

The Rhetoric of the Patent Wars:
How Technology Becomes “Common Sense”

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Dedication

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Abstract

This dissertation sheds light on large questions involving innovation and technology. To answer these questions, I investigate one battle in the so-called "Patent Wars" surrounding mobile computing. I combine classical and modern rhetorical notions of common sense and community with perspectives on society and technology offered by philosophers Charles Taylor and Andrew Feenberg. I apply this theoretical lens to three sets of texts: 1) public rhetoric surrounding Google's purchase of Motorola Mobility--these texts come in the form of press releases, blog posts, and tweets; 2) public rhetoric involving a patent dispute between Microsoft and Motorola Mobility involving the former's accusation that the latter is not honoring its patent licensing commitments--these texts are drawn from press releases and blog postings; and 3) legal rhetoric found in four legal briefs filed by Microsoft and Motorola Mobility following the testimony phase of a patent trial. I find that the rhetoric used in these texts concentrates on technology as an ends, rather than allowing for a critical evaluation of these technologies as embedded in a broader cultural landscape. I offer a rhetorical approach that helps uncover and demystify the values that are embedded in mobile computing technologies.

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Chapter 1: Introduction

Introduction

There is war raging around the world. Although the battles in this war take place in court rooms from Seattle to Munich, the disputed territory can be found much closer to home: a few square inches of touch-sensitive Gorilla Glass in your purse or pocket. Moreover, many of the battles involve language and persuasion. Whether a patent dispute is argued in a courtroom or whether the nature of collaboration and standards is hashed out in press releases, speeches, and online, these conflicts involve rhetoric. This is not to say that patent disputes revolve around empty speech. Instead, it is to argue that written language and persuasive speech are at the heart of these conflicts. Indeed, mobile computing technologies themselves are built upon foundations of written and persuasive speech. This dissertation is about the role that rhetoric plays in shaping disputes in the smart phone patent wars. In the chapters that follow, I show that what is seen as technological “common sense” is really an amalgam of competing values and visions. It is through rhetoric that these competing values are either embedded into or discarded from technologies that become invisible in their ubiquity. The conflict I study is important to rhetorical scholars because it demonstrates that technology and technological innovation are contested fields of human creativity in which writing and persuasion play major roles.

In Chapters 4–6 below, I analyze the public and legal rhetoric used in one battle of the broader patent wars. By “public rhetoric,” I mean that I am concerned with textual discourse offered by various parties in defense of their positions or actions in these

disputes. Such rhetoric includes blog postings, tweets, and press releases. By “legal rhetoric,” I mean that I am concerned with the written discourse found in post-trial legal briefs filed after the testimony phase of a patent dispute between Microsoft and Motorola Mobility. Approaching this project through multiple channels of rhetorical writing (that is, blog posts, press releases, and legal writing) makes it possible to triangulate results and gives insight into whether the players are consistent in their messages or whether they are offering one kind of rhetoric in public and another kind in court.

As smartphones have become more advanced, more and more people have purchased them (and the expensive data plans that usually come with them). Competition in the smartphone marketplace has intensified since Apple released the first generation iPhone in 2007 and Google followed with the Android operating system. One aspect of this competition can be seen in the so-called “patent wars.” Patent wars have been around at least since Thomas Edison rushed one of his assistants to the patent office to file a claim over a light bulb that did not quite yet work (see Bazerman, 2002). However, the ubiquity of mobile computing and the sway this technology has over the everyday lives of millions of people make the stakes in the smartphone patent wars especially high.

The dispute that I study in this dissertation involves a small set of lawsuits and counter suits filed by Motorola and Microsoft against each other. These lawsuits involve patents for portions of the following technologies:

- 802.11 is a set of protocols that enable wireless digital communication. The first 802.11 standard was released in 1997 (IEEE Standards Association, n.d., sec. Superseded or Withdrawn). The standard has seen continuous updates and

revisions in the years since its original release (Perahia, 2008).

- H.264 is a standard for encoding digital video. It was developed to support the transmission of video over the Internet. H.264 has been designed to support “‘conversational' (video telephony) and 'nonconversational' (storage, broadcast, or streaming) applications” (Wiegand, Sullivan, Bjontegaard, & Luthra, 2003, p. 560). H.264 was also developed in late 1990s and early 2000s. By 2011, H.264 was being used in Blu-ray DVDs, video conferencing software, terrestrial television systems, and web-based video technologies such as Flash and QuickTime (Ozer, 2011, sec. H.264 Support and Adoption).

An additional term that requires defining is the acronym RAND, which stands for Reasonable and Non-Discriminatory. This is a common method for sharing technologies, in which various patent holders contribute their patented technology to a standard such as 802.11 or H.264. They then make binding agreements to license the technology on RAND terms (Miller, 2006, p. 3)

Although this terminology may seem esoteric, it represents technologies that affect a large audience of people. The 802.11 Wi-Fi technology and the H.264 video technology are crucial to most smartphones. Without Wi-Fi and video, two of the major advanced capabilities described below fall by the wayside. Therefore it makes sense that these two technologies became a focal point in the current patent wars. More importantly, these two technologies are rhetorically important for the following reasons:

1. Both of these technologies are completely dependent on standards in order to function. By this I mean that in order to have *any* useful Wi-Fi or video

technology, a device must conform to the standards that determine those technologies. A phone that does not conform to such standards would be considerably less useful, since it would not be able to share videos or connect over Wi-Fi with other devices.¹ Given that standards themselves are the written products of a great deal of persuasive communication, understanding the rhetoric used to talk about the standards-setting process is of great importance to scholars interested in the rhetoric of technology. My analysis in Chapter 5 helps makes this clear.

2. Since these particular Wi-Fi and video technologies are the subject of Microsoft's lawsuit against Motorola Mobility, they become subject to the legal rhetoric I study in Chapter 6.

Thus, rhetoric is tightly woven into the creation and maintenance of the negotiation, standards, and disputes that are part and parcel of these technologies.

In a similar fashion, rhetoric informs an overarching conflict between between open-source software (OSS) and traditional patent-based innovation. Supporters of both sides deploy persuasive speech and writing in order to strengthen their positions. Indeed, the very name “open source software” has come to be rhetorically charged, standing in for a set of values that OSS supporters pit against “Proprietary Software.” Chief among these values is freedom of speech, as demonstrated by the open-source slogan “Free as in Speech, not Free as in Beer.”²

1 This becomes clear if you imagine a phone that does not use the same standard as other cell phones. Such a phone could be technologically superior, but it would be useless as a phone, since its main purpose—to make calls to other phones—would not be achievable.

2 See Berry (2004) for an excellent discussion of the discourse used in this dichotomy, which is also known as *libre* versus *gratis*.

In this dissertation, I am concerned with the larger conflict between open-source software and patented software. More specifically, I study the ongoing patent wars taking place among mobile computing companies. Clearly, many of the patent disputes do not involve open-source software directly. For example, Apple has sued Samsung over the “rubber banding” patent, which describes the way an iPhone or iPad behaves when the user has scrolled to the bottom of a list (Worstall, 2012). Although the rubber banding patent is considered one of the small ways that Apple makes its iOS operating system seem natural and intuitive, most Android devices do not implement this patented technology. Samsung's use of rubber banding has been the exception, precipitating a prolonged legal battle between the two companies (Mintz, 2013). As interesting as the conflict over the rubber banding is, this dispute has less to do with the challenge that open source presents to patents than other disputes do. Indeed, one of the primary challenges that Android presents to non-open device makers is its openness. Android is based on the open-source Linux operating system, and Google gives Android away free of charge. More importantly, Android's open-source license requires that the source code be made available as well. This means that Android has been modified and used to run devices as diverse as tablet computers and smart watches (See, for example “Android smartwatches,” 2013; Rothman, 2011). Since I am interested in the overarching conflict between open-source software and patents, I chose Microsoft, Motorola, and Google for this case study.

As I detail in the case narrative later in this chapter, the conflict between Microsoft and Motorola began on October 1, 2010, when Microsoft filed two complaints

involving nine patents that Motorola was allegedly infringing upon. By the end of November that same year, Motorola had counter-sued, involving more than a dozen patents of its own. If this dispute had remained exclusively between Microsoft and Motorola, it may have been no more relevant to the broader conflict between open source and patent-based innovation than the battle between Apple and Samsung. However, in the summer of 2011, Google purchased Motorola, largely for its trove of patents, invoking the need to defend Android from patent-holding attackers such as Microsoft and Apple (see Chapter 4 of this dissertation for a detailed analysis of this portion of the dispute). In many ways, the purchase of Motorola was a strategic move in the patent wars. This makes *Microsoft v. Motorola Mobility* and the rhetoric involved in that dispute useful points of focus for a study interested in the fundamental conflict at hand. Figure 1 represents one way of conceptualizing the subjects involved in this dissertation.

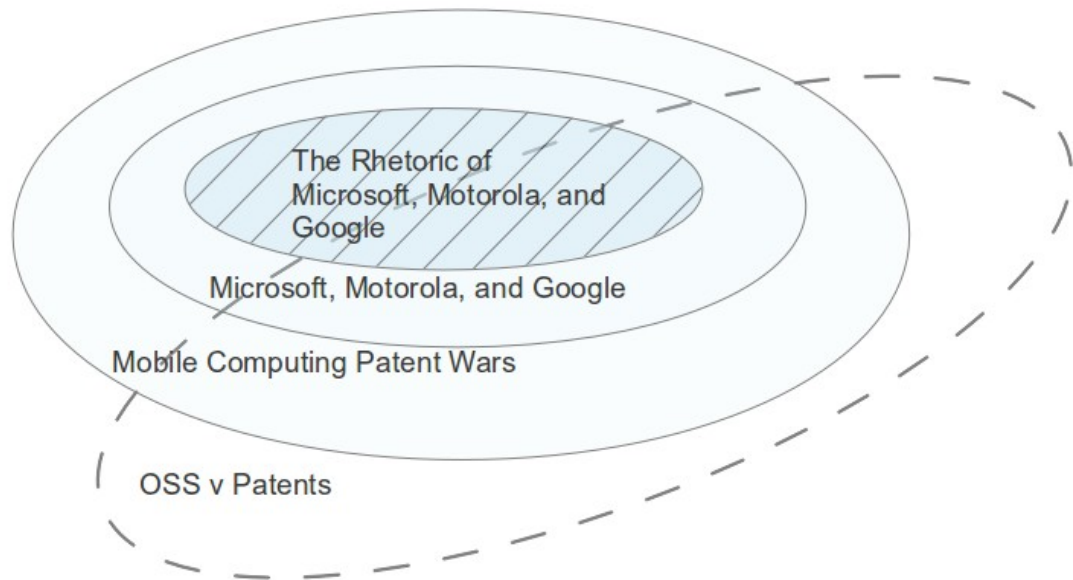


Figure 1: Conceptualizing the subject of this dissertation.

As this figure shows, there is a great deal of overlapping area involving the

umbrella conflict between open-source software and patent-based innovation. However, each of the more constrained areas of conflict also involves patent conflicts that have nothing to do with open-source software. The case I have chosen for this dissertation (represented by the inner-most circle in Figure 1), involves a great deal of rhetoric about openness and innovation, but it also involves patent disputes that have very little to do with open-source software.

Purpose of this Study

The purpose of this dissertation is to investigate the public and legal rhetoric involved in a set of patent disputes taking place among Microsoft, Motorola Mobility, and Google. In conducting this study, I have come to see rhetoric and technology as closely related areas of human creativity, concerned chiefly with action. There are a number of definitions for the term rhetoric, but one common element is that rhetoric is language aimed at action. In other words, conceived of broadly, rhetoric is linguistic or symbolic manipulation created with the intent to change things in the social and (indirectly) the material worlds.

Technology, although somewhat harder to define, is also pointed at action. Often definitions of technology become boiled down to something like “applied science.” This can work when technologies are new—when we can easily see the link between the technology and its science. But it gets harder and harder to see the science behind ubiquitous technologies: what is the science behind an email? A telegram? A hand-written letter? The more a technology is used, the more the science behind it fades from view. In Chapter 2 I review various definitions of technology, and I offer my own. Technology can

be found when people use processes and things to effect changes in the material and social worlds. In other words, technology, like rhetoric, is all about action. If there is no action, then we are not talking about technology.

Therefore rhetoric and technology can be thought of as overlapping circles in a Venn diagram. As Figure 2 demonstrates, the area of overlap between rhetoric and technology outweighs any areas where the two fields are not somehow connected. Although such exclusive topics must exist, I find it difficult to conceptualize how technology can exist and function as a technology—that is, as a creative means for changing the social and material worlds—without some kind of persuasive language to help it take form and spread from person to person.

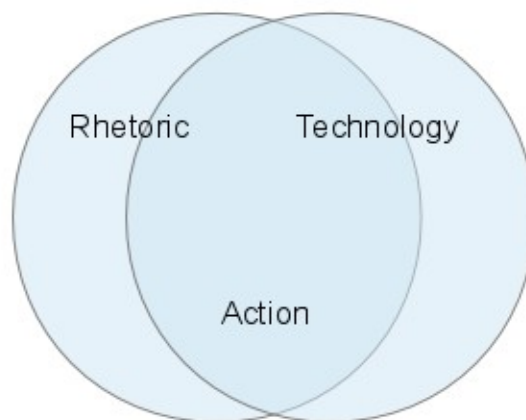


Figure 2: Rhetoric and Technology as overlapping circles.

This relationship is well demonstrated by the examples Latour (1987) uses to describe the process of “black-boxing” a technology.³ Latour describes black-boxing as heavily dependent on rhetoric:

³ When a technology becomes too complex to efficiently deal with its inner workings, scientists in many fields will put it in a conceptual black box, whereby they cease worrying about how the technology works and concern themselves only with the inputs and outputs (Latour, 1987, pp. 2–3).

If [the genetic scientist] wants to know anything about the DNA structure or about the *Eclipse* [the computer he is using to conduct his research], [he] opens *Molecular Biology of the Gene* or the *User's Manual*, books that he can take off the shelf. (p. 4)

The same is true for the countless decisions and collaborations that must take place in order for a science to be turned into a technology or for a technology to move from the research and development lab into the hands of consumers. In essence, this is the kind of rhetorical technology transfer described by Doheny-Farina (1992) as “highly rhetorical in nature. That is, *at their core* these processes involve individuals and groups *negotiating* their visions of technologies and applications, markets, and users in what they hope is a common enterprise” (p. 4, emphasis original). This finding has been borne out by other scholars. For example, Gulbrandsen (2012) describes rhetoric as central to justifying competing interests in a university research setting focused on technology transfer. Durack (2006) takes this observation a step farther in her assessment of the relationship between patents and scholarly peer review; she puts patents at the crux of technology transfer, arguing that patents are “central to the act of commercializing innovation, patents are the very instruments that define the ownership of technical and scientific ideas and make possible technology transfer” (p. 315). Similarly, other kinds of rhetoric guide and constrain technology through the creation of standards, and the arguing over ownership that takes place when the system breaks down.

In the analysis chapters that follow, I take the observation that rhetoric is central to technology and apply it to the patent dispute among Microsoft, Motorola Mobility, and

Google. My goal is to identify and analyze the ways in which rhetoric shapes this dispute. Understanding the rhetoric of the patent wars will help extend observations such as Doheny-Farina's (1992), Gulbrandsen's (2012), and Durack's (2006), which are more or less focused on transferring technology from university research settings to the marketplace. Studying the rhetoric of the patent wars provides insight into the rhetoric of technology “in the wild,” that is, in a highly competitive, dynamic, and fast-paced marketplace.

To study rhetoric and technology in the wild, I have constructed a case study framework and chosen rhetorical analysis as my analytical lens. I describe this theoretical lens and my case study framework in greater detail in Chapter 2. For now, suffice it to say that case study and rhetorical analysis are both extremely well-suited to studying texts in context. Thus, for example, case study makes it possible to include the rhetoric of Google's purchase of Motorola Mobility in my study. The purpose of stepping outside the bounds of the actual lawsuit between Microsoft and Motorola Mobility is to provide insight into the broader dispute. This is necessary because ultimately the patent wars are not about any one patent or lawsuit. Instead the patent wars involve large sets of disputes and strategic moves. Since Google's purchase of Motorola Mobility was seen by many (and confirmed by statements made to investors) as a bid for patents, it makes sense to study the rhetoric of this move. In Chapter 4 I find that rhetorical communion (*a la* Perelman and Olbrechts-Tyteca), enthymeme, and metaphor all contribute to the rhetoric used by Google and Microsoft executives in this part of this dispute.

Similarly, in Chapter 5 I study the rhetoric of RAND licensing. In doing so, I have

tightened my focus to include just one kind of dispute. RAND agreements are central to the particular lawsuit that I study in Chapter 6. RAND disputes are also important to understanding the rhetoric of the patent wars because RAND is essentially a bridge between patents and standards. Without RAND agreements, it is not clear how a technology such as Wi-Fi would move from the research and development lab of a corporation and into public use. In Chapter 5 I discuss the competing social imaginaries that seem to make up RAND agreements. I also argue that these social imaginaries inform competing visions of the ways in which innovation should take place.

Finally, in Chapter 6 I study the legal rhetoric of *Microsoft v. Motorola Mobility*. Here I tighten my focus even further to include a single kind of document from a single lawsuit: legal briefs filed following the courtroom testimony given in November 2012. This focus helps to determine whether Microsoft, Google, and Motorola Mobility are consistent in their rhetoric. I am interested in determining whether they paint the same pictures of technology and innovation in the courtroom as they do in their blog postings, press releases, and tweets. To do this I look for ways that competing values inform the rhetoric of these documents. I find that notions of community and arguments base on *loci of quantity* inform this rhetoric to a great extent.

Throughout my analysis, I have found that Microsoft, Motorola Mobility, and Google present their views on innovation more or less consistently, whether they are producing public rhetoric in the form of blogs or tweets or whether they are filing legal briefs following a court hearing. The participants in this conflict use a variety of textual channels to challenge each other, but they often rely on notions of community and

common sense to connect with and persuade their audiences.

The Relevance of Mobile Phones and Mobile Computing

The technological artifacts involved in this dissertation are so ubiquitous to our everyday lives as to seem unimportant—even invisible. This is often the case with successful technologies. For example, our electricity or even our Internet connections are usually noticeable only when they stop working. However, it is this very commonness that makes smartphones an important technology to understand, for financial, technological, and social reasons.

Cell phones and mobile computing are associated with a great deal of economic activity, both in the United States and abroad. For example Darell West, with the Brookings Institution, observed that mobile broadband connections would soon be more common than broadband delivered via cable or copper landlines (West, 2011, pp. 1–2). Additionally, West claimed that mobile broadband connections would more than triple their land-based counterparts by the year 2015 (p. 2). In addition to the growing use of cell phones, US companies are investing billions in advanced mobile networking technology. For example, the financial consulting firm Deloitte estimated that US companies would invest between \$25 billion and \$53 billion by the year 2016 (Deloitte, 2011, p. 7). In turn, this investment could add as much as \$150 billion to the gross domestic product and generate as many as half a million new jobs (Deloitte, 2011, p. 8). The Deloitte report suggests that these investments could give the United States an entrepreneurial edge, but it is clear that mobile computing and networking technologies are having far-reaching effects in other parts of the world as well.

Indeed, mobile phones are seen by many as a means of extending the Internet and all of its benefits to people in developing countries. For example, Rashid and Elder (2009) point out that cell phones are

the predominant mode of communication in the developing world. At the beginning of the twenty-first century, the average number of mobile phones per 100 inhabitants in Asia, Africa and Latin America and the Caribbean (LAC) has risen by 100-400% in a span of just five years. (p. 1)

In addition to the rapid growth of cell phones in the developing world, cell phones with fast Internet connections are also growing at a rapid rate in these countries. This growth is having a positive effect on these countries' economies, as Thompson and Garbacz put it, “shifting out the frontier of more efficient countries, and closing the efficiency gap for the less efficient” (2011, p. 1008). In other words, mobile broad band helps corporations in developed countries reach more consumers in the third world. At the same time, it provides more opportunities for producers and companies in developing countries themselves.

The Android operating system itself has seen remarkable growth, both in the US and abroad. For example, as of late 2012, Android was the most popular mobile operating system in the United States, holding a nearly 53% market share (Seitz, 2012). The runner up, Apple's iOS operating system, held just over 34% of the market. However, in spite of Android's dominance, the marketplace remains highly competitive—and highly volatile. By early 2013, Apple's share had grown to nearly 39% (“comScore report,” 2013). Nevertheless, Android is also growing abroad. For example, one Android software

developer estimates that there will be 300 million Android users in China alone by the end of 2013. *Business Insider* cites a report from market analyst ABI Research claiming that there will be 1.4 billion smartphones in use around the world by the end of 2013, and that over half of them will run Android. Others have claimed that Google stands to make \$10 for every official instance of Android that ships (Sterling, 2011). All of this is not to say that Google will make \$7 billion from Android in 2012. Since Google does not operate in China, most of Android phones sold in that country are “uncoupled from Google's 'official' version” (Mims, 2013, n.p.). All the same, mobile computing marketplace is highly competitive and (potentially) highly profitable. Nevertheless, the market itself remains finite. Companies providing devices, data and voice connections, and other services compete ferociously for these profitable consumers. As I demonstrate in the analysis chapters that follow, not all of this competition takes place on store room floors. Furthermore, a critical approach to technology requires a perspective that takes into account more than one measure of efficiency. That is to say, mobile computing is important for reasons that go far beyond the billions of dollars in profits it offers to the winners in the patent wars.

A number of questions arise as mobile computing becomes integrated into our lives. In just the last few years, a computer has gone from something you can carry around with you to something you can wear. There are a number of “smart watches” being developed that may provide the functionality of a smartphone in a form factor small enough to wear on your wrist. Google Glass is essentially a pair of glasses that is similar in functionality to a smartphone. This particular device can unobtrusively stream

video to the Internet or record everything the wearer sees, a feature that has raised a number of privacy concerns. As National Public Radio technology reporter Steve Henn (2013) mused as the wearable computers were being rolled out to the public:

Right now, Goggle [sic] Glass might be the world's worst spy camera; if you go out in public with one on you are guaranteed to attract attention. Still, the idea of techies mounting a tiny screen and a little camera to their faces makes millions of people uncomfortable. (n.p.)

It well worth noting that both Microsoft and Apple are also developing similar computerized glasses (See Carlson, 2012a, 2012b); it is also important to note that Google Glass runs the Android operating system. The decisions made in courtrooms in 2013 regarding what can and cannot be built into an implementation of Android may have lasting effects on devices that have yet to be imagined.

Wearable computers are not likely to stop with glasses. Dutch researchers have developed a contact lens with a built in LCD screen. According to *Business Insider*, within years these devices “could function as a head-up display, 'superimposing an image onto the user's normal view.' Eventually this kind of screen-on-the-eye technology could displace the smartphone as the dominant way people access the Internet and connect to each other” (Carlson, 2012c). And Brown University researchers have developed an implantable computer that interfaced directly with the brain (Borton, Yin, Aceros, & Nurmikko, 2013). While it is clear that such devices remain in the realm of pure research for the time being, it is worth remembering that the Internet itself began as a research project backed by the Defense Advanced Research Projects Agency (DARPA), while

stored program computers underwent decades of research before they could function at all, let alone fit into a space the of size a typical single-family home.⁴ But long before computers became small enough to be worn or implanted into the human body, they had become ubiquitous in our lives by virtue of their sheer numbers and connectivity.

Indeed, more and more people access the Internet on their phones or other mobile devices. As Rainie and Wellman (2012) put it:

Mobile phones have become key affordances for networked individuals as they have become easier to carry, cheaper to use, and able to function in more places. With the proliferation of smartphone applications, (“apps”), they have become more than just a phone or a sidekick to computers. Indeed, apps have developed a life of their own and serve users in different ways than personal computers. At the same time, wireless computers have become lighter in weight and easier to use. (p. 84).

So, for example, mobile phone ownership in the United States has grown from less than half a million in the mid 1980s to over 300 million—83% of American adults—in 2011 (Rainie & Wellman, 2012, p. 84). Furthermore, by 2011 nearly one third of Americans had forgone their landline telephones in favor of using cell phones exclusively, while “another 16 percent of households with both mobile and landline receive almost all of their calls on their mobile phones” (p. 86).

Smartphones are differentiated from earlier cell phones or feature phones by their capabilities. Generally speaking, smartphones have advanced features such as fast

⁴ See Abbate (2000) for a detailed history of the invention of the Internet; Campbell-Kelly and Aspray (2004) provide a helpful introduction to the history of machine computing.

cellular and Wi-Fi Internet connections, email access, web access, still and video cameras, and music and video players (Paik & Zhu, 2013, p. 12). As Rainie and Wellman put it, in the mid-2000s, technological improvements in data processing storage capacity converged with improvements in cellular data connectivity to lower the costs of connected mobile computing:

Phones themselves became more versatile as cameras were added and apps were developed. These turned the former two pound “mobile” calling device into a light, compact multi-functional Swiss Army-style tool, able to browse, create, and amuse—and be in touch with social networks in an instant. (Rainie & Wellman, 2012, p. 91)

In 2007, the number of cell phone owners who reported using their devices to record video or access the Internet was 19% and 18%, respectively. By 2011, those numbers had doubled: 40% of cell phone users took videos with their phones; 51% went online using their cell phones (Rainie & Wellman, 2012, p. 91, table 4.3). Meanwhile, Smith (2012) finds that people are ambivalent about their relationships with their phones. For example, 24% of American mobile phone users “say that the worst thing about cell ownership is that they are constantly available and can be reached at any time” (p. 2). Similarly, according to Smith, cell phone owners are “extremely attached to their phones—although most don't see that as too big a problem” (p. 3). Over 44% of the people in Smith's survey report that they have slept with their phones near the bed. Similarly 29% say that their phone is “something they can't imagine living without” (p. 3). Nevertheless, Smith also finds that Americans see a great deal of value in their phones, especially in terms of

supporting their relationships with other people. The vast majority of the people surveyed say their phone makes it easier to stay connected to the people in their lives (p. 4).

Finally, as mobile devices have become faster and lighter, mobile data networks have become faster and more capacious. Globally, users of mobile data services sent 520 petabytes per month in 2011 (*Cisco visual networking index*, 2013, p. 1).⁵ As remarkable as this figure is, Cisco projects that mobile data traffic will grow to 11.2 exabytes per month by the end of 2017.⁶ Figure 3 helps demonstrate the dramatic increase that Cisco predicts for mobile data traffic, globally.

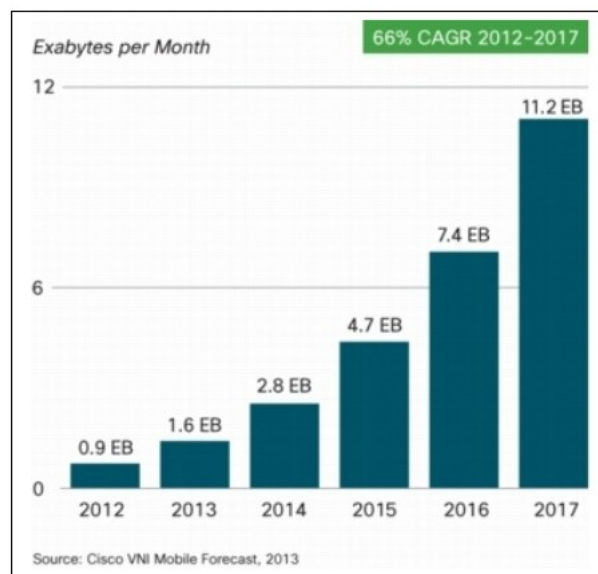


Figure 3: Cisco's projected global data traffic.

From Cisco visual networking index: global mobile data traffic forecast update, 2012–2017. (2013) (pp. 1–34). Retrieved from

http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html

However, even the fact that by 2017, mobile device users around the world will be sending and receiving the rough equivalent of half a million years' worth of DVD quality

⁵ A petabyte is roughly equivalent to one million gigabytes. A single petabyte would be able to hold the data stored on 223,000 DVDs.

⁶ An exabyte is approximately one thousand petabytes.

video *per month* has the potential of missing the point of all this connectivity: the network effect.⁷ This astonishing growth in data traffic is the result of the growing number of people joining the ranks of smartphone owners.⁸ As these people spend more and more time connected to the Internet, the networks in which they participate become more and more important to them and to others.

But perhaps most importantly, mobile computing is helping to transform the ways we communicate with one another. Rainie and Wellman (2012) argue that this change in communication patterns (which actually began with earlier technologies such as long-distance air travel and the automobile) altered the ways in which society itself is organized. The effects of this shift have been widely studied. For example, Baron (2008) takes a broad look at the ways in which the Internet, instant messaging, and cell phone texting may be impacting communication and language. Interestingly, in Chapter 8 of her book, Baron argues that the Internet is *not* having a significant effect on written language:

True, electronically-mediated language and the likes of spell-check and Google make it easy to drift into sloppy writing habits. The culprit, however, is not the technology. Depending on how you view the situation, fault lies either in ourselves or in the more global 'whatever' attitude regarding regularity in language. (p. 180)

Similarly, Baron finds that the Internet is having very little effect on speech. But she does see an impact that the Internet is having on larger questions of communication—what she

⁷ One exabyte is roughly equivalent to 250 million DVDs (Plumer, 2012). If a DVD lasts approximately 2 hours, then that is well over 50,000 years' worth of DVD video. Therefore, 11 exabytes exceeds half a million years of DVD video.

⁸ To be sure, much of the growth will also be caused by technological changes themselves. For example, as people stream more and more HD video the amount of data traffic will also rise.

calls “volume control” in Chapter 3. Here Baron finds that people use a variety of methods for controlling the perceived volume of their Internet communications. Some students would block their parents on Instant Messaging (IM) platforms or participate in multiple simultaneous IM conversations with friends. But the same studies found that people were reluctant to multi-task and divert their attention away from face-to-face or even telephone conversations. All of these findings point to the conclusion that although the Internet is not impacting language use in negative ways, Internet-based communication *is* having a profound effect on the ways in which we organize our communications with others.

Rainie and Wellman describe this shift as a part of a “triple revolution” that began taking place more than 100 years ago in Western societies (Chapters 2–4). This revolution continued with the shift from community to network that began taking root as early as the 1950s (Chapter 2). Technology has accelerated this shift; this is especially true of the Internet and mobile communications, two important technologies that are now converging.

Ultimately, mobile phones are playing a role in a revolution that changes the way we live, for example by blurring the boundaries between work and home, changing the way we navigate the physical world, and even reaching into the most private spheres of our lives: sex and family (See Gant & Kiesler, 2002; W.-C. Lee & Cheng, 2008; Richards & Calvert, 2009; Weisskirch & Delevi, 2011). As these devices become more integrated into our lives, we need to investigate the values that shape them. This dissertation is just such an investigation.

Case Narrative

A number of rhetorical devices inform the texts that make up this case. In this section, I outline the history of the case itself, and I also draw out some of the context surrounding the case. Where possible, I point to the kinds of rhetoric that inform these texts in context. For a chapter-by-chapter outline, see the end of this introductory chapter.

The case that I study in this dissertation begins on October 1, 2011, when Microsoft sued Motorola Mobility for breaking its RAND commitments (Fried, 2011). The crux of this and the complex of lawsuits that followed was the 2.25% per-unit royalty rate demanded by Motorola from Microsoft for the use of its Wi-Fi and video patents. The case ends on April 26, 2013, when US District Judge James Robart ruled in favor of Microsoft. In his ruling, Robart set the royalty rate the Motorola can collect for its Wi-Fi and video patents used by Microsoft at 3.5 cents and half a cent, respectively (Decker, 2013).⁹ To understand the technological and economic context of this case, it is helpful to look further back in time, to the year 2003. Expanding the bounds of the case narrative also helps illustrate the rhetorical context, which is crucial to rhetorical analysis.

Android, iOS, and the Smartphone Explosion

In 2003, the vast majority of cell phones were still “feature phones.” Many phones could do little but make phone calls and send text messages. Nevertheless, Andrew Rubin had started a company to build an operating system that could run on a smartphone (Levy, 2011, p. 214). Meanwhile, Google was looking for ways to extend its well-known search and advertising business to people accessing the Internet from hand-held devices. As

⁹ By way of rough comparison, a new, lower-end Xbox 360 might retail for around \$200 in the Spring of 2013. Thus, a 2.25% royalty for Wi-Fi and video technologies would have cost around \$9, per unit.

Levy points out, it was difficult to fit the purchase of a mobile operating system into Google's 2005 mission “to access and organize the world's information” (p. 215).

But [Google co-founder] Larry Page interpreted Google's mission in the broadest sense. What was good for the web was good for Google. What was good for the cloud was good for Google. So it made sense that what was good for the growing universe of wireless communication over mobile phone carrier networks would also be good for Google. (p. 215)

The business press reported the purchase of Android as an extension of Google's broader strategy to remain relevant in an increasingly mobile world:

Google has been toiling to make its services more appealing to people who access the Net over cell phones and other mobile devices. In April [of 2005], the company uncorked local-flavored search for mobile users. Also in April [of 2005], it announced Google Short Message Service (SMS), which sends text-based information to mobile users seeking everything from driving directions to weather forecasts. (Elgin, 2005, n.p.)

The Android purchase was shrouded in secrecy. In fact neither Google nor Android would confirm that the search giant had bought the start-up for its cell phone operating system. Nevertheless, work on the Android operating system continued at Google for the next three years. During this time, as I discuss in Chapter 5, Google executives were already hinting at the importance of an open approach to innovation. While Google's investment in open-source software goes well beyond Android (for example Google's Chrome OS is built on Linux), I believe that much of the rhetoric of openness discussed in Chapter 5 is

an attempt to build a foundation for future conflicts with the patent system.

Meanwhile, in Cupertino, CA, Apple was working on a mobile phone and operating system of its own. The iPhone was released in January of 2007, to considerable fanfare and accolade (Burgess, 2012). Apple sold half a million iPhones the first weekend it was available; by the end of 2009, consumers had purchased 42 million of the devices, “arguably making it one of the most successful mobile phone products ever launched” (Laugesen & Yuan, 2010, p. 91). Despite its instant success in the marketplace, iPhone sales were more or less flat from mid-2009 until mid-2010. Only with the release of the iPhone 4 did Apple's phone sales spike again (Butler, 2011, p. 4, Figure 1).

Android's entrance into the market was much different. The first Android phone was released on September 23, 2008. The phone was built by HTC and sold only by T-Mobile. According to Levy, Rubin was worried that the phone would crash during the demonstration announcing the new phone to the media: “The last thing I wanted to do was talk about it' [Rubin] says. 'The only thing I wanted to do was make sure it didn't crash when it powered on’” (Levy, 2011, p. 227, quoting Andy Rubin). The phone did not crash during its unveiling and went on to respectable sales, functioning well enough to sell over 660,000 units in the remaining three months of 2008.

Additionally, the first Android phone garnered moderately positive reviews, such as this one from CNET:

Though we're not in love with the design and would have liked some additional features, the real beauty of the T-Mobile G1 is the Google Android platform, as it has the potential to make smartphones more personal and powerful. That said, it's

not quite there yet, so for now, the G1 is best suited for early adopters and gadget hounds, rather than consumers and business users. (Cha & Lee, 2008, sec. The bottom line)

Other reviewers agreed that the phone itself was about average. But the reviewer at Engadget agreed that the G1 was important for the bigger picture:

At the end of the day, however, this isn't about the hardware, and really never was. The story here is Android and what it promises... though doesn't necessarily deliver on at first. Like any paradigm shift, it's going to take time. (Topolsky, 2008, sec. Wrap-up)

Most other reviewers also met the first Android phone with a non-committal shrug. Nevertheless, the idea of Android as a platform continued to excite.

Perhaps surprisingly, Android began to deliver on its promises in a relatively short amount of time. By the end of the following year, Android had been released on seven more phone models in the US alone, and had sold over 7.7 million units worldwide (German, 2011, table; “Majority of smart phones,” 2010 table “Worldwide smart phone market by OS vendor”). Over the next three years, the Android ecosystem continued to expand. By summer of 2011, there were 95 different Android phones being sold in the US (German, 2011, table).

All this growth for Apple and then Android came at a cost to their competitors. Figure 4 shows the dramatic changes made to the smartphone operating system landscape by the introductions of iOS and Android (Donovan, 2013, p. 17). This chart demonstrates that the abrupt rise in popularity of iOS and Android devices came at a cost to Microsoft's

Windows Mobile system as well as Palm, Research in Motion's BlackBerry devices, and the Symbian OS (used by a number of manufacturers, including Motorola).

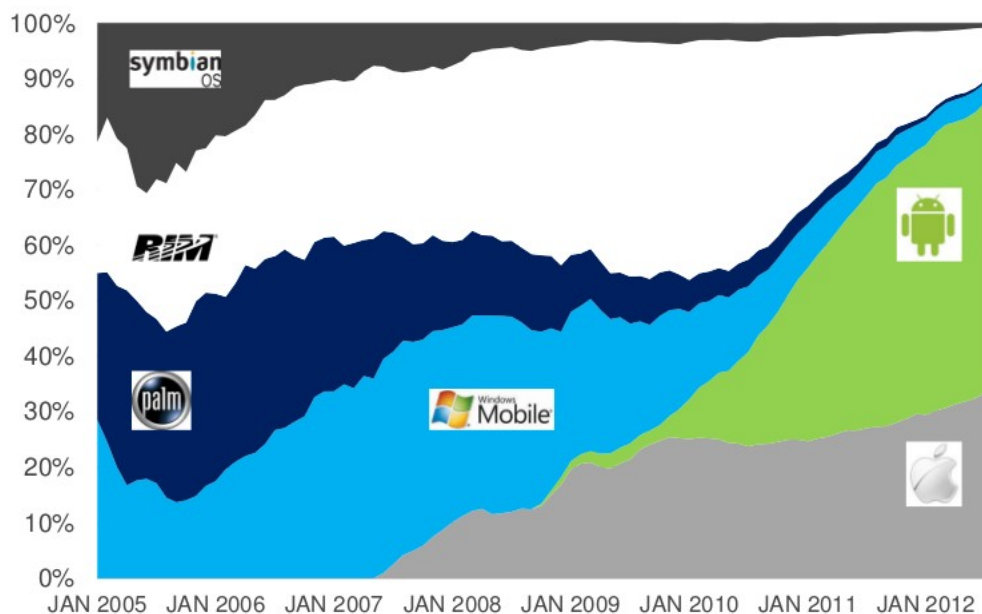


Figure 4: The historical proportion of smartphone market share, by operating system. Apples iOS is represented by the Apple logo, while Android is represented with by the Android logo. Source: Donovan, M. (2013, March). 2013 Mobile Future in Focus. Webinar. Retrieved from http://www.comscore.com/Insights/Presentations_and_Whitepapers/2013/2013_Mobile_Future_in_Focus3. Used with permission via the comScore Data Usage Policy, available at http://www.comscore.com/Insights/Data_Usage_Policy.

Even after Microsoft replaced Windows Mobile with Windows 7 Phone in the fall of 2010 (Bray, 2010), the software giant's mobile platform continued to struggle. Neither Windows 7 Phone, nor its successor, Windows 8 Phone has managed to chip away a substantial portion of Android's or Apple's shares of the market. In fact, by February of 2012, Windows' share of mobile phone subscribers had dropped to just 3.9%, down from 5.2% the year before (“comScore report,” 2012, sec. Smartphone Platform Market Share). Nevertheless, Microsoft as a company continued to thrive in other areas, and

Microsoft-owned technologies were implemented on a number of smartphones. Often these implementations came in the form of RAND agreements; Microsoft's public rhetoric during this time (also discussed in Chapter 5) seems to be aimed at supporting this patent-based mode of collaboration and innovation.

Motorola's Problems in the mid-2000s

Unlike Apple and Google, Motorola was slow to enter the smartphone race. The company had seen a great deal of success in the early 2000s. In 2005, enjoying the success of its popular line of RAZR smartphones, Motorola posted a 52% jump in profits for the second quarter. As the *Chicago Tribune* reported,

Sales have been strong across Motorola's entire phone portfolio, including the Razr V3, the ultra-slim--and expensive--metal phone launched in November. Razr production volume doubled from the first to second quarter, and Motorola had shipped more than 5 million of them by the end of June. ("Motorola profits jump," 2005)

Interestingly, later that year, Motorola began releasing a number of iTunes-enabled phones in partnership with Apple. For example, the ROKR, a music-focused phone was released in September of 2005, and iTunes was released with the RAZR V3im the following year ("Briefing.com: Tech Stocks," 2006, "Motorola plans to add iTunes to Razr phone," 2005). These iTunes-enabled phones were not great sellers. The stripped down version of iTunes released with both phones would only play 100 songs, and the RAZR version of the phone was never released in the United States. The partnership between Motorola and Apple seemed to falter. By the end of 2006, Motorola was

planning to ship the ROKR E6 without iTunes. Technology information website *Gizmodo* speculated that the iTunes-free phone was an indication that Apple was moving away from including iTunes on feature phones and moving towards the release of the iPhone itself (White, 2006).

Meanwhile, Motorola was seeing its record sales and profits turn to losses. In summer of 2007, Motorola reported a loss of \$28 million. Worse, the company had shipped just 35.5 million phones that quarter, a little more than half of the record 65.7 million phones they sold in the last quarter of the year before. Then CEO Ed Zander seemed at a loss for how to turn the company back around, as reported in the *Wall Street Journal's* "MarketWatch" section:

Chief Executive Ed Zander is under intense pressure to get the company back on track and some investors have called for his ouster. The company's handset lineup has lost some sizzle and Motorola was late to introduce new high-end phones to overseas markets.... "What we need to do is get new products out there," [Zander] said in a conference call with analysts. (Bartash, 2007, n.p.)

Within the year, Zander had been replaced by Greg Brown and Sanjay Jha as co-CEOs.

Jha, who was in charge of the company's mobile division, quickly announced sweeping changes to its cell phone strategy. The company had cut 10,000 jobs by October of 2008, and Jha announced that the company would walk away from four phone operating systems and focus on partnering with Google's Android (Silver, 2008, p. B1). Although Motorola continued to build business-focused phones using the Windows Mobile operating system, the announcement marked a shift towards Android as the main

operating system for its broad line of consumer phones. As the technology web site *TechCrunch* commented on the announcement, “In other words, Android phones will become [Motorola's] bread and butter” (Schonfield, 2008, n.p.). This is the same move that was later referred to by Google CEO Larry Page as Motorola's “big bet” on Android, as I discuss in Chapter 4.

Sanjay Jha also helped oversee the division of Motorola into two separate entities, “one focused on smartphones and tablets, and the other on enterprise solutions” (CIOinsight, 2011, n.p.). The division of the business was meant to separate profitable products such as TV set-top boxes and communications devices used by law enforcement and other public safety officials from the struggling consumer cell phone division (Holson, 2008, n.p.). But despite two short periods of profitability, between 2008 and the summer of 2012 Motorola lost money in all but two quarters (Pichette, 2012).

Microsoft Sues Motorola and Google Gets Involved in Patents

Even as Motorola Mobility was struggling to regain profitability, it faced problems on other fronts as well. In Chapter 5, I discuss one case in which Motorola contributed technology to the GSM phone standards and then leveraged its standards-essential patents in order to compete in the marketplace (see Bekkers, Verspagen, & Smits, 2002). In October of 2010, Microsoft sued Motorola Mobility for infringing on nine patents (Kang, 2010; United States International Trade Commission, 2012). A month later, Microsoft filed another lawsuit, alleging that Motorola Mobility was taking similar actions with standards-essential patents that Motorola (before being divided into Motorola Mobility and Motorola Solutions) had contributed to the H.264 video standard and the 802.11 Wi-

Fi standards (Lowensohn, 2010a; Rigby & McCormick, 2010). Motorola Mobility counter-sued opening another front in the patent wars.

As I discuss in Chapter 4, it was around this time that Google was looking around for patents to help “defend Android” from opponents in the patent wars. In the spring of 2011, Novell sold a patent portfolio to a consortium of companies that included Microsoft and Apple (Department of Justice, 2011). As was later made clear, Google had been invited to join in this consortium, but declined.¹⁰ The Novell deal was approved in April of 2011. A few months later, a similar consortium bought up a patent portfolio owned by Nortel. In early July, Google opened discussions with Motorola Mobility, looking for ways to the two companies could work together to protect Android against what was beginning to look like a growing arsenal of patents in the hands of their competitors (Motorola Mobility, 2011). As shown by the Special Proxy Statement, these discussions quickly turned to the possibility of Google itself purchasing patents from Motorola, with the goal of using them to defend Android. But the Motorola executives did not believe the company would last long in the hyper-competitive mobile marketplace without access to its trove of patents, so the discussions then turned to an outright merger. Google would purchase Motorola so that both companies could use Motorola's patents in any disputes.

On August 3, Google's Chief Legal Officer, David Drummond, posted “When patents attack Android” to the official Google Blog (Drummond, 2011). In this post, Drummond casts Android as a hapless victim of aggressive patent bullies like Microsoft and Apple and hints that Google is working to correct this imbalance of power. From

¹⁰ Interestingly, when the Department of Justice approved the deal, they required many of the patents to be placed under two different open source licenses—effectively negating the strategic value of the patents themselves (Vaughan-Nichols, 2011).

August 3 to August 4, Microsoft executives posted a series of five tweets in response to Drummond, making public the information that Google had been invited to participate in the Novell deal (See Chapter 4 for a list of these tweets). Drummond posted an update to his blog in the early afternoon of August 4, responding to Microsoft's tweets, arguing that owning the patents in common with their competitors would have prevented Google from using them strategically in disputes involving other patents. In Chapter 4 I discuss the details of this development along with the rhetorical implications of competing sets of facts and truths.

On August 15, 2011, Google CEO Larry Page announced that the company would purchase Motorola Mobility, pointing to the cell phone maker's large patent portfolio as one of the justifications for making the purchase (Page, 2011). The Special Proxy Statement also makes it very clear that Motorola's intellectual property was a major factor in the negotiations. The merger took about 10 months to pass through the gauntlet of US, European, and Chinese regulatory hurdles. On May 22, 2012, Page announced that the merger had been completed and that Motorola Mobility was now owned entirely by Google. On August 3, 2012 Google announced major layoffs at Motorola Mobility, firing 4,000 of the cell phone maker's 20,000 employees (Pichette, 2012). As the apparent value of Motorola Mobility's patents became clear, Google's ways of describing the merger changed. In Chapter 4 I discuss the rhetorical shifts that take place as Google seems to rely more and more on allusion and maxim to justify their purchase.

Throughout the negotiations and regulatory approval process, the lawsuits between Microsoft and Motorola shifted back and forth, with each side winning some

decisions, but by and large the balance seemed to be tipping in Microsoft's favor. (See, for example “Microsoft wins ruling against Motorola,” 2012, and “Update 2-German court rules against Microsoft,” 2012 for samples of this coverage.) The RAND-related lawsuits went to trial in November 2012 (Rigby & Levine, 2012). In Chapter 6 of this dissertation, I analyze the rhetoric found in the post-trial briefs filed following the oral testimony. As noted above, on April 26, 2013, Judge Robart ruled in favor of Microsoft, drastically reducing the royalty that Motorola is allowed to charge for its Wi-Fi and video technology (Decker, 2013).

In the case narrative above, I have drawn together several seemingly disparate threads of events. Although the case studied in this dissertation does not begin until Microsoft sues Android in the fall of 2010, the full narrative begins several years before that date, in order to establish the context in which the disputes between Microsoft and Motorola Mobility/Google take place. Additionally, although I end this case narrative with Judge Robart's decision in favor of Microsoft, other disputes between Motorola Mobility/Google and Microsoft continue to be hashed out in the courts. Meanwhile, the larger patent war among competitors in the mobile computing marketplace continues as well, with regular news of court cases won by Apple or market share gained by Samsung (or vice versa). But for the purpose of this project, it is necessary to focus on a small slice of these overarching disputes. To conclude this introduction, I provide a preview of the remaining chapters in this dissertation.

Preview of Chapters

In Chapter 2 I provide my theoretical framework and methodological approach. This

chapter investigates rhetorical methods for establishing notions of common sense, especially the common sense that makes technological choices take on an aura of inevitability. I rely on a rhetorical framework drawn from classical and modern understandings of enthymeme as well as Perelman & Olbrechts-Tyteca's work involving audience and quantitative arguments. I also make use of philosopher Charles Taylor's idea of the social imaginary, and how the way we expect things to go helps inform our common sense understanding of things *should* go. Philosopher Andrew Feenberg's critical understanding of technology further informs my theoretical framework by calling for the inclusion of holistic approaches to the values that people impart to the technologies they create.

In Chapter 3, I review a broad selection of relevant literature. I begin with an overview of rhetorical approaches and studies involving public relations and social media. Not surprisingly, I find that public relations scholars and practitioners draw from the rich tradition of ancient, modern, and post-modern approaches to persuasion. I then survey the literature involving the rhetoric of intellectual property and standards. This literature is crucial to my dissertation in that it covers the space in which the rhetoric of the patent wars stands. I then provide a brief overview of the historical controversies involving software patents. As linguistic products, the legal system has not always known whether to protect the intellectual property of software with patents or with copyright. In light of this uncertainty, industry has at times turned to trade secrets to protect their software. The last area of literature covered in Chapter 3 involves the rhetoric of legal writing. I was surprised when reviewing this literature that legal scholars—and especially

legal writing pedagogues—have had a similar relationship to rhetoric as found in my own discipline of scientific and technical communication. Taken as a whole, this broad range of literature provides an overview of the context in which my case study is situated.

In Chapter 4, I provide a rhetorical analysis of Google's purchase of Motorola Mobility. I review the background of that purchase and then analyze relevant samples of the public rhetoric offered by Google, Motorola Mobility, and Microsoft executives regarding the use of patents in intellectual property disputes. I find that Google and Microsoft executives provide opposing rhetorical constructions of facts and truths in the ways they depict the strategic use of patents in such disputes. In its early public rhetoric regarding the transaction, Google pointed to the acquired patents as a justification of the \$12.5 billion purchase of Motorola Mobility. However I find that Google then backed away from patents as their grounds for buying Motorola Mobility, largely because the patents they bought were not proving much of a defense. As they retreated from the logos-based reason of defending Android through Motorola Mobility's patent trove, Google executives began to deploy other rhetorical means to justify the purchase. These rhetorical devices include the use of metaphor, the creation of a sense of rhetorical communion, especially through allusion and maxim, and the unstated premises or conclusions of enthymeme to allow their audience to see the “common-sense” need to make the purchase.

Chapter 5 constitutes the second portion of my analysis. In this chapter, I review the context of standards-essential patents and the ways in which RAND agreements encourage companies to participate in standards. I then provide an analysis of the public

rhetoric provided by Microsoft, Motorola Mobility, Google, and various regulatory agencies in response to developments in RAND-related cases. I find that the different rhetorics deployed by these parties demonstrates their opposing ways of understanding innovation itself. These perspectives lead to an understanding of mobile technology that appears to be holistic, but which is in reality focused solely on sales and profits. Furthermore, the rhetoric offered by these parties exposes what some see as a fundamental flaw in the modern patent system itself: the buying and selling of patents creates a commodification of invention.

In Chapter 6 I offer my final set of analysis. This chapter digs into four legal briefs submitted to Judge Robart in the wake of the oral testimony portion of the *Microsoft v. Motorola Mobility* trial. I find that the rhetoric in these legal briefs reflects the attitudes that Microsoft and Motorola Mobility hold towards innovation and technology in general. Motorola Mobility's rhetoric depicts innovation as resting on a balance beam with patent holders on one side and patent implementers on the other. In essence, Motorola Mobility argues that upsetting this balance could wreck the future of innovation itself. Microsoft, on the other hand, uses language in these legal briefs that does not reveal a concern with the balance between technology and licensing fees. Rather, according to Microsoft's perspective, companies innovate in order to compete in the marketplace in ways that go beyond the collection of royalties for a particular patent or technology.

In Chapter 7 I draw conclusions based on these three areas of analysis. I find that although open-source software may have originally been seen as a challenge to the

existing system of patents and copyright, attempts to make this challenge are drawn back into the language of patents, standards, and legal proceedings. In other words, the challenge that open-source software brings to the patent system remains strong in the public rhetoric offered in press releases and blog posts, but is considerably weaker in the courts. Thus, the patent holders seem to have emerged victorious over their challengers.

Chapter 2: Theoretical Framework and Methodological Approach.

Introduction

This dissertation is built on a theoretical foundation that draws close connections between rhetoric and technology.¹¹ These relationships go beyond the observation that Aristotle considered rhetoric to be a *techne* (or art) (2007 1.1.2). Rather, rhetoric and technology are similar in the fact that both *do things* in the world. In this chapter, I am specifically interested in how rhetoric and technology both rely on and potentially contribute to what can be seen as “common sense.” In the pages that follow, I investigate several sites of change between classical and modern rhetoric, focusing on differences involving the concepts of common sense (*endoxa*). I argue that there are loci of change that mark the shift from the classical sense of *endoxa* as a purely rhetorical concept to the modern recognition that the truth is largely what we make of it. These sites of change can be found in 1) arguments based on *loci of quantity*, 2) enthymematic arguments, 3) modern understandings of the relationship between common sense and truth, 4) Perelman and Olbrechts-Tyteca’s universal audience, and 5) the philosophical concept of social imaginaries. Finally, I argue these shifts also reflect changes in the ways that people relate to technology.

My purpose is to tease out differences among these closely related rhetorical and philosophical concepts in order to shed light on their rhetorical normative implications. “Common sense” also influences the ways in which we see ourselves fitting into the

¹¹ Part of this chapter will appear in the Journal of the Project on Rhetoric of Inquiry (POROI) in January 2014.

world, as philosopher Charles Taylor (2004) points out. Taylor offers the theoretical construct of social imaginaries to help outline the ways in which participants in a society shape and are shaped by the social structures around them. Insofar as these interactions are rhetorical, I see them as similar to the kinds of rhetoric that undergird Perelman and Olbrechts-Tyteca's concept of communion. In the last part of this chapter, I outline a methodology for investigating the rhetoric used to make technology seem like common sense. In other words, although many technologies become so commonplace as to seem simply "the way things are," I argue that this sort of apparent self-evidence actually rests on carefully constructed rhetorical moves.

Aristotle's Views on Rhetoric, Endoxa, and Truth

Before beginning the main part of this chapter, it is worth reviewing some of Aristotle's fundamental views on rhetoric itself, beginning with this oft-cited passage from *On Rhetoric*: "Let rhetoric be [defined] as the ability, in each [particular] case, to see the available means of persuasion" (1.2.1). Aristotle considered rhetoric to be related to dialectic—however, it is clear that dialectic served a much more important role in Aristotle's mind, since dialectic could lead to knowledge whereas rhetoric leads only to persuasion. What's more, Aristotle makes a distinction between those kinds of rhetoric that draw on knowledge and those that are based on opinion: "Speech based on knowledge is teaching, but teaching is impossible [with some audiences]; rather it is necessary for *pisteis* and speeches [as a whole] to be formed on the basis of common [beliefs]" (1.1.12). Later in this chapter I discuss the relationship that Aristotle sketches between *endoxa* and the rhetorical device enthymeme. For now it is sufficient to

acknowledge that for Aristotle, truth remained well outside the purview of rhetoric. That is, both enthymeme and *endoxa* had to draw on truth (or what seems to be true) in order to be persuasive. Thus, for Aristotle, dialectic was an essential methodology that could be drawn on in the hopes of discovering truths, whereas rhetoric was at best a technique used to persuade.

Endoxa can be thought of simply as commonly held opinion, as Aristotle puts it in *The Topics*:

In the case of scientific principles, there is no need to seek the answer of *why* but each of the first principles is persuasive in and of itself. Generally accepted opinion [*endoxa*], on the other hand are those that seem right to all people or most people or the wise. (*Topics* 100b18)

Furthermore, Aristotle sees in humans an innate ability to find *endoxa* that are more or less true:

It belongs to the same capacity both to see the true and what resembles the true, ... and at the same time humans have a natural disposition for the true and to a large extent hit on the truth; thus an ability to aim at commonly held opinion [*endoxa*] is a characteristic of one who has a similar ability in regard to the truth. (*Rhetoric* 1.1.11)

It is clear that although “rhetoric is *antistrophos* to dialectic” (*Rhetoric* 1.1.1), for Aristotle, rhetoric is concerned with persuasion and action and can never rise to the level of helping to discover truth. At best rhetoric should attempt to rely *on* truth to persuade audiences to act in accordance *with* truth.

Modern rhetoricians have found the line between opinion and truth to be much less distinct. Without going so far as to claim the non-existence of the material world, many modern theorists have found truth to be more the product of human communication and rhetoric than Aristotle likely would have allowed. Indeed, Perelman and Olbrechts-Tyteca (1969) see their project as taking up this thread: “Here is resumed the age-old debate between those who stand for truth and those who stand for opinion, between philosophers seeking the absolute and rhetors involved in action” (p. 27). This debate in turn leads to the “distinction between *persuading* and *convincing*” (p. 27). Whereas Aristotle saw Truth as something that the rhetorician could only lean on in order to persuade, Perelman and Olbrechts-Tyteca draw a close connection between generally held opinion and those things that are eventually held to be true.

Locus 1: Loci of quantity

Loci of quantity provide the first place to look for a change in the relationship between rhetoric and the truth found in common sense. According to Perelman and Olbrechts-Tyteca, *loci of quantity* provide a connective tissue binding opinion and truth. Simply put, an argument resting on a *locus of quantity* relies on the power of numbers to be persuasive—that is, something that is good for many is generally thought to be persuasive to all. Indeed, Aristotle considered *loci of quantity* in *The Topics*, as Perelman and Olbrechts-Tyteca point out: “Aristotle mentions some of these *loci*: a greater number of good things is more desirable than a smaller” (Perelman and Olbrechts-Tyteca, 1969, p. 85). But such quantitative proofs go beyond the utilitarian argument articulated by Spock in *Star Trek II: The Wrath of Khan* that “the needs of the many outweigh the needs of the

few” (Meyer, 1982). Indeed, Perelman and Olbrechts-Tyteca argue that these kinds of proofs lie at the heart of many modern notions of self-rule and even what comes to be counted as “truth” itself:

A *locus* of quantity, the superiority of that which is accepted by the greater number of people, forms the basis of certain conceptions of democracy and also conceptions of reason which equate reason with ‘*common sense*.’ Even when certain philosophers such as Plato contrast truth with the opinion of the greater number, it is by means of a *locus* of quantity that they justify the preference they accord to truth, for they hold it to be something commanding the assent of all the gods, something which should win the assent of all men. (Chaim Perelman & Olbrechts-Tyteca, 1969, pp. 86–7)

Regarding the relationship between *loci of quantity* and truth, Perelman and Olbrechts-Tyteca point to the notion of *durability* (which is quantitatively based on the amount of time that something will last): “The quantitative *locus* of durability justifies also the high values attached to truth as being that which is eternal in contrast to opinions, which are passing and unstable” (p. 87). Contrast this with Descartes, who viewed “Good sense” as “the power of judging aright and of distinguishing truth from error” (Descartes, 1994, p. 3). Descartes saw good sense, or reason, as being distributed in equal shares among all people. The reason people disagree is thus not that some people have more reason than others, but because “we conduct our thoughts along different ways, and do not fix our attention on the same objects” (p. 3). Implicit in this view of reason is the assumption that truth itself lies outside of the ways in which we reason about it. Some of us may find

truth by using reason well; others may not. But Truth itself is always external to the seeker.

Unlike Aristotle and Descartes, Perelman and Olbrechts-Tyteca maintain that truth is not external to rhetoric—instead they place truth directly in the hands of the rhetor. In other words, to be considered true a thing need only be thought of as true by the greatest number of people for the greatest amount of time. Rhetors concerned with opinion are therefore directly involved in crafting what comes to be held as true.¹²

Of course, Perelman and Olbrechts-Tyteca were not the first scholars to question positivist notions of truth. To take one eighteenth-century example, Giambattista Vico (1990) critiqued the Cartesian methods of inquiry that were prevalent in his time, arguing that an over-reliance on these methods had led to a neglect of ethics:

Since, in our time, the only target of our intellectual endeavors is truth, we devote all our efforts to the investigation of physical phenomena, because their nature seems unambiguous; but we fail to inquire into human nature which, because of the freedom of man's will, is difficult to determine. (p. 720)

Vico's solution, at least for those interested in political topics, was to forgo the study of nature for the study of debate and rhetoric.

Foucault (1970) takes a similar tack in his description of the role that language plays as part of the epistemic warehouse: "All knowledge is rooted in a life, a society, and a language that have a history, and it is in that very history that knowledge finds the element enabling it to communicate with other forms of life" (p. 372). According to

¹² This should come as no great surprise to readers of modern rhetoric, especially work that has been done in the past three decades on the rhetoric of science. Gross (1990) and Latour & Woolgar (1986) are excellent examples.

Foucault, language's role in the epistemic warehouse is rooted in custom and the human mind:

Having become a dense and consistent historical reality, language forms the locus of tradition, of the unspoken habits of thought, of what lies hidden in a people's mind; it accumulates an ineluctable memory which does not even know itself as a memory. (p. 297)

Setting aside the Foucauldian mystery of how language could involve itself in “unspoken habits of thought,” the key insight is clear. In fact, it is reminiscent of the observation offered by Mumford (1967) that the mind is something different from the brain, and quite impossible without language (Chapter 2). The crux of Foucault's project in *The Order of Things* is to explain how rhetorical changes have impacted that epistemic warehouse.

Foucault claims that before the modern era, language and knowledge were centered on categorizing and taxonomies. Indeed, Foucault insightfully points out that categories rely on the natural ambiguity of language, since a perfect one-to-one naming system would be completely flat, and therefore meaningless. In other words, language is not simply about naming things; language concerns itself with putting like with like and thereby attempting to understand differences (pp. 96–103). However, Foucault argues that during the modern era, language (and consequently knowledge) moved from taxonomies to grids: “The centre of knowledge in the seventeenth and eighteenth centuries is in the table” (p. 75). This reflects changes in writing and even printing technologies; it is easier to communicate using grids and tables if these devices can be reproduced consistently. In essence, these rhetorical changes impact the nature of knowledge itself—changes in

language and writing affect the way that knowledge is discovered, understood, created, and transferred.

Locus 2: Enthymeme

A second locus of change in the relationship between rhetoric and common sense can be found in shifting understandings of enthymeme. Enthymeme, at its core, is a rhetorical argument in which one or more premises or the conclusion has been left unstated. The classic example of enthymeme is as follows:

1. Socrates is a man.
2. Therefore Socrates is mortal.

In this example, the unstated premise is “All men are mortal.” Aristotle offers the enthymeme as one way to connect arguments with *endoxa*:

...since rhetorical *apodeixis* [i.e. demonstration] is enthymeme (and this is, generally speaking, the strongest of the *pisteis*) and the enthymeme is a sort of syllogism..., it is clear that he who is best able to see from what materials, and how, a syllogism arises would also be most enthymematic—if he grasps also what sort of things an enthymeme is concerned with and what differences it has from a logical syllogism; for it belongs to the same capacity both to see the true and what resembles the true, and at the same time humans have a natural disposition for the true and to a large extent hit on the truth; thus an ability to aim at commonly held opinions [*endoxa*] is a characteristic of one who also has a similar ability in regard to the truth. (*Rhetoric* 1.1.11)

Thus, for Aristotle, there is a clear relationship between enthymeme and *endoxa*.

However even when dealing with enthymeme, Aristotle remains focused on truth as the most important ingredient in persuasion: “True and better ones [i.e., underlying facts] are by nature always more productive of good syllogisms [and by extension, good enthymemes] and, in a word, more persuasive” (*Rhetoric* 1355a12). Without access to the truth, the rhetor (at least as far as Aristotle is concerned) does not have much hope of being persuasive. In other words, for Aristotle, knowing the truth can help reveal more persuasive enthymemes, but not the other way around.

Bitzer (1959) sheds light on the relationship between commonly held opinion and enthymeme in Aristotle’s *Rhetoric*, while strengthening the connection between dialectic and rhetoric itself. He surveys previous definitions of enthymeme and finds most of them lacking in one way or another. But building from these definitions and from the *Rhetoric* itself, he finds that definitions of enthymeme generally see it as something akin to a syllogism that deals with probabilities or signs while at the same time leaving some part of the argument unstated. Bitzer implies in his own definition that it is the unstated portion of the argument that gives rhetorical enthymeme its persuasive power: “The enthymeme is a syllogism based on probabilities, signs, and examples, whose function is rhetorical persuasion. Its successful construction is accomplished through the joint efforts of speaker and audience, and this is its essential character” (p. 408). In other words, the unstated premises in an enthymeme are similar to the questions used in dialectic: both allow the audience to fill in crucial parts of the interaction based on their own opinions and beliefs. This has become especially important as rhetoric has moved from oratory into writing. However, Walton (2001), far from seeing this as a strength of enthymeme,

considers it to be “the problem with enthymemes”:

If given carte blanche to fill in any proposition needed to make the inference structurally correct, we may insert assumptions...that the speaker or audience didn't realize were there, doesn't accept, or didn't even mean to be part of the argument. (p. 94)

Nevertheless, Walton offers his own description of the way enthymeme often functions in rhetoric: “In rhetorical persuasion, it seems that eikotic or plausibilistic arguments are frequently combined with arguments that have nonexplicit premises or conclusions” (p. 99).

After analyzing a number of enthymematic arguments, Walton helps shed light on the connection between enthymeme and *eikos*, or probability:

A common basis for many of the enthymemes above is found in propositions that are relied on as acceptable assumptions that need not be explicitly stated because they can be taken for granted as holding on the basis of common experience, or common understanding of the way things normally work in familiar situations.
(Walton, 2001, p. 104)¹³

In other words, enthymemes need not state those premises that are anchored in common sense. It is this reliance on common sense and the relationship between common sense and commonly held opinion (that is, between enthymeme and *endoxa*) that interests me, especially as both concepts become anchored in technological choices. In the following

¹³ As an example, Walton also offers the following argument: “Rise e bise is often listed on menus among the soups, and some gastronomic writers dare to call it one. Nonsense! It is served with a fork. Who ever heard of eating soup with fork?” (Walton, 2001, p.102, citing Root, 1990). Walton breaks down the enthymeme in this example more quite clearly as, “If something is served with a fork, and nobody eats soup with a fork, then what was served is not a soup” (p. 102).

section, I attempt to make clear some connections between common sense and rhetorical facts and truths.

Locus 3: The Changing Relationship among Common Sense, Facts, and the Truth

A third place where modern rhetoric has shifted towards the epistemic can be found in the relationship among common sense, facts, and truth. This is important to an understanding of how rhetoric in turn shapes technology because of the tendency that successful technologies have of becoming ubiquitous—and then invisible. Our understanding of technological progress becomes interwoven with our understanding of the way things are—the historical choices that have been made along the way fade into imperceptibility. An example of technology taking a common sense place in our lives can be illustrated by my choice of a tool with which to write early versions of this chapter. Having grown weary of word processors crashing and inconsistent formatting of text, I chose the LaTeX markup language (see Figure 5). Several colleagues have told me that I am crazy, since writing in LaTeX looks more like computer programming than word processing and would require a heavy learning curve. One person said, “Isn’t there a reason everyone uses Word? Because it’s better!”


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124 sense and rhetorical facts and truths.
125 \section{Common Sense}
126 In this section, I am concerned with the role that rhetoric plays in the c
the tendency that successful technologies have of becoming ubiquitous and
even the Internet connection in my home is when it stops working; if all i
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learning curve will pay dividends as I work on a project as large as a dis
{common sense} by forgoing the ease of writing in a WYSIWYG word processor
choice will ultimately be worth it.
127 \begin{figure}
128   \begin{center}
129     \includegraphics[width=1\textwidth]{../diss_figures/LaTeX-Screen}
130
131     \caption{The LaTeX markup language for an early version of this chapter}
132   \end{center}
133 \end{figure}
134
135 As noted above, Perelman and Olbrechts-Tytecha point to \textit{loci of qu

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Figure 5: The LaTeX markup language for an early version of this chapter.

The actual reasons that many people prefer graphical word processors are considerably more complex. However, it seems safe to say that one factor is the “lock-in” that occurs as technological choices are made. David (1985) writes about technological “lock in” in the case of the QWERTY keyboard layout:

A path-dependent sequence of economic changes is one of which important influences upon the eventual outcome can be exerted by temporally remote events, including happenings dominated by chance elements rather than systematic forces. (p. 332).

In other words, choices made today can have lasting impacts on choices that must be made tomorrow, even after the conditions which led to today's choices cease to exist. David outlines the economic choices that led to the lock in of the QWERTY keyboard layout in the 19th century. Originally this layout made technological sense, given

manufacturing and design constraints of the time. But long after typing and keyboarding technologies ceased to favor QWERTY, the layout has persisted. David argues that this is because once typists learned to touch type on QWERTY keyboards, economic factors favored the QWERTY layout just enough for it to prevail over competing layouts, even if the latter were more ergonomic. In the case of word processor choices, it may well be that “everyone” uses Microsoft Word because it is better. Or it may be that Word is preferred because of the near ubiquity of Microsoft's software on the computers that people use at work (a choice which is itself the result of earlier corporate decisions involving desktop computers for employees in the 1980s and 1990s).

Regardless of how graphical word processors came to be seen as superior, the consensus among my colleagues was that I was defying *common sense* by forgoing the ease of writing in a graphical word processor such as Microsoft Word or OpenOffice. Below I outline the basis for such notions of common sense, arguing that they are essentially found in rhetorically constructed notions of Truth. As noted above, Perelman and Olbrechts-Tytecha point to *loci of quantity* as the justification given by philosophers such as Plato for their preference for Truth over mere opinion, since Truth is “something commanding the assent of all the gods, something which should win the assent of all men” (Chaim Perelman & Olbrechts-Tyteca, 1969, pp. 86–7). They base this insightful observation at least in part on the following passage from Plato’s *Phaedrus*: “A moderate man does not put himself through this labor [of constructing speeches] in order to speak and act in the company of human beings, but to put himself in a position of saying what is gratifying to the gods”(Plato, 2003, 273e). However, in the modern world Perelman

and Olbrechts-Tyteca describe an attachment to truth that is unconditionally bound to the assent of other people, or at least to any such assent that can be constructed by the rhetor.

Similarly, rhetoricians have long argued that facts are the constructions of speakers and writers. Poovey (1998) describes the ways in which the Renaissance innovation of double-entry bookkeeping helped move the production of knowledge from speaking to writing (Chapter 2). She argues that the writing of the emerging mercantile class contributed to a change in what was understood to be a fact: “mercantile writing—both double-entry bookkeeping and mercantile accommodation more generally—played a greater role in the transition from the old status hierarchy to modern, functionally differentiated domains than historians have typically acknowledged” (Poovey, 1998, p. 91). Poovey traces this shift to the modern reliance on statistics as a tool for understanding the natural world. However she acknowledges that this shift did not come about without philosophical challenges and difficulties:

As long as one assigned the phenomena of nature—or even more questionably an abstraction like the economy or society—the kind of prominence that Bacon had done, it was impossible to devise any method *except a mathematical one* for moving from observed particulars to general principles. (p. 317, emphasis in original)

Not only are facts drawn from the social and material worlds reliant on the ways people write about them for their existence, but the shift from hierarchy and taxonomy to statistics and mathematical tables enables a transition from deduction to induction. Individual details, when observed *en masse*, can be assembled into an understanding of

the greater whole.

Perelman and Olbrechts-Tyteca reveal a more rhetorical stance in their discussion of facts and truths. Indeed, they tend towards social construction. For example, they claim that “[i]t is not possible [to]...classify this or that concrete datum as a fact” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 67). However, it is clear that the authors do not reject the existence of facts themselves, but rather point to the ways that facts emerge amid the various forces of argumentation and persuasion. “From the standpoint of argumentation, we are confronted with a fact only if we can postulate uncontroverted universal agreement with respect to it” (p. 67). In other words, speakers and writers deploy facts that are much like the controversial concept of the universal audience in that the “facts” we argue with are constructions of our own making. This does not mean that basic facts do not exist outside of our argumentation. For example, it is fact that water freezes at zero degrees Celsius. But when I deploy that fact in an argument, I rely on it as a construction of what I assume my audience will grant as a fact. This must be so, because I cannot actually *know* what my audience takes as fact.

In “Act and Person in Argument,” Perelman and Olbrechts-Tyteca (1951) provide an anecdote that makes clear the tenuousness of even seemingly self-evident facts. They relate a tale from John Locke that illustrates the extent to which well-accepted facts must be accommodated to the audience:

It happened to a Dutch ambassador, who entertaining the king of Siam with the peculiarities of Holland...amongst other things told him “that the water in his country would sometimes in cold weather be so hard that men walked upon it, and

that it would bear an elephant if it were there.” To which the king replied “hitherto I have believed the strange things you have told me, because I look upon you as a sober, fair man: but now I am sure you lie!” (p. 263)

Thus, the Dutch ambassador wrongly assumed he was addressing a universal audience as he explained the “fact” of water freezing.

Perelman and Olbrechts-Tyteca (1969) make it clear that the relationship between the universal audience and rhetorical facts is always an intimate one: “The way in which the universal audience is thought of, and the incarnations of this audience that are recognized, are thus determining factors in deciding what, in a particular case, will be considered a fact” (Perelman and Olbrechts-Tyteca, 1969, p. 67). To put this in the proper context, it is crucial to bear in mind that the universal audience as conceived by Perelman and Olbrechts-Tyteca is itself a construction of the author, thus certainly any “concrete datum” held as fact by the audience must also be a construction.¹⁴ However, Perelman and Olbrechts-Tyteca also take an interesting turn with this discussion: “A fact loses its status as soon as it is no longer used as a possible starting point, but as the conclusion of an argumentation” (Perelman and Olbrechts-Tyteca, 1969, p. 68). Note that this flies in the face of Aristotle’s observation that facts are not generally the subject of arguments (*Rhetoric* 1.4.2). As far as Perelman and Olbrechts-Tyteca are concerned, we most certainly *can* argue about facts, but if we do, the facts lose their facticity. In this, Perelman and Olbrechts-Tyteca are much closer to Latour and Woolgar (1986, see especially Chapter 4), who come to a similar conclusion regarding the status of scientific

14 In this way the Universal Audience is just like any other audience (*a la* Ong (1975)).

facts. In other words, arguing about what counts as a fact is not the same as arguing about the facts of a particular case. The latter is simply an exercise in figuring out which facts to pay attention to and which to ignore. The former plays a role in determining whether a datum (e.g., the freezing point of water or the number of planets in the solar system) counts as a fact at all.

Perelman and Olbrechts-Tyteca divide those things that have gained traction as facts into two groups: “Accepted facts may be either observed facts—this is perhaps the case for most premises—or supposed, agreed facts, facts that are possible or probable” (Perelman and Olbrechts-Tyteca, 1969, p. 68). The authors also provide a helpful connection between facts and truths: “The term ‘facts’ is generally used to designate objects of precise limited agreement, whereas the term ‘truths’ is preferably applied to more complex systems relating to connections between facts” (pp. 68–9). Thus, even those things commonly understood as “Truths” in reality are built on a foundation of rhetorical moves and constructed audiences, seen as universal by the speaker—the rhetor hoping to deal with Truth must take into account Perelman and Olbrechts-Tyteca’s notion of the universal audience.

Locus 4: The Universal Audience

Perelman and Olbrechts-Tyteca’s universal audience provides a fourth theoretical place to aid in the creation of epistemic common sense. The concept of the universal audience has long been controversial. For example Ede (1989) criticizes the concept for its apparent reliance on the rationality of the audience, while Gross and Dearin (2003, Chapter 3) dispute this weakness, since rationality, like the universal audience itself, remains a

construction of the speaker. Perelman and Olbrechts-Tyteca claim that the universal audience

refers of course...not to an experientially proven fact, but to a universality and unanimity imagined by the speaker, the agreement of an audience which should be universal, since, for legitimate reasons, we need not take into considerations those which are not part of it. (Perelman and Olbrechts-Tyteca, 1969, p. 31)

Clearly, this statement will ring critical alarm bells, especially among post-modern readers. However, I do not believe that the authors intended their concept of the universal audience to be used as a permission slip to exclude members from audiences. Instead, I see their project as a thoroughly modern attempt to update notions and sensibilities drawn from classical rhetoric; as such, it seems unfair to me to criticize a modernist project for its inherent modernity.

More recently, Nicolas (2011) sees the relationship that the universal audience creates between the speaker and his or her constructed audience as a helpful point of transaction between rhetoric and dialectic:

I believe that this idea [i.e., the universal audience] gives meaning to the parallel between rhetoric and dialectic. Addressing the universal audience amounts to debating with oneself, that is, to undergo the necessary trial of contradiction and justification allowing for no possible loophole. (p. 52)

That said, it seems clear that the rhetorical concepts outlined above rest on a foundation of perceived common sense. Indeed, one function of rhetoric is to reinforce that very foundation.

Locus 5: Social Imaginaries

The fifth locus of change I am going to discuss offers an understanding of what constitutes common sense and helps explain those aspects of the social world that depend entirely on the belief and participation of many individuals. This is the concept of social imaginaries put forth by Taylor (2002). In “Modern Social Imaginaries,” Taylor suggests a way of looking at the ways in which people see themselves forming and taking part in society. In Taylor’s words, a social imaginary is “the ways in which people imagine their social existence [and] how they fit in with others” (p. 100). It is important to note that this notion is both normative and dialogic. For example, Taylor suggests that the economy functions as a social imaginary. The economy is normative in that everyone must participate in the economy in some way—it is exceedingly difficult, if not impossible, to opt out completely. However, the economy is also affected by the actions and beliefs of all of the people that participate in it.

Taylor maintains that social imaginaries are different from theory in that the former are “the [ways] ordinary people ‘imagine’ their social surroundings... [This] is often not expressed in theoretical terms; it is carried in images, stories, and legends” (p. 100). Whereas social imaginaries are necessarily “shared by large groups of people, if not the whole society” (p. 106), theories belong to an elite few. Nevertheless, theories do inform social imaginaries—by being taken up by other elites so that eventually even whole societies may believe in a theory, to the extent that it becomes part of “that common understanding that makes possible common practices and a widely shared sense of legitimacy” (p. 106). Although Taylor does not attempt to tie these notions to rhetoric

in any explicit way, his focus on the social imaginaries as informed by images, stories, and legends clearly helps align social imaginaries with rhetorical perspectives. For example, the “stories, images, and legends” of Taylor’s social imaginaries are much the same as Aristotle’s belief that human wisdom could be “preserved, if only partially, in the form of sayings, maxims and myths” (Haskins, 2004, p. 6). Note also that Perelman and Olbrechts-Tyteca point to similar means for creating the communion that is crucial to epideictic rhetoric, a concept which I discuss in greater detail below. Additionally, Taylor’s focus on the practices of participants further strengthens the ties between social imaginaries and rhetorical analysis.

Similarly, if the social imaginary is concerned with the stories and images we tell to make sense of our social worlds, then metaphor must play a role in forming such images. In terms of understanding the rhetorical impact of metaphor, Johnson-Sheehan (1999) takes a view that is sympathetic to my own understanding of rhetoric as language in action: “If rhetoric is primarily about how words are used to achieve particular ends, then a rhetorical view of metaphor should concern how people use them, not how they work” (Johnson-Sheehan, 1999, p. 48). Similarly, Giles (2001) provides an example of such a rhetorical analysis of metaphor in his own study of the metaphors used to describe cloning. In his analysis, Giles offers a distinction between natural metaphors and technical metaphors. He claims that natural metaphors “illustrate the unknown entity with the known by associating the unknown with those occurring in the natural world” (Giles, 2001, p. 377). Natural metaphors can also rely on social relationships, and may even “border on personification [sic] since they draw imagery from human relations between

individuals and social groups” (p. 377). Technical metaphors, on the other hand, “explain the unknown in terms of the known by associating the unknown with figures occurring in the technical world, with items and processes that are the byproducts of science and technology” (p. 378).

It is well worth noting that beyond simply being the stories we tell ourselves about society, social imaginaries are normative at their core. As Taylor puts it: “We have a common sense of how things usually go, but this is interwoven with an idea of how they ought to go” (Taylor, 2002, p. 106). It is this aspect of telling us how things *ought* to be that connects social imaginaries with enthymeme. However, the concept of social imaginaries lacks the iron-clad inescapability of similar concepts, such as ideology as expressed by Althusser (2001). In other words, social imaginaries as conceived by Taylor exhibit something approaching dialectic—people shape the practices that shape them. In this sense, a social imaginary such as the economy can be viewed in much the same way as discourse itself.

Fairclough (2010a, citing Giddens) calls this “the notion of ‘duality of structure’” (p. 38). Furthermore, Fairclough urges researchers not to ignore critical questions, since this means that power and status will also be ignored. Additionally, “the absence of a serious concern with explaining norms [will likewise result] in a neglect of power” (Fairclough, 2010, p. 48). That is, analysis based solely in description will fall short of understanding the actions connected to and resulted from the use of language—it will not be able to account for the ethical implications of rhetoric. To guard against this neglect, Fairclough suggests researchers look for ways in which discourse shapes ideology. He

calls such interactions between discourse and ideology “ideological-discursive formations” (p. 30). Ideological-discursive formations (IDFs) work to “naturalize” ideologies, i.e., to win acceptance for them as non-ideological ‘common sense’ ” (p. 30). Fairclough further argues that “naturalized ideologies and practices become part of the ‘knowledge base’ ...and hence the ‘orderliness’ of interaction may depend on them” (p. 37). Furthermore, this “micro” orderliness in turn comes to depend on “an achieved consensus in respect to ideological positions and practices” (p. 37). In other words, the small ways in which we communicate perpetuate ideologies that are generated by social groups or classes, but which appear to be due to human nature. In essence, the relationship between ideology and discourse is dialogic, and this relationship is created and maintained by IDFs. Fairclough makes it clear that this duality applies to people as well as their ideologies: “In preferring ‘subject,’ I am emphasizing that discourse makes people, as well as people make discourse” (p. 41).¹⁵ Therefore, despite being essentially normative, due to their inherent dialogic nature, social imaginaries can be changed by the words and practices of people that participate in them.

Finally, it is important to note that the Taylor’s social imaginaries are essentially recursive. As Taylor puts it: “The social imaginary is not a set of ideas; rather it is what enables, through making sense of, the practices of society” (Taylor, 2002, p. 91). An example of this recursiveness can be found in Habermas’ (1991) description of the Public Sphere’s use of political power to write constitutions to further stabilize its political power. Kelty (2008) extends and explicates this concept of recursiveness in his work on

¹⁵ Although Fairclough is concerned with analyzing discourse, Berkenkotter and Huckin (1994) extended this concept to genre analysis.

the practices that the free and open source software community used to understand and enable itself and its work. He describes a recursive public as “a public constituted around the technical and moral ideas of order that allow them to associate with one another” (p. 27). It is important to note that for Kelty, a recursive public is more than the community and the discourse it creates about itself. Kelty’s definition insists on the inclusion of the technical structure that enables the making and modification of the community itself (p. 50). The technical structures that enable systems of innovation such as the patent system or open source software would thus fall under the purview of a recursively constituted social imaginary.¹⁶ However, it is clear that such structures and any social imaginaries they enable would amount to nothing without a community of people to make use of and participate in them.

Finally, Perelman and Olbrechts-Tyteca’s *New Rhetoric* offers the concept of rhetorical communion, which is one way speakers and writers participate in the creation and maintaining of the communities that are a prerequisite for social imaginaries. Graff and Winn (2011) provide a thorough analysis of this kind of communion, which until now has received relatively little attention. Graff and Winn make clear that the sense of communion established by perhaps seemingly small instances of epideictic language is essential to the forming and maintaining of community:

Acknowledging that every political community will consist of individuals and groups with competing interests and values, Perelman points to the sense of Communion cultivated in epideictic discourses as the factor that enables the

¹⁶ Scholars such as Richard Nelson have done a great deal of work theorizing the concept of innovation systems. For example, Nelson and Nelson (2002) draw out the connections between innovation systems and institutions.

community to confront or transcend internal divisions that threaten to fracture it.

(Graff and Winn, 2011, p. 111)

Thus, communion is “in this its primary sense a...sociological notion” carrying with it ideas of “shared values as a source of social rapport and cohesion” that Perelman’s mentor Dupreel also held dear (Graff and Winn, 2011, p. 109). In this sense, communion is also closely connected to less rhetorical concepts such as solidarity:

The values promoted in any particular epideictic speech are presumed to command the assent of the audience addressed by the discourse, and as such, the discourse fosters a sense of solidarity or communal spirit among the members of the audience who share those values [citing *The New Rhetoric*, pp. 48–53].

“Communion” is the term Perelman and Olbrechts-Tyteca introduce to name this solidarity.” (Graff and Winn, 2011, p. 109)

Graff and Winn argue that this is essentially a “constitutive function for rhetoric” (p. 122), in the same sense as described by Charland (1987). In other words, this is a rhetoric that a community uses to construct itself—not just to convince or persuade itself.

Although Perelman and Olbrechts-Tyteca see communion as largely related to epideictic discourse, Graff and Winn argue that Epideictic itself can be oriented towards the future, rather than focusing solely on the present, as Aristotle describes in *The Rhetoric* (1.3.4). As Graff and Winn put it: “Epideictic, though celebrating values in the present, is oriented toward the future. The Communion it fosters is anticipatory and preparatory” (p. 110).

Finally, Graff and Winn point to three major methods for establishing communion,

as described in *The New Rhetoric*:

1. Maxims and proverbs, which are centered on the values of the audience;
2. Allusion and quotation, which are also focused on values;
3. Inviting the audience to participate, which Graff and Winn suggest are value-neutral. (p. 114).

For the third method, Graff and Winn point to devices such as the oratorical question, but it is clear from the discussion of enthymeme above that unstated premises or conclusions can also be seen as an invitation to participate—especially in discursive situations that do not involve direct interaction with the audience. As noted, the first two methods rely on the supposed values of the audience being addressed.

Changes in the Relationship between Rhetoric and Technology

I have discussed five loci of change in the pages above. I argue that these changes illustrate a shift in the relationship between rhetoric and truth. These points of change also help reveal the nature of the relationship between humans and technology. In this section I hope to shed light on this relationship, first by attempting the deceptively difficult exercise of defining technology, and second by examining Andrew Feenberg's (2002) critical theory of technology.

Defining Technology

If any attempt to flesh out the relationship between rhetoric and technology is to be successful, it is necessary to define the term “technology” itself. In the age of smart phones and tablet computers, it may be tempting to think of technology as nothing more than the shiny device with a bright screen that you hold in your hand and use to post

pictures of your dog to Facebook. However, even this tongue-in-cheek example points to a greater complexity. The actual device you hold can do nothing without a long history of software development, systems and networks of mineral extraction to provide cobalt for the battery, and vastly complex interactions between telephone networks and the Internet—and this just scratches the surface of the social and technical systems required to make these devices work. Below I attempt to coalesce a working definition for technology from a diverse number of scholars.

Hughes (2004) sees technology as a “creative process involving human ingenuity” (p. 3), and later as a “creative means to a variety of ends” (p. 5). Key components of Hughes’ definition include creativity and process. Technology is not a thing; it is way of dealing with the material world. Furthermore, by focusing on the ends of technology, Hughes makes it clear that technology cannot be considered in isolation from the effects that it has on the social and material worlds—on people and the environment. Winner (1978) views technology as composed of a variety of sub-components: in this definition technologies can be broken down into apparatuses, organizations, and networks. Of course, Winner is concerned more with understanding the relationship between technology and power than with simply defining technology itself. For example, in “Do Artifacts Have Politics” (1980) Winner argues for studying the “arrangements of power and authority” that people embed into technologies (p. 123). At the same time, Winner acknowledges that many will take issue with the idea that we can blame inanimate objects for the ills of society:

We all know that people have politics, not things. To discover either virtues or

evils in aggregates of steel, plastic, transistors, integrated circuits, and chemicals seems just plain wrong, a way of mystifying human artifice and avoiding the true sources, the human sources of freedom and oppression, justice and injustice.

Blaming the hardware appears even more foolish than blaming the victims when it comes to judging the conditions of public life. (p. 122)

But despite this straw man argument, Winner is clearly in favor of addressing the politics that are embedded in technologies. By way of example, Winner points to the low highway overpasses found on Long Island, which were designed to discourage buses—and the low-income, largely African American passengers that relied on public transit—from easily traveling to the beaches and parks of Long Island (pp 123-4). However, Winner also makes it clear that technological choices have political effects even when the intent is not as transparent as racial segregation. A second approach to technological politics suggest that technologies “a given technical system actually *requires* the creation and maintenance of a particular set of social conditions as the operating environment for that system” (Winner, 1980, p. 130). Ultimately, however, Winner suggests that in order to understand the values embedded in a given technology, scholars must investigate both the artifact and the system in which it exists.

The historian Thomas P. Hughes leans more heavily towards machines connected into systems as the correct approach for those interested in studying technologies. Hughes notes that systematization is often thought of as a dehumanizing force (think urban planning), while networks denote hope and human connections (think Vannevar Bush’s vision for the Memex device) (Hughes, 2004, p. 97).

To help shed light on the difference between a technology and a machine, it is useful to turn to Latour (1987) and Mumford (1967). Latour describes a machine as a device that holds otherwise disparate forces together: “This makes a machine different from a tool which is a single element held directly in the hand of a man or a woman. Useful as tools are, they never turn Mr or Mrs Anybody into Mr or Mrs Manybodies!” (p. 129). Similarly, Mumford claims that the first machine was the bow and arrow, which is the first human-made device to do more than simply extend the function of an existing organ (such as a club extending the function and force available in the naked human hand). Mumford also describes the systems of human capital and control used to build the pyramids as a “megamachine,” which he justifies as more than just an “idle play on words” (p. 191). “If a machine be defined...as a combination of resistant parts, each specialized in function, operating under human control, to utilize energy and to perform work, then the great labor machine was in every respect a genuine machine” (p. 191). Moreover, Wajcman (1991) points to the intrinsic connection between technology and human knowledge:

“technology” is a form of knowledge....Technological “things” are meaningless without the “know-how” to use them. That know-how often cannot be captured in words. It is visual, even tactile, rather than simply verbal or mathematical. But it can also be systemized and taught, as in the various disciplines of engineering.(p. 14)

Wajcman also notes the close connection between technology and action: “‘Technology’ also refers to what people do as well as what they know.... A computer without programs

and programmers is simply a useless collection of bits of metal, plastic and silicon” (pp. 14–15). Wajcman considers the actual hardware of technology to be a third layer of meaning that people use when referring to the term “technology.”

Wajcman, a feminist scholar, further describes the realm of technology as one that is dominated by men and, as a result, by male values: “As with science, the very language of technology, its symbolism, is masculine. It is not simply a question of acquiring skills, because these skills are embedded in a culture of masculinity that is largely coterminous with the culture of technology” (p. 19).¹⁷ Wajcman is concerned with barriers that have prevented women from participating in the creation, shaping, and steering of technology; however, she notes that mere access is no solution, due to fundamental disconnects between technology that has been dominated by male values and the potential for a truly ‘feminist’ technology—one that sees an elimination of patriarchy as an engineering goal of technology itself. In this sense, a feminist approach to technology would likely resemble a kind of technological holism as described by Feenberg (2002). Wajcman’s insight is quite clear, especially in light of a rhetorical dispute such as “The Patent Wars”—the very label implies a set of shared values and beliefs, set against technological, economic, and legal systems that favor “winners” over “losers” and tend to disregard value systems that do not align well with this perspective.

Taking into account all of these sources, I offer the following definition of technology:

Systems that involve creative combinations of tools, machines, processes and/or

¹⁷ Note that Oldenziel (1999) places the beginnings of technology as masculine in the late 19th century. Conversely, Harding (1998) sees androcentric roots in the enlightenment philosophies upon which modern science is built (p. 152).

people that are connected by networks with the purpose of making, creating, or changing things in the social and material worlds.

By combining the devices with their effects on the world, this definition calls for ethical considerations of technology. By this I mean that technology cannot be seen as a neutral tool. As I have argued above, rhetoric and technology have always been closely connected, even if those connections have not always been seen.

But there also exists a rhetoric *of* technology. Bazerman (1998) offers the following definition for this concept:

[A rhetoric of technology] is the rhetoric that accompanies technology and makes it possible—the rhetoric that makes technology fit into the world and makes the world fit with technology. There is a dialectic between rhetoric and the material design as the technology is made to fit the imaginably useful and valuable, to fit into people’s understanding of the world. (p. 385)

Bazerman’s definition highlights once more the close, two-way relationship between rhetoric and technology—dialectic in Aristotle’s terms or dual in Fairclough’s or Taylor’s. By paving a road between people and technology, rhetoric plays an important role in transferring human values into technological creations.

Values and Technology

Technology is imbued with the values of the people that create it. Feminist scholars of technology have been aware of this for some time. For example, Wajcman (1991, Chapter 5) discusses the technological architecture of the home as “uniquely revealing about prevailing social relations and norms of household organization” (p. 110). The Victorian

desire for a separation of the sexes and privacy (especially for the “Master” of the house) gave way to more open architecture that—at least in theory—implied families that would share in the work of the home. Wajcman describes similar instances of values being built into urban transportation infrastructure that favors the (traditionally) male bread-winner and his commute to work (pp. 126–135). Similarly, in her investigation into the absence of women from historical accounts of technical writing, Durack (1997) points to a crucial misstep in the way previous histories have viewed technology and women:

The problem with regard to adding women to our disciplinary history lies in the assumption that *technology*, *work*, and *workplace* are gender neutral terms.... But as the work of feminist historians and scholars demonstrate, such terms represent contested ground. (p. 250)

It is in these areas of contestation that values become embedded in technology.

Similarly, values are being designed into the size, shape, and design of mobile technologies.¹⁸ Addressing such values is the central task that Feenberg has set out for himself. In the rest of this section, I outline three of Feenberg’s core concepts: instrumentalism (which is essentially the notion that technology is a neutral tool), substantivism (often described as technological determinism), and Feenberg’s own critical theory.

Instrumental Theory

Instrumental theory is the belief that technologies are nothing more than neutral tools, which people use to do whatever they will. Feenberg argues that this common-sense

¹⁸ For example, it seems an unlikely coincidence that the size and shape of a cell phone is about the same size and shape as a man’s billfold—a form factor that potentially trades ease of use in order to easily fit in a pocket.

approach is the “most-widely accepted view of technology” (p. 5). Furthermore,

Feenberg argues that instrumentalism rests on the following four assumptions:

1. Technology is neutral in the same way that any “instrumental means” (p. 5) is neutral, and that technology is “indifferent to the variety of ends” it can be directed towards.
2. In addition to being indifferent to its outcomes, “technology...appears to be indifferent with respect to politics” (p. 6). That is, discussions regarding the public good have little or no bearing on discussions of technological progress. The only place where the barrier between politics and technology is permeable involves discussions of cost.
3. Technology is deemed neutral because of its “‘rational’ character” (p. 6). In other words, since science is seen as the product of a rational process, uncovering knowable things about the material world, technology—which is science applied to the material world—must also be neutral.
4. Technology is seen as neutral because it “stands essentially under the very same norms of efficiency in any and every context” (p. 6). If the focus is on measurements of efficiency, other ways of evaluating the effects of technology drop to the wayside. Social, cultural, and environmental costs (and benefits) are much harder to measure in terms of efficiency.

Although Feenberg’s four points are an extremely helpful analysis of this point of view, I believe that instrumentalism’s most defining (and most insidious) feature is its connection to self-evidence, or common sense. Instrumentalism is at the heart of slogans such as

“Guns don’t kill people; people kill people.”

Substantive Theory

Substantive theory, on the other hand, places agency in technology itself: “Substantive theory...argues that technology constitutes a new cultural system that restructures the entire social world as an object of control” (Feenberg, 2002, pp. 6–7). Under substantivism, technology becomes more than one cultural factor among many that define the course of human development—it becomes the *most important* factor. The illogical conclusion of this argument is that technology will become autonomous and will ultimately control people as the means to fulfill its (i.e., technology’s) own ends. Nightmarish scenes from any number of science fiction movies have envisioned the results.

A less imaginative but more realistic version of this theory can be found in *Autonomous Technology*, where Winner (1978) describes the current state of Western technology as a conduit, “such that no matter which aims or purpose we decide to put in, a particular kind of product inevitably comes out” (p. 278). Feenberg offers a relatively mundane illustration: As fast food has replaced the nightly practice of sitting down with family for dinner, “the unity of the family, ritually affirmed each evening, no longer has a comparable locus of expression” (p. 7). This is not to say that fast food causes a decline in family life, but the correlation between the two factors (that is, the rise of a technologically-based daily life and the simultaneous decline in family life) is significant. However, Feenberg reiterates that substantive theory does not necessarily consider technology as run amok: “The issue is not that machines have ‘taken over,’ but that in

choosing to use them, we make many unwitting commitments” (p. 7). These commitments add up, amounting to a kind of technological determinism, in which technology determines the shape of society (and not the other way around).

Smith and Marx (1994) argue that technological determinism “has a prominent place in the culture of modernism” (p. ix). They also describe determinism as a spectrum. At one end is the “hard” viewpoint, which holds that humans are giving up all of their agency and have placed it in technology; at the other end is a softer approach to determinism. This approach reminds us that technology is itself a cultural product created by human beings. Ultimately, Smith and Marx seem to lean slightly in favor of a hard approach to determinism:

We need only to look at the world of the 1990s to revivify the intuitively compelling idea that technological innovation is a major driving force of contemporary history, if not the primary driving force. Even if the critique of hard determinism is valid, it may only lead us to alter the status of technology to that of a second-order agent of history. (p. xiv)

Seeing technology as “second-order agent of history” aligns well with the “unwitting commitments” described by Feenberg. Interestingly, there is a measure of “common-sense” in substantive theory as well—when people speak of “the march of progress,” they are often invoking a substantive view of technology. The implication is that technology will move forward in the direction that it has chosen, and people can only follow along or get out of the way.

A Critical Theory of Technology

Feenberg's critical theory of technology requires that technology be thought of not as a thing, but rather as "an 'ambivalent' process of development suspended between different possibilities" (p. 15). It is important to note that this ambivalence is not the same thing as neutrality, because ambivalence incorporates social values into the design, and not just the use of, technologies (p. 15). Note also that this definition of technology is similar to the definition offered by Hughes (2004), who sees technology as a "creative process involving human ingenuity" (p. 3), and as a "creative means to a variety of ends" (p. 5). The key parts of these two definitions overlap: technology is a process aimed at "ends" in Hughes' definition and at "possibilities" in Feenberg's.

The goal of critical theory is to deconstruct and evaluate technology and its relationship to those ends/possibilities, under the assumption that technology is a cultural construct shaped by the values and attitudes of the people that create it. Feenberg summarizes this relationship nicely: "Technology is a two-sided phenomenon: on the one hand, there is the operator, on the other, the object. Where both operator and object are human beings, technical action is an exercise of power" (p. 16).¹⁹ By considering roles that technology plays in reconstituting relationships among people and things, Feenberg's theory makes it possible to account for the social and cultural values involved in the production of technology.

Methodology

The scholars that I outline above can be divided into two groups: those that offer a pure description and those that suggest methods, criticism, or both. I consider Perelman and

¹⁹ Here Winner (1978 see especially, Chapter 6, and also 1980) would likely agree.

Olbrechts-Tyteca to be largely descriptive. Their goal, to my mind, is one of explaining the way authors attempt to persuade. Aristotle in *The Rhetoric* is similarly descriptive. However, in *The Topics* (101b) he outlines a method whereby *endoxa* can be used dialectically to help establish first principles. While it is certainly not my intent to use this discussion of common understandings or common sense to figure out epistemological principles, I do take this is an indicator that studying the ways in which texts are deployed to shape or strengthen positions of common understanding will also help further my understanding of my case. Similarly, even a descriptive analysis such as Perelman and Olbrechts-Tyteca's is immeasurably helpful in understanding these same kinds of rhetorical moves.

Conversely, Walton (2001) makes explicit methodological suggestions. To begin with, he divides missing enthymematic assumptions into two categories:

1. Needed assumptions are "missing propositions such that (1) the argument is not structurally correct as it stands, but (2) when the propositions in question are inserted, the argument becomes structurally correct." (p. 95)
2. Used assumptions are "propositions that, even though not explicitly stated in the text of discourse, are meant to be part of the argument." (p. 95)

Naturally, the used assumptions are especially problematic, because in determining what the speaker intends to be part of the argument, the researcher must necessarily attempt to interpret the speaker's intent. However, as Walton points out, this is much the same as the "problem with enthymeme" itself. The researcher, like the audience, may insert assumptions or arguments that the speaker did not intend.

In order to analyze enthymematic arguments, Walton recommends looking for either needed or used assumptions. This is a clear move from methodology into methods. Before I turn to my own methods, it is helpful to return briefly to Feenberg (2002) for methodological insight into the study of technology.

The crux of Feenberg's critical theory is "technological holism" (p. 183), which aims to provide a framework for evaluating technology as part of a system of subject and objects, including the "ecological, medical, aesthetic, urbanistic, and work-democratic considerations" (p. 184). However, Feenberg's holism demands more than a simple diversity of perspectives; instead, it requires that technology be considered as a cultural construct. Since technology, like any other cultural artifact, is created by people, it must be considered a part of the cultural fabric of society itself. This concept provides a powerful starting point for understanding histories of technology: while no history is likely to provide a completely holistic view, historians who consider the relationship between technology and the environment, health, city and rural aesthetics, and questions of workplace democracy often provide powerful accounts of how technologies and societies interact.

Furthermore, technological holism requires technology itself be reconsidered not as an ends, but as a means: "Health and environmental considerations, the enrichment of work and industrial democracy, must all be internalized as *engineering* objectives" (Feenberg, 2002, p. 184, emphasis original). In other words, rather than utilizing the environment as a means towards technological ends such as smart phone connectivity, technology itself should be used as a way to improve the environment.

Research Questions

As I discuss in my introduction, the major concern that motivates my research involves the conflict and tensions between two major systems of innovation: the traditional patent system and open-source software development. I have chosen the patent conflict between Microsoft and Motorola as a lens through which to view this conflict. To guide my research, I asked the following overarching research questions:

1. How is rhetoric used to define, defend, and extend positions in disputes surrounding mobile computing patents?
2. How do parties in these disputes use rhetoric to attempt to anchor their positions and their technologies in a sense of “common sense?”
3. How do parties in these disputes deploy claims relating to assumed beliefs, values, and truths?

In the rest of this chapter, I outline the methods I chose to help answer these questions.

Case Study

Case study is well-suited to research that is intended to “help formulate hypotheses and add to the development of theory” (MacNealy, 1999, p. 199). Case study is also useful for exploring a topic about which little is known and for gaining insight into groups. Case study is often interested in describing a particular event that a group has experienced, or in providing a rich description of a small group of people or objects (p. 195). Marshall and Rossman (2011) offer this summary of the goals of case research: “Studies focusing on society and culture in a group, a program, or an organization typically espouse some form of case study as a research strategy” (p. 93, emphasis in original). Additionally, case

study may make use of observations and interviews as well as logs, verbal protocols, questionnaires, archival records, physical artifacts, and tests (MacNealy, 1999, p. 203, table 10-1). However, MacNealy cautions that case study research is not simply “more than one method of data collection” (p. 196). Instead she defines case study as “a carefully designed project to systematically collect information about an event, situation, or small group or persons or objects for the purpose of exploring, describing, and/or explaining aspects not previously known or considered” (p. 197). In other words, the goal is to create “new insights, new knowledge” (p. 197) about the case.

Thus, case study is an appropriate research framework for an investigation of the kind of patent dispute I am interested in, since only recently has open source software come into conflict with traditional software development in the mobile computing market. The challenges leveled by proponents of these two systems of innovation constitute a novel situation, one that will benefit from rich description made possible by case study research.

Yin (2003) describes a variety of approaches to single-case and cross-case analysis. Each of these approaches depends on the relationship between the unit of analysis to be studied and its context. Figure 6 displays Yin’s four main types of case study designs.

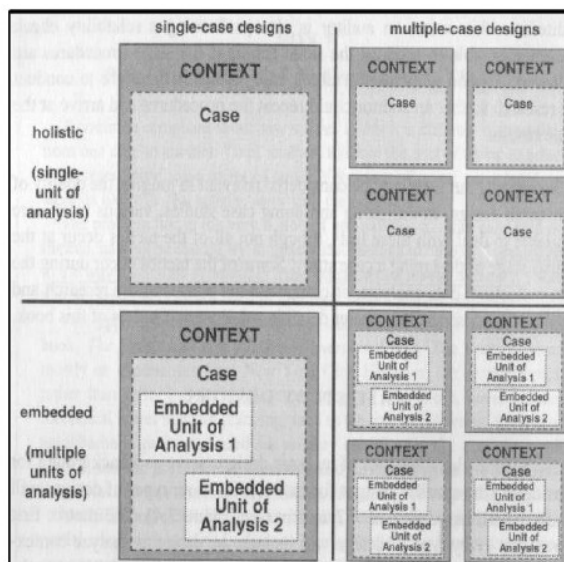


Figure 6: Basic Types of Designs for Case Studies
(Yin, 2003, p. 40)

For this dissertation, I chose a case design of an embedded case study with multiple units of analysis (shown in the lower left quadrant of the figure above). Yin suggests that this design can help guard against one pitfall of a holistic case study based on a single unit of analysis: the chance “that the entire nature of the case study may shift, unbeknownst to the researcher, during the course of the study” (Yin, 2003, p. 45). The possibility of a shifting case seemed relatively high for my project, since over the course of writing the dissertation, the technological and legal landscape was almost certain to change. Indeed, between the time I started writing and the time I finished, oral testimony in *Microsoft v. Motorola Mobility* was held and Judge Robarts issued his verdict. Yin offers embedded units of analysis as a possible antidote: “One way to increase the sensitivity to such slippage is to have subunits. Thus, an embedded design can serve as an important device for focusing a case study inquiry”(p. 45). By using embedded units of analysis, I was able

to draw from three relatively isolated sets of texts for my three chapters of analysis.

Bounding the case in space was somewhat more difficult. However, since I am concerned with patents and open source development as systems of innovation, it makes sense to include in my analysis a wide range of textual artifacts involving the patents and OSS development itself as well as those texts that interested parties use to create, maintain, and defend positions in the field.

Rhetorical Analysis of Texts

Berkenkotter (2002) describes three methods of textual analysis (rhetorical analysis, discourse analysis, and genre analysis): “All three share a common concern with understanding the relationship between text and context” (p. 48). However, “a strictly rhetorical analysis is concerned with the strategies through which arguments are made in written, oral, or electronic texts” (pp. 48–9). I chose to conduct a rhetorical analysis for two reasons:

1. As my review of the literature in Chapter 3 shows, there exists a gap in the rhetoric of intellectual property. Little rhetorical analysis has been conducted of the overlapping systems of open source software innovation and traditional patent-based innovation.
2. As my review of rhetorical theory above in this chapter demonstrates, a theoretical framework involving notions of endoxa, enthymeme, and ways of approaching common sense will help improve our understanding of the case at hand.

Therefore, it is clear that a rhetorical analysis of texts, through its interest in arguments

and how they affect “the relationship between text and context” (Berkenkotter, 2002, p. 48), is a method that is well suited to the case study framework, especially as described by MacNealy (1999) as an exploratory method aimed at finding new insight into a specific event. Atkinson (1998) argues further for careful examination of context when attempting rhetorical analysis: “A crucial element of rhetorical analysis [is the] need to have an articulated sense of the rhetorical situation ... surrounding texts” (p. xx).

Furthermore, Atkinson claims “five identifying characteristics” of rhetorical analysis:

First, it is *eclectic*, in that it borrows concepts and techniques from a broad range of fields. Second it is *highly contextual*, because in order to apply it successfully, its users must have articulated knowledge of the text-producing communities and their specific social contexts, as well as broad exposure to the textual genres under examination. Third, rhetorical analysis is *interpretive*, assuming that the researcher can “read off” important aspects of the surrounding context from the text itself. Fourth, it is a *bottom-up*, or inductive, type of analysis, in which analytical categories or foci are emergent. That is, the analytical categories grow out of engagement with the individual texts themselves, rather than structure preceding the analysis. Fifth and finally, rhetorical analysis operates, theoretically speaking, at the level of *genre*. (Atkinson, 1999, p. xx, emphasis original)²⁰

In this definition, Atkinson seems closely aligned with Berkenkotter’s description of rhetorical analysis:

Not only is the rhetorical analyst concerned with the nature or character of

²⁰ It seems clear that a discussion of the genres involved in innovation systems would be of great value, especially in light of the focus Miller (1984) brings to bear on genre and actions. However, since the purpose of this dissertation is to concentrate on a single dispute, a generic approach is less appropriate.

arguments in texts, but the analyst also pays attention to the situational, sociohistorical, and discursive contexts in which the text appears. The analysis is interpretive and based on the analyst's bringing the tools of rhetorical criticism to bear on the text or texts in question. (Berkenkotter, 2002, p. 49)

Similarly, Lay (2000) describes the purpose of rhetorical analysis as aiming "to examine closely word choice, arguments, warrants, claims, motives, and other purposeful, persuasive features of language. ...For it is through discourse that we come to accept as 'givens' these various technologies and their effects" (p. 7). Lay is concerned with rhetoric as related to reproductive technologies specifically, but this insight helps provide a critical focus for a rhetorical approach to all kinds of technologies. As Bazerman (1998) puts it: "the rhetoric of technology shows how the objects of the built environment become part of our systems of goals, values, and meaning, part of articulated interests, struggles, and activities" (p. 386). Since all technologies can potentially take people as the objects of technological actions, it is crucial that we attempt to understand how these technologies function rhetorically.

In terms of rhetorical analysis of online texts, Gurak and Silker (2002) suggest that a major challenge to online rhetorical analysis is the confusing nature of digital texts (pp. 230–1). The traditional boundaries between texts such as transcripts and published documents becomes blurred in informal publishing formats such as a blog. However, since the texts I have selected come from publicly available court proceedings, press releases, corporate documents, and social media sources, this concern is mitigated (at least somewhat) for the case that I am concerned with.

Several rhetorical scholars have used case study to create insight in to cases similar to mine—that is, cases concerned with rhetoric, technology, and community. For example, Gurak (1997) studies the rhetoric of different communities involved in protests over privacy concerns that arose with new technologies in the early 1990s. Similarly, Reyman (2010) offers a case study of the rhetoric of the peer-to-peer file sharing disputes of the early 2000s. These two examples come quickly to mind because they combine case study with rhetorical analysis.

Selection of Texts

The challenge when selecting texts for this project was to focus on texts with a narrow enough lens that data do not become overwhelming, while at the same time taking a view that is broad enough to enable considering the texts within context. With the goal of meeting that challenge in mind, I selected texts from the following sources:

- Publicly available court proceedings.
- Company blogs and tweets.
- Publicly available press releases, statements, and reports from the involved companies, regulatory agencies, and government officials.
- Publicly available documents that communicate with federal regulators or investors.

Description of Categories

As Berkenkotter (2002) and Atkinson (1999) make clear above, rhetorical analysis relies on categorization at its core. As Atkinson suggests, rhetorical analysis is inductive. As I read through the texts for each chapter, I found statements involving enthymeme,

especially where needs or use statements are apparent. I also found arguments based on *loci of quantity* as well as arguments that involve the construction of facts and truths, or those that the invoke such facts or truths for their persuasive power. Next, found instances of communion as understood by Perelman and Olbrechts-Tyteca. Finally, I found several rhetorical insights in the metaphors used in these documents. Table 1 displays these categories and the theorists that help inform them.

Category	Informed by
Enthymeme	Aristotle, Walton
Loci of Quantity Arguments	Perelman and Olbrechts-Tyteca
Addressing of Truths/Facts/Values	Perelman and Olbrechts-Tyteca
Construction of Facts	Perelman and Olbrechts-Tyteca
Communion (i.e.: maxims & proverbs; allusions & quotations; and invitations to the audience)	Perelman and Olbrechts-Tyteca, Graff and Winn
Metaphor	Johnson-Sheehan, Giles

Table 1: Preliminary Categories of Rhetorical Analysis

Conclusion

To summarize, I am conducting a rhetorical analysis of the texts used in one battle of the patent wars: the disputes between Microsoft and Motorola. As a case study, this dissertation is interested in the relationship between text and context. In terms of rhetorical theorists, I rely on a rhetorical foundation drawn from Aristotle’s descriptions of *endoxa* and enthymeme, as well as Perelman and Olbrechts-Tyteca’s notion of communion. I supplement this rhetorical foundation with the philosophical works of Taylor and Feenberg, both of whom provide helpful tools for teasing out the ways in which technology become “naturalized” into our lives—the way that it becomes invisible. I believe that this invisibility arises not from anything inherent in the technology itself,

but from the rhetoric of that technology—and how that rhetoric works to accommodate people to the technology.

Chapter 3: Review of Literature

Introduction

The dispute I analyze in this dissertation concerns controversies and lawsuits among Microsoft, Motorola, and Google. This chapter summarizes key literature from areas of scholarly inquiry applicable to this conflict. In the first section of this chapter, I review the literature involving rhetoric, public relations, and social media. The sources in this section outline key questions that public relations scholars have tried to answer using such rhetorical approaches as the rhetorical situation (Elwood, 1995), Quintilian's vision of the good orator (Stokes & Waymer, 2011), and Burkean identification (Heath, 1993). Other scholars have forgone Aristotelian and modern perspectives on public relations in favor of a post-modernism with roots in Isocrates (Marsh, 2008). Still others, such as Sommerfeldt (in press) offer a view of public relations as seen through Habermas' public sphere. Additionally, many public relations scholars have shown a keen awareness of technological changes that have affected their work, and several of the sources below deal with how cell phones and blogs (Barnes, Lescault, & Andonian, 2012; Hiebert, 2005), micro-blogs such as Twitter (Hwang, 2012; Lovejoy, Waters, & Saxton, 2012; Xifra & Grau, 2010), and other social media are re-creating the landscape of public relations rhetoric. This section also involves the rhetoric of organizational communication. This literature challenges the idea that language can be a neutral conveyor of information (S. B. Katz, 2001; Suchan, 1998; Winsor, 1990). These sources help support the implications of the literature involving rhetoric and public relations

writing outlined above. Taken as a whole, these sources demonstrate that public relations as a discipline is well aware of its rhetorical roots. Like my own discipline of technical communication, a variety of rhetorical lenses can be used to gather insight into public-relations textual practices. Chapters 4 and 5 of my dissertation attempt to do just that, using the theoretical lens outlined in Chapter 2.

In the second part of this literature review, I examine the intersections of rhetoric, intellectual property, and standards. These sources include a thorough analysis of the rhetoric surrounding copyright and questions of digital music sharing (Reyman, 2010), a thorough investigation of the rhetorical and generic implications of Edison's use of the patent system to create and defend the invention of the incandescent light bulb (Bazerman, 2002), and a helpful discussion of the metaphors and other factors that drive competing legal understandings of computer code (Burk, 2000; Vee, 2012). Similarly, several of the sources reviewed below provide insight into the process of contributing technology to a modern standard. For example, Pelkmans (2001) demonstrates how Motorola worked to include its technology in the European GSM cell phone standard, while Bekkers, Verspagen, and Smits (2002) show how Motorola then attempted to take advantage of the standard to the detriment of its competitors. Finally, Young (2003) connects rhetoric and the creation of standards in accounting. All in all, the sources in this section help demonstrate the close relationships among rhetoric, standards, and intellectual property. In Chapter 5, I provide an analysis of the rhetoric involved in standards-setting and RAND licensing commitments.

A third set of literature reviewed below involves the controversies surrounding

software patents as well as the roots of the patent system itself. In establishing the historical foundations of the patent system, I review scholarship from rhetoricians and historians alike (Bazerman, 1994; M. Campbell-Kelly, 2004). By way of contrast, Vee (2010) helps tease apart the differences between patent and copyright, especially where questions of writing are concerned. Finally I outline competing perspectives on fostering innovation in the realm of software: the traditional patent system and the relatively new system of open-source collaboration (D. S. Evans & Layne-Farrar, 2004; Moy, 2000; Stallman & Garfinkle, 1992). Overall, this section contributes to my dissertation by outlining roots and current perspectives on the conflict between the patent system and open-source software. By some accounts, this conflict is at the very heart of the patent wars, as is demonstrated by the public rhetoric offered by Google and Microsoft, which I analyze in Chapters 4 and 5 below. However, as I demonstrate in Chapter 6, the conflict between open source and patents has little to do with the legal rhetoric involved in the case at hand.

In the last section of this chapter I examine rhetoric and legal writing. Wetlaufer (1990) deals with the rhetoric of legal discourse in general. Little (1996) and Harris (2009) bring post-modern perspectives to what has often been seen as an overly positivistic view of law and the world. Finally, I review a number of sources that concern themselves with the teaching of legal writing. Interestingly, this pedagogy can be seen as running parallel to scholarship that has concerned itself with the teaching of basic writing and technical writing. Indeed, Berger (1999) explicitly cites composition scholar James Berlin, while Britt, Longo, and Woolever (1996) note that the teaching of composition

and the teaching of legal writing have been in dialogue with each other since at least the 1980s. These sources on legal discourse and legal writing help my own project by demonstrating that scholars have long been concerned with the rhetorical underpinnings of legal discourse and writing. In Chapter 6 of this dissertation, I apply my own rhetorical lens to a small number of legal briefs drawn from the case that I am studying. In the rest of this chapter, I review these sources in greater detail.

Rhetoric, Public Relations, and Social Media

The literature in this section involves the rhetoric of public relations. That public relations is itself a product of rhetoric may seem self-evident, but Elwood (1995) explains why this is so: “People do not experience organizations; they experience the communication organizations issue and the communication about organizations” (p. 3). Elwood goes on to discuss public relations rhetoric in terms of the canonical debate over the rhetorical situation shaped by Bitzer (1968) and Vatz (1973). Elwood argues that public relations rhetoric is involved in both responding to and creating rhetorical situations (Elwood, 1995, p. 11); he also depicts the ethical considerations involved in public relations rhetoric as a “continuum,” arguing that “rhetoric and ethics are dynamic because they constitute our culture. Just as our culture changes, so does our perspective on politics, rhetoric, and ethics” (Elwood, 1995, p. 10). Ultimately this means that ethical considerations of public relations rhetoric need to account for the values and emotions of the audience.

Fudge (1995) provides an analysis of a corporate merger. She notes that the discourse surrounding such mergers often focuses largely on financial aspects and ignores

the impact that the change will have on people (p. 213). Concerning the merger of AT&T and NCR in the early 1990s, Fudge points to three kinds of propositions: fact, value, and policy:

Fact propositions are characterized by objectivity and verifiability. Value propositions involve claims of right and wrong, and policy statements support corporate interests to provide the best products and services in harmony with public interest. Value statements establish common ground and increase identification, but policy statements that combine self-interest with company interest are the most persuasive. (p. 216)

In my analysis of Google's acquisition of Motorola (Chapter 4), I argue that Google's rhetoric makes a similar shift from being fact-based to being value-based, as it becomes clear during the course of the approval process that the facts behind the merger (i.e., Google wanted to buy Motorola's patents to protect Android from lawsuits) were not going to be enough justification for the deal.

Stokes and Waymer (2011) discuss rhetoric as it is incorporated into public relations pedagogy. They argue that two main threads of rhetorical thought can be found in the teaching of public relations:

one reflecting the fundamentals of rhetoric in public relations and the other concerning organizational communication as rhetoric. The former tradition explores how the meanings and channels of today's rhetors influence society in some way, while the latter explores the impact of rhetorical strategies inside the organization. The former line of research led to the development of the "corporate

advocate” perspective, whereby individuals learn rhetorical skills to better craft messages to represent their organizations. (p. 443)

The authors argue that including rhetoric in the training of public relations students will help practitioners with critical thinking and problem solving. Ultimately, Stokes and Waymer draw their inspiration from Quintilian's view that oratory is in its essence the good man, speaking well (Quintilian, 1873 XV: 33). But recall that for Quintilian, “the true orator [...] cannot speak well unless he be a good man” (XV, 33). This caveat seems to make the extension of Quintilian's rhetoric to public relations and organizational communication somewhat problematic, since an organization may be “good” in the eyes of its shareholders but “bad” in the eyes of its customers, communities, or other stakeholders.²¹

Heath (1993) sees rhetoric as essential to public relations practice as well, arguing that meaning

defines the identities and prerogatives of organizations, people associated with them, and their relationships. Changes that affect businesses and non-profits result from calls, voiced in interpretative vocabularies, to constrain their prerogatives by displacing old meanings with new ones. Idioms of environmentalism, feminism, racism, ageism, consumerism, and globalism have altered the salience and meaning of values such as fairness, equality, aesthetics, safety, and security. Each “ism” contains evaluative assumptions that challenge organizations to operate in specific ways, provide services and products of a certain quality, relate to

21 Clearly, the same can be said of individual speakers, but it seems to me that organizations, with their multiplicity of decision makers, speakers, stakeholders, and listeners complicate this relationship even further than a single person addressing a more or less unified audience, as was the typical rhetorical situation of Quintilian's time.

customers and employees in a preferred manner, and not harm the environment.

(p. 142)

Although Heath is focused on Burkean rhetoric, his insight that “this rhetorical paradigm adds value to organizations by increasing sensitivity to how stakeholders create interpretative frames to impose limits on their business and non-profit activities” (Heath, 1993, p. 142) helps demonstrate that a rhetorical lens based on enthymeme and rhetorical communion can similarly provide a glimpse into how the public rhetoric of an organization shapes the organization itself. Additionally, Heath views rhetoric in public relations as “an interactive, dialogic process” (pp. 143–4). This perspective also aligns well with the dialogic aspects of the theoretical framework I set forth in Chapter 2.

However, not all public relations rhetorical theory agrees with the kind of Aristotelian-modern framework I have constructed. For example, Marsh (2008) describes currents of post-modern philosophy in public relations scholarship:

In the small but growing body of postmodern public relations theory [...] identifiable characteristics do emerge, including resistance to positivism and certainty; realization of chaos, complexity, and multiplicity; resistance to metanarratives; realization of the discursive origins of meaning; empowerment of difference and the “other”; realization of power disparities in relationships; and the promotion of justice. (p. 238)

Indeed, aspects of this critique could also inform a theoretical lens involving Perelman and Olbrechts-Tyteca's *New Rhetoric*, especially a “resistance to positivism and certainty” (Marsh, 2008, p. 238). It is precisely this resistance that informs the shift from

rhetoric *based* on “truth” to a rhetoric that helps *determine* truth through *endoxa*, as I argue in Chapter 2. However, whereas I look to Aristotle for help with *endoxa*, Marsh finds the roots of this shift in Isocratean rhetoric:

Isocrates forcefully rejected Plato’s positivistic belief that philosophers, through dialectic, could discover unchanging core realities... Opposing positivism, Isocrates privileges individual thinkers who, with the core virtues of moderation and justice, confront the necessity of action despite the impossibility of certainty.
(p. 239)

Isocrates (2000) himself addresses the wisdom of the crowd in “Antidosis,” in which he defends his pedagogical program. Here he outlines a pedagogy that continues to eschew what we might call “book learning” in favor of practice. He writes that “teachers of philosophy” should expose their students to “all of the structures which speech [*logos*] employs” (*Antidosis*, 15.184).

When they have given them experience and detailed knowledge of these, they again exercise the student and make them accustomed to hard work, and then force them to synthesize everything they have learned in order that they may have a more secure understanding and their views (*doxai*) may be better adapted to the right moments (*kairoi*). (“Antidosis,” 15.184)

This is one of many places where Isocrates stresses the importance of practice. But in this passage he pairs practice and hard work specifically with *doxa*. Note that *doxa*, especially as used by Isocrates, is not the same as Aristotle’s *endoxa*. Where *endoxa* might be loosely thought of as the wisdom of the crowd, *doxa* had a meaning more

specifically tied to political decisions, as Poulakos (2001) makes clear: “Within the secular tradition, *doxa* came to signify an appropriate form of knowledge for the imprecise world of politics, a world characterized by change, ambiguity, and contingency” (p. 66). Ultimately, Poulakis finds that Isocrates' use of *doxa* is indeed more constitutive than persuasive:

Isocrates' use of the term suggests a deliberate effort on his part to disassociate *doxa* from persuasion and associate it, instead, with the process of constituting audiences and their identities. Less interested in rhetoric as an instrument of symbolic influence with the sole end of winning over auditors in particular situations, Isocrates explored rhetoric's constitutive possibilities, in other words, the power to create a world of its own making and situate audiences as potential inhabitants of that world. (pp. 64-5)

This vision of *doxa* does indeed seem to foreshadow post-modern rejections of certainty and positivism, and, as Marsh suggests, would lend a great deal to the teaching and practice of public relations rhetoric.

Sommerfeldt (in press) views the rhetoric of public relations through yet another theoretical lens: Habermas's conception of the public sphere. For Habermas (1991), what is considered “public” can only be defined in relation to what is considered “private.” He offers the public sphere as one example.

The bourgeois public sphere may be conceived above all as the sphere of private people come together as a public; they soon claimed the public sphere regulated from above against the public authorities themselves, to engage them in debate

over the general rules governing relations in the basically privatized but publicly relevant sphere of commodity exchange and social labor. (p. 27)

These people came together physically in meeting places such as coffee houses, which Habermas claims extended access to the public sphere to a broader swath of the middle class.

However, Habermas sees little hope for the public sphere in the world of mass communication, both the mass newspapers of the nineteenth century and the electronic media of the twentieth century: “The world fashioned by the mass media is a public sphere in appearance only” (p. 171). This is because the mass media, in Habermas's conception, lacks the kind of rational critical debate around which the bourgeois public sphere was built. Weighing in on modern mass media and the difference between advertising and public relations, Habermas maintains that advertising is the simple sales pitch, whereas public relations “goes beyond advertising; it invades the process of 'public opinion' by systematically creating news events or exploiting events that attract attention” (Habermas, 1991, p. 193). Habermas takes the position that although public relations may be able to create a kind of consensus, this is not the same thing as the consensus that is formed through rational-critical debate of the public sphere of the past (p. 195). Nevertheless, Sommerfeldt argues that the public sphere and public relations are indeed closely related, noting that Habermas

asserted that publics must be able to affect a “critical publicity” for a true and fully-functioning public sphere. Such is a premise for the essential role of public relations in the public sphere: to enable publics to affect a publicity such that

issues are publicly considered within the sphere. (Sommerfeldt, in press, p. 2) Clearly, this is in stark contrast to Habermas's own views on public relations and the public sphere. However, Sommerfeldt argues convincingly that public relations can concern itself with both broader questions of the state and society and with grass-roots issues that are of concern to smaller communities: “While large scale campaigns, international nation-building efforts, government relations, and public diplomacy are, no question, connected to democracy and democratization, building communities and making society more fully functional may be the ultimate contribution of public relations to democracy” (p. 8). This is because of the contributions that public relations can make to the “civil society and robust public dialog” (p. 8) that help shape society and communities.

In terms of studying the persuasive techniques involved in specific instances of public rhetoric, I find that Taylor's notion of “social imaginaries” (which I outline in Chapter 2) does considerably more to complement rhetorical and critical analysis than does Habermas's conception of the public sphere. This is partially due to the broader nature of Taylor's work. Whereas Habermas investigates what boils down to a single social imaginary (albeit at great depth and over the course of several centuries), Taylor suggests a framework for viewing the multiple ways in which people see themselves in society. By focusing on the practices that people take part in as they (usually unconsciously) imagine the way they fit into society, Taylor offers a more robust set of perspectives.

Public relations scholars have also weighed in on the impact that technology and

new modes of communication is having on the practice of their discipline. In *Public Relations Review*, Hiebert (2005) outlines the ways in which public relations work has changed as communication technologies have evolved. In many cases, Hiebert recognizes that new technologies such as cell phones have disrupted traditional public relations models:

In many places in the world, the Internet and cell phones have been used in impromptu ways to help rally mass movements for political change. In the Philippines, a text-messaging campaign is credited with removing President Joseph Estrada from power. A similar campaign helped Roh Moo Hyun win the presidency in South Korea. (p. 4)

Hiebert sees blogs as a technology that has been similarly disruptive to the field of public relations:

Web logs, or blogs, became crucial new media for political debate in 2004. There were thousands of political blogs, each with its own usually partisan position on the nation's politics, and some attracted such sizable followings that they were considered important media for political advertising. (p. 3)

In the mid 2000s, blogging moved into the corporate world and grew quickly. Barnes et al. (2012) found that the use of public-facing blogs among *Fortune* 500 companies rose from 16% in 2008 to 28% in 2012 (Section 1a, "Corporate Blogs"). Lee et al. (2006) identify five categories of corporate blogs among *Fortune* 500 companies: Employee, Group, Executive, Promotion, and Newsletter (pp. 319–20). The texts I analyze in Chapters 4–6 seem to most closely resemble the Executive type and the Promotion type.

Lee et al. argue that the executive corporate blog is popular because investors and consumers are interested in what the leaders of organizations have to say: “When top executives appear in the blogosphere, their blogs generate instant traffic and can be an effective tool to establish a direct connection with stakeholders” (p. 320). Often the purpose of an executive corporate blog is to communicate “Thought leadership or communication with stakeholders” (p. 321, table 2). This is an apt description of the rhetoric found in Google's and Microsoft's corporate blogs. Often executive bloggers are given a great deal of free range, as evidenced by the example Robert Scoble, who was Microsoft's “technical evangelist” from 2001–2006 (“Face value,” 2005; Scoble, 2006). Nevertheless, blogging has not spelled the end of corporate public relations. Corporate promotion blogs, such as those used more often at Motorola Mobility make this clear. Unlike the personal musings, insights, and opinions offered by executives from both Google and Microsoft, Motorola Mobility's blog presence seems to be entirely focused on promoting its products.

Micro-blogging services such as Twitter have seen a similar rise in popularity among public relations professions and other corporate communicators. Lovejoy, Waters, and Saxton (2012) discuss ways in which non-profit organizations make use of Twitter, noting that nearly 20% of Internet users also use Twitter and that “it [is] the most used social media application in official public relations, advertising, and marketing campaigns” (p. 313). Interestingly, the authors of this study see a dialogic connection between the sender of a tweet and his or her readers: “Sending public messages [on Twitter] demonstrates responsiveness and establishes a dialog between users and the

organization” (p. 314). Xifra and Grau (2010) note that Twitter has enjoyed explosive growth in terms of users; from 2008 to 2009, Twitter grew by 14 fold (p. 171). As with the rise of corporate blogging noted above, Lovejoy et al. (2012) document that a remarkable 73% of *Fortune* 500 companies had active Twitter accounts in 2012 (Section 3a. “Corporate Twitter Accounts”).²² Google had the highest number of people following their Twitter account, with nearly 4.8 million followers in 2012. The next in line was Whole Foods, with nearly 2.7 million followers. Neither Microsoft nor Motorola ranked among the top 10 companies, in terms of Twitter followers (Section 3d. “Corporate Twitter Followers”). Nevertheless, the key insight from these data is clear: more and more large companies are turning to micro-blogging services to reach their audiences, and Google is leading the pack, by a wide margin.

Corporations make use of Twitter in a variety of ways. Hwang (2012) echoes the assessment of Lovejoy et al. that much of the appeal of Twitter is its dialogic potential: “according to young consumers, the CEOs’ efforts to engage in candid dialogue and tackle the challenge of using this new medium produced a positive effect on public relations” (Hwang, 2012, p. 160). However, Hwang found that the positive effect was associated only with the person sending the Tweets, not with the company itself. In other words, the good feeling a reader of Frank X. Shaw's tweets might have for Shaw himself is not easily transferred to Microsoft (Shaw's employer). Nevertheless, in Chapter 4, I provide a rhetorical analysis of Shaw's use of Twitter to force Google General Counsel David Drummond's hand on Drummond's own blog. Even if Shaw is not transferring

²² Compare that with the 28% of *Fortune* 500 companies that have public-facing blogs, noted earlier in this Chapter.

much good will to Microsoft from his candid and entertaining tweets, he is deploying this new technology to shape the corporate conversations that he is involved with.

Additionally, the exchanges between Drummond and Shaw involve at least three online texts, including blog posts, tweets, and emails. Each of these texts provokes a response, creating a small web of interaction. In this way, this relatively small exchange reflects the intertextuality described by Warnick and Heineman (2012, Chapter 5).

Although Warnick and Heineman are concerned chiefly with the effect that intertextuality has on online rhetoric aimed at social and political parody, their conclusions are relevant to any kind of intertextual, online communication:

Intertextuality's major rhetorical benefit comes from its use of resources in the larger intertext to involve the user in construction of the text's meaning. In some instances, intertextual references function in the same way as enthymes did in Aristotle's rhetorical logic. (p. 93)

In light of the intertextual references I discuss in Chapter 4, this emphasis on the unstated portion of an argument becomes especially relevant. Microsoft's Frank X. Shaw does an especially skillful job of weaving connections between his own “micro” texts and the longer texts of others.

That rhetoric is key to organizational communication is a given in our field, but a constitutive view of rhetoric takes this insight a step further. Organizations do not merely transmit information. Instead, as Zachry (2000) found, organizations sustain themselves through their textual practices. The literature reviewed in this section attempts to flesh out some of the implications of this insight. Katz (2001) offers a rhetorical analysis of a

government press release, finding that the rhetorical moves made in the press release belie its purpose and create “a sense of failure before successes can be talked about” (p. 96). Katz suggests that this is because the language of the press release does not account for a rhetorical understanding of language and information:

Language is not a neutral conduit, through which communication clearly flows.

Arrangement, style, and diction convey values and emotions. Speakers and writers have rhetorical choices about how to present ideas. However, the information transfer model of communication fails to account for the impact of the structure of language in the “communication equation,” and how language itself communicates values and emotions, because it fails to account for the values and emotions of senders and receivers as valid “components” of communication.” (p. 96)

Katz argues that values and emotions are always rooted in the audience, and that “No matter how logical or clear a 'message' seems to one group, it may communicate and provoke different values and emotions from another” (p. 96). Winsor (1990) offers a similar critique of language-as-knowledge-conduit in her assessment of the communications failure that led to the *Challenger* disaster, arguing against a view of this failure as a simple breakdown in knowledge transmission. Instead, Winsor sees this problem as a complex among “entrenched views,” power, and community: “Writers who wish to disturb entrenched views must augment their own power by employing evidence and by building consensus with colleagues” (p 17). Interestingly, Winsor sees a close connection between consensus and arguments based on quantity: “It is possible that if

evidence had been more plentiful and had been widely and repeatedly distributed, the beliefs of the launch managers would eventually have been affected” (p. 17). Here Winsor relies on Perelman and Olbrechts-Tyteca's discussion of *loci of quantity* (Chaim Perelman & Olbrechts-Tyteca, 1969, pp. 85–9) which I discuss in Chapter 2.

Like Katz and Winsor, Suchan (1998) questions the efficacy of theories of writing that treat language as a container. He compared reports that featured “high impact writing” (i.e., writing with stylistic features such as short paragraphs, telegraphic headings, and internal previews) with reports that featured “low impact” writing (i.e., writing without such features). Ultimately, Suchan found that high-impact writing did not affect the decisions of the people who read the reports. Instead, “an array of complex, external-to-the-document contextual factors” (p. 321) such as the reader's role and satisfaction within the organization had larger impact on decisions. Suchan argues that the lack of efficiency of high-impact writing is due to the fact that writers continue to think of such documents a-contextually, instead of taking into account the organizational situations in which the documents will be located.

Rhetoric, Intellectual Property, and Standards

Reyman (2010) argues that the digital copyright debate is best understood through its underlying narratives and metaphors. Reyman finds that the owners of copyrighted content and their representatives (recording companies, movie companies, and lobbying groups such as the Recording Industry Association of America) employ narratives of cultural stewardship to describe their role in the digital copyright conflict while using metaphors of piracy and crime to describe the behavior of people who download files

illegally. On the other hand, technology companies such as Grokster and advocates from academia use a competing narrative of cultural ecology and a metaphor of the digital world as commons to argue that information and the Internet should be as free as possible.

Bazerman (1994) provides a germane analysis of the U.S. Patent system focusing on the generic nature of patents and supporting texts. He describes the patent system as “a complex societal machine in which genres form important levers” (p. 79). Furthermore, he argues that patents constitute a kind of speech act (in the sense of Austin and Searle): “Genres, in-so-far as they identify a repertoire of actions that may be taken in a set of circumstances, identify the possible intentions one may have. Thus they embody the range of social intentions toward which one may orient one’s energies” (p. 82). The notion that genres provide a set of possible actions from which to choose is echoed in Taylor’s discussion of social imaginaries. Bazerman also rightly points out an easily overlooked side effect of patents as genre: the role that patents play in supporting romantic notions of inventor and invention:

This creation of the status of invention (and inventor, as the person to win the patent and receive the benefit of the patent) has a curious historical effect in that it reinforces the folk belief that inventions are discrete acts occurring at discrete times by discrete people. (p. 95)

Bazerman notes that scholars such as Bruno Latour have been “trying to disabuse us from this belief in heroic isolated individuals and isolated eureka moments” (p. 95) for some time. I would argue that such illusions also contribute to the fundamental concept of

intellectual property as something tangible, steal-able, and defend-able.

Vee (2010) offers a more explicit connection between the rhetoric of intellectual property and computer code, which is often the subject of disputes surrounding software patents. She suggests the legal system has traditionally viewed computer code through the lens of one of three dominant metaphors: 1) code as text, 2) code as speech, and 3) code as machine. In many cases, code as text and code as machine have been used in arguments that would make code conform to existing intellectual property regimes. The metaphor of code as speech is often used in arguments challenging those regimes, such as the debates surrounding the Napster trial. Thus, the choice of metaphor is essential to the kinds of arguments that can be made regarding code and intellectual property:

Each legal metaphor for code offers a different paradigm for where code can go, what it can do, and who is allowed to write and circulate it. By looking more closely at the metaphors for code, we can see some ways that the law constructs writers, distributors, and consumers of computer code. Since code now comprises much of our infrastructure for politics and expression, as well as the infrastructure for modern life through electricity grids, traffic signals, and microwaves, the ‘universal audience’ implied when the different legal metaphors were established may translate into who controls these infrastructures in the future. (Vee, 2010, sec. Conclusion: The unrepresented audience fights back)

Vee sees this approach to metaphor as relying on Perelman and Olbrechts-Tyteca's concept of the Universal Audience.²³ Ultimately, Vee finds that developers from open source communities are able to carve out their own conceptions of code as well as a

²³ See Chapter 2 for my perspective on this powerful rhetorical lens.

rhetorical space in which to work. This may be true for some communities of coders, but my own research indicates that—at least in the case of Microsoft, Motorola Mobility, and Google—patent disputes remain more or less anchored in the rhetorical space of the legal system.

Burk (2000) provides a detailed analysis of the shift from viewing software as a text that can be protected under copyright to an invention that can be patented, also noting that recent court cases have given traction to the idea that software could be considered speech, and thus protected under the First Amendment. But Burk worries about the “long-term implications of holding software to be protected speech” (p. 102), noting that grafting software onto free speech could result in an undesirable cross-pollination:

Although much of the inquiry in this Article has been given over to the insights into patent law that may be gleaned from parallel copyright and First Amendment jurisprudence on expression, it may be that the experience of intellectual property law may inform future free speech analysis. (p. 161)

Burk suggests that creating a new kind of intellectual property protection might be better suited to software, since it “blurs the distinction between function and expression in intellectual property” (p. 161). Put another way, the blurring of function and expression could be thought of as rhetoric in action.

Standards constitute another sphere where such a blurring takes place. In terms of understanding how standards get set, Pelkmans (2001) offers a history of the GSM cellular standard (used by carriers such as AT&T and T-Mobile). Pelkmans finds that cooperation among the contributors to the standard was often fraught with conflict, owing

to various cultural, national, and corporate interests. Pelkmans also finds that Motorola was a major player in the setting of the GSM standard, since the company held nearly half of the patents involved in the standard:

Motorola could not accept free-riding on its long and expensive research efforts, which led to sixty patents for six critical technologies in the GSM system. It was prepared to engage in cross-licensing with leading companies with interesting patent licenses to offer in return. This seemingly cooperative stance implied potential conflict with others and competitive disadvantages for smaller actual or potential entrants. However, in a non-proprietary approach essential intellectual property rights (IPRs) should be cross-licensed (with or without low payments) or licensed in a fair, reasonable and non-discriminatory way. (Pelkmans, 2001, p. 440)

Similarly, Bekkers, Verspagen, and Smits (2002) found that Motorola used this leverage to strengthen its position in the European marketplace:

By using the negotiation power that came with its patent portfolio, Motorola could dictate its licensing conditions to all firms. The company thus imposed a market structure by conducting exclusive cross-license agreements with a selected number of other parties on the market. These parties were selected because their IPRs were valuable to Motorola (not only essential patents, but also others), or because their product line complemented that of Motorola. (Bekkers et al., 2002, p. 186)

Nevertheless, the GSM standard was formulated, and it can certainly be considered a

success (Pelkmans, 2001, p. 449), especially compared to the much more competitive nature of cellular standards setting that took place in the United States around the same time.

Young (2003) provides an analysis of the rhetorical aspects of the standards-setting practices in the field of accounting. Although accounting standards would seem to have little do with cellular communications standards, Young's key insight is clear: the creation of ostensibly neutral texts such as standards is built on rhetoric, despite what the organizing bodies behind such standards would have us believe:

We are being asked to accept that good standards adhere to reality and are more practical, more consistent, more useful, and more relevant than alternative possibilities. Similarly, we are asked to accept that a “good” standard-setter is passive with respect to undertaking action, follows a set process, gathers information widely, and deliberates carefully and comprehensively. It does not advocate a position but reaches decisions through a slow, deliberate process. (p. 637)

Young argues that accepting such a view of accounting standards amounts to “implicitly accepting the universality of accounting” (p. 637). Such a universal view opens the door to a belief that the practices enabled by the standards are objective and immune from ethical and social questions.

Finally, DeNardis (2009) points to one way that values become embedded in technology: through the use of standards and protocols. In contrast to legal scholar Lawrence Lessig, who compares code to “law” on a variety of levels (Lessig, 2006),

DeNardis points to the differences between standards and code:

Standards are not software code but language. If code is “law regulating conduct similar to legal code, or even if software is its own modality of regulation unlike law or physical architecture, then the underlying protocols to which software and hardware design conforms represent a more embedded and more invisible form of legal architecture able to constrain behavior, establish public policy, or restrict or expand online liberty. (DeNardis, 2009, p. 11)

Additionally DeNardis rightly points to both the ubiquity and the invisibility of successful standards. Describing the standards that enable the features of a typical smartphone (i.e., voice calling, text messaging, GPS, digital camera, Wi-Fi, video, etc.): “Individual Internet users are not necessarily even aware of the existence of all of these standards, never mind understanding or accounting for ways in which values have entered the conception and design of such technologies” (p. 76). Thus standards and protocols are one means by which cultural values are embedded into technologies. But as DeNardis makes clear, standards—and the values that inform them—fade from view long before the devices they govern are turned on. My purpose with this dissertation is to use the theoretical framework outlined in Chapter 2 to reveal at least some of those values.

Controversies over Software Patents

There is a great deal of academic literature on patent systems effectiveness at fostering innovation. In this section, I sketch a conflict that has arisen between proponents of the patent system and proponents of open-source innovation. In Chapter 5, I further analyze these two viewpoints as they are taken up by various sides in a patent licensing dispute.

The U.S. patent system has its roots in the Science and Useful Arts clause of the U.S. Constitution (“U.S. Constitution, art. I, para. 8, cl. 8,” n.d.). The purpose of a patent is to grant the inventor a temporary monopoly in exchange for full disclosure of the inner working of an invention. Bazerman (2002) describes development of the patent system and copyright system this way:

As modern capitalism developed in Britain and America, special economic incentives were put into law to encourage invention and the public dissemination of inventions. These incentives were in the form of “letters patent,” which granted monopoly control of an advantage from the invention for a limited period. Thus a legal mechanism was created to turn ideas into property. [...] This new class of property, known as 'intellectual property' inevitably required governmental mechanisms for certifying particular ideas as property and for protecting that property from theft. (p. 85)

The benefits of intellectual property are meant to be two-fold: 1) the inventor has the opportunity to profit by the fruits of his or her labor without having to worry that a competitor will steal the idea, and 2), competitors have the opportunity to learn about and make improvements on the design of the original invention. The public is meant to be the ultimate beneficiary of the Science and Useful Arts clause, since the public should enjoy the resulting system of innovation. In this way, patent law is meant to function in a manner similar to copyright law, creating limited-term monopolies in exchange for benefits to the public good. However, Shapiro (2001) is concerned that despite these intentions, the Useful Arts clause actually has the opposite of its intended effect. Rather

than supporting creativity and innovation, Shapiro (echoing both Google and Microsoft) sees the patent system as “creating a patent thicket, a dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology” (p. 120). As I discuss in Chapter 5, Shapiro sees the roots of the patent thicket problem in a system that grants patents too freely to too many owners. This often means that a single device can involve hundreds of patents, which makes it nearly impossible to build anything without infringing on multiple patents.

Of course, not all intellectual property protections are created equal. Vee (2010) provides a helpful summary of the differences between copyright and patent in her analysis of the affects that software patents are having on the teaching of writing:

Copyright law pays attention to the composition process behind a work of authorship whereas patent law does not. To prove copyright infringement, a rights holder must demonstrate that at some point during composition the accused actually copied the copyrighted work. In contrast, patent law bars independent discovery; a person can infringe on a patent without knowing the patent existed. (p. 183)

This distinction has had major consequences in the world of patent disputes. Such disputes, incidentally, are not a new phenomenon. Bazerman (2002) outlines Thomas Edison's race to patent the incandescent light bulb:

While they were currying the favor of the French and British general and technical presses, Edison's men were also planning legal moves against Hiram Maxim and other competitors. On July 29 [1878], Puskas and Bailey [Edison's

agents at Paris Exhibition] wrote to tell Edison that they had consulted local attorneys to have Maxim's exhibit seized on the opening day of the exposition for patent violation. (p. 208)

Bazerman goes on to document the legal, public-relations, and textual practices that Edison used to secure the patent rights to his inventions.

Over the centuries, patent law has changed to adapt to new technologies such as processes involving chemical reactions (M. Campbell-Kelly, 2004, p. 246). However, patent law as applied to computer software has been considered controversial. Indeed, until the 1980s, only a handful of patents were granted for software-based inventions. Campbell-Kelly writes that until patenting was widely adopted for software, the industry relied on copyright or trade secrecy to protect its intellectual property. However, Campbell-Kelly argues that copyright is not effective for protecting software because the copyright system “was designed to protect only the expression of work, not its function” (p. 222), thus developers competing against a superior (but copyright protected) computer only need to reverse engineer the product to benefit from the work of its original creator. On the other hand, trade secrecy stifles innovation, since competitors are forced to reinvent the work of others without the benefit of disclosure provided by the patent system (p. 226). By way of contrast, open-source software operates under a model of full disclosure of source code without any expectation of monopoly. As open-source projects have moved into competitive markets such as mobile computing, these two innovation systems have come into conflict. Often these conflicts take the shape of patent lawsuits.

Allison, Dunn, and Mann (2007) note that “the legal system has responded

gradually to the burgeoning software industry by broadening the scope and strength of protection for software-related inventions in fits and starts” (p. 1579). They provide an empirical analysis with the goal of determining what effect the increase in software patents in recent decades has had on innovation. Although software patenting grew in practice in the 1980s and became controversial in the 1990s, the authors point to a 1951 Bell Labs patent as an important early example of patented software. However, although this patent does cover a computer process, the word “software” was not used until the 1980s. Indeed, like many “firsts” in the history of computing, it is surprisingly difficult to pin-point the first software patent. This is because the word software has not been used to describe the programmable part of a computer until long after the development of programs themselves. Grier (1996) traces the verb “to program” back to the development of one of the earliest electronic computers, the ENIAC. Marty Goetz is often credited with applying for the first software patent, especially in popular accounts such as Smith (2007).

The difficulty in establishing the “first” software patent may point to the inherent tensions between the intellectual property system and what has come to be known as software. Copyright is good for protecting the expression of an idea: others are not allowed to use my copyright protected words without giving me credit. Patents are well-suited to protecting function. Others may not make use of my patent-protected ideas without negotiating compensation. But software is both expressive and functional. It took several decades before patents emerged as a viable way to protect software.

However, as Allison, Dunn, and Mann (2007) note, by the 1980s, a growing

number of software firms had turned to patent protection as a way of protecting their technologies (pp. 1587–8). The authors conclude that the patenting patterns of the software industry have stabilized, “with at least four distinct groups (incumbents, venture-backed firms, open-source communities, and independent inventors and associated intermediaries), each with a different relation to the patent system” (p. 1621). Interesting for this dissertation are the convergent spaces that the Android operating system offers for analysis: Android itself was originally a small start-up company that drew on an open-source community project. It was purchased by the incumbent Google and is now used by intermediaries such as Motorola (and is drawing challenges from other incumbents such as Microsoft). A similar set of transactions has taken place since Google purchased Motorola.

Evans and Layne-Farrar (2005) provide an overview of the conflict between open-source software proponents and software patents. They argue that two of the main criticisms expressed by the open-source community (that the patent system is flawed and that patents interfere with the development of open standards) are both only partially true. In the case of the flawed patent system that grants trivial and non-original patents for software, the authors argue that “the handful of empirical studies that examine software patents do not paint nearly as dismal a picture as the ad hoc stories do” (p. 15)—essentially echoing Allison et al.’s conclusion that patent trends for the software industry are not significantly different from other industries (Allison et al., p. 1608). In response to the criticism that software patents “hold standards hostage” (p. 15), Evans and Layne-Farrar argue that this concern “rings true. But again, the extreme measure [proposed by

open-source software supporters] of eliminating software patents to solve the standards problem is not warranted” (p. 16), since less drastic means of supporting the open standards processes are available. The authors similarly dismiss open-source advocates’ concerns about patent thickets stifling innovation (pp. 21–5) and the threat that patents pose to the “software commons” (pp. 25–6), finally concluding that although the current system of software patents is imperfect, abolishing the system would be worse, since developers would be unlikely to embrace the open-source model of development and would instead turn to trade secrecy and copyright law to protect their intellectual property. Although Evans and Layne-Farrar tend toward the polemic in their style (for example, describing the GPL as “anti-business,” even though companies such as Google, Redhat, and IBM have all been able to successfully combine open source software with profitability), their conclusions echo those of Campbell-Kelley, outlined above.

Historians, economists, and free software activists have varying opinions on the effect that software patents have on innovation. As noted above, Campbell-Kelley (2004) argues that software patents are more effective than copyright or trade secrecy for the purpose of supporting inventors and innovation. Conversely, Moy (2000) contends that patent law should be changed to exclude software patents, since in his view, copyright law provides adequate protection of limited-term monopolies and innovation. Stallman and Garfinkle (1992) worried that software patents would prevent new players from entering the software industry, since “most major programs will require licenses for dozens of patents, making them infeasible” (p. 17). This dire prediction has not come to pass. Indeed in the years since 1992, “copylefted,” open source software has grown at an

astonishing rate alongside its patented (and copyrighted) closed-source competitors. And of course, the Android operating system is just one example that shows that the two systems can co-exist, even within a single device.

Rhetoric and Legal Writing

The last area of scholarship I am going to review is the rhetoric of legal writing. Clearly, there is a strong relationship between legal discourse and rhetoric. Wetlaufer (1990) provides a helpful summary of what he calls “rhetorical commitments” made by the rhetoric of law:

These include commitments to a certain kind of toughmindedness and rigor, to relevance and orderliness in discourse, to objectivity, to clarity and logic, to binary judgment, and to the closure of controversies. They also include commitments to hierarchy and authority, to the impersonal voice, and to the one right (or best) answer to the question and the one true (or best) meaning of texts. Finally, the rhetoric of our discipline reveals our commitments to a particular conception of the rule of law. (p. 1552)

Wetlaufer argues that, despite lawyers being “the sons and daughters of Gorgias himself” (1554–5), the “*particular* rhetoric that law embraces is the rhetoric of foundations and logical deductions. And that particular rhetoric is one that relies, above all else, on the denial that it is rhetoric that is being done” (p. 1555, emphasis in original). Wetlaufer then suggests a view of the rhetoric of law that rests on rhetorics of advocacy, scholarship, and teaching. In order to support these rhetorics, according to Wetlaufer, lawyers will speak and write in more or less predictable ways. For example, to support the rhetoric of

advocacy, “The lawyer will speak about texts as if their meanings were clear and uncontroversial, as if they had, and could only have, one true meaning” (p. 1559). Such a rhetorical perspective helps lawyers serve the clients and the legal system in general. But Wetlaufer worries that the existing rhetoric of the law can also work to entrench power:

Outside the legal academy and its realm of scholarship, we have also seen that the rhetoric of law may operate to overstate the legitimacy of the system and rightness of existing solutions. In this measure, our rhetorical commitments work to disempower the already powerless, to reinforce the existing distribution of power and wealth, to prove wrong those who question the legitimacy or neutrality of the existing system, and to marginalize the voices of opposition. (p. 1596)

Wetlaufer concludes with a call for lawyers to investigate their own relationships to rhetoric, truth, and community.

Schanck (1991) provides a similar foundation on which to build an understanding of the relationship between rhetoric and legal writing. However, rather than focusing on ancient rhetoric, as Wetlaufer does, Schanck's analysis is grounded in post-modern understanding of language. Schanck summarizes four key beliefs of post-modernism:

(1) The self is not, and cannot be, an autonomous, self-generating entity; it is purely a social, cultural, historical, and linguistic creation. (2) There are no foundational principles from which other assertions can be derived; hence, certainty as the result of either empirical verification or deductive reasoning is impossible. (3) There can be no such thing as knowledge of reality; what we think is knowledge is always belief and can apply only to the context within which it is

asserted. (4) Because language is socially and culturally constituted, it is inherently incapable of representing or corresponding to reality; hence all propositions and all interpretations, even texts, are themselves social constructions. (Schanck, 1991, p. 2509)

Schanck claims that post-modern thought became “almost unanimously [accepted] by legal theorists” (p. 2512) in the 1980s, despite the reluctance of the media and most individuals to accept its destabilizing implications. Schanck's goal is to “bridge the gap” (p. 2512) between notions of reality-as-rooted-in-language and the more concrete conceptions of reality-as-knowable upon which many “common sense” understandings of the world are based. Ultimately, Schanck argues that post-modernism has affected legal interpretation in the negative: “Postmodernism may not tell us how to construe statutes, but it very definitely tells us how *not* to interpret them. That is, one should not employ a foundational theory or a transcendent methodology of interpretation if one adheres to postmodern tenets” (p. 2595, emphasis in original). Clearly, a rhetorical approach to legal interpretation or legal writing would adhere to this postmodern admonition. Although I do not consider the rhetorical approach I have outlined in Chapter 2 to be a post-modern one, some of its components are comfortable within an epistemology that sees the material and social worlds as without anchor and completely dependent on language and discourse.²⁴

Little (1996) is perhaps more germane to my own theoretical framework. She

²⁴ For example, I do not subscribe to the post-modern notion of the de-centered self; while the audience may be unknowable, the speaker (in my opinion) must have a fairly stable notion of him or herself, in order to speak at all. Additionally, although I agree that our understanding of what is true is constructed through notions of common sense and the community, I also believe that in many cases there is an objective reality, which we can strive to understand. Our knowledge of reality may not be perfect, but it must be *possible* to understand it, or why would we study anything?

describes the legal tactic of characterization, in which an argument is answered not with a counter-argument, but with a reframing of the argument itself. To illustrate, she provides a tongue-in-cheek example from her own marriage:

Wife (newly married): We've been living together for several months and I've restrained myself from nagging about housework. But I can't take it any longer. I am doing the shopping, cooking, dishwashing, tidying, scrubbing, bill paying, and most of the laundry. You're not doing your share.

Husband: This is a marriage, not a checklist. You can't "keep score" in a mature relationship. You must have faith that everyone is doing their best. You will undermine us if you insist on running a tally. (p. 372)

As Little points out in the first line of her piece: "It's tough being married to a lawyer" (p. 372). The insight here is clear: "different perspectives can color the same set of facts" (p. 400). Little observes that lawyers often practice characterization, especially when the facts of an argument are stacked against them. Little provides a thorough grounding in the legal, rhetorical, and even the psychological aspects of this tactic, arguing that focusing on characterization when training new lawyers can help appreciate the variety of perspectives that inform people's understandings of reality.

Little's perspective can be glimpsed in the Law and Literature approach to teaching the law. Brody (2011) suggests using the literature of authors such as Virginia Woolf and Michael Cunningham can help law students recognize "that life's events, including legal wrongs, may be experienced in vastly different ways, especially for those who are unfamiliar to us, who have been marginalized, or who have been otherwise

unheard” (p. 45). However, Harris (2009) offers a more penetrating insight into the relationship between law, rhetoric, and the construction of the social world: “Law, allied with what Michel Foucault called 'disciplinary power,' not only grants people rights (or not). It also shapes who counts as a person and what kinds of experiences human bodies will have before being recognized as rights-bearing individuals” (p. 40). Harris argues that such a perspective is informed by feminism, which in turn can help develop an understanding of the relationships among class, gender, and the law. Harris argues that much of the current interest in this kind of analysis originally emerged with the post-modern theories of the 1980s,

but post-modernity has caught up with us, intellectually and socially. We need not Google 'Third World Feminism' or 'Jacques Derrida' to recognize that gender is like Orion or the Big Dipper: real yet at the same time a pattern wholly dependent on one’s standpoint. It is a constellation that can never be fully disentangled from race, class, nation, disability, sexuality, or myriad other factors. (p. 55)

Ultimately, Harris argues that studying the ways in which gender, class, and other social divisions are interconnected can help discover tools for critiquing and challenging the inequities that such divisions help create.

Focusing on questions involving the teaching of legal writing itself, Britt et al. (1996) note that even as early as the 1980s, some cross pollination was taking place between rhetoric and composition on the one hand and the teaching of legal writing on the other hand. The authors suggest that legal writing should be taught in way that would “help students understand the context for each kind of document so that legal writing is

seen as answering a question within an ongoing discussion” (p. 221). Similarly Berger (1999) unpacks the rhetorical dimensions of legal writing from a pedagogical perspective. She suggests that approaching to legal writing as truth-constructing and rhetorical will “help law students develop the habits of mature legal readers and writers” (p. 155). Berger locates the strongest potential for such a constructive rhetoric in what she calls “New Rhetoric”:

For New Rhetoricians, however, “knowledge is not simply a static entity available for retrieval. Truth is dynamic and dialectical, the result of a process involving the interaction of opposing elements.” Knowledge and truth are created by the process, rather than existing outside the process. The elements of the communication process—writer, audience, reality, language— “do not simply provide a convenient way of talking about rhetoric. They form the elements that go into the very shaping of knowledge.” (Berger, 1999, p. 157)²⁵

It is just this perspective that informs much of the theoretical framework I have outlined in Chapter 2.

Turning from the new rhetoric to the ancients, Tiscione (2011) provides a framework for teaching legal writing through the rhetoric of Aristotle. Tiscione provides a brief overview of rhetoric and legal writing instruction. Interestingly, the history of legal writing pedagogy is similar to the history of rhetoric and writing pedagogy given by Berlin (1987). Like composition, legal writing pedagogy has long been fraught with tensions between theory and practice: “Although early legal writing programs sought to teach both the substance of legal analysis and the mechanics of writing, they focused

²⁵ Here Berger is citing composition scholar James Berlin (1982).

more on what to write than how or why, hindered, in part, by the prevailing writing pedagogy” (p. 323) To counter this tendency, Tiscione suggests teaching legal writing through the lens of classical rhetoric, since classical rhetoric offers an inherent connection between “legal analysis and argument as a whole” (p. 325) Tiscione focuses on Aristotelian concepts such as invention and the three appeals, arguing that

classical rhetoric provides a natural framework for teaching the complicated process of persuasion in the legal context. It makes legal writing more substantive and interesting to students because it relies on more than imitation to teach. It allows students to consider all the modes of appeal—logical, emotional, and ethical, their ability to persuade, and why. Rhetorical theory hastens students’ understanding of the law as indeterminate in and out of the legal writing classroom. (p. 339)

These post-modern and rhetorical perspectives on legal discourse are important to my dissertation because a portion of my case study involves legal briefs (See Chapter 6). My goal with these briefs is not to evaluate them in terms of the legal merits or to judge the effectiveness of the legal writing contained therein. Instead I am looking for ways in which these briefs demonstrate and reinforce their respective companies' perspectives on innovation and openness. Scholarship such as that reviewed in this section helps to demonstrate that legal discourse does indeed play a rhetorical role in the shaping of individual and societal beliefs.

Conclusion

This chapter has covered a broad range of literature in order to establish the rhetorical

context in which my dissertation is situated. Since I am conducting a case study, context is of paramount importance. The rhetorically oriented literature on topics as diverse as public relations, social media, intellectual property, and legal discourse demonstrates that each of my chapters fits well within an established tradition of rhetoric. The rhetoric of public relations draws on classical, modern, and post-modern sources, looking for insight into the ways organizations communicate with the public. I have also reviewed sources interested in communication within organizations. Throughout these perspectives runs a common thread similar to that of rhetorical theory itself. Classical approaches to public relations rhetoric (i.e., those based on Aristotle, Isocrates, or Cicero) see the author as a more-or-less stable concept which addresses a more-or-less stable audience with the intent to persuade. Modern and post-modern approaches question this stability, recognizing that neither author nor audience are as stable as they seem. Technology adds a complicating factor, as social media such as blogs and Twitter attempt to rattle the one-to-many rhetorical foundation upon which much of public relations rhetoric has been built.

The rhetoric of intellectual property often rejects from the outset the romantic notion of the inspired author, even if the Useful Arts clause itself seems to perpetuate this idea. Studies of patents, copyright, and other methods of intellectual property protection often take for granted the idea that inventions are usually the result of a tension between collaboration and competition. This tension is also reflected in the way standards are created, as shown by the examples outlined above.

Software patents have historically been an especially fraught area of contention,

owing perhaps to the dual nature of software itself: it is both expressive and functional. Copyright is well-suited to protecting expressions but not functions. Patent law is meant to protect functions and the ideas that enable them. For the moment, software patents have carried the day, but many argue that patenting software has undermined the original purpose of the Useful Arts clause and created a system that stifles innovation rather than fostering it.

Finally, the literature reviewed above outlines the clear relationship between rhetoric and legal discourse. In recognizing and investigating this relationship, the sources above tread many of the same paths as other rhetoricians. Some scholars ask questions regarding the rhetorical commitments that lawyers have inherited from classical rhetoricians. Others apply a post-modern critique to these commitments, arguing that legal theorists have overwhelmingly accepted post-modern notions such as the de-centered self, the non-existence of first principles, and the inability of language to accurately and faithfully correspond to reality.

In the remainder of my dissertation, I investigate the case of *Microsoft v. Motorola Mobility* in the context of these strands of scholarship. My goal in Chapter 4 is to find out what happens, rhetorically, when public relations comes face-to-face with social media. In Chapter 5, I look for insight as to what public rhetoric can tell us about questions of intellectual property and standards-setting practices. Finally, in Chapter 6, I investigate ways that a company's values are reflected in the legal discourse it deploys to defend its position in a case such as *Microsoft v. Motorola Mobility*.

Chapter 4: Google Buys Motorola Mobility

Introduction

The story of Google's purchase of Motorola Mobility Inc. begins several months before the purchase was announced, with two separate and seemingly unrelated patent deals. One of these deals involved a patent portfolio held by Novell; these patents were bought by a consortium of companies made up of Microsoft, Oracle, Apple, and EMC²⁶ (Department of Justice, 2011). The second involved a similar consortium which purchased patents owned by Nortel (Motorola Mobility, 2011). This led Google to approach Motorola Mobility in early July of 2011, apparently with the aim of discussing patent strategies in light of these deals. As a special proxy statement issued by Motorola Mobility shows, these discussions quickly turned to the possibilities involving Google's purchase of Motorola Mobility's patents (Motorola Mobility, 2011). However, Motorola Mobility made it clear that they would not be able to function for long in the mobile computing market without the protection afforded by a large patent portfolio. This led Google to make an offer for Motorola Mobility itself. As the special proxy statement shows, Google began by offering a per-share price around \$30. By the end of the negotiations, the offer had risen to \$40 per share, or a 63% premium over the value of the stock at the time of the deal (Page, 2011).

The deal was announced on August 15, 2011, pending approval by Motorola Mobility's shareholders and a number of US and international regulatory agencies. The

²⁶ EMC provides “cloud-based” services such as networked data storage and off-site networked computing.

Department of Justice approved the merger in February of 2012; the European Commission approved the deal at around the same time (European Commission, 2012). Three months later, in May of 2012, the Chinese government gave its approval for the merger. On May 22, 2012, Google announced that the deal was complete and that Motorola Mobility was now a wholly owned subsidiary of Google (Page, 2012). On August 3, 2012, Google announced that they would lay off 4,000 of Motorola Mobility's 20,000 employees (Pichette, 2012), with two-thirds of the cuts occurring outside of the United States.

Although Google's purchase of Motorola Mobility may seem unrelated to the ongoing patent disputes between Microsoft and Motorola Mobility, I argue that this purchase is actually a move (both strategic and rhetorical) made by Google as part of an effort to defend Android from competitors' attacks levied through patent litigation. This rhetorical move is well demonstrated by the texts used to justify this purchase. Furthermore, Google's purchase of Motorola Mobility clearly overlaps into the context of the case surrounding *Microsoft v. Motorola Mobility*. Therefore, it is crucial in a case study such as this to understand the context as best as possible.

In this chapter, I analyze the following 16 source documents:

1. "When Patents Attack Android," a blog post by Google's chief legal officer, David Drummond, posted during the negotiations with Motorola Mobility—but before the announcement of the purchase itself (Drummond, 2011).
2. A set of six tweets by Microsoft executives Frank X. Shaw and Brad Smith, made in response to Drummond's post (Shaw, 2011a, 2011b, 2011c, 2011d, 2011e; B.

Smith, 2011)

3. Two blog posts by Google CEO Larry Page. The first announces that the Motorola Mobility purchase was underway; the second announces that the deal had closed (Page, 2011, 2012).
4. Three press releases by Google's Investor Relations group. The first two announce the deal and its completion. The third accompanies the company's second quarter 2012 earnings statements.
5. "European Commission clears Motorola deal," a blog post by Google executive Don Harrison (Harrison, 2012).
6. A preliminary special proxy statement issued by Motorola Mobility to its investors, explaining the background and justifications for merging Motorola Mobility with Google (Motorola Mobility, 2011).
7. The 8-K form Google filed with the SEC announcing a major round of layoffs at Motorola Mobility (Pichette, 2012).
8. A proxy statement issued by Google to its investors, which among other things, provides justification for extending stock compensation to those new employees joining Google through the Motorola Mobility purchase (Page, Brin, & Schmidt, 2012).

In analyzing these documents, I look at four rhetorical devices used to justify Google's decision to purchase Motorola Mobility, the purchase itself, and the layoffs that followed. These devices are the rhetorical constructions of facts, metaphor, rhetorical communion (in the sense of Perelman and Olbrechts-Tyteca's *New Rhetoric*), and enthymeme. I find

that these four devices help the authors of these 16 texts in their attempts to make their view of technology appear to be common sense. Furthermore, this “common-sense” approach to technology facilitates a focus on the consumer and the end product (i.e., “innovative” smart phones). I consider this constant attention to the final technological product to be something like *faux* technological holism: by attending to the user experience, it gives the appearance of being concerned with more than just the selling of shiny new phones. Indeed, this hyper-focus on consumer choice actually reflects a kind of technological instrumentalism that Feenberg addresses with his critical theory. The focus of much of the rhetoric discussed below is on hardware, which stands in for a truly holistic view of technology as process. I begin my analysis with the rhetorical construction of facts.

Rhetorical Construction of Facts and Truths

In Chapter 2, I discuss the relationship between facts and truths, especially as seen through the lens offered by Perelman and Olbrechts-Tyteca's *New Rhetoric*. Recall that Perelman and Olbrechts-Tyteca see facts as more-or-less socially constructed: “[i]t is not possible [to] ... classify this or that concrete datum as a fact” (1969, p. 67). The authors also make clear that they do not reject the existence of facts themselves, but rather they argue that facts emerge as the products of ongoing arguments: “From the standpoint of argumentation, we are confronted with a fact only if we can postulate universal agreement with respect to it” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 67). Indeed, this close relationship between what the author can offer and what the audience will accept as fact points to the inherently intimate relationship between facts and audiences

in and of themselves. The exchange I analyze in this section demonstrates this shifting nature of facts.

The establishment of facts that results from this argument has repercussions for the entire transaction—for Google's \$12.5 billion purchase of Motorola Mobility. Ultimately, Google seems to want to cast this purchase as a defensive move in the ongoing Patent Wars. However Microsoft takes measures to dispute this version of the facts, painting a much more complex picture of the relationships among the companies involved.

The rhetorical construction of facts in this transaction begins with an indirect exchange that took place between a Google executive, David Drummond and two Microsoft executives, Brad Smith and Frank X. Shaw.²⁷ The exchange took place in early August, 2011. Indeed, Drummond wrote this blog posting while in the middle of negotiations with Motorola Mobility; it is easy to read his post as an attempt to pave the way for the probable announcement that Google would soon purchase Motorola Mobility. In this blog post, Drummond outlines a narrative describing the Nortel and Novell patent deals, effectively raising suspicions over the fact that Apple and Microsoft are “in bed together” (Drummond, 2011) given that the two rivals “have always been at each other's throats” (Drummond, 2011). After pointing to the rapid growth that Android is seeing, he mentions the Novell and Nortel patent deals by name, describing the two consortia of companies that purchased these patents as taking part in “a hostile, organized campaign against Android by Microsoft, Oracle, Apple, and other companies, waged through bogus

²⁷ Drummond is Google's Senior Vice President and Chief Legal Officer. Smith is Microsoft's General Counsel and Executive Vice President of Legal and Corporate Affairs. Shaw is Microsoft's Corporate Vice President of Corporate Communications.

patents” (Drummond, 2011). Drummond then describes such consortia and patent deals as an “anti-competitive strategy [that] is also escalating the cost of patents way beyond what they are worth” (Drummond, 2011). He notes that the Nortel patents cost the Rockstar consortium (made up of Apple, Microsoft, and others) \$4.5 billion, even though the worth of the patents before the auction was a mere \$1 billion.

Drummond then justifies his blog post itself: “We thought it was important to speak out and make it clear that we’re determined to preserve Android as a competitive choice for consumers, by stopping those who are trying to strangle it” (Drummond, 2011). Note here the inherent assumption that his audience agrees with the premise that Android is under attack. Here he presents a fact in the sense of an “[object] of precise limited agreement” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 68). Finally, Drummond begins to lay the groundwork for the upcoming announcement that Google itself spent \$12.5 billion to buy Motorola Mobility.²⁸ He adds that

We’re looking intensely at a number of ways to do that. We’re encouraged that the Department of Justice forced the group I mentioned earlier to license the former Novell patents on fair terms, and that it’s looking into whether Microsoft and Apple acquired the Nortel patents for anti-competitive means. We’re also looking at other ways to reduce the anti-competitive threats against Android by strengthening our own patent portfolio. Unless we act, consumers could face rising costs for Android devices—and fewer choices for their next phone.

(Drummond, 2011)

28 Although it may be a stretch to claim that Google bought Motorola Mobility exclusively for its patent portfolio, the preliminary proxy statement discussed below does make it clear that patents played a major role in this transaction.

These lines were apparently intended to be the dramatic finale to the blog posting. Here he casts the Novell and Nortel deals as inherently anti-competitive, and hints toward the pending announcement that Google itself would soon be acquiring Motorola Mobility and its trove of patents.

Rhetorically, Drummond appears to cast Android as the victim of an organized campaign against it, waged through patents. Indeed, Drummond not only does his best to reveal the anti-competitive practices of the competition, he also attempts to undermine the patent system itself: “Patents were meant to encourage innovation, but lately they are being used as a weapon to stop it” (Drummond, 2011). In terms of rhetorical facts and truths, here Drummond seems to be moving towards the latter. As Perelman and Olbrechts-Tyteca make clear, speaking of “truths” generally involves “complex systems relating to connections between facts” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 68). Drummond's text seems to draw connections between the (albeit disputed) fact that Android is under attack and the related fact that such attacks come in the form of patent lawsuits. Together these facts have the potential to form a larger truth that patents themselves have ceased to be tools of innovation and instead are now “weapons” used to stifle innovation. Ultimately, the dispute between Drummond and the Microsoft executives represents not just the facts behind a particular patent purchase, but competing visions of truth involving the role of patents in the future of innovation itself.

Drummond's blog post can also be read as an attempt to prepare his audience for the Motorola Mobility announcement. Since patents are used “as a weapon to stop” innovation, it is only right that Google negotiate ways to defend Android against patent

attacks. The justification given for such a defense is one that is echoed by all sides in the patent wars: consumer choice. In other words, shoppers must be able to choose from a myriad of shinier, brighter, and more amazing devices every time they upgrade their cell phone contracts.

However, Drummond's position in this post has a weakness, which Microsoft executives were only too eager to share with their Twitter followers. Google had been invited to join in the consortium that bought the Novell patents. Microsoft General Legal Counsel Brad Smith quickly tweeted foul:

Google says we bought Novell patents to keep them from Google. Really? We asked them to bid jointly with us. They said no. (Smith, 2011)

Two hours later, Microsoft's VP for Corporate Communications, Frank X. Shaw, also tweeted a response to the “When Patents Attack Android” blog post:

Free advice for David Drummond – next time check with Kent Walker before you blog. :) pic.twitter.com/PfKle9H. (Shaw, 2011a)

The URL at the bottom of Shaw's tweet points to a screen shot of an email from Google General Counsel Kent Walker politely declining a joint bid. This image is shown in Figure 7.

From: Kent Walker
Sent: Thursday, October 28, 2010 1:13 PM
To: Brad Smith (LCA)
Subject: Following Up

Brad --
 Sorry for the delay in getting back to you -- I came down with a 24-hour bug on the way back from San Antonio. After talking with people here, it sounds as though for various reasons a joint bid wouldn't be advisable for us on this one. But I appreciate your flagging it, and we're open to discussing other similar opportunities in the future.

I hope the rest of your travels go well, and I look forward to seeing you again soon.
 -- Kent

*Figure 7: Screen shot of an email tweeted by Frank X. Shaw.
 From Shaw, F. X. (2011, August 3). Free advice for David Drummond – next time check with Kent Walker before you blog. :) pic.twitter.com/PfKle9H. @fxshaw. microblog.
 Retrieved from <https://twitter.com/fxshaw/status/98932077327691776>*

The next day, Drummond appended his blog with an update, in order to respond to what he called Microsoft's “false 'gotcha!' ”:

A joint acquisition of the Novell patents that gave all parties a license would have eliminated any protection these patents could offer to Android against attacks from Microsoft and its bidding partners. Making sure that we would be unable to assert these patents to defend Android — and having us pay for the privilege — must have seemed like an ingenious strategy to them. We didn't fall for it.

(Drummond, 2011)

In other words, Google chose not to join the patent bid with Microsoft because the search giant would not have been able to use a shared patent as any kind of leverage in a future dispute.

However, Shaw was not done. He responded in a series of tweets, acknowledging that the 140-character limit of Twitter would not suffice:

Hello again David Drummond. This is going to take a few tweets, so here we go.

Let's look at what Google does not dispute in their reply. (Shaw, 2011b)

We offered Google the opportunity to bid with us to buy the Novell

patents; they said no. (Shaw, 2011c)

Why? BECAUSE they wanted to buy something that they could use to assert against someone else. (Shaw, 2011d)

SO partnering with others & reducing patent liability across industry is not something they wanted to help do[.] (Shaw, 2011e)

In essence, Shaw restates here what Drummond already wrote. But while Drummond argues that a patent partnership would prevent Google from defending Android from its attackers, Shaw casts Google as a potential aggressor, looking for “patents that they could assert against someone else.” Technology and business reporters alike reveled in the back and forth (Bishop, 2011; Tu, 2011; Yarrow, 2011), but the exchange represents much more than another skirmish in the Patent Wars: both sides are arguing for the establishment of certain facts.

Both Drummond and Shaw agree on one point: Microsoft invited Google to bid on the Novell patents and Google declined. However, Drummond claims that they declined because such an alliance would weaken their ability to defend Android from other patent holders; Shaw on the other hand claims that Google wanted its own trove of patents to use against others. In essence, this small exchange epitomizes the Patent Wars as illustrated by the disputes between Microsoft and Motorola Mobility. Furthermore, by arguing over the purpose of patents, each side casts its opponent in the role of the aggressor.

Rhetorically, Drummond is put into an awkward position by the claims and evidence put forth by Smith and Shaw, as the assumption that Android is under attack

loses its status as a fact. Drummond begins his blog post with a factual assumption that Android is under attack. In the absence of the counter-evidence offered by Smith and Shaw, Drummond can postulate universal agreement with his audience. But as the Microsoft executives pile on their own claims and arguments, Drummond's ability to portray Android as the innocent victim of patent attacks slips away. As Perelman and Olbrechts-Tyteca observe: "A fact loses its status as soon as it is no longer used as a possible starting point, but as the conclusion of an argumentation" (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 68). Drummond begins his post with "Android is under attack" and spends a substantial portion of his text describing that attack and the aggressors as a "hostile, organized campaign" of companies "in bed together" (Drummond, 2011). But thanks to five short tweets from Smith and Shaw, Drummond is forced to backtrack and explain why Google did not accept the invitation from its competitors.

All of this may seem like little more than highly paid executives playing a public game of "He started it," but recall that for Drummond, this exchange took place as negotiations with Motorola Mobility were coming to a head. In the following section, I offer an analysis of the metaphors Google relied upon as they announced the deal to the public.

Use of Metaphor to Justify the Purchase

In Chapter 2, I discuss the role that metaphor plays in helping people make sense of the world. I argue that metaphor is closely related to the "images, stories, and legends" that Taylor (2002) describes playing such a crucial role in the social imaginary. This is

closely related to understanding how metaphors themselves work. As Johnson-Sheehan (1999) argues, rhetorical analysis should be chiefly concerned with effects that metaphors have and the ways in which people attempt to deploy them: “If rhetoric is primarily about how words are used to achieve particular ends, then a rhetorical view of metaphor should concern how people use them, not how they work” (Johnson-Sheehan, 1999, p. 48).

Furthermore, recall that in his analysis of metaphors used to describe cloning in scientific writing Giles (2001) describes the distinction between natural metaphors and technical metaphors, arguing that natural metaphors “illustrate the unknown entity with the known by associating the unknown with those occurring in the natural world” (Giles, 2001, p. 377). Natural metaphors can also rely on social relationships, and may even “border on personification [sic] since they draw imagery from human relations between individuals and social groups” (p. 377). Similarly, Giles describes the technical metaphors used to explain cloning: “Technical metaphors explain the unknown in terms of the known by associating the unknown with figures occurring in the technical world, with items and processes that are the byproducts of science and technology” (Giles, 2001, p. 378).

Metaphors involving the natural and social worlds are used to describe Google's purchase of Motorola Mobility. Additionally, there is a persistent technical metaphor (the “supercharging” metaphor), which is deployed, sometimes in isolation and sometimes in relation to natural metaphors.

Whereas Giles is interested in teasing out the effect that metaphors used to describe cloning experiments had on the scientific community, I offer the following analysis as an interpretation of Google's attempt to re-position the Motorola Mobility

purchase. Initially, Google deployed metaphors to justify the purchase in terms of improving Android's position in the patent wars. However, in the months between the initial announcement that Google was in the process of buying Motorola Mobility and the final announcement that the deal had closed, doubt was cast over the value of Motorola Mobility's patent portfolio. Therefore, Google's use of metaphor to explain and justify the purchase as divorced from the patent wars began to make less and less sense. In this section I outline and analyze the use of metaphor to explain this transaction.

On August 15, 2011, just about ten days after the exchange between Drummond and his counterparts at Microsoft took place, another Google executive took to the official Google blog. Interestingly, although Motorola Mobility makes it quite clear in its special proxy statement that patents were at the center of the deal (Motorola Mobility, 2011, pp. 27–30), Page de-emphasizes the importance of patents in his announcement, not mentioning them until nearly the last paragraph. Instead, he offers a brief summary of Android's rapid growth—both in terms of the role that Android has played in “increasing consumer choice” (Page, 2011), and in terms of the number of Android devices entering the marketplace: “more than 150 million Android devices have been activated worldwide—with over 550,000 devices now lit up every day” (Page, 2011). He then alludes to Motorola's history of “innovation in communications technology and products, and in the development of intellectual property” (Page, 2011) pointing to a historic Motorola product as evidence of this history.²⁹

The body of the press release describes Motorola's relationship with Android since 2008. To describe this relationship, Page deploys a gambling metaphor: “In 2008,

²⁹ I will discuss the use of allusion as a means of creating rhetorical communion later in this chapter.

Motorola bet big on Android as the sole operating system across all of its smartphone devices” (Page, 2011). However, this bet quickly shifts from a gamble to something more: “Motorola’s total commitment to Android in mobile devices is one of many reasons that there is a natural fit between our two companies” (Page, 2011). Finally, he describes the coming merger as a way to “not only supercharge Android, but ... also [to] enhance competition and offer consumers accelerating innovation, greater choice, and wonderful user experiences” (Page, 2011). This focus on the metaphor of “supercharging Android” is drawn in other documents describing the purchase as well.

In the official press release announcing the purchase, Google Investor Relations deploys the supercharging metaphor, but extends it from Android itself to the Android “ecosystem.” However, both metaphors (i.e., *supercharging* and *ecosystem*) are cast against the core concept of “amazing user experiences.” The press release re-frames the words of CEO Page outlined above:

Larry Page, CEO of Google, said, “Motorola Mobility’s total commitment to Android has created a natural fit for our two companies. Together, we will create amazing user experiences that supercharge the entire Android ecosystem for the benefit of consumers, partners and developers. I look forward to welcoming Motorolans to our family of Googlers.” (Google Investor Relations, 2011)

Note also that Page draws on yet another metaphor to help describe the transaction: family. Of course, this will come as no surprise to those acquainted with the corporate culture that Google has long worked to cultivate. One recent popular (but well-researched) account (Levy, 2011) describes the founding founders of Google and their

unconventional approach to employee relations in great detail. The family metaphor can also be found in an otherwise detached document such as a quarterly earnings press release, once again framed as a quotation from CEO Page: “Larry Page, CEO of Google [said] 'This quarter is also special because Motorola is now part of the Google family, and we're excited about the potential to build great devices for users' ” (Google Investor Relations, 2012b). It is worth noting that this statement was made approximately one month before it was announced that Google would be laying off one fifth of Motorola Mobility's workforce; it is equally worth noting that when disclosing these layoffs to the Securities and Exchange Commission in Form 8-K (which seems to be the only public document announcing the layoff), Google makes no mention of Motorola Mobility employees as family members (Pichette, 2012).

The “supercharging” metaphor is later echoed in a blog post attributed to Google Vice President and Deputy General Counsel, Don Harrison. In this post, Harrison announces that the Motorola Mobility purchase has cleared a regulatory hurdle and then describes some of the benefits of the merger:

As we outlined in August, the combination of Google and Motorola Mobility will help supercharge Android. It will also enhance competition and offer consumers faster innovation, greater choice and wonderful user experiences. (Harrison, 2012)

Once again, Harrison's post focuses on how “supercharging” Android through the purchase of Motorola Mobility will help consumers. Table 2 lists these metaphors along with the documents they are found in, the source of those documents, and their context.

Metaphor	Document(s)	Source	Context
Motorola's "Big Bet" on Android	"Supercharging Android"	(Page, 2011)	Initial Blog Post by CEO Larry Page
Supercharging Android	"Supercharging Android"	(Page, 2011)	Initial Blog Post by CEO Larry Page
Supercharging Android	"Google to Acquire Motorola Mobility"	(Google Investor Relations, 2011)	Official Press Release from Google Investor Relations
Supercharging Android	"European Commission clears Motorola deal"	(Harrison, 2012)	Official blog posting Announcing removal of certain regulatory hurdles
Android Ecosystem	"Google to Acquire Motorola Mobility"	(Google Investor Relations, 2011)	Official Press Release from Google Investor Relations
Family	"Google to Acquire Motorola Mobility"	(Google Investor Relations, 2011)	Official Press Release from Google Investor Relations
Family	"Google Inc. Announces Second Quarter 2012 Financial Results"	(Google Investor Relations, 2012b)	Quarterly Earnings Press Release. Released one month before Motorola Mobility layoffs were announced.

Table 2: A list of metaphors used in various documents announcing Google's purchase of Motorola Mobility

Of course, it should come as no surprise when metaphor is used to help explain the world. That is exactly what metaphor does best. As noted above and in Chapter 2, metaphor is akin to "images, stories, and legends" (p. 100) that Taylor (2002) describes as shaping "the [ways] ordinary people 'imagine' their surroundings" (p. 100). However, as Perelman and Olbrechts-Tyteca (1969) note, metaphor can take on a life of its own: "If one loses sight of the metaphorical aspect of such formulations, they can easily lead into the world of the fairy tale" (p. 404). In the case of the metaphors used to explain and

justify the purchase of Motorola Mobility, especially the “supercharging” and the “family” metaphors, it seems clear that if these formulations have not crossed over into fantasy, they are surely in danger of escaping the control of their creators.

Indeed, the “supercharging” and “family” metaphors run further amok the farther they find themselves from serious discussion of one of the primary reasons for the purchase: patents. As the Special Proxy Statement issued by Motorola Mobility to its investors shows, Google first approached Motorola Mobility to discuss (among other things) Google's purchase of Motorola patents in the wake of the Nortel sale (discussed above) (Motorola Mobility, 2011, p. 27). Indeed, in disclosing risks involved in the merger, Motorola Mobility acknowledges that merging with Google could impact their ability to settle outstanding licensing issues (p. 33). In fact, Motorola Mobility itself uses the ecosystem metaphor as well:

[Motorola Mobility CEO] Dr. Jha and [Google Chief Business Officer] Mr. Arora discussed the protection of the Android ecosystem and, in the context of this discussion, Dr. Jha indicated to Mr. Arora that it could be problematic for Motorola Mobility to continue as a stand-alone entity if it sold a large portion of its patent portfolio. (Motorola Mobility, 2011, p. 27)

In this context, a metaphor involving the defense of the Android ecosystem (in close connection with ongoing patent disputes) makes sense.

Indeed, early on in the texts from Google, the ecosystem metaphor is drawn in the context of patents. Patents are mentioned in the first blog post announcing the patent deal. I cite that original blog posting by CEO Larry Page at length, in order to show these

comments in context:

We recently explained how companies including Microsoft and Apple are banding together in anticompetitive patent attacks on Android. The U.S. Department of Justice had to intervene in the results of one recent patent auction to “protect competition and innovation in the open source software community” and it is currently looking into the results of the Nortel auction. Our acquisition of Motorola will increase competition by strengthening Google’s patent portfolio, which will enable us to better protect Android from anticompetitive threats from Microsoft, Apple and other companies.

The combination of Google and Motorola will not only supercharge Android, but will also enhance competition and offer consumers accelerating innovation, greater choice, and wonderful user experiences. I am confident that these great experiences will create huge value for shareholders.

I look forward to welcoming Motorolans to our family of Googlers. (Page, 2011)

Put this way, in close connection with the defensive position David Drummond attempts to craft in his “When Patents Attack Android” blog post, the supercharging metaphor makes more sense: Purchasing Motorola Mobility will help Google defend Android (and indeed open-source innovation itself) from anti-competitive enemies in the patent wars. But as the deal moves forward, Google mentions the patents less and less. The strategic reason for the purchase is stripped away, leaving only a metaphorical justification, if not to the point of fairy tale, then certainly to the point of nonsense. However, as the texts

progress from the initial announcement of the agreement to the final announcement that the deal was approved, the metaphors used to discuss the purchase displace any discussion of patents.

The absurdity of divorcing the metaphorical justification from the strategic reasons for the purchase is especially apparent in the announcement that the regulatory hurdle of the European Commission had been cleared (Harrison, 2012). Harrison makes no mention of patents, but as their press release shows, the European Commission itself was concerned largely with how the merger would affect the patent positions of the major players in the mobile computing market (European Commission, 2012).

The reason for distancing the purchase from strategic use of patents may be due to the nature of those patents themselves. Many analysts were dubious about the value of the patent trove that Google acquired with the purchase of the company. For example, two weeks after Google announced the decision to buy Motorola Mobility, Bloomberg News interviewed M-Cam's David Martin, who called the patents "Crap" ("Martin Calls Motorola Patents Acquired by Google 'Crap'," 2011). Assuming these analysts were correct about the strategic value of the patents, then Google had worked itself into a difficult position. If the patents themselves would not provide the kind of strategic protection that Google had announced to the world it needed (in order to defend itself against its foes in the Patent Wars), then the \$12.5 billion purchase would have to be justified some other way. Unfortunately, without being grounded in the patent acquisition, the metaphors used to justify the purchase make less and less sense. Ultimately, Google finds itself in the odd position of welcoming Motorola Mobility to the family just weeks

before announcing a major round of layoffs.

Fortunately for Larry Page and the rest of Google, the justification of the purchase did not depend on metaphor alone. In the next section, I discuss the use of rhetorical communion as a means of explaining and defending the purchase of Motorola Mobility.

Rhetorical Communion through Allusion and Maxim

As I discuss in Chapter 2, Perelman and Olbrechts-Tyteca in *The New Rhetoric* provide an understanding of rhetorical communion, which helps makes sense of the ways that communities talk about themselves. Communion performs an essentially “constitutive function for rhetoric” (Graff & Winn, 2011, p. 109). Communities deploy communion to help construct themselves *qua* communities. As Graff and Winn make clear, this is done primarily through three rhetorical devices: 1) maxims and proverbs, 2) allusions and quotations, and 3) invitations to the audience to participate (Graff & Winn, 2011, p. 114). Recall that the first two devices are centered on the values of the audience while the third can be seen as value neutral. Finally, it is crucial to remember that for Perelman and Olbrechts-Tyteca, communion is important above all to *epideictic* discourse: celebratory language focused more or less on the present.

In this section, I argue that the language of the press releases and blog postings used to announce the purchase of Motorola Mobility are examples of rhetorical communion achieved through epideictic prose and that the result of this communion contributes to the faux technological holism that pervades the rhetoric of the Motorola Mobility purchase. Three of these documents in particular make heavy use of the rhetorical device of allusion to celebrate and promote the purchase. CEO Larry Page

makes use of two of the means of creating communion outlined above: allusions and maxim.

In the “Supercharging Android” blog posting used to announce the coming merger, Page (2011) makes several allusions to Motorola Mobility's long history as a manufacturer of mobile phones: “[Motorola's] many industry milestones include the introduction of the world’s first portable cell phone nearly 30 years ago, and the StarTAC—the smallest and lightest phone on earth at time of launch” (Page, 2011). However, Page also works to remind his audience of Motorola Mobility's relevance in the smart phone marketplace: “I have loved my Motorola phones from the StarTAC era up to the current DROIDS” (Page, 2011).

Nine months later, when announcing the completion of the deal in a blog post, Page alludes to the SarTAC once more: “We all remember Motorola’s StarTAC, which at the time seemed tiny and showed the real potential of these devices” (Page, 2012). The official press release announcing that the merger had come to term cites the new CEO of Motorola Mobility (who came from the ranks of Google's executives), who alludes to a Motorola phone of a more recent era: “[New CEO Dennis] Woodside added: 'Motorola Mobility has many outstanding leaders, including people who were behind the original RAZR in 2004 and recent successes like the Droid and RAZR MAXX' ” (Google Investor Relations, 2012a).

By alluding to the StarTAC and the original RAZR, the Google executives are conjuring up images from the past. The StarTAC was a “wildly popular clamshell” phone released in 1996 (J. E. Katz & Sugiyama, 2005, p. 67). Figure 8 shows a 1997 version of

the StarTAC.³⁰



Figure 8: A StarTAC phone, produced in 1997. From ProhibitOnions. (2007). Motorola StarTAC. Retrieved from <http://en.wikipedia.org/wiki/File:MotorolaStarTAC.jpg>. Reprinted with permission under Creative Commons Attribution-Share Alike 3.0 Unported License.

Although the phone looks clunky and primitive today, Katz and Sugiyama (2005) claim that the StarTAC's design and name itself were allusions to the high tech, futuristic communicators used in the 1960s television show *Star Trek* (p. 67). But by invoking the StarTAC, Page is not merely asking his audience to indulge in a moment of nostalgia. Instead he is hearkening back to a better time—both for himself, for Google, and the country as a whole. In the late 1990s, Page and Google co-founder Sergey Brin were graduate students at Stanford, had an early version of the search engine algorithm that would later become Google, and were attracting a great deal of attention and venture capital (Levy, 2011, Chapter 1). No doubt Page really did love his StarTAC phone along with its tech-savvy image and (probably more importantly) the access and mobility that such a device made possible. Silicon Valley in the late 1990s was booming and the entire

³⁰ To be clear, none of the press releases or blog posts discussed in this section offered photographs of the StarTAC or the RAZR. I present them as an aid to readers less familiar with these devices.

economy was riding the wave of prosperity that came with the expanding Internet, with various layers of the new Internet economy growing between 50 and 68 percent from 1998 to 1999 (Barua, Whinston, & Yin, 2000, p. 103). It would be a few years before the Internet boom revealed itself to be a bubble (Perez, 2009). By alluding to the StarTAC, Page is essentially asking audience to remember a time of prosperity and growth for Google, for Motorola, and for the country.

The Motorola RAZR points to an equally interesting time for Google—the year 2004. Figure 9 contains an image of the 2005 RAZR v3i, which in terms of design, is very similar to the 2004 RAZR. From 2004 until 2008, Motorola produced several models of RAZR, selling 110 million phones (Heater, 2011). Like the StarTAC, the RAZR was also very influential in terms of design, so much so that it made *PC Magazine's* list of “Most Influential Technologies” in 2011 (Heater, 2011).



Figure 9: A Motorola RAZR V3i, released in 2005. From Peterwhy. (2006). Motorola RAZR V3i. Retrieved from http://commons.wikimedia.org/wiki/File:RAZR_V3i_opened.JPG. Public domain.

However, as with the StarTAC allusion, Page does more than simply call to mind

a popular phone when he mentions the RAZR. He alludes to a highly prosperous time for Motorola itself.³¹ 2004 is also the year that Google held its Initial Public Offering (IPO) and became a publicly traded company. Choo (2005) explains that although the IPO price of \$85 per share came in lower than had been expected, the company did raise \$1.67 billion, of which “\$473 million went to Google executives and investors selling their shares.”

Page, [co-founder Sergey] Brin, CEO Eric Schmidt, senior Google managers and directors, and long term Google employees gained potential millions through the value of their stock and stock options. Driven by market hype and strong investor interest, the stock price surged in the following weeks, and traded as high as \$210.86 on February 3, 2005. (Choo, 2005, p. 405)

2004 and 2005 were exciting times for Google and Motorola. By calling to mind the 2004 RAZR, Page seems to seek to recreate that excitement in the reader.

Of course, this device is only effective insofar as Page's audience can bring images and emotions associated with these phones to mind—none of the press releases discussed here include pictures of the phones themselves. This makes sense because the announcement is not about any particular phone from the past—it is about the future of the two companies. Page's allusion to these technologies is meant to create a sense of commonality with his audience. If the audience can call to mind one of these phones and remember prosperous or exciting times, the allusion has been successful and rhetorical

31 In fact, the original RAZR was so successful for Motorola that some consider over-reliance on this device to have caused the companies decline after 2007 (Bartash, 2007). It is also well worth noting Motorola Mobility is still suffering from this decline: when Google announced major job cuts at Motorola Mobility in 2012, Form 8-K they filed with the SEC pointed to the fact that Motorola had “lost money in fourteen of the last sixteen quarters” (Pichette, 2012), which dates the beginnings of Motorola's current profitability problems to at least 2008.

communion has been achieved. If, on the other hand, the audience does not share Page's emotional attachment to these collections of plastic, silicon, and software, then the rhetorical device falls flat. The audience is left wondering what these phones have to do with this \$12.5 billion merger.

In other words, by invoking these phones, Page seems to address a universal audience. To use Perelman and Olbrechts-Tyteca's term, Page has constructed as his audience a set of people that know these devices and understand their history. This is the universal audience in the sense that it displays a “a universality and unanimity imagined by the speaker, the agreement of an audience which should be universal, since, for legitimate reasons, we need not take into considerations those which are not part of it” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 31). This close connection between the rhetor's construction of his audience and the attempt to create rhetorical communion is made even more clear in the way Page invokes a maxim: Amara's Law. I discuss this use of maxim to create communion in the next section.

Perhaps the most telling indication of rhetorical communion in the press releases and blog postings announcing the Motorola Mobility deal can be found in Page's invocation of Amara's Law in the final statement of the blog posting announcing the culmination of the deal: “It's a well known fact that people tend to overestimate the impact technology will have in the short term, but underestimate its significance in the longer term” (Page, 2012). This “law” was formulated by Roy Amara, former president of The Institute for the Future (“Definition of Amara's Law,” 2011). Indeed, the tech industry is guided by many such “laws.” For example, Moore's Law makes a rough

prediction that the number of components that can fit in the same size microchip will double every year (MacKenzie, 1998, p. 54).³² The difficulty with such “laws” is that they come to be seen as akin to actual physical laws, such as Conservation of Energy or Special Relativity, when in fact, the “laws” of Silicon Valley represent, at best, observations of past behavior of groups of people, or as MacKenzie puts it, self-fulfilling prophecies (pp. 55–6). At their worst, these laws become clichés concerning technological development.

MacKenzie (1998) argues that the “laws” of Silicon Valley help explain what neoclassical economics cannot. Neoclassical economics would have us believe that large technological investments are made to maximize profits, since firms cannot know which investments to make without spending large sums of money determining which investments *not* to make (MacKenzie, 1998, pp. 50–1). However, firms can rely on observed phenomena such as Moore's law to help guide decisions. MacKenzie calls such laws “technological trajectories.” But he adds that these phenomena should not be confused with actual scientific principles. Instead, “a technological trajectory can be seen as a self-fulfilling prophecy. Persistent patterns of technological change are persistent in part because technologists and others believe they will be persistent” (MacKenzie, 1998, pp. 55–6). Although relatively little scholarly study has been conducted on such laws, Mollick (2006) agrees with MacKenzie's observation. From a rhetorical perspective, it seems clear that this explanation does little to explain *how* such laws perform their

32 Two other well-known “laws” include Brooks's Law and Linus's Law. Brooks's Law deals with the difficulty that large groups have in working together. It claims that “Adding manpower to a late software project makes it later” (Brooks, 1975, p. 25). And Linus's Law (named after the creator of the Linux operating system, Linus Torvalds, but actually formulated by open-source software champion Eric Raymond) attempts to flip Brooks's Law on its head, in light of the possibilities made possible by open-source software projects: “Given enough eyeballs, all bugs are shallow” (Raymond, 1999, p. 29).

functions as self-fulfilling prophecies. Just as Johnson-Sheehan (1999) argues that rhetorical analysis should include the hermeneutic function of metaphor itself, my goal with the analysis that follows is to use rhetorical concepts to help interpret the purpose of such allusions in texts deployed to support Google's purchase of Motorola Mobility. The concept of rhetorical communion forms the basis of my interpretation, as is illustrated by Larry Page's invocation of Amara's Law.

Recall that communion in this sense is made up of seemingly small instances of epideictic language (Graff & Winn, 2011, p. 111). Recall also that the epideictic discourse created through communion is often pointed in the direction of the future: “Epideictic, through celebrating values in the present, is oriented toward the future. The communion it fosters is anticipatory and preparatory” (Graff & Winn, 2011, p. 110). Finally, recall that one of the ways to create a sense of communion with the audience is to invoke maxims and proverbs, which focus on values held by the audience (Graff & Winn, 2011, p. 114). Thus, when Page invokes Amara's Law (“It’s a well known fact that people tend to overestimate the impact technology will have in the short term, but underestimate its significance in the longer term” [Page, 2012]), he draws on the values of his audience to create a sense of communion.

Furthermore, rhetorical communion can have a powerful effect on the audience. Seen through MacKenzie's analytical lens, Amara's Law is at best a self-fulfilling prophecy. However, seen from within the community, a law such as this *has the weight of an actual law*. This is clear from the very fact that Page attempts to invoke the law to justify the purchase of Motorola Mobility. If this law holds true, then it does not matter

that Google spent \$12.5 billion dollars on a struggling company with a trove full of patents that analysts are now calling “crap.” It does not matter that Motorola Mobility has been unprofitable in 14 of the last 16 quarters (in other words, since about 2008, the year that they committed to using Android as their only smart phone operating system). And it does not matter that the ostensibly defensive move of purchasing Motorola Mobility does not seem to be working, or at least not very well.³³ What does matter is that Page and the community he is addressing understand the difference between short-term thinking and long-term thinking, especially in terms of technology. Amara's law helps to prove those outside of the community wrong, despite evidence to the contrary.

Rhetorical communion itself facilitates another rhetorical device: enthymeme. In the next section I discuss the connections among unstated arguments and the values and beliefs of the community. I then dissect a selection of enthymemes from my textual samples.

Enthymeme and “Common Sense”

As I discuss in Chapter 2, there is a close relationship between the notion of common sense and the rhetorical device known as enthymeme. Walton's analysis of enthymematic arguments helps make clear that what is often referred to as “common knowledge” constitutes the “informal criteria” that support enthymemes (Walton, 2001, p. 94). Walton also describes two distinct types of assumptions that arise when attempting to reconstruct

33 For example, despite a minor win in a German court earlier in May which found in favor of Motorola Mobility in a patent infringement case involving the Xbox 360 and Windows 7 (“Update 2-German court rules against Microsoft,” 2012)the United States was considering whether to comply with an order to bar some patent-infringing Motorola phones from being imported into the country (“US says will bar some Motorola Mobility phones,” 2012)And just two days after the merger was announced, a German court found that Motorola Mobility was indeed infringing on a Microsoft patent involving text messages (“Microsoft wins ruling against Motorola,” 2012).

the missing arguments from an enthymeme. These are *needed assumptions* and *used assumptions*:

Needed assumptions in an argument are missing propositions such that (1) the argument is not structurally correct as it stands, but (2) when the propositions in question are inserted, the argument becomes structurally correct. *Used assumptions* in an argument are propositions that, even though not explicitly stated in the text of discourse, are meant to be part of the argument by the speaker (and are likely to be so taken by the hearer, once they are identified by the hearer). (Walton, 2001, p. 95)

Walton argues that figuring out the needed assumptions for an enthymeme is generally an easier task than interpreting the author's intent to determine used assumptions. Finally, Walton points to common knowledge as an especially helpful method for determining the unstated parts of an enthymeme (pp. 96–7). Of course, filling in used assumptions is an inherently tricky business, since it requires the reader to interpret the author's intent, often in light of precious little text. Therefore, it is helpful to draw on the context of the case to aid in this interpretation and shed light on used assumptions.

In the following paragraphs, I offer an analysis of two enthymemes that appear in a proxy statement filed by Google with the SEC (Page et al., 2012). In this section of the proxy statement, the authors are soliciting approval of a compensation plan for the Motorola Mobility employees that have joined the company through the merger:

We believe strongly that the approval of Google's 2012 Incentive Compensation Plan for Employees and Consultants of Motorola Mobility is essential to our

continued success. Our employees are among our most valuable assets. Stock options and other awards such as those provided under the 2012 Incentive Compensation Plan for Employees and Consultants of Motorola Mobility are vital to our ability to attract and retain outstanding and highly skilled individuals. Such awards also are crucial to our ability to motivate employees to achieve our goals. For the reasons stated above the stockholders are being asked to approve Google's 2012 Incentive Compensation Plan for Employees and Consultants of Motorola Mobility. (Page et al., 2012, p. 99)

The enthymeme in this passage can be stated in a number of different ways. Argument A is probably fairly close to the authors' intentions.

Argument A:

1. Our employees are among our most valuable assets.
2. A company must reward employees well to encourage them to stay with the company.
3. Therefore, we must reward our employees.

In Argument A, the main premise is contained in statement 1. Statement 2 is heavily anchored in common sense and seems to be of the needed type, in that it merely fills in the structure of the argument, but does not require a great deal of interpretation of the authors' intent.

However, it is interesting that Google is focused on employees in this statement, since a primary reason for the purchase of Motorola Mobility was not the employees themselves but their ideas—their intellectual property, which came in large measure in

the form of patents. So it would seem that this statement contains another enthymematic argument, which must be accepted by the audience before Argument A makes sense.

Argument B:

1. Employees are valuable to a company because they bring and create ideas.
2. Employees can be separated from their ideas.
3. *Conclusions*:
 1. Our employees are *among* our most valuable assets.
 2. There are other assets that are equally or even more valuable than our employees.

Here, the stated premise from Argument A is depicted as the stated conclusion of Argument B. Statement 1 is an unstated used assumption. It rests on the common sense notion that people are important to a company because of the knowledge and creativity they bring. This is especially true of a company like Google, which has always relied on these qualities in its employees.³⁴ However, in order to get to the statement that employees are *among* the most valuable assets, the reader fills in used assumptions: 1) the common-sense notion that the ideas a person brings to work can make that person more valuable to the company, and 2) there are ways of separating people from their ideas, which makes it possible to value the idea itself along with the person who brought it.³⁵ These two used assumptions lead to a two-part conclusion. The first part is explicitly stated: Employees are among our most valuable assets. The second part is an unstated

³⁴ Again, Levy (2011), describes this reliance on and appreciation for employees in great detail. For example, Google is famous for providing gourmet quality food at no cost to its employees (Chapter 3).

³⁵ It should come as no surprise that the copyright system and patent system themselves, combined with “Ownership of Work Product Clauses” in employment contracts, provide one mechanism to separate people from their ideas, as university faculty are well aware. Packard (2002) describes a study of copyright policies at over 70 American universities.

used assumption: There are other assets that are equally or even more valuable than our employees. This conclusion comes to play a contextual role in the next document I discuss: the August 2012 announcement that Google would fire 20 percent of Motorola Mobility's work force.

Unlike the other events covered by this chapter of analysis, the Motorola Mobility layoffs did not receive formal or informal announcements in any of the channels Google used to communicate the purchase itself (i.e., The Official Google Blog or the Google Investor Relations press releases). Instead, the layoffs announcement seems to have been picked up by the press from an SEC filing made by Google dated August 3, 2012. This is the Form 8-K signed by Google CFO Patrick Pichette (Pichette, 2012). The main body of this relatively brief document consists of four main sections. The first paragraph announces the plan to lay off 4,000 Motorola Mobility employees. The second paragraph explains the purpose of the layoffs. The third paragraph outlines the company's plans in terms of compensating the laid-off employees. And the fourth paragraph contains more or less standard disclaimers regarding forward-looking statements. In terms of understanding the enthymematic argument in this document, I will focus my attention on the end of the first paragraph and the beginning of the second:

On August 3, 2012, Motorola Mobility (Motorola), a wholly owned subsidiary of Google Inc. (Google), determined that it would reduce its headcount by approximately 4,000 out of a total of about 20,000 employees. Two-thirds of the reduction is set to occur outside of the U.S. In addition, Motorola plans to close or consolidate about one-third of its 90 facilities, as well as simplify its mobile

product portfolio—*shifting the emphasis from feature phones to more innovative and profitable devices.*

These changes are designed to return Motorola's mobile devices unit to profitability, after it lost money in fourteen of the last sixteen quarters. That said, investors should expect to see significant revenue variability for Motorola for several quarters. While lower expenses are likely to lag the immediate negative impact to revenue, Google sees these actions as a key step for Motorola to achieve sustainable profitability. (Pichette, 2012 emphasis added)

I have emphasized that part of the text which informs the enthymeme discussed below.

This enthymeme might be laid out in the following manner:

Argument C

1. Motorola has lost money in 14 of the last 16 quarters.
2. Feature phones are unprofitable.
3. Innovations are profitable.
4. Therefore, making innovative phones will return the company to profitability.

In Argument C, statement 1 is explicit: The company has been unprofitable for most of the past four years. Statements 2 and 3 are left unstated (feature phones are not profitable, innovations are profitable), but they are required to get from the statement that Motorola has been losing money for most of the past four years to the conclusion that concentrating on innovative phones will correct this problem. Statement 2 is an unstated premise and statement 3 is implied but not stated explicitly. Furthermore, statements 2 and 3 are used assumptions—the reader must fill them in for the chain of arguments to make sense, yet

they rely on a common-sense understanding that only cutting-edge devices can be profitable. Finally, statement 4 (innovative phones will return the company to profitability) is the stated conclusion of the argument.

Of course, the chain of premises and the conclusion outlined above does not actually address the layoffs themselves. The exact relationship between employee headcount and whether or not Motorola makes “innovative” phones is left for the reader to fill in, using his or her own common-sense understanding of innovation in the mobile computing marketplace. To help fill in this gap, I offer Argument D as a more direct path from unprofitable feature phones to the mass lay-offs:

Argument D:

1. Motorola has lost money in 14 of the last 16 quarters.
2. Feature phones are not profitable; smart phones are profitable.
3. Motorola has too many people making feature phones.
4. Therefore, we must fire that portion of our workforce that is making feature phones.

However, laying out the argument in this way does not push enough of the argument to the common sense of the reader. In other words, the reader becomes more apt to ask himself about the explicit reasoning of such an argument. For example, does the company really know that feature phones cannot be profitable and that innovative phones will be profitable? Why is firing people a better a course of action than keeping them to build innovative phones instead of feature phones? Indeed, Argument D demonstrates the close relationship between enthymeme and common-sense. Enthymeme does not simply rely

on common sense to help fill in used assumptions. It helps create a sense of the way things ought to be, by not offering explicit alternatives for the reader to consider.

Finally, there is something essentially enthymematic about the overriding focus on products. In many of the texts I have analyzed in this chapter, an explicitly stated conclusion has been that the merger is justified because it will allow Google to create “amazing user experiences” (Google Investor Relations, 2011). Similarly, “When Patents Attack Android” (the blog post by Google's Chief Legal Officer David Drummond) ends with a heavy emphasis on the need to protect Android from patent attacks—once again focusing on the effect that non-action will have on phones: “Unless we act, consumers could face rising costs for Android devices — and fewer choices for their next phone” (Drummond, 2011). It is true that this hardware-centered perspective is often couched in concern for the consumer. However, that concern always ends as soon as the companies are able to get the newest, shiniest device in the consumer's hands. The phone itself is essentially the stated conclusion of any number of stated or unstated premises and used assumptions (e.g.: Protecting Android from patent attacks will help us make better phones; Purchasing Motorola Mobility for its large collection of patents will help us make better phones; Firing a large portion of Motorola Mobility's employees will help us make better phones). Clearly, one cannot fault companies involved in the cell phone business for trying to make better phones. However, this overwhelming focus on products reflects a philosophy that sees technology as nothing more than a neutral tool. In the conclusion of this chapter, I will discuss some of the implications of that perspective.

Conclusion

In Chapter 2, I describe the instrumentalist view of technology outlined by Feenberg (2002). Instrumentalism can also be thought of as technological neutrality; this is the reasoning behind statements such as “Guns don't kill people; people kill people.” One component of instrumentalism is an acceptance of efficiency. More specifically, instrumentalism sees technology as “[standing] essentially under the very same norms of efficiency in any and every context” (Feenberg, 2002, p. 6). Often, that measure of efficiency boils down to cost. Feenberg offers a critical theory of technology as an antidote to instrumentalism. Feenberg's critical theory holds that technology be thought of not as a thing, but as “an 'ambivalent' process of development suspended between different possibilities” (Feenberg, 2002, p. 15). Shifting the focus from things to processes enables what Feenberg calls technological holism. Technological holism is the recognition that technology results from long chains of human choices. Furthermore, each of those choices affects individuals, groups, the environment, and other technologies and systems.

At first glance, it would seem that by concentrating on phones, the texts that I have discussed above avoid the instrumentalist pitfall of focusing cost as a measure of efficiency. In fact, very little of the discussion involves cost, whether that be the cost of a phone to a consumer, or the cost of buying Motorola Mobility. Instead, the texts I have analyzed nearly always swing around to describe devices and the benefits these devices will bring to consumers. Indeed, framing these texts around consumer choice may seem holistic, at least in the way that I have described it above. However, I argue that this focus

on consumer choice is little more than faux holism. The only choices taken into consideration are the choices made at the point of purchase.

Each of the rhetorical devices discussed in this chapter contribute to that faux holism by providing a foundation of common sense for it to rest upon. The rhetorical construction of the facts that are used to justify the purchase of Motorola Mobility and its patents help determine the terms under which the transaction will be understood. The use of metaphor to justify the purchase as the patents themselves begin to appear less appealing constitutes an appeal to the images that the audience uses to understand the two companies and their work. As it became clear that the purchase would not be as useful in terms of acquiring patents to defend Android, the justification for the merger shifted to a value-based argument, through the use of rhetorical communion. Rhetorical communion achieved through the use of allusion and maxim represent an attempt on the part of Google to create a sense of community with its readers. And finally, enthymematic arguments are deployed that rest on common-sense used assumptions filled in by the audience.

All of the devices are focused on products and couched in a concern for consumer choice that has the appearance of something more than instrumentalism, but which is really nothing more than a faux technological holism. In the end, this is a discussion about hardware, and not about alternative ways of creating new technologies. In the next chapter, I will discuss the conflict between Microsoft and Motorola Mobility/Google through the lens of a particular type of patent: those governed by Reasonable and Non-Discriminatory licensing agreements—RAND patents.

Chapter 5: RAND: Reasonable and Non-Discriminatory

Introduction

This chapter approaches the patent wars from the perspective of standards-setting and licensing agreements. In this chapter, I focus specifically on RAND agreements; RAND stands for Reasonable And Non-Discriminatory.³⁶ While an emphasis on RAND disputes may seem to miss the core dispute (i.e., claims that Android infringes on patents owned by other companies), standards and licensing are at the heart of several of the complaints that Microsoft has leveled against Motorola Mobility. More importantly, the ways that each of the parties to this dispute talk about standards and licensing speak volumes about their overall understanding of innovation and technological improvement.

In the pages that follow I provide a brief background on standards-essential patents and the licensing agreements that go with these standards. Next I provide an outline of the origins of a particular patent dispute between Microsoft and Motorola Mobility. I then spend the bulk of the chapter analyzing 18 source documents:

- Four blog posts by several different Microsoft executives.(Albert, 2012; Heiner, 2012; Howard, 2012; B. Smith & Gutierrez, 2011). In these texts, Microsoft establishes its position on the relationship among standards-essential patents, licensing, and innovation.
- An open letter to standards-setting organizations published on Microsoft's Legal

³⁶ European licensing agreements prepend the adjective Free to make FRAND. Since the case which I investigate is ultimately decided by US court, I have used RAND throughout

and Corporate Affairs website (“Microsoft’s support,” 2012). This letter was intended to reassure standards-setting organizations of Microsoft's position on its RAND commitments.

- Six blog posts by a number of Google executives (DiBona, 2007; M. Lee, 2009a, 2009b; Rosenberg, 2009; Shelton & Lee, 2007; Walker, 2011). In these texts, Google stakes out its own perspective on patents and innovation.
- A letter from Google's Deputy General Counsel to standard setting organizations (Lo, 2012). This letter established Google's position on how it will conduct itself without regard to the RAND commitments associated with the patents acquired in its purchase of Motorola Mobility.
- A press release from Motorola Mobility (Motorola Mobility, 2010). This text announces the earliest lawsuit that Motorola Mobility leveled against Microsoft.
- The special proxy statement issued by Motorola Mobility describing its potential purchase by Google (Motorola Mobility, 2011).
- A report published jointly by two US government agencies: the Economics and Statistics Administration (ESA) & United States Patent and Trademark Office (USPTO) (Economics and Statistics Administration & United States Patent and Trademark Office, 2012). This report (which I refer to below as the ESA/USPTO report) provides a wealth of data and context for interpreting the influence that intellectual property has on the US economy.
- A speech given by President Barack Obama (“Remarks by the President,” 2010). I include the text of this speech in my analysis because it is cited in the

ESA/USPTO report as context for the importance of innovation.

- A press release from the US Department of Justice (Office of Public Affairs, 2012). This text announces the DOJ's approval of a large number of patent transfers that took place in 2011 and 2012.
- A press release from the European Commission's regulatory agency ("Antitrust," 2012). This press release announces the Commission's opening of an anti-trust investigation against Motorola Mobility. The investigation concerns whether or not Motorola Mobility has broken its RAND commitments.

I argue that some of these texts contribute to competing social imaginaries in a number of ways. The first is metaphor, which through the images it evokes helps in the creation of social imaginaries. The second is rhetorical communion, especially when allusion plays a role. In Chapter 2, I discussed the concept of communion as described by Perelman and Olbrechts-Tyteca in *The New Rhetoric* (1969). Following Graff and Winn (2011), communion in this sense is somewhat akin to solidarity, in that it is one of the forces that can help to hold a community together. But communion also performs "a constitutive function for rhetoric" (Graff & Winn, 2011, p. 109). That is, communion in this sense takes on a constructive role in the forming and maintaining of the community itself. Finally, recall once more that Graff and Winn described three major methods found in *The New Rhetoric*, that authors can deploy when trying to evoke a sense of communion. These are 1) maxim and proverb, 2) allusion and quotation, and 3) invitations to the audience to participate (Graff & Winn, 2011, p. 114).

The texts analyzed in this chapter also point towards what I call "faux"

technological holism, that is a view of technology that at first glance appears to take in a multiplicity of values and perspectives, but which is in fact focused more or less exclusively on consumption and profits. I find that *loci of quantity* arguments play a role in the rhetorical creation of this perspective on technology. Perelman and Olbrechts-Tyteca see *loci of quantity* as one of the basic components of what comes to be taken as common sense. In my analysis below, I find that *loci of quantity* are also at the heart of many of the arguments that serve to create this false sense of technological holism.

Finally, I argue that the texts indicate competing visions of innovation from the various sides in this dispute. In other words, the companies are arguing about more than how a particular law or patent should be applied in a particular case or complaint. Rather, they are arguing about what kind of intellectual property regime can best support innovation in general. In essence, this is an argument that concerned itself with the best way to create new technologies.

Standards-Essential Patents and RAND Commitments

In Chapter 3 I reviewed literature surrounding standards-setting and the rhetoric of standards. One thing this literature makes clear is that standards are anything but neutral texts. Indeed, standards are built upon rhetorical foundations that can be as heavily laden with persuasion and contentiousness as any other negotiation of power. Therefore it is useful to review the relationship between standards and patents, especially since that relationship constitutes a sort of rhetorical canvas, across which the images, metaphors, and allusions of this dispute are drawn.

Standards and intellectual property rights such as patents are in some ways at

cross purposes. Bekkers, Verspagen & Smits (2002) maintain that standards can benefit producers and consumers alike. For producers, standardization can help to “increase economies of scale” (p. 172), which in turn can benefit consumers through lower costs. Although standards can also lock out smaller producers or disruptive technologies, standards can help reduce format battles such as the struggle between the VHS and Betamax videotape recording formats of the late 1970s and early 1980s.³⁷ Standards can also benefit consumers by preventing them from getting “locked in” to a format or technology that will vanish from the marketplace. By way of contrast, Intellectual Property Rights (IPRs) are meant to foster development and innovation. In the United States, such rights are rooted in the Useful Arts clause of the US Constitution, which states that “Congress shall have the power ... To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (“U.S. Constitution, art. I, para. 8, cl. 8,” n.d.). Although the patent system has seen a great many changes in the two centuries since the Constitution was written, the underlying principle that innovation should be supported by granting inventors limited-term monopolies for new ideas has remained intact.

However, Shapiro (2001) worries that, despite the intentions of the Useful Arts clause to promote innovation, the current patent system actually has the opposite effect:

Thoughtful observers are increasingly expressing concerns that our patent (and copyright) system is in fact creating a patent thicket, a dense web of overlapping

³⁷ In the case of VHS and Betamax, the competing formats were not governed by any sort of industry standard. Instead the companies that owned the formats (RCA and Sony, respectively) competed in terms of the length and quality of the recordings that could be made on a given cassette. Liebowitz & Margolis (1995) argue convincingly that the simple fact of VHS's larger cassette housing enabled RCA to stay ahead of Sony in terms of recording length and recording quality, since regardless of other technical considerations, a VHS cassette could contain more tape than a competing Betamax cassette.

intellectual property rights that a company must hack its way through in order to actually commercialize new technology. With cumulative innovation and multiple blocking patents, stronger patent rights can have the perverse effect of stifling, not encouraging, innovation. (2001, p. 120)

Shapiro places much of the blame for this situation on a patent system that grants too many patents to too many owners, a situation which makes it nearly impossible to build anything without infringing on multiple patents. The complexity of building a device such as a cell phone in the midst of such an intellectual property “thicket” has been echoed by both Google and Microsoft. See Drummond's (2011) blog post “When patents attack Android” for Google's perspective; like Shapiro, Drummond considers the cost of cutting through the “250,000 (largely questionable) patent claims” (para. 5) involved in a typical smart phone to be a kind of tax.³⁸ For Microsoft's viewpoint, see the Q&A with Gutierrez (“Microsoft reflects,” 2008). In this text Gutierrez echoes Shapiro's metaphor of patents as web. However, unlike Shapiro, Gutierrez sees the system of patents and the licenses that enable companies to connect them not as something that must be cut through, but something that can be built upon:

In any given consumer electronics device there are hundreds of patents representing innovations created by other companies that are incorporated into that product because of IP licensing agreements. It is that “invisible web” of licensing agreements in the background that enables that device to be “cool.” That’s a benefit of IP collaboration you rarely hear about, but that is very real. (“Microsoft reflects,” 2008, para. 5)

³⁸ I provide a more detailed analysis of Drummond's blog post in Chapter 4.

It should come as no surprise that these two competitors have opposing views of the costs and benefits of the patent system. These perspectives illustrate the inherent tension between standards and intellectual property rights.

The possibility of patent “holdup” may be an even worse damper on innovation than patent thickets themselves. Holdup occurs after a product has been developed and produced, when a patent holder can file a lawsuit asking the court to prevent the allegedly infringing firm from producing, importing, or distributing the product in question (Shapiro, 2001, p. 121). Both Microsoft and Motorola Mobility have requested and been granted such injunctive relief. A German court ordered that Microsoft not be allowed to import several Microsoft products into Germany (“Motorola wins Xbox ban in Germany,” 2012) note, however, that a US Court prevented this injunction from ever going into effect (Jones, 2012). Similarly, on May 18, 2012, the International Trade Commission ordered that Motorola Mobility not be allowed to import into the United States devices that infringe on Microsoft's Patent No. 6,370,566, which involved the synchronizing of calendar entries among various devices (United States International Trade Commission, 2012).

Returning to the inherent tension between patents and standards, Bekkers et al. find the roots of these stresses in the simple fact that standards and intellectual property rights are at cross purposes:

At first sight, standardization and IPRs [intellectual property rights] may serve conflicting interests: an IPR is aimed at appropriation of a right to exploit a piece of knowledge by a single firm, while a standard aims to identify a common pool

of knowledge to be used by all parties contributing to or using a standard.

(Bekkers et al., 2002, p. 172)

Perhaps nowhere does this tension come into sharper focus than in the uneasy alliance between standards and patents: the standards-essential patent (SEP).

Standards-essential patents are those patents that have been used to help create a standard. Bekkers et al. describe SEPs as “protected knowledge that is indispensable for a product that has to comply with that standard” (2002, p. 173). Once a patent is written into a standard as an SEP, it can either be shared freely or at a cost. Shapiro (2001) contends that such sharing agreements are created because without them, patent owners would be hesitant to contribute to the standard, since other contributors could potentially use their part of the standard as leverage against competitors: “Thus, standard setting organizations like the ITU or the American National Standards Institute (ANSI) typically require that participants agree to license all patents essential to compliance with any standard on 'fair, reasonable, and nondiscriminatory' terms” (Shapiro, 2001, p. 128). In theory, these agreements should balance intellectual property rights and the need for standards by giving patent owners some kind of fair compensation for their property, while at the same time preventing any single patent holder from using that property to dominate the market. However, not even RAND agreements can ease the tension between standards and patents completely.

One example of standards-setting that resulted in market dominance for a single firm can be found in the history of Motorola and the GSM standard. Bekkers et al. outline the formation of the standard, which is used in cell phone communications in Europe and

by two of the major carriers in the United States.³⁹ Motorola contributed more patents to this standard than any other single firm (p. 176). Motorola then used its dominance to gather more power over the standard itself:

By using the negotiation power that came with its patent portfolio, Motorola could dictate its licensing conditions to all firms. The company thus imposed a market structure by conducting exclusive cross-license agreements with a selected number of other parties on the market. These parties were selected because their IPRs were valuable to Motorola (not only essential patents, but also others), or because their product line complemented that of Motorola. Also, Motorola took the position of firms in the alliance network into account when selecting its cross-licensing partners (Ericsson). As a result, the importance of Motorola in the network of strategic alliances increased drastically in the late 1980s. (Bekkers et al., 2002, p. 186)

In fact, Bekkers et al. argue that the creation of the GSM standard and Motorola's leverage of that standard to dominate the industry actually changed the way telecommunications companies approach patents and standards: more and more of these firms actively pursue patents that may become integrated into standards, hoping for the advantages that may be afforded by such valuable intellectual property.

Microsoft, Motorola Mobility, and Google

The texts provided by Microsoft, Motorola Mobility, and Google reflect these companies' differing views and understanding of innovation. Although the lawsuit I am concerned with is between Microsoft and Motorola Mobility, it makes sense to include

³⁹ See Pelkmans (2001) for a thorough history of the GSM standard.

texts from Google in this analysis because the company purchased Motorola Mobility in the midst of this case. This section provides a brief history of relevant patent disputes involving Microsoft, Motorola Mobility, and Google.

Patent analyst Florian Mueller has created two graphics that help make clear just how quickly this dispute has escalated (Mueller, 2011). Figures 10 and 11 are taken from Mueller's blog. The ongoing conflict between Microsoft and Motorola Mobility began on October 1, 2010, when Microsoft filed two complaints involving nine patents against Motorola Mobility (Kang, 2010; United States International Trade Commission, 2012). This original suit claimed that Motorola Mobility was infringing on Microsoft's patents; Microsoft filed a second suit in November claiming that Motorola Mobility was not honoring its RAND commitments (Lowensohn, 2010a; Rigby & McCormick, 2010). The following day, Motorola Mobility counter-sued over many of those same RAND-related patents (Motorola Mobility, 2010). A few days later, Motorola Mobility filed a similar complaint with the International Trade Commission (Lowensohn, 2010b). Mueller's comprehensive and carefully documented flow charts depict the progressions of salvos between these two companies. Figure 10 shows the state of the dispute at the end of November, 2010—less than two months after Microsoft's original complaint (Mueller, 2011, p. 5).

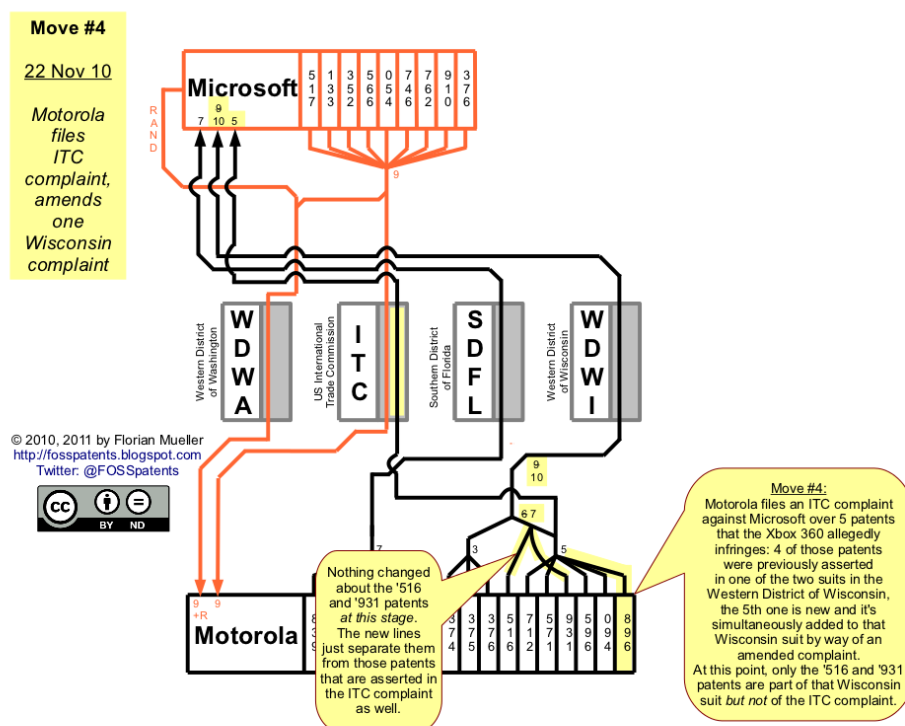


Figure 10: The first four moves of the patent disputes between Microsoft and Motorola Mobility.

The dispute began on October 1, 2010, when Microsoft sued Motorola Mobility over patent infringement. Within two months, a total of five complaints involving over 20 patents had been filed. From Mueller, F. (2011, December 11). *Microsoft vs. Motorola Mobility: The patent battlefield as of 11 Dec 11*. Scribd. Retrieved from <http://www.scribd.com/doc/75443115/MicrosoftVsMotorola-11-12-1>. Used with permission.

Even at this early stage, the web of lawsuits, counter-lawsuits, and complaints was quite complex, involving more than 20 patents and four jurisdictions. However, this already contention state of affairs was just the beginning. The conflict quickly spread to include an even wider array of patents and RAND commitments. Figure 11 shows the state of the dispute 14 months after Microsoft filed its first lawsuit (Mueller, 2011, p. 1).

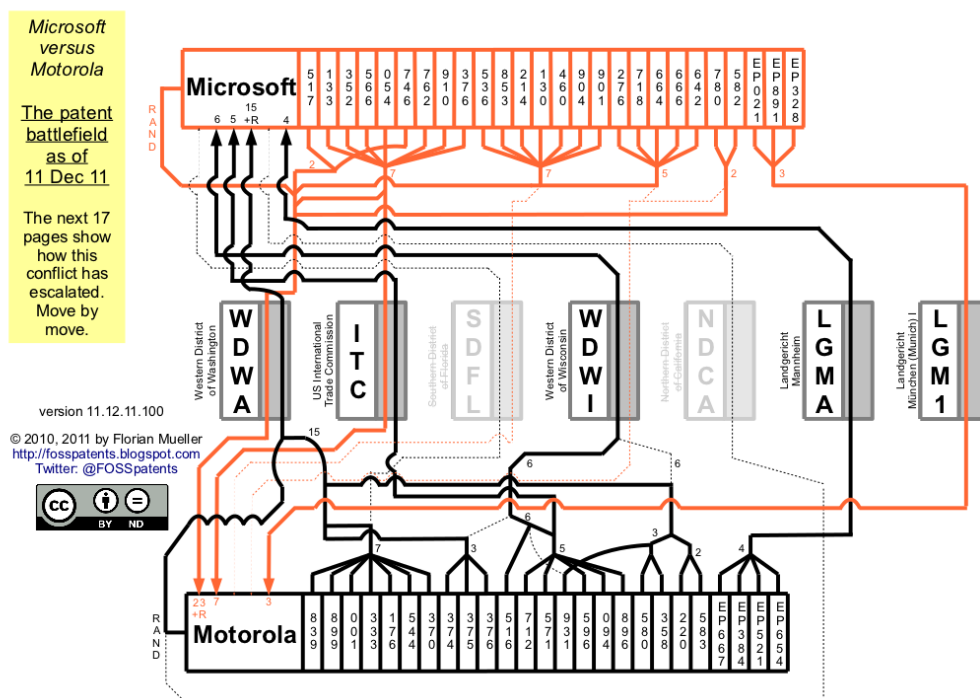


Figure 11: The patent disputes between Microsoft and Motorola Mobility as of December 11, 2011.

Dotted lines and faded out boxes represent claims that have been moved to other jurisdictions. From Mueller, F. (2011, December 11). Microsoft vs. Motorola Mobility: The patent battlefield as of 11 Dec 11. Scribd. Retrieved from <http://www.scribd.com/doc/75443115/MicrosoftVsMotorola-11-12-11>. Used with permission.

As these two figures show, this dispute escalated with an explosive complexity. As lawsuit was met with counter-lawsuit, more and more patents and jurisdictions were drawn in to fray. In just a little more than a year, the conflict had expanded to involve approximately 50 patents and seven jurisdictions.

Although the parties in these lawsuits are limited to Microsoft and Motorola Mobility, Google became involved when they purchased Motorola Mobility in 2011. As the purchase underwent regulatory scrutiny, Google required that Motorola Mobility

agree not to settle any outstanding intellectual property lawsuits (Motorola Mobility, 2011, p. 66).⁴⁰ Finally, it is important to note that Microsoft itself brought Google into the dispute when they expanded a claim against Motorola Mobility to include its parent company Google (Rigby, Orlofsky, & Gregorio, 2012). The remainder of this chapter is focused on one small section of that overall dispute: RAND commitments. In the next section, I discuss the ways these texts describing RAND commitments contribute to competing social imaginaries.

Social Imaginaries

I discussed the Charles Taylor's (2002) powerful concept of the social imaginary in Chapter 2. To recap, Taylor argues that social imaginaries are essentially “the ways in which people imagine their social existence [and] how they fit in with others” (p. 100). The distinction between the social imaginary and theory is important here. Theories belong to the elite few; social imaginaries, in order to work at all, must be “shared by large groups of people, if not the whole society” (p. 106). Taylor offers the economy as an example of a social imaginary that evolved from the elite theories of Adam Smith and others. Taylor argues that the fundamental concept of economic systems as a way of understanding people's interactions with each other began with the theories of Adam Smith and others. But over the course of more than a century, this idea percolated into other spheres of human interaction. It is this percolation into the everyday ways in which we talk about our lives and work that constitutes a social imaginary:

Conceiving of the economy as a system is an achievement of eighteenth-century

⁴⁰ While it may be standard practice in corporate mergers to put such litigation settlements on hold as the company is changing hands, the Preliminary Proxy Statement makes it quite clear that whether or not Motorola would settle its intellectual property lawsuits was an important factor in the negotiations to purchase the company (see Motorola Mobility [2011, sec. Background of the merger (pp. 27–30)]).

theorists (e.g., the Physiocrats and Adam Smith), but coming to see the most important purpose and agenda of society as economic collaboration and exchange is a drift in our social imaginary, which begins in that period and continues to this day. (Taylor, 2002, p. 105)

Thus, today the concept of the economy refers to more than just the buying and selling of goods in the marketplace. The economy pervades many spheres of social existence. In other words, we now “see society as an 'economy,' an interlocking set of activities of production, exchange, and consumption, which form a system with its own laws and dynamic” (Taylor, 2002, p. 105). It should come as no surprise that standards-essential patents and RAND agreements, with their deep connections to both the marketplace economy and other systems of social interaction, are also governed to a large extent by the social imaginary of the economy itself.

Recall also that social imaginaries are often normative in nature, as Taylor makes clear: “We have a common sense of how things usually go, but this is interwoven with an idea of how they ought to go” (2002, p. 106). However, the social imaginary is essentially dialectical in nature. In other words, the social imaginary, emerging as it does from the understandings and actions of people participating in it, is shaped by the very practices that it also creates and normalizes. Ultimately, as Taylor puts it, “the new practice, with the implicit understanding it generates, can be the basis for modifications of theory, which in turn can inflect practice, and so on” (2002, p. 111). However, the normative and dialectic aspects of the social imaginary cannot help but be at odds with each other. As the people and organizations participating in a given social imaginary pursue their

interests and agendas, the tension between normalism and dialectic becomes clear. This tension is well demonstrated by the Patent Wars, as the analysis in this chapter helps show.

I have also discussed the role that metaphor plays in helping people make sense of the world and their role in a community. Metaphor is essentially one component of the Taylor's social imaginary. Furthermore, Giles (2001) distinguishes between technical metaphors and natural metaphors, arguing that the former function “by associating the unknown with figures occurring in the technical world, with items and processes that are the byproducts of science and technology” (Giles, 2001, p. 378). Contrast this with natural metaphors, which explain the unknown through naturally occurring figures (such as the “ecosystem” metaphor I describe in Chapter 4, above).

In this section, I dissect the social imaginary of standards-essential patents and RAND agreements involved in the Patent Wars. Specially, I look at the *economic engine* metaphor, which has come to shape discussions surrounding intellectual property in general and patent licenses specifically. Generally speaking, those parties in this dispute that will benefit from the maintenance of the *status quo* rely on a metaphor of patents as economic engine in their arguments. Those with an interest in disrupting the patent system seem to be attempting to create a sense of communion with their audience through the use of allusions and maxims.

The “Economic Engine” Metaphor

One of the first examples of the “patent as economic engine” metaphor in my sample of documents occurs in a 2011 blog post from Microsoft's General Counsel Brad

Smith and Deputy General Counsel Horacio Gutierrez (B. Smith & Gutierrez, 2011). In this post, Smith and Gutierrez announce a cross-licensing agreement between Microsoft and Samsung. The accompanying press release offers the details of the deal: Samsung agreed to pay royalties for its “phones and tablets running the Android mobile platform. In addition, the companies agreed to cooperate in the development and marketing of [Microsoft's mobile operating system] Windows Phone” (“Microsoft and Samsung,” 2011, para. 1). In the blog post trumpeting the deal, Smith and Gutierrez take a broader view of what such deals mean, both for Microsoft as a company and for innovation writ large:

These agreements prove that licensing works. They show what can be achieved when companies sit down and address intellectual property issues in a responsible manner. The rapid growth of the technology industry, and its continued fast pace of innovation are founded on mutual respect for IP. Intellectual property continues to provide the engine that incentivizes research and development, leading to inventions that put new products and services in the hands of millions of consumers and businesses. (B. Smith & Gutierrez, 2011, para. 4)

In addition to the stability invoked by phrases such as “mutual respect for IP,” Smith & Gutierrez also cast intellectual property in terms of a technological metaphor: an engine. In this case, this metaphorical engine “incentivizes research and development.” Incentivization is a common argument in favor of intellectual property rights, emphasizing as it does the stated purpose of the Science and Useful Arts clause: “The Congress shall have power . . . to promote the Progress of Science and Useful Arts, by

securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (“U.S. Constitution, art. I, para. 8, cl. 8,” n.d.). But combining the incentivization argument with the technical metaphor of the engine may create a sort of harmonious circle in the mind of the reader. As “engine,” intellectual property has become its own kind of technology, one that makes possible the creation of more advanced intellectual property.

Microsoft also makes use of the engine metaphor to describe the relationship between patents and other intellectual property and the US economy as a whole. The company's Associate General Counsel for IP Policy & Strategy, Jason Albert, wrote a blog post titled “Intellectual Property: The Engine of U.S. Economic Growth” (Albert, 2012). Here Albert summarizes a report from two US government agencies: the Economics and Statistics Administration (ESA) and the US Patent and Trademark Office (USPTO). The report (hereafter referred to as the ESA/USPTO report) analyzes the effects that patents and other kinds of intellectual property have on the US economy. As the USPTO summarizes nicely on the web page that houses the report: “The entire U.S. economy relies on some form of IP, because virtually every industry either produces or uses it” (US Patent and Trademark Office, 2012, sec. Principle Findings, para 1). In terms of dollars and jobs, the report found that “IP-intensive industries” added over \$5 trillion dollars to the GDP in 2010 and represented more than 18% of the US workforce (US Patent and Trademark Office, 2012, sec. Principle Findings).⁴¹ However it should be

41 The report defines IP-intensity as related to the use of “intellectual property protection,” while acknowledging that such a definition can be subject to criticism, since it may overemphasize IP used strategically (such as is often the case in the Patent Wars), while de-emphasizing IP used for research and development (Economics and Statistics Administration & United States Patent and Trademark Office, 2012, p. 33).

noted that the lion's share of the IP effect was related to Trademark; patent-intensive industries accounted for only 5.3% of the GDP and 2.7% of employment (US Patent and Trademark Office, 2012, fig. 5).

The “engine” metaphor is deployed several times in this report, even in the epigraph to the main body of the report, which features a quotation from President Obama. In this formulation, the harmonious circle I describe becomes even more apparent, in that here the relationship between the metaphorical engine and innovation has changed directions.

The key to our success – as it has always been – will be to compete by developing new products, by generating new industries, by maintaining our role as the world’s engine of scientific discovery and technological innovation. It’s absolutely essential to our future.

–President Barack Obama, November 17, 2010 (Economics and Statistics Administration & United States Patent and Trademark Office, 2012, p.

1[emphasis original])

In this case, the engine has moved from the intellectual property and patents to the country as a whole. So the relationship between innovation and the engine metaphor has flipped. Here it is innovation itself that allows the United States to function as “the engine of scientific discovery and technological innovation” (p. 1). However, it is worth taking a glance at the context of Obama's words. The epigraph is taken from remarks the President made when awarding National Medals of Science and National Medals of Technology and Innovation in 2010. The speech in its entirety focuses on the hard work and amazing

talents that the recipients of these awards bring to their endeavors—both as individuals and as partners in collaboration. The passage from which the USPTO selected its epigraph provides a good sense of the remarks as a whole:

Yet it is in these labs -- often late at night, often fueled by a dangerous combination of coffee and obsession -- (laughter) -- that our future is being won. For in a global economy, the key to our prosperity will never be to compete by paying our workers less or building cheaper, lower-quality products. That's not our advantage. The key to our success -- as it has always been -- will be to compete by developing new products, by generating new industries, by maintaining our role as the world's engine of scientific discovery and technological innovation. It's absolutely essential to our future. ("Remarks by the President," 2010, para. 13)

Elsewhere in his remarks, the president spoke more directly to the work of the assembled scientists and inventors as individuals: "The achievements of the men and women who are onstage today stand as a testament to the ingenuity, to their zeal for discovery, and to the willingness to give of themselves and to sacrifice in order to expand the reach of human understanding" ("Remarks by the President," 2010, para. 5). But nowhere in his remarks does the president concern himself with intellectual property in its own right. In fact, although he does mention the collaboration involved in creating technologies as complex as semi-conductors (para 6), the president's remarks tend to favor a rather romantic notion of authorship—the inventor or scientist as lone genius, toiling away in a lab, fueled by caffeine and inspiration.⁴² This is in stark contrast to the purpose of the

42 As I will discuss below, this is a view of inventions favored by Google in its rhetoric deployed to

ESA/USPTO report, which is to describe the ways in which intellectual property rights—not individual lone inventors—drive innovation and the US economy as a whole.

Returning now to the body of the ESA/USPTO report, the economic engine metaphor is in many ways a foundational assumption of the report itself. For example, the authors argue that “IP is used everywhere in the economy, and IP rights support innovation and creativity in virtually every U.S. Industry” (2012, p. v). To use Perelman and Olbrechts-Tyteca's (1969) terminology, the ESA/USPTO report takes as a *fact* the notion that intellectual property is an engine that drives the economy. In other words, the authors of the report seem to be “[postulating] uncontroverted universal agreement with” (p. 67) the notion that patents, trademarks, and copyright are engines that they observe driving the economy. This perspective does not admit to the possibility that there may be other ways of supporting inventors and creative work that is equally or more effective than the system anchored in intellectual property protections. Again, this is exactly the challenge that Google is attempting to make in its rhetoric on the subject. Google's texts make use of allusion to create a sense of rhetorical communion, as I discuss in the next section.

Allusion

Allusion is one way that an author can strive to evoke a sense of communion and solidarity with the audience (Graff & Winn, 2011, p. 109). In the sample of documents I have collected involving the licensing disputes between Microsoft and the combined entity of Motorola Mobility and Google, these kinds of statements seem to be efforts to recall the historical roots of the patents system itself. Interestingly, when Google deploys

disrupt the current system of patents and licensing.

such allusions, they seem to be intended to support a disruption to the current systems of licensing agreements. For example, the following lines come from the opening paragraph of a 2007 blog post made by Google's Johanna Shelton, Policy Counsel and Legislative Strategist, and Michelle Lee, the company's Head of Patents and Patent Strategy:

Many of our nation's founding fathers (most notably Ben Franklin) were inventors, and from America's earliest days we've been a country that has promoted innovation. To protect and promote invention, those same founding fathers gave Congress the power (in Article I, Section 8 of the U.S. Constitution) “to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” Inventors have relied on the patent system to protect those rights. (Shelton & Lee, 2007, n.p.)

Note that the purpose of this post is made quite clear by its title: “Reforming Patents, Promoting Innovation.” Interesting is the double-barreled allusion: not only do they call to mind such an eminent inventor as Ben Franklin, but they also ground their allusion in the US Constitution itself. Although this blog post pre-dates the patenting and licensing disputes between Microsoft and Motorola Mobility discussed above, Shelton and Lee do offer valuable insight into Google's perspectives on the patent system. Coming as it does two years after Google bought the Android operating system itself (see Elgin [2005]), the company seems to be staking out a philosophical position regarding patents and licensing even a year before the release of the first Android-powered smartphone in 2008.⁴³

⁴³ . The purchase of Android and the release of the first Android phone are well documented in the business press. See for example Elgin (2005) and Holson & Helft (2008).

Lee repeats her allusion to the Constitution in 2009, a year after Android officially hit the marketplace. In this instance, the company's patent strategy leader comments on oral arguments at the Supreme Court in the case of *Bilski v. Kappos*. As Lee summarizes, the case involved a lawsuit brought by business partners who solicited a patent for a way they had devised to reduce risks when buying and selling certain commodities. Lee describes the lawsuit as “a potential landmark case in intellectual property law that will determine what kinds of business methods and software processes deserve patent protection” (para. 2).

This case is critical to the future of innovation in the United States. A recent flood of patents on business methods and abstract software processes has contributed to uncertainty and an explosion of expensive lawsuits. The Constitution permits Congress to create patent laws "to promote the progress of science and the useful arts," and we support patent rules that effectively further that goal. But awarding patents on abstract ideas and processes, like the claim at issue in the *Bilski* case, poses a serious threat to innovation, job creation, and economic growth. (M. Lee, 2009b, para. 3)

In this post, as in the post that Lee co-authored two years earlier, Google alludes to the Constitution in their bid to disrupt one aspect of the current patent system. In this instance, Lee takes a position against the further extension of patents into the realm of processes and abstractions, which began with one of the earliest court decisions allowing patents for software: *Diamond v. Diehr* (*Diamond v. Diehr* - 450 U.S. 175 (1981), 1981). As Lee makes clear in the 2009 post, Google sees reforming the patent system as crucial

to something of fundamental importance: “the future of innovation in the United States.” The 2007 post reveals an attitude towards innovation not unlike President Obama's. Invention and innovation can result from scrappy inventors who persist in following their dreams and ideas. Obama cites the example of a Texas high school student who “taught herself chemistry” so that she could “look at new cancer drugs” (“Remarks by the President,” 2010, para. 19). Google alludes to the founding fathers, and especially Benjamin Franklin. Neither Obama nor Google seems especially interested in the kind of innovation that involves patent pools and RAND agreements.

In Google's case, the allusion to the past seems to be an attempt to make it clear that although they are trying to disrupt certain parts of the patent system, they are not arguing that it be walked away from entirely. By citing the Useful Arts clause, they make it clear that they see patents as important tools for protecting intellectual property. By alluding to the inventor and founding father Ben Franklin, they seem to be hearkening back to a romantic notion of the inventor as lone, inspired genius. Setting aside the opportunity for critique that Google's idea of authorship offers, it seems clear that Google is trying to create a sense of communion that adheres to a community that values individual creativity and abhors the notion that a non-creative entity (read, “patent troll”) could profit from another's ideas and hard work.⁴⁴

At the same time, it must be noted that allusions to the Useful Arts clause abound among texts that concern themselves with patents. Indeed, the ESA/USPTO report discussed above makes just such a move on page 1:

⁴⁴ Consider, for example, Barthes (1990), Foucault (1991), and Woodmansee (1984) for three canonical examples.

Protection of IP has been a critical function of the U.S. government since the founding of this country. Indeed, Article I, Section 8, Clause 8 of the U.S. Constitution grants to Congress the power to “promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” (Economics and Statistics Administration & United States Patent and Trademark Office, 2012, p. 1)

Clearly in this case, the purpose of the allusion is not to cement community bonds while disrupting selected portions of the patent system. Instead the allusion seems to provide a historical context and justification for patents, trademarks, and copyright in their role as protectors of intellectual property—protections which the founding fathers saw as critical enough to the future of the country that they codified them into the US Constitution itself.

Faux Holism

In Chapter 2, I describe Feenberg's (2002) three approaches to understanding technology: instrumentalism, substantivism, and Feenberg's own critical theory. Recall that instrumentalism is the force behind conceptions of technology as nothing more than a neutral tool. Instrumentalism makes sayings such as “Guns don't kill people, people kill people” possible. Instrumentalism also relies on “the very same norms of efficiency in any and every context” (p. 6). Often, this efficiency is measured in terms of profitability or, as I describe in Chapter 4, sales.

Conversely, substantivism places all agency in the technology itself. In other words, a substantivist gun control slogan would turn the NRA slogan on its head, to

something like “People don't kill people, guns kills people.” Winner (1978) described the substantivist view of technology as similar to a pipe, “such that no matter which aims or purpose we decide to put in, a particular kind of product inevitably comes out” (p. 278). Feenberg himself takes a less drastic view of substantivism: “The issue is not that machines have 'taken over,' but that in choosing to use them, we make many unwitting commitments” (2002, p. 7). Note that both instrumentalism and substantivism rely to some degree on notions of common sense.

As an alternative to instrumentalism and substantivism, Feenberg suggest his own approach to technology, which he describes as “critical theory.” Critical theory approaches technology not as an end, but as a means (Feenberg, 2002, p. 15). In terms of the smart phone technology that I am concerned with in this dissertation, critical theory is more concerned with the processes and systems that enable their creation than with the end product, that is, the actual phone itself. As such, Feenberg's perspective is similar to Hughes (2004, pp. 3–5). Critical theory is also essential to Feenberg's technological holism, which requires that technology be considered as a cultural construct. Most importantly, technological holism sees technology as a means, not as an end (Feenberg, 2002, p. 184). Viewing technology as means is often at direct odds with the approach to technology taken in the fast-paced consumer electronics marketplace, where faster, brighter, bigger phones are used to convince people to re-commit to expensive contracts with their cell phone providers every two years.

Another aspect of importance when interrogating the relationship between technology and common sense are *loci of quantity* arguments. As I describe earlier in this

dissertation, Perelman and Olbrechts-Tyteca see *loci of quantity* as being fundamental to many notions of common sense: “A *locus* of quantity, the superiority of that which is accepted by the greater number of people, forms the basis of certain conceptions of democracy and also conceptions of reason which equate reason with '*common sense*' ” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 86 [emphasis original]).

Loci of quantity can be found in several of the source documents discussed in this chapter. Interestingly, both sides of this dispute deploy such arguments to support their competing notions of the best way to innovate. For example, the following paragraph was posted by Chris DiBona, Open Source Program Manager at Google, in August of 2007.⁴⁵ In this post, DiBona is announcing that Google is joining the Open Invention Network (OIN), “an innovative patent-sharing organization founded to create a legally protected environment for anyone who works with Linux” (para. 2). In the following excerpt, DiBona describes the importance of OIN.

The concept behind OIN is simple. All OIN licensees, including participants such as IBM, Oracle, NEC and Sony, agree to cross-license their Linux-related patents to the others free of charge. Patent issues therefore become a much smaller concern inside the community, and OIN members can focus their energy on writing and releasing software rather than vetting their code for intellectual property issues. It's the legal equivalent of taking a long, deep breath. (DiBona, 2007, para. 3)

By listing other members of OIN, DiBona is relying on a *locus of quantity*. To the extent

⁴⁵ As noted earlier in this chapter, 2007 is well after Google purchased Android and began its move into mobile computing, although it is about a year before the first Android phone was released.

that DiBona offers a list of companies involved in OIN that is longer than the list of companies involved in patent disputes, the argument may be persuasive.

Google is quite consistent with this approach to openness. In a 2009 blog post, which was originally a company-wide email, Jonathan Rosenberg, then Senior Vice President of Product Management takes 4,300 words to outline the company's position on fundamental questions of “openness.” For example, Rosenberg contrasts open and closed systems: “Closed systems are well-defined and profitable, but only for those who control them. Open systems are chaotic and profitable, but only for those who understand them well and move faster than everyone else” (Rosenberg, 2009, sec. When bigger is better, para. 1). Rosenberg also anchors Google's approach to openness in a *locus of quantity*: namely the well-worn adage that what's good for the web is good for Google: “Our commitment to open systems is not altruistic. Rather it's good business, since an open Internet creates a steady stream of innovations that attracts users and usage and grows the entire industry” (Rosenberg, 2009, sec. Open systems win, para. 6). Indeed, “what's good for the web is good for Google” is the impetus behind many of Google's products and business decisions, as documented throughout Levy (2011) and referenced by insiders such as Google psychologist Dawn Shaikh in Chamberlain (2011, sec. Global Google). But in Google's case, the persuasiveness of the *locus of quantity* is not simply based on “a greater number of good things [being] more desirable than a smaller” (Chaim Perelman & Olbrechts-Tyteca, 1969, p. 85 citing Aristotle). Instead, the adage has taken on the aura of something like a higher truth, such as that favored by Plato, as described by Perelman and Olbrechts-Tyteca:

Even when certain philosophers such as Plato contrast truth with the opinion of the greater number, it is by means of a locus of quantity that they justify the preference they accord to truth, for they hold it to be something commanding the assent of all the gods, something which should win the assent of all men. (1969, pp. 86–7)

In fact, and as Rosenberg's blog post helps demonstrate, Google's business practices rest to a large extent on the “truth” that open systems will be good for the web and therefore good for Google. This is the truth that seems to be behind Google's support of several open-source software projects and Android itself.⁴⁶

Of course, *loci of quantity* can be deployed to support other positions as well. In fact, *loci of quantity* provide much of the foundation for justifications of standards-essential patents agreements and RAND licensing commitments. For example, in the winter of 2012, Microsoft published a statement outlining its commitment to standards-essential patents (“Microsoft’s support,” 2012). In this statement, the company promises to stick to its RAND commitments, to share standards-essential patents with other companies (so long as those companies also share their SEPs), and to require any firm that might purchase SEPs to also adhere to these commitments (para. 2, numbered items 1–4). By way of introducing these commitments, the company stakes out a position in stark contrast to Google's views on openness:

The international standards system works well because firms that contribute to standards promise to make their essential patents available to others on fair, reasonable and nondiscriminatory terms. Consumers and the entire industry will

⁴⁶ See the Google code website (“Open source projects,” n.d.) for a list of examples.

suffer if, in disregard of this promise, firms seek to block others from shipping products on the basis of such standard essential patents. (“Microsoft’s support,” 2012, para. 1)

By pointing to the potential harm that can come from interfering with SEP and RAND commitments, the company is essentially making a *loci of quantity* argument of its own. In other words, SEPs and RAND commitments benefit the greatest number of people and firms, therefore, getting in the way of those commitments will cause harm to that same number of people and firms.

Similarly, Dave Heiner, a Microsoft VP and General Counsel involved with corporate standards, wrote a blog post on the company's public policy blog, referring to and contextualizing the company's re-commitment to SEPs and RAND agreements. Heiner deploys *loci of quantity* arguments to anchor his argument. For example, Heiner claims that

Every firm building on the standard just relies on the fact that a license is available, if needed. For example, Microsoft has contributed patented technology to hundreds of standards, yet we are seldom asked to provide a license for our standard essential patents, and we rarely seek such licenses from other contributors. (2012, para. 5)

In this case, both the number of companies relying on the standard, and the number of patents that go into the standard form the quantitative *locus* for the argument. Likewise, Heiner makes use of similar reasoning in his explanation of the standards-essential patent system itself:

These firms typically promise that they will make these “standard essential patents” available to any firm that wishes to implement the standard on reasonable and nondiscriminatory terms. That way every firm can build products based upon the standard, secure in the knowledge that it can obtain a license to any essential patents. And it means that every consumer can reasonably expect to be able to watch videos or connect to a wireless network regardless of the device they are using. (Heiner, 2012, para. 4)

In Heiner's formulation, the entire SEP and RAND system rests on a foundation of *loci of quantity*. What is good for one company is good for other companies. What is good for more companies will be good for more consumers.

Furthermore, breaking with the quantitative locus can have disastrous consequences, as Heiner makes clear: “Every now and then a patent holder may break its promise to make its standards-essential patents available on reasonable and nondiscriminatory terms. These outliers create a lot of trouble for the international standards ecosystem” (Heiner, 2012, para. 7). Microsoft opposes these outliers, but the company is not alone in doing so: “Microsoft is one of several firms that have been discussing these concerns with antitrust enforcers over the past few months” (Heiner, 2012, para. 8). Ultimately, Microsoft's position, and the SEP system itself, rests on lining firms up, keeping them in line, and making sure they do not break with the *locus of quantity* upon which the whole system is built.

Regulatory agencies have also made statements that reveal *locus of quantity* statements. However, these positions seem to have more to do with the logic of the

marketplace than with arguing for the preservation of the licensing system. For example, in its announcement that it had cleared several major shifts of patent ownership, the DOJ gives a thorough description of a number of territorial shifts in the Patent Wars: Google's purchase of Motorola Mobility and its collection of over 17,000 patents; the Rockstar Bidco consortium's (made up of Apple, Microsoft, Research in Motion, and others) purchase of "approximately 6,000" (Office of Public Affairs, 2012, sec. Rockstar Bidco) Nortel patents; and the transfer of an unstated number of Novell patents to Apple. In announcing that the deals will be allowed to proceed, the DOJ focuses on the potential that the patent transfers could have stymied competition and innovation: "In all of the transactions, the division conducted an in-depth analysis into the potential ability and incentives of the acquiring firms to use the patents they proposed acquiring to foreclose competitors" (Office of Public Affairs, 2012, para. 2). In the end analysis, the DOJ found that the shifting patent landscape was not likely to change the current dynamics of the marketplace: "transferring ownership of the patents would not substantially alter current market dynamics" (Office of Public Affairs, 2012, sec. Analysis, para. 4).⁴⁷ However, it is worth noting that regulators were less convinced about Google's commitment to continue Motorola Mobility licensing agreements: "the division determined that the acquisition of the patents by Google did not substantially lessen competition, but how Google may exercise its patents in the future remains a significant concern" (Office of Public Affairs, 2012, sec. Analysis, para. 12).

In a similar analysis, European regulators are concerned whether or not Motorola

⁴⁷ It is worth noting that the Department of Justice did not come to the conclusion that the patent deals would improve the contentious landscape, only that that these transactions would not disturb the status quo, which is essentially a tangle litigation and billions of dollars worth of settlements.

Mobility is honoring its licensing commitments. Again, the concern is the extent to which breaking these agreement could affect competition (and by implication, the overall health of the marketplace): “In order to guarantee undistorted competition and to reap the positive economic effects of standardisation it is important that RAND commitments be fully honoured by the companies concerned” (“Antitrust,” 2012, sec. Background, para. 3). By emphasizing the effect that the patent transfers will have on competition, the European regulators are relying on the *locus of quantity* upon which the entire market economy is built: the assumption that competition benefits the largest number of consumers. The conclusion is that a transaction that would interfere with competition and its benefits should be avoided. The US Department of Justice takes a similar position in its announcement that Google will be allowed to purchase Motorola Mobility and its 17,000 patents:

In light of the importance of this industry to consumers and the complex issues raised by the intersection of the intellectual property rights and antitrust law at issue here, as well as uncertainty as to the exercise of the acquired rights, the division continues to monitor the use of SEPs in the wireless device industry, particularly in the smartphone and computer tablet markets. The division will not hesitate to take appropriate enforcement action to stop any anticompetitive use of SEP rights. (Office of Public Affairs, 2012, para. 5)

Once again, the transfer of patent rights is evaluated in terms of how it will affect competition and consumers.

Indeed, a similar *locus of quantity* provides the reasoning for the Useful Arts

clause itself: “Congress shall have the power ... To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (“U.S. Constitution, art. I, para. 8, cl. 8,” n.d.). Note that most of the clauses in Article I, paragraph 8 are concerned with Congress ability to secure the common good. For example, clause 7 gives Congress authority to “To establish Post Offices and post Roads” and the rest of paragraph 8 similarly deals with Congress's ability to create and manage aspects of the economy (borrowing money, minting coins, punishing counterfeiters) and its powers concerning national defense (punishing piracy, declaring war, and raising an army and a navy) (“U.S. Constitution, art. I, para. 8, cl. 8,”). All of these powers rest on a similar *locus of quantity* as does the Useful Arts clause: something that benefits the public (that is, a greater number of people) is worth protecting.

Thus, a *locus of quantity* of mutual benefit provides the foundation for much that is found in these documents and the way they approach patents and licensing agreements: Everyone benefits from the promotion of the useful arts, the protection of competition, and agreements to share ideas. However, this particular *locus of quantity* itself rests on an instrumentalist view of technology. In fact, the chain of benefits from useful arts to licensing agreements all appear to measure that benefit in terms of its economic effect on the people involved in that chain (firms and consumers). This is clearly a sign of instrumentalism as described by Feenberg (2002, Chapter 1). To take a critical view of this technology requires a recognition that not everyone benefits from this competition—certainly not to the same degree. Some benefit more than others, and some

may actually be harmed. For the sake of clarity and brevity I will set aside environmental and labor concerns and focus in the next section only on how these views of technology present different visions of innovation.

Visions of Innovation: The Commodification of Invention

Ultimately, the rhetorical analysis in this chapter helps illustrate a larger point: the different sides in this debate have radically different visions of innovation. In the rest of this chapter, I discuss these competing visions in light of the rhetorical analysis performed above. The debates over licensing agreements also help reveal a fundamental criticism levied against the modern patent system itself: that trolls have come to profit from the hard work of bona-fide inventors. Google's patent strategy leader Michelle Lee summarizes this view in a 2009 blog post:

Of the 20 patent lawsuits filed against Google since late 2007, all but two have been filed by plaintiffs who don't make or sell any real product or service — in other words, by non-practicing entities or “patent trolls.” Most of these cases seem to feature the same small set of contingent fee plaintiff's lawyers asserting patent claims against the same small set of companies. We've also noticed a more disturbing trend: in many of these cases, the patents being asserted against us are owned by — and in a surprising number of cases, are even “invented” by — patent lawyers themselves. (M. Lee, 2009a, para. 2)

In essence, Lee's argument resists the commodification of patents and intellectual property. Contrast this with Lee's allusion to Benjamin Franklin or President Obama's description of inventors discussed above. Lee and Obama both seem to see invention as

the inspired provenance of an inventor, not as commodities that can be bought and sold on the marketplace.

However in the years following Lee's post, Patent Wars erupt and Android becomes involved in more and more disputes. The company finds itself in the odd position of being against the commodification of patents, but in need of a stronger patent portfolio. In April of 2011 Google general counsel Kent Walker writes a blog post titled "Patents and innovation" that seems to be an attempt to bridge that gap. In paragraph one, Walker echoes Lee's criticism of a system that enables commodification and trolling:

The tech world has recently seen an explosion in patent litigation, often involving low-quality software patents, which threatens to stifle innovation. Some of these lawsuits have been filed by people or companies that have never actually created anything; others are motivated by a desire to block competing products or profit from the success of a rival's new technology. (Walker, 2011, para. 1)

Here Walker makes a connection between what he seems to see as two similarly despicable practices: patent trolling on the one hand and anti-competitive use of patents on the other. Note also that Walker seems to be attempting to associate the licensing disputes—"a desire to block competing products"—with "low quality patents."

Nevertheless, the purpose of Walker's post is to announce Google's bid for the Nortel patent portfolio:

But as things stand today, one of a company's best defenses against this kind of litigation is (ironically) to have a formidable patent portfolio, as this helps maintain your freedom to develop new products and services. Google is a

relatively young company, and although we have a growing number of patents, many of our competitors have larger portfolios given their longer histories.

(Walker, 2011)

This statement sets Google up to submit an unsuccessful bid for Nortel's patents. As I discuss in Chapter 4, after losing that bid, Google began the talks with Motorola Mobility that eventually led to the purchase of that company. However, it is worth noting here that patent protection was a main reason behind the merger. In other words, Google was looking for patents that it could use to stave off lawsuits and “protect the android ecosystem” (Google, n.d., sec. Benefits of the deal, para. 2).

Part of the process of purchasing Motorola Mobility involved reassuring standards-setting organizations (SSOs) of Google's intentions regarding the patents it received under the deal. To do this, Google's Depute General Counsel, Allen Lo, wrote a letter to the president of the IEEE.⁴⁸

In addition, while Google has no present intention to transfer any of the acquired MMI patents that include Essential Patent Claims to third parties, should Google do so in the future, it will use its best efforts to ensure that the transferees of any such MMI patents including Essential Patent Claims are contractually obligated to comply with MMI's licensing commitments. (Lo, 2012, para. 6)

In this letter, the company seems to be even more open to the notion that patents can be bought and sold in a fashion similar to other commodities. The difference may arise from the inherently strategic purpose of purchasing the Motorola Mobility patents. Google's

⁴⁸ It is worth noting that this is the letter which the Department of Justice found to be “ambiguous” in terms of clarifying Google's position on SEPs and RAND commitments.

interest in Motorola Mobility's patents was always as a means to help “defend Android” (Drummond, 2011, sec. Update, para. 1) from patent attacks, as Chief Legal Office David Drummond put it. Since the company wanted the patents for strategic reasons, it makes sense that they would be more open to the idea of trading them—these are not the patents describing the core ideas of Google's search and advertising business. Instead, the Motorola Mobility patents are more like ammunition to be used in the Patent Wars.

Of course, the Patent Wars predate Google's acquisition of Motorola Mobility. Even before Google began making overtures to buy Motorola Mobility, the cell phone maker was in the midst of a licensing dispute with Microsoft. Although the cell phone maker seems to have made far fewer public statements regarding its philosophical approach to patents and licensing, Motorola Mobility's head of intellectual property Kirk Daily did make the following statement through a company press release, announcing the an infringement case against Microsoft. In this statement, Daily argues that the lawsuit is needed to protect Motorola Mobility's body of innovative research:

Motorola's R&D and intellectual property are of great importance to the Company and are renowned worldwide. We are committed to protecting the interests of our shareholders, customers and other stakeholders and are bringing this action against Microsoft in order to halt its infringement of key Motorola patents. Motorola has invested billions of dollars in R&D to create a deep and broad intellectual property portfolio and we will continue to do what is necessary to protect our proprietary technology. (Motorola Mobility, 2010, para. 3)

This statement also seems to run counter to a view that sees patents as a commodity.

Although it is clear that intellectual property is an investment for the company, this statement positions the lawsuit as a bid to protect that investment from encroachment. Although Motorola Mobility clearly wants to make money from its investment in these inventions, it does not want to trade them away, as one would wheat or coffee. In other words Motorola Mobility views its intellectual property as an investment with a great deal of value added. This is in contrast to commodities and their fluctuating prices.

Interestingly, the company acknowledges in the following paragraph that Microsoft itself had already sued Motorola Mobility over patent infringement as well. Here Daily casts Microsoft in the role of the troll: “It is unfortunate ... that Microsoft has chosen the litigation path rather than entering into comprehensive licensing negotiations, as Motorola Mobility has mutually beneficial licensing relationships with the great majority of technology companies industry-wide” (Motorola Mobility, 2010, para. 4). Thus, although Daily acknowledges with this statement that Motorola Mobility's suit against Microsoft is essentially part of the over-arching patent dispute between the two companies, he still make clear that the company sees its intellectual property as a value-added investment—one that is not easily traded away. Indeed, this perspective is also made clear in the company's Special Proxy Statement explaining its prosed merger with Google:

At a July 6, 2011 meeting that occurred during this period, [Motorola CEO] Dr. Jha and [Google's Chief Business Officer] Mr. Arora discussed the protection of the Android ecosystem and, in the context of this discussion, Dr. Jha indicated to Mr. Arora that it could be problematic for Motorola Mobility to continue as a

stand-alone entity if it sold a large portion of its patent portfolio. (Motorola Mobility, 2011, p. 27)

Motorola Mobility's position in this instance seems to be taken from a strategic perspective: in the context of the ongoing Patent Wars, the company would be defenseless against aggressors without its patent portfolio. As intellectual property expert Colleen Chien told Steven Levy in a recent magazine article about patent trolls: "Patents are like bullets.... They're cheap to acquire but can cause a lot of damage" (Levy, 2012, p. 207). Whether or not the patents that Google acquired with its \$12.5 billion purchase of Motorola Mobility qualify as "cheap" is open to some debate. See Duncan (2012) and a story in Bloomberg ("Martin Calls Motorola Patents Acquired by Google 'Crap'," 2011) for two perspectives from the business press. However it is clear that the company intended to use the patents in litigation, so the bullet simile seems appropriate.

Contrast this with the ways Microsoft talks about SEPs and licensing agreements. A blog post by David Howard, Deputy General Counsel for the company, demonstrates several key rhetorical differences between his company and Google. Here Howard is reacting to an FTC statement to the International Trade Commission. Howard maintains that the FTC's statement reflects a growing weariness among regulators with the involvement of SEPs in the Patent Wars. Additionally, he paints a picture of standards as crucial to the background fabric of our daily lives:

Industry standards don't sound like something you should spend a lot of time worrying about, and in normal times you'd be able to take the benefits of standards for granted. But industry standards are the behind-the-scenes

underpinning to wireless connectivity and the Internet, indeed, a foundation on which virtually all modern electronic devices and networks are built. Without industry standards, your computer, smartphone, tablet, home wireless network and the Internet would be far more expensive and not work together the way you've become accustomed – if at all. (Howard, 2012, para. 3)

In other words, standards are part of a system that lets technology become invisible. Over time, this allows technology to become part of the common sense way of doing things.

Conclusion

Ultimately, the analysis in this chapter reveals a debate that is about much more than any one patent or licensing agreement. In the sections above, I have analyzed these texts using a rhetorical framework built largely upon metaphor and communion. This analysis made it possible to deconstruct the social imaginaries that constitute the background fabric of this debate, revealing the competing visions of innovation held by the various participants.

Each of the perspectives outlined above sees invention as something very different. Proponents of a “conservative” view of invention such as Microsoft or regulatory agencies tend to see invention as collaboration among firms. From this perspective, the current system of patents and licensing works reasonably well. This is not to say that Microsoft or the DOJ sees the system as perfect, but they seem to believe that the process of inventing, patenting, standardizing, and licensing has a proven track record of fostering innovation and technology for the betterment of all. This is a point of view that sees patents essentially as commodities—units that can be bought and sold on

the market, much like agricultural products.

Google on the other hand, seems to have a fairly divided view of innovation. On the one hand they present texts that see invention as the work of an inspired author— allusions to inventors such as Benjamin Franklin make this clear. This view of innovation would resist the commodification of patents; however, as Google has moved into the smart phone marketplace and as the Android operating system has helped set off the patent wars, Google's patent rhetoric has shifted. In later texts, especially those texts written since Google began acquiring a patent portfolio of its own, the company's language has shown itself to be much more amenable to the commodification of patents. For its part, Motorola Mobility seems to have viewed patents as leverage and even as ammunition, at least since the setting of the GSM standard in the early 1990s. This may be due to the simple fact that as Motorola Mobility is an established company with roots in hardware manufacturing, an area of innovation that has perhaps not seen as much controversy surrounding the patentability of its core inventions. As software companies, Google and Microsoft may have different views on the purpose of patents.

By focusing on standards and licenses, this chapter has provided a somewhat oblique view into this case. However, it is clear from the texts above that standards-setting and licensing commitments are seen by all of the parties as crucial to their overall enterprise of innovation and technological improvement. In the next chapter, I investigate this dispute from a more direct perspective: the legal briefs filed in *Microsoft v. Motorola Mobility*.

Chapter 6: *Microsoft v. Motorola Mobility*

Introduction

In the previous chapter, I analyzed the public rhetoric concerning RAND commitments offered by the parties in this dispute. Through my analysis, I found that Microsoft, Google, and Motorola Mobility have largely different visions for how innovation should take place. This chapter deals with the rhetoric involved in four legal briefs filed in the case of *Microsoft v. Motorola Mobility*. These briefs were filed following the testimony phase of the trial, which took place in late November, 2012. The trial and supporting briefs represent the culmination of one small portion of the patent conflict between Microsoft and Motorola Mobility. Wetlaufer (1990) discusses legal briefs as being among the most rhetorical of legal writing genres, even though the rhetoric found in such briefs attempts to cast itself as a-rhetorical summaries of objective truth. As Wetlaufer puts it, “the lawyer is always right and his adversary is always wrong” (Wetlaufer, 1990, p. 1558). Nevertheless, Wetlaufer argues that such briefs demonstrated recognizable rhetorical patterns and that effective lawyers are well aware of the rhetorical exercises in which they engage (1558–60).

In this chapter, I present a rhetorical analysis of the four legal briefs involved in the case of *Microsoft v. Motorola Mobility*. Analyzing these briefs helps to triangulate the results of Chapters 4 and 5. As I approached these texts, I was especially interested in finding out whether the parties involved use rhetoric consistently. I chose to analyze briefs, as opposed to transcripts of the testimony or other kinds of legal discourse, for two

reasons: 1) because I am interested in analyzing texts (not speech), and 2) because the briefs I found I found in *Microsoft v. Motorola Mobility* seemed to me to be more explicitly rhetorical than other kinds of legal writing (such as exhibits). Table 3 provides a summary of each brief.

Name	Document Number	Description
Defendants' post-trial brief	Document 623	Motorola's main post-trial brief
Motorola's post-trial brief regarding the Google-MPEG LA AVC license agreement.	Document 622	Motorola's brief regarding the judges request for information regarding Google's commitments to the MPEG LA patent pool
Plaintiff Microsoft corporation's post-trial brief.	Document 626	Microsoft's main post-trial brief
Microsoft's post-trial brief concerning Google's AVC patent portfolio license	Document 614	Microsoft's brief in response to the judge's request regarding Google's MPEG LA commitments

Table 3: Four legal briefs files after oral testimony in Microsoft v. Motorola Mobility.

These legal briefs involve the lawsuit that Microsoft brought against Motorola in November of 2010 claiming that Motorola was not honoring its RAND commitments (Lowensohn, 2010a; Rigby & McCormick, 2010). By the time this case was heard in court, it involved two patented technologies: 802.11, which is a set of standards representing what is generally known as Wi-Fi, and H.264, which is a standard covering digital video encoding and compression. Over the years, Motorola has contributed patents to the standards governing these technologies. In exchange for having its technology included in the standard, Motorola agreed to license the technologies under terms that are Reasonable and Non-Discriminatory (RAND). I discuss the background of RAND agreements more thoroughly in Chapter 5; for the analysis involved in this chapter, it is

sufficient to note that Motorola had offered to license each set of patents at 2.25% of the cost of the unit in which the technology was being used. Thus, if an XBOX 360, which costs several hundred dollars, used Motorola's patents in video decompression and Wi-Fi connectivity, Microsoft would have owed Motorola 4.5% of the total price of the device. Microsoft's November 2010 suit argues that this rate is not RAND. Documents 623 and 626 are the main post-trial briefs that were filed in the wake of the November 2012 testimony phase of the trial. Documents 614 and 622 are two extra post-trial briefs that the judge asked the companies to file regarding a potentially complicating aspect of the case: Google's status as a licensee of the MPEG LA AVC/H.264 patent pool (MPEG LA, LLC, 2009). As the legal briefs themselves show, Google joined this patent pool in 2005 (*Microsoft's post-trial brief concerning Google's AVC patent portfolio license*, 2012, p. 4, *Motorola's post-trial brief regarding the Google-MPEG LA AVC license agreement*, 2012, p. 4). Since Google purchased Motorola Mobility in 2011, Microsoft argues that Motorola should be covered under the terms of the MPEG LA license agreement as an affiliate (*Microsoft's post-trial brief concerning Google's AVC patent portfolio license*, 2012, p. 5). Motorola, on the hand, argues that the MPEG LA agreement should not apply to themselves, since they were not owned by Google at the time that Google became a licensee of MPEG LA (*Motorola's post-trial brief regarding the Google-MPEG LA AVC license agreement*, 2012, p. 13).

In the rest of this chapter, I will analyze these legal briefs according to several key rhetorical qualities. However, it is important to note that I am not attempting to evaluate the legal persuasiveness of these briefs as they might be read by a judge. Instead,

my goal is to look for insight that the briefs might bring to the two companies' overall understandings of technology and innovation. In other words, I am not concerned with evaluating the briefs in the context of this particular court case; instead I am looking for ways that they speak to the broader context of patents and licensing agreements as well as innovation and technology.

In the sections that follow, I analyze the briefs in terms of the economic and technological values they demonstrate, the divergent understandings of the patent system as community that they reveal, and the different ways in which both parties deploy *loci of quantity* arguments to support their claims. I conclude the chapter by looking at the different perspectives towards innovation that the legal briefs reveal.

Economic and Technological Values

In Chapter 2, I discussed Feenberg's critical theory of technology. Put briefly, this theory requires the researcher to consider technology not as a set of objects but as a process—one that is “suspended between different possibilities” (Feenberg, 2002, p. 15). Feenberg describes this suspension as “ambivalence,” which is a succinct way of pointing to the choices that must be put into and that consequentially shape any technological development. Of course, human beings make these choices, which are guided by and described in the rhetoric surrounding them. In order to better understand these choices, Feenberg offers technological holism, which requires that technology be considered in as much of its cultural context as possible.

In Chapter 4 I argued that Google's executives extend a sort of “faux” holism in their justification of their purchase of Motorola Mobility, especially in rhetorical

instances that concentrate on consumer choice as an end of technology itself. In my analysis of public writings concerning RAND commitments in Chapter 5, I found a similar focus on consumption and profits masquerading as a concern with a variety of values. In this chapter, I will argue that the legal briefs following the November 2012 trial reveal deeper insights into the values that the Microsoft and Motorola place in the development of technologies involved in the case. These briefs reveal a deep concern with two kinds of value: technological value and economic value. They also seem to show less interest in the value that a technology can bring to the user.

The post-trial briefs demonstrate a number of claims regarding the technological value of Motorola's video (H.264) and wireless (802.11) patent portfolios. In Motorola's post-trial brief, the company makes an early claim that attempts to tie the royalty rate they are demanding from Microsoft for the use of both patent portfolios to the technological value that their (that is, Motorola's) patents contribute to those standards:

During trial, Motorola's experts demonstrated that the reasonableness of the rates in Motorola's licenses is confirmed by the importance of Motorola's patented technology to the standards, and the value of the standardized technology to Microsoft's products. (*Defendants' post-trial brief*, 2012, p. 6)

Motorola goes on to use a variety of rhetorical approaches to justify this claim. For example, they draw on the ethos of an expert to justify the claim that the 802.11 Wi-Fi patents are technologically important to the standard:

Dr. Williams testified that Motorola's 802.11 SEPs are technologically valuable because they cover fundamental and core features of the Standard. [...]. He

considered eleven patent families covering various aspects of four core features of the Standard, and explained why the inventions of these patents must be used by any device certified as 802.11 compliant by the Wi-Fi alliance. (*Defendants' post-trial brief*, 2012, p. 20)

Note also that this expert testimony relies on a locus of quantity (that is, mentioning the 11 patent families) for at least some of its persuasiveness. I discuss such quantitative arguments in greater detail later in this chapter.

However, Microsoft's post-trial brief indicates that the software giant was not impressed by the ethos of Motorola's experts or by the quantitative locus of their arguments. Additionally, Microsoft argues that Motorola's technological value proposition itself breaks down: "Motorola also failed to prove that its 802.11 patents have any unique value. No competent evidence was offered on a patent-by-patent basis that Motorola's patents are, in fact, essential" (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 29). In other words, the technological value of these patents cannot be established by a simple counting exercise.

Almost as though in response to this argument, Motorola goes beyond a mere patent tally in its attempt to justify the claim that the H.264 video patents are technologically valuable. They outline the six patent "families" to which Motorola's 16 US patents belong. 1) Krause 2) Wu, 3) Effrig, 4) MBAFF, 5) PAFF, and 6) the Scan patent family. They then explain where their own patents fit into these six families and how these families contribute to the technological value of the standard itself:

The Krause and Wu Families contributed to the 50% coding efficiency gain

reported for H.264 progressive-scan video. [...]. They are essential to the H.264 Standard at every level of the Baseline, Main, and High profiles. [...]. Every encoder and decoder that processes H.264 video uses these patents. [...]. The Eifrig, MBAFF, PAFF and '094 (Scan) patents are essential at the Main and High profiles, levels 2.1 to 4.1; and the '888 (Scan) patent is essential at the High profile, levels 2.1 to 4.1. These profiles/levels are important because they are commonly used for standard definition and high definition video. (*Defendants' post-trial brief*, 2012, p. 26)

Thus, by sorting out the various patent families and how their own patented technology fits into those families, Motorola lays claim to extensive technological value for its patents. Motorola seems to be attempting a sort of synecdochic argument here. Put another way, the argument might be laid enthymematically as follows: "The standard is technologically valuable. These families are important to the standard. We have patents in each of these families. Therefore our patents are technologically valuable."

However, Microsoft disputes this claim as well, arguing that Motorola did not demonstrate the actual value that its own patents contribute to the standard.

The record shows that the Motorola H.264 patents have little value. No Motorola expert performed a rigorous infringement analysis to show that the patents are actually essential to the standard, nor did any expert consider their validity, either to assess their value or simply to measure the significance of the patents in relation to prior art. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 21)

In essence, Microsoft refuses to complete the enthymematic argument I outline above.

Microsoft goes on to call Motorola's evidence “absurd [and] deeply flawed” (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 21). This assessment is offered in response to evidence offered by Motorola's expert R. Sukumar; however it is not clear from Motorola's post-trial brief whether or not Sukumar testified regarding Motorola's contributions to the various patent families outlined above. Still, the essence of the Microsoft claim is clear: Motorola's experts have not offered compelling evidence regarding the phone maker's contributions of technological value.

Clearly in a case such as this it makes little sense to focus on technological value alone. Therefore Motorola take pains to connect technological value with economic value. For example, this passage from Motorola's post-trial brief takes Microsoft to task for trying to tie the economic value of the patents it is using to the rates charges by similar patent pools:

These pools also are poor comparables because they ignore the actual value and technical merit of patents and, instead, value all patents equally. This contradicts directly Microsoft's economic theories advanced at trial that “a RAND royalty must reflect the economic value of the patented technology” [...] and that a “reasonable royalty should be tied to the technical merit of the patent” [...]. These pools do precisely the opposite – they distribute royalties on a per-patent basis and treat all patents (both weak and strong) as if they are equally valuable (or equally unimportant). PFF 157- 63. This “patent counting” approach (1) is not used in bilateral licensing; (2) ignores the technology of the patent, its contribution to the standard and its use by licensed products; and (3) contradicts the irrefutable logic

of Microsoft's Gary Sullivan, who observed that a company can charge more for "fundamentally-important IPR" than for a "Bozo tweak." (*Defendants' post-trial brief*, 2012, pp. 15–6)

Instead, Motorola's goal is to have the court tie the economic value of the patent to its technological value, independently of similar patents that have pooled together.

Furthermore, Motorola argues that the particular technologies in question add economic value to Microsoft's products well beyond the cost of implementing the technologies themselves. To do this, it first establishes the value of the broader technology, as in this passage from the section dealing with Wi-Fi:

There is no doubt that the ability to communicate via the 802.11 Wi-Fi Standard and obtaining Wi-Fi certification are crucial to the marketability of the Xbox.

There has been a steady trend in recent years to provide Wi-Fi in consumer and business products, and it has become a customer expectation. (*Defendants' post-trial brief*, 2012, p. 23)

In other words, here Motorola argues that conforming to the Wi-Fi standards has become an integral part of competing in the marketplace for video game consoles. A few pages later, Motorola attempts to connect this market-driven imperative with its own demand for a percentage of the selling price of each Xbox unit:

Microsoft's experts argue that net selling price is inappropriate as a royalty base because, for example, the royalty for 802.11 would exceed the price of the chip that contributes much of the 802.11 functionality in the Xbox. But the Federal Circuit has recognized that "the economic value of a patent may be greater than

the value of the sales of the patented part alone.” [...]. This is precisely the case here – the value of Wi-Fi to the Xbox cannot be measured by the price of the Marvell chip. (*Defendants’ post-trial brief*, 2012, p. 32)

Thus, Motorola argues that if the *technological* value of a technology is great enough, it can impart a value far beyond the direct and immediate cost of simply implementing the technology. That is to say, the technology itself adds value over and above the cost involved in manufacturing the chips that implement the technology. Finally, Motorola endeavors to connect this economic value to the value that the technology brings to the person who uses it: “The economic value of Motorola’s 802.11 technology is best measured by the value it provides to the user – not by the price of the Marvell chip [which implements it]” (*Defendants’ post-trial brief*, 2012, p. 18). In other words, economic value is tied to what a customer is willing to pay for the technology—the selling price of the device that uses it.

However, Microsoft again points to Motorola's relatively small contribution to the overarching technology in order to contest the 2.25% royalty claim:

A broadly-accepted economic and legal principle is that a patent owner is entitled to the value of the use of its patent, and not to the value of the benefits of others’ SEPs or of the standard as a whole. (*Plaintiff Microsoft corporation’s post-trial brief*, 2012, pp. 8–9)

Put differently, a patent holder that contributes to a standard does not earn the right to benefit from the entire standard, but only from its contribution to that standard.⁴⁹

Furthermore, Microsoft argues that contributing to a standard restricts the value that a

⁴⁹ I discuss the connections between contributions and community in a later section of this chapter.

patent holder can claim from their patents.

A RAND valuation must recognize that a license for only a standard-compliant implementation has less value than an unrestricted license. RAND commitments do not entitle implementers to use the patents for anything other than an implementation of the standard. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 11)

Microsoft seems to be trying to paint Motorola into a corner, arguing that the very fact that Motorola has participated in standards setting has placed a cap on what they can hope to gain from their patent. Indeed, this is the essence of what RAND agreements are all about. One of the reasons that standards-setting organizations implement RAND agreements is to prevent individual patent holders from benefiting disproportionately from their contribution. In essence, the philosophy behind the RAND system depends on a shared sense of community. I discuss the traces of community-based rhetoric found in these legal briefs in the next section.

Community

In Chapter 2 I discussed relationships among notions of common sense, rhetorical communion, and community. Recall that Graff and Winn (2011) offer a reading of Perelman and Olbrechts-Tyteca's *New Rhetoric* that ties a community's sense of itself to seemingly small instances of epideictic rhetoric (p. 11). In the previous two chapters of analysis, I have also offered instances of such epideictic discourse, which I argue rely on devices such as allusion to create the sense of communion described by Perelman and Olbrechts-Tyteca. Clearly, the rhetoric found in legal briefs should be considered

deliberative and *not* epideictic. Nevertheless, the concept of community can be found throughout Microsoft's briefs. Interestingly, I found far fewer references to community in the Motorola briefs.

The rhetorical moves that deal with community often address whether or not a patented technology provides something of value to the community. Another move that Microsoft often makes is to deploy *loci of quantity* arguments to create a sense of *endoxa* (that is, the common sense of the community). Finally, the legal briefs demonstrate Microsoft's apparent attempt to cast Motorola's royalty demands as a break with the community that has been created by the RAND agreements their related patent pools.⁵⁰

The post-trial legal briefs demonstrate the tensions between patents and standards. Microsoft makes this tension clear in multiple sections. One move Microsoft makes is to cast doubt on the assumption that patented technologies play *any* role in the creation of standards. For example, in this passage they paint a picture of engineers collaborating on standards, but not concerning themselves at all with whether any particular choice involves patented technologies:

Moreover, most of what is included in the standards does not involve a conscious choice by the collaborating engineers between alternatives or between patented technologies—and the inclusion of a given technology in a standard does not mean that it was superior to alternatives. There is no evidence that these engineers commonly consider specific patents or that they are even conscious of what might be patented when framing the standards. Typically, patents are just not considered.

(Plaintiff Microsoft corporation's post-trial brief, 2012, p. 7)

⁵⁰ See Chapter 4 for similar moves made by Microsoft in its public rhetoric on RAND agreements.

This position is remarkably consistent with the public relations rhetoric I discuss in Chapter 5. For example, recall the blog post in which Microsoft VP Dave Heiner claims that “Microsoft has contributed patented technology to hundreds of standards, yet we are seldom asked to provide a license for our standard essential patents, and we rarely seek such licenses from other contributors” (Heiner, 2012, para. 5). Indeed, Microsoft continues to depict the relationship between patents and standards in ways that are consistent with its public rhetoric.

However, these moves also point to larger questions of the effects that patents can have on technology itself and on the realities of competing in a high-tech marketplace such as mobile computing. For example, regarding the relationship between patents and technology, Microsoft makes statements such as this: “Most of the technology reflected in popular standards like H.264 and 802.11 is unpatented—built on technologies known to the engineers collaborating to write the standard, or on unpatented contributions from those engineers or from prior technology” (*Plaintiff Microsoft corporation’s post-trial brief*, 2012, p. 7). In other words, according to this viewpoint, it's not the *patents* that are the engines of innovation, but *standards*. Recall from Chapter 5 that Microsoft took a similar public position regarding licensing agreements.

Microsoft makes a related move when arguing for tying Motorola's disputed royalty H.264 royalty rates to the royalty rates set by patent pools:

If a patent pool contains large numbers of patents from multiple patent owners, the pool rates must be set with an eye to the overall licensing situation, including the cost of obtaining all necessary licenses from other relevant patent holders. If

one pool participant insists on a disproportionate royalty for its patents, the other licensors are unlikely to agree. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 14)

All of the members of a patent pool must agree on reasonable rates—similar to the RAND rates agreed to when a patent holder contributes patented technology to a standard. This is essentially an argument that sees *endoxa* as distilled into a dollar value. The common sense of the community rests on a certain royalty rate. The members of the community agree to that rate, because if any individual member should refuse and demand more, the rest of the members would see no reason to continue accepting the lower rate. It remains in every member's best interest to accept the relatively low rate.

Throughout the legal briefs I found *loci of quantity* arguments used to create a sense of community surrounding the creation and marketing of the H.264 and Wi-Fi standards. One excellent example can be found in Microsoft's post-trial brief addressing whether or not Google's commitments to the MPEG LA patent pool should apply to Motorola. For example, the following passage lists the numbers of contributors (i.e., licensors) and users (i.e., licensees) of the H.264 patents in the pool:

More than 1100 licensees and 25 licensors have agreed to license the H.264 essential patents in the pool at these royalties. The royalty that Defendants' parent Google has accepted as fair and reasonable has generally been accepted as fair and reasonable within the industry. (*Microsoft's post-trial brief concerning Google's AVC patent portfolio license*, 2012, p. 2)

This is essentially an appeal that relies on the overwhelming number of community

members—somewhat akin to the plaintive teenager's “Everyone else is doing it!”

Microsoft also makes nuanced moves connecting community and technology in their post-trial brief. For example, its claims that the H.264 technology took a certain direction because of the wisdom of the “video compression community” itself:

H.264 development was originally directed solely to progressive video coding because the video compression community recognized that modern digital compression technologies are superior to the primitive technique of interlaced video scanning and concluded that interlaced video was waning in importance.

(Plaintiff Microsoft corporation's post-trial brief, 2012, p. 21)

Here the *endoxa* of the community of developers and companies involved in video compression saw digital compression as a superior approach to a technical program, and thus, H.264 was born. Similar connections between community and *endoxa* can be found throughout Microsoft's post-trial brief.

One such example can be found towards the end of the post-trial brief addressing the MPEG LA pool. Here Microsoft is disputing a claim made by Donohoe, who testified in favor of Motorola's proposed royalty rate. I cite the relevant passage in its entirety:

Donohoe’s claim that Motorola’s opening licensing demand “is RAND” lacks any support in the record, and is a worthless *ipse dixit*. See *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997); *Wendler & Ezra, P. C. v. Am. Intern. Group, Inc.*, 521 F.3d 790, 791 (7th Cir. 2008) (per curiam) (“An expert who supplies nothing but a bottom line supplies nothing of value to the judicial process.”) (quotation marks omitted); *Hathaway v. Bazany*, 507 F.3d 312, 318 (5th Cir. 2007) (“[A]n expert's

testimony that ‘it is so’ is not admissible.”). (*Microsoft’s post-trial brief concerning Google’s AVC patent portfolio license*, 2012, p. 37)

Although the references to previous cases make this passage somewhat confusing, Microsoft seems to be arguing that a single expert witness’s “say so” is not sufficient to overturn the wisdom of the community. In other words, it is very difficult for ethos to overrule *endoxa*.⁵¹

Interestingly, Motorola does not appeal to the community of standards in its briefs. In fact, when it does mention community, Motorola tends to position itself against the crowd in ways that question whether such agreements can actually be read as anything more than their unique circumstances: “Patent pools, and their downward-biased, patent-counting-based royalty rates, reflect the unique circumstances of a given pool and are not representative of the rates in bilaterally negotiated patent license agreements, especially cross-license agreements” (*Motorola’s post-trial brief regarding the Google-MPEG LA AVC license agreement*, 2012, p. 5). Here Motorola seems to be taking issue with the notion that rates determined by a patent pool should be applied outside of the pool. In other words, Motorola seems not to be concerned with whether or not the patent pool rates reflect any sort of community knowledge or *endoxa*-based pricing. They argue that since they are not taking part in that community, they cannot be held to its agreements.

Nevertheless, Microsoft *does* want Motorola to be held to the norms of the

51 This is similar to the kinds of contractual arguments that allude to the “plain language” of the agreement, such as: “Defendants’ arguments defy the plain language of the agreement. . . . a contract is to be interpreted in accordance with the plain and ordinary meaning of its terms and intent is determined within the four corners of the agreement.” (*Microsoft’s post-trial brief concerning Google’s AVC patent portfolio license*, 2012)

community. In fact, Microsoft deploys arguments that seem to be aimed at casting Motorola's royalty demands as unwarranted “hold up,” which clearly breaks with the standards-setting process. The following passage from Microsoft lays out the argument nicely:

If the suggested technologies are incorporated in the standard, and the standard is broadly adopted, the patent holder's patents provide it leverage to pounce on implementers, including its competitors. Even in the absence of such intent, every patented technology incorporated into a broadly-adopted standard endows the patent holder with the ability to hold up implementers, independent of any technical or commercial merit in the patent. As one of Motorola's economic experts in other litigation pointed out, “it only takes one bullet to kill”—and any SEP is a bullet. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 8)

Thus, Microsoft makes an explicit connection between standards essential patents (SEPs) and the patent-as-bullet metaphor discussed in Chapter 5. However, Microsoft also argues that such hold up threatens more than the implementation of a technology in a particular product, which is one of the usual concerns for hold up (i.e., that an SEP holder can slow competitors from entering the marketplace and thereby gain an unfair advantage). Indeed, Microsoft argues that any such hold up would threaten the standard itself: “The issue here is the royalty Motorola demands, which, if duplicated by others, would render implementation of the standards impossible. ... That is the true measure of 'hold up' and stacking” (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 12). By arguing that Motorola's demands threaten not just Microsoft's products and profits, but also the

“implementation of the standards” themselves, Microsoft seems to be casting Motorola as the interloper that could bring down the entire community.

Loci of Quantity

As I discuss in Chapter 2, Perelman and Olbrechts-Tyteca see arguments based on *loci of quantity* as essential to making connections between opinions and truth. Such arguments can come in a number of forms. For example, an argument could be based on durability; that is, a good thing that lasts longer is better than a good thing that does not last as long. Another *locus of quantity* can be found in arguments based on quantity itself—in other words, more of a good thing is considered better and more persuasive than less of a good thing. Alternatively, an argument can be built on the idea that less of a bad thing is more desirable than more of a bad thing.

The legal briefs I analyzed for this chapter demonstrate the range of these arguments. Interestingly, the two sides deploy these arguments quite consistently. Microsoft tends to create *loci of quantity* arguments based on the notion that more of a good thing is more persuasive. Conversely, Motorola's *loci of quantity* tend to be built around notions of durability; that is, their arguments deal with a phenomenon stretched out over time.

One move that Microsoft makes is to use *loci of quantity* arguments to downplay Motorola's contribution to a standard. The following passage, which deals with the H.264 video codec, offers a number of such arguments.

The H.264 standard is large and technically complex, developed with the goal of providing improved compression capability relative to prior video standards. [...]

H.264 provided a 50% improvement over existing technology, a result that was achieved by the summer of 2001 , before Motorola began its participation in the H.264 standards setting process. [...] The H.264 standard resulted from the contributions of roughly 170 entities, who submitted over 2300 contribution documents as part of the H.264 development process. ...The Telenor Group was the largest contributor of technology to the H.264 standard. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 20)

This passage demonstrates a number of quantitative arguments, most of which seem to be intended to demonstrate that Motorola contributed only a minimal amount of technology to the standard. Note that Microsoft also makes use of a durability argument when it claims that most of the improvement to the technology was made *before* Motorola offered its contribution.

Another approach that Microsoft demonstrates in its post-trial legal briefs can almost be summed up as the “everyone else is doing it” argument. For example, Microsoft points to the numbers of licensors and licensees that are participating in the H.264 video patent pool without conflict: “The MPEG LA H.264 pool includes over 2,400 SEPs from 26 different patent owners; the pool patents have now been licensed by more than 1,100 licensees” (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 22). The quantitative argument seems quite clear: not only is the patent pool the result of a large number of contributors and an even larger number of patents, but the pool also serves an even *larger* community of licensees. Microsoft makes a similar argument in Document 614: “Google is among more than 1100 such Licensees.” (*Microsoft's post-*

trial brief concerning Google's AVC patent portfolio license, 2012, p. 3)⁵²

Another argument that Microsoft offers is partially based on a similar *locus of quantity* to those discussed in the previous paragraph, but also relies on a quantity of zero:

It is not unusual for companies to participate in SSOs [standards-setting organizations] and contribute their technology, but never try to license their patents for cash. [...] Even foundational contributors, such as Telenor in H.264 development, forego patents and potential royalties entirely. (*Plaintiff Microsoft corporation's post-trial brief*, 2012, pp. 10–11)

Here the quantitative locus can be found in the unnamed numbers of companies that take part in standards settings (i.e., SSOs); however what seems to be more important to the argument is the fact that many of these companies “never try to license their patents for cash” and “forgo patents and potential royalties entirely” (*Plaintiff Microsoft [Document 626]*, 2012, pp. 10–11). In other words, these companies contributed a great deal and asked for nothing in return. This is essentially the opposite of the “every one else is doing it” argument; indeed, this argument echoes another common childhood refrain, “But no one else has to do this!” This kind of argument is based on what might be labeled a *quantitative locus of null*.

Microsoft makes similar moves later in the brief, when they argue that the low number of companies taking part in the Via license pool demonstrates that the pool is charging its licensees too high a price for its technology: “The fact that the Via pool has

⁵² Note also that this particular locus of quantity also involves an enthymematic argument. Here the implied conclusion boils down to “Why can't Motorola be like all of the other participants?”

only attracted six licensees (compared to the more than 1,100 licensees in the MPEG LA H.264 pool) suggests that the 'rates are too high.'" (*Plaintiff Microsoft corporation's post-trial brief*, 2012, p. 28). This kind of quantitative argument seems to rest on the idea that a community with fewer members is less relevant than a community with more members.⁵³

Finally, Microsoft deploys a large number of quantitative arguments to support the claim that Motorola has contributed less to the 802.11 Wi-Fi standard than others. The following long passage demonstrates the breadth of these claims nicely:

Motorola's 802.11 SEPs concern, at most, only a small portion of a limited number of technology areas in the 802.11 standard and are not central to enabling those technology areas; at best, these patents cover less than one percent of the 802.11 standard. ... Like H.264, the 802.11 standard is immense and technically complex; the current draft of the standard is almost 2800 pages long. [...] The development of the first draft of the 802.11 standard took seven years and development of the standard continues today. [...] Over 1,000 companies have participated in the 802.11 standard-setting process. [...] Today, over 450 representatives from 150 organizations are actively working on the standard. [...] Over 350 patents have been specifically identified as essential to the 802.11 standard via letters of assurance to the IEEE, and 94 companies have led "blanket" LOAs, including wireless communication industry leaders such as

⁵³ Note that this is different than the "network effect," which holds that a network becomes exponentially more useful the more nodes that exist on the network. The network effect helps explain the explosive growth of social networking sites such as Facebook. However licensees of a patent pool do not exhibit network behavior. Licensees are more like people who subscribe to the same newspaper than people that participate in the same social network.

Atheros, Broadcom, Qualcomm, Research in Motion, and Intel. (*Plaintiff
Microsoft corporation's post-trial brief*, 2012, pp. 26–7)

In other words, since Motorola contributed so much less than the other members of the community, it does not make sense that Motorola should be allowed to reap such a substantial portion of the profits from the use of the technology. Table 4 provides a summary of the *loci of quantity* arguments found in this passage; this table also indicates the kind of quantitative locus each argument invokes.

Argument	Quantitative Locus	Document and Page Number
The standard is large (that is, it contains many patents)	quantity	Document 626, p. 20
The standard offers a 50% improvement over the status quo	quantity	Document 626, p. 20
The improvement was made before Motorola began contributing	durability	Document 626, p. 20
170 entities contributed over 2,300 documents to the standard	quantity	Document 626, p. 20
The Telenor group contributed the most quantity	quantity	Document 626, p. 20
The H.264 pools consists of “2,400 SEPs from 26 different patent owners”	quantity	Document 626, p. 22
The H. 264 pool has “been licensed by more than 1,100 licensees:	quantity	Document 626, p. 22
“Google is among more than 1100 such Licensees.”	quantity	Document 614, p. 3
Some companies seek no remunerations for their contributions to standards.	“null” quantity	Document 626, p. 10-11
The Via pool has attracted only six licensees.	Fewer good things are not as a good as more good things.	Document 626, p. 28
Motorola has contributed for less to the Wi-Fi standard than others have.	Fewer good things are not as a good as more good things.	Document 626, p. 6-7

Table 4: Loci of quantity arguments found in Microsoft's Legal Briefs

One thing that Table 4 makes clear is that Microsoft's quantitative arguments seem much more likely to deal with simple quantities than with durability or other aspects of time. Additionally, the company is more likely to deploy quantitative arguments based on positive quantities than on null quantities.

Motorola also deploys a large number of quantitative arguments. However, in

contrast to the arguments offered by Microsoft, Motorola deals more often with arguments involving durability or other notions of time—both the past and the future. For example, in the following passage, Motorola works to establish the overall history and context for standards setting and RAND agreements:

For decades, the RAND commitment established by SSO patent policies has worked successfully to balance the needs of patent holders and implementers in this regard, allowing patent holders to secure a reasonable return on their investment in developing patented technology, while assuring implementers that they will have access to a license on RAND terms. (*Defendants' post-trial brief*, 2012, p. 7)

Indeed, Motorola presents a corollary to this rhetorical move earlier on the same page: “The impact of forcing SEP holders to license at pool rates would be significant and long-lasting” (*Defendants' post-trial brief*, 2012, p. 7). Thus, Motorola's argument rests on the durability of the existing system: the relationships between RAND agreements and patent pools have been in place and functioning for many years. Motorola presents the durability of those relationships alongside the potential long-term effects of altering them as evidence that they should not be forced to accept patent pool rates.

Elsewhere, Motorola relies on non-durable quantitative arguments. For example, they point to the near ubiquity of home wireless networks as evidence that their 802.11 Wi-Fi patents are crucial to Microsoft's products: “Microsoft has admitted that 'most homes do not have wired networks today. When you go into a home, if they have a connection, it's going to be Wi[-]Fi, because it's the easiest to set up.'” (*Defendants'*

post-trial brief, 2012, p. 24). Motorola also uses a quantitative argument when attempting to connect the market share of Microsoft's Xbox 360 game console with the patented wireless technology that is the subject of the lawsuit: “Indeed, without integrated Wi-Fi, the Xbox 360’s market share plummeted to less than 30% from a dominant 69% after launch” (*Defendants’ post-trial brief*, 2012, p. 24). As with the Microsoft example discussed above, this argument also helps to form an enthymeme, which might be formulated as follows:

1. The original Xbox 360 did not have Wi-Fi.
2. Without Wi-Fi, Xbox 360's lost market share when competitors with Wi-Fi appeared on the market.
3. Therefore, Wi-Fi is needed to compete in the marketplace.

In this enthymeme, statements 1 and 2 are explicit, whereas statement 3 is the unstated conclusion. Like all enthymemes, this argument relies heavily on the audience. It is up to the reader to fill in the conclusion; in this case, Motorola seems to be hoping that the conclusion the reader fills in will be similar to the one I have created for statement 3 above. Note however, that the enthymeme also rests on a false dichotomy. By restricting the premises as it does, this enthymeme asks the reader to consider only one question while evaluating the Xbox 360's success in the marketplace: Does the device have Wi-Fi or not? Since devices without Wi-Fi lost market share when competitors with wireless capabilities appeared on the marketplace, the reader is invited to fill in the conclusion that the lack of Wi-Fi kept the device from competing. However, other factors may have played a role as well. (For example, what games were released during those years? What

other competing devices were released?) In other words, this particular enthymeme invites the reader to come to a fallacious conclusion.

Motorola also relies on a durability argument in their own assessment of a licensing pool that has attracted very few licensees: “The Via Licensing pool has been unable over seven years to attract a meaningful number of licensors or licensees and is effectively a failure” (*Defendants’ post-trial brief*, 2012, p. 15).

Interestingly Motorola deploys what “null” quantity arguments in their post-trial briefs as well. This approach is often taken when arguing that Google's agreement with MPEG LA patent pool should not apply to Motorola: “Motorola respectfully submits that the AVC Agreement [with Google] itself is no more relevant than any other MPEG LA H.264/AVC License Agreement currently on the record” (*Defendants’ post-trial brief*, 2012, p. 6). Note that the crux of this argument is that Google's agreement with MPEG LA predates the merger of Motorola with Google by several years. In fact, Motorola makes this argument at least twice in their post-trial brief. In this passage, they repeat the argument several pages after first stating it in the example above. “The Google AVC Agreement is no different than any other MPEG LA pool agreement and should carry no additional significance.” (*Defendants’ post-trial brief*, 2012, p. 11). Table 5 lists a selection of quantitative arguments from Motorola's post-trial briefs.

Argument	Quantitative Locus	Document and Page Number
RAND agreements have balanced the needs of both parties for decades.	Durability	Document 623, p. 7.
Forcing SEP holders to accept pool rates would have “significant and long-lasting” impacts.	Durability	Document 623, p. 7.
Most homes have Wi-Fi.	Quantity	Document 623, p. 24
Without Wi-Fi, the Xbox 360 lost market share.	Quantity	Document 623, p. 24
Google's license with MPEG LA is no more relevant than any other company's license with them.	“null” quantity	Document 623, p. 6
“The Google AVC Agreement is no different than any other MPEG LA pool agreement and should carry no additional significance.”	“null” quantity	Document 623, p. 11
The Via licensing pool has not attracted large numbers of licensees, even though it has been in operation for several years.	Durability	Document 623, p. 11

Table 5: Loci of quantity arguments from Motorola's post-trial briefs.

This table shows that although Motorola does deploy both quantitative and “null” quantity arguments, the company also seems to draw on the durability of time as a persuasive proof. Interestingly, these arguments concern themselves with both the past and the future. One implication of these arguments may be that the company sees legacies and long-lasting implications as important values to consider when making technological choices. As with the rhetoric involving values and community, these choices also seem to reflect an overall attitude towards innovation. In the next section, I conclude this chapter by looking at ways in which these legal briefs address innovation more directly.

Conclusion

In this chapter, I have been concerned with how the rhetoric in these legal briefs reflects the attitudes that Microsoft and Motorola have toward innovation. In most cases, these attitudes must be gleaned from a careful rhetorical reading of the texts themselves.

However, the legal briefs provide relatively few direct statements regarding the impact that standards and licenses can have on innovation. However Motorola offers a window into its position in statements such as this one:

Indeed, if companies like Motorola – which has invested \$50 billion dollars over the past 20 years in R&D – are forced to license their SEPs for a fraction of their value, incentives for contributing to standards will be eliminated. . . . This will result in less collaboration among high technology companies, slower progress in the development of technology, and weaker standards to the detriment of the industry and consumers alike. (*Defendants' post-trial brief*, 2012, p. 7)

Here Motorola makes an argument similar to that implied by the Useful Arts clause itself: the market value of intellectual property must be protected in order for innovation to thrive. However, Motorola also provides an argument in favor of balancing the needs of patent owners with those of device makers:

The result [of balancing the needs of patent holder and patent implementers] has been broad participation in standards and incentives for innovation, resulting in adoption of robust standards in a variety of industries. Maintaining this balance is critical to the long-term success of standards. (*Defendants' post-trial brief*, 2012, p. 7)

Although the focus in this passage is on balance, the implication remains the same: upsetting the established relationship between patent holders and the companies that use patented technologies will have long-lasting negative effects on innovation itself.

However, Microsoft's rhetoric paints a more nuanced picture of the relationship between patent holders and patent implementors, as shown by this passage regarding Google's MPEG LA commitments:

Motorola's doomsday arguments about the collapse of the standards system if companies cannot extract high royalties ... are fallacious, because they overlook the myriad motivations that companies have to contribute their technology to standards, the fact that an unchecked effort to extract high royalties would itself doom standardization ... , and the fact that some SSOs actually require royalty-free licensing. (*Microsoft's post-trial brief concerning Google's AVC patent portfolio license*, 2012, p. 11)

In other words, innovation does not teeter on a see saw with licensing fees perched on the other side. Instead, companies innovate and share their innovations through the standards system for reasons that go beyond market rewards such as high royalties. These reasons become clear when these legal briefs are examined through a rhetorical lens involving *endoxa* and *loci of quantity* arguments. This is because both *endoxa* and *loci of quantity* are heavily involved in giving successful technologies their aura of common sense. Viewing these texts through this rhetorical lens reveals the values that make up the technologies.

The three chapters of analysis in this dissertation have investigated the patent

dispute among Microsoft, Motorola, and Google. Each of these chapters has approached the dispute by focusing on a different set of texts. In the next chapter, I triangulate among these three sets of texts and draw conclusions for the dispute as a whole.

Chapter 7: Conclusion

Introduction

In this dissertation, I have provided a rhetorical analysis of one dispute in the broader conflict known as the mobile-computing patent wars. I have analyzed the public and legal rhetoric provided by Microsoft, Motorola Mobility, and Google, as well as several key regulatory agencies. Following the temporal bounds required by a case study framework, I chose a case that began with Microsoft's filing of a lawsuit against Motorola. The basis of Microsoft's complaint was that Motorola was not living up to its RAND commitments and attempting to overcharge for Wi-Fi and video technologies. This case ended with Judge Robart's April 2013 decision in the case, which favored Microsoft. Looking at the rhetoric deployed by various parties in these disputes reveals several key insights into the ways these parties view technology and innovation. In this concluding chapter, I summarize the key findings from my research. I then discuss the contributions and limitations of the dissertation. Finally, I suggest several avenues for further research.

My purpose with this dissertation was to investigate one way that rhetoric shapes technology. I chose smart phones in part because of their ubiquity. But I am also interested in mobile computing because of the network effects these devices have. The network effect is multiplied by the fact that smartphones are becoming increasingly lighter and more powerful. At the same time, each generation of wireless technology enables faster and faster Internet connections for these devices. As a result, these devices are growing increasingly common and increasingly powerful at the same time.

With that in mind, I have conducted a rhetorical analysis of a patent dispute that took place between 2011 and 2013. On one side of this dispute was Microsoft; on the other side was Motorola Mobility and (as of summer 2012) its parent company, Google. This dispute is important to rhetorical scholars since it offers an excellent opportunity to extend our understanding of the rhetoric of technology. This is because it involves questions of technology, intellectual property, legal rhetoric, and public relations rhetoric. Standing as it does on the boundaries of all these fields, the case offers a wide view of the relationship between rhetoric and technology.

In the second place, this dispute is important because it reveals some of the rhetorical means by which technologies come to be seen as “common sense.” The major rhetorical means by which this happens in this case study include enthymeme, arguments based on *loci of quantity*, and rhetorical communion through allusion and maxim. My analysis has shown that rhetoric works normatively in this dispute—the way things go comes to be seen as the way things ought to go (to paraphrase Taylor [2004] once again).

In the third place, this dissertation is important for rhetoricians because it demonstrates that rhetoric is a powerful tool for uncovering and demystifying the values that are built into technologies. If Feenberg (2002) is correct in his call for a critical approach to technology, rhetorical scholars will be justified in wondering how such an approach might take form. This dissertation provides one such approach, taken from the viewpoint of classical and modern rhetoric. In many ways this dissertation extends the work of scholars who have done research in the rhetoric of intellectual property, such as Bazerman (2002), Reyman (2010), and Vee (2010). Moreover, it seems clear that this

rhetorical approach would be fruitful for similar investigations of technology. This is because rhetoric—especially rhetoric that draws from the work of Perelman and Olbrechts-Tyteca—is heavily concerned with values and human decision-making.

In conducting this research, I chose a case study framework using rhetorical analysis of texts. The case study approach allowed me to investigate the texts in context, but within certain established bounds. Similarly, rhetorical analysis is an appropriate theoretical lens for a case study because rhetorical analysis is also concerned with understanding texts in context. In essence, my approach to rhetorical analysis is to ask questions regarding what a text or set of texts *do*. Since technology is also concerned with action (in this case, with science in action, to borrow Latour's [1987] phrase), rhetorical analysis makes a good fit for analyzing the texts that accompany technological decisions. By applying a rhetorical lens to these texts, I was able to glean significant insight into the values that inform technologies.

My analytical approach combines several rhetorical components that are key to the creation of community. Enthymeme, *loci of quantity* arguments, and Perelman and Olbrechts-Tyteca's concept of rhetorical communion feature prominently in my theoretical framework. I have combined these rhetorical concepts with insights borrowed from two philosophers: Andrew Feenberg's critical theory of technology and Charles Taylor's concept of the social imaginary. Drawing from this broad selection of traditions, thinkers, and ideas has allowed to me to construct a theoretical approach that reveals how rhetoric works to create an understanding of common sense and how technological choices come to be viewed as natural and inevitable. In the following section, I review

the principal findings of my analysis.

Key Findings and Contributions

As discussed in Chapter 4, after the Novell patents were sold to Microsoft and Apple, an exchange occurred between executives from Google and Microsoft. In this exchange, both sides construct competing constructions of the overarching truths that inform the patent wars. Google's David Drummond cast Android in the role of a defenseless victim of an organized campaign of patent aggressors. In making these claims, Drummond also challenged the efficacy of the patent system itself, arguing that patents have stopped encouraging invention and have begun functioning as weapons to be used by patent holders. Microsoft's executives, on the other hand, disputed this characterization of Android as victim by making public the fact that Google had been invited to bid on the patents as well. This forced a response from Drummond explaining why Google did not join the consortium of companies bidding on the patents.

Rhetorically, Google and Microsoft construct and address two different universal audiences. The relationship between facts and universal audiences is made clear by Perelman and Olbrechts-Tyteca: "From the standpoint of argumentation, we are confronted with a fact only if we can postulate universal agreement with respect to it" (1969, p. 67). My analysis of this exchange helps demonstrate the shifting nature of facts and the important role that audience plays in establishing and maintaining facts.

This is similar to the competing visions of innovation offered in the debates over RAND commitments, which I discussed in Chapter 5. The sides in this debate each see innovation differently. I found that Microsoft and regulators take a relatively conservative

view of innovation in which patents and standards enable cooperative invention among firms that continue to compete in the marketplace. By way of contrast, Google's rhetoric regarding openness and innovation is divided. At times they seem to have a romantic notion of invention—the inspired inventor struggling in isolation to create something new and amazing. This view of invention is strongest in the public rhetoric that Google executives created in the years leading up to the patent wars. But as Android began to make gains in the smartphone marketplace, Google's persuasive approach shifted to become much more amenable to the commodification of patents and inventions. At the same time, Motorola's rhetorical texts and actions reveal a relatively long history of seeing and using patents as ammunition, dating back at least to the creation of the GSM phone standard in the 1990s. That is to say, the construction of facts extends beyond subjective questions as to who is the aggressor in a dispute or who has the most effective vision for the future of innovation. Answers to questions such as these will come from multiple perspectives addressing a variety of concerns. But at a deeper level, the construction of facts through rhetorical means also informs the ways in which we see ourselves fitting together in society—in Taylor's terms, the social imaginary. Microsoft seems to see standards as part of the system that makes it possible for technology to become invisible. In Chapter 5, I found that this perspective is crucial to creating common sense notions of technology.

This dissertation also found connections among rhetorical devices and the social imaginaries that support mobile computing technologies. Rhetorical communion provides the strongest of these connections. In Chapter 4, I demonstrated how Google made use of

allusion and maxim to justify their purchase of Motorola Mobility (especially as it began to seem that the original reason for the purchase—Motorola's large collection of patents—would not provide much help in defending Android in the patent wars). By alluding to the past and to certain iconic Motorola phones, Google CEO Larry Page seems to invoke a universal audience. In essence, he constructs an audience of people who are familiar with these devices and their history—he relies on the knowledge of that history to make the purchase make sense. He also invokes maxim in the form of Amara's Law, to much the same effect.

Interestingly, my dissertation reinforced our understanding of the dialogic relationship between rhetoric and the social imaginary. In Chapter 5, I found that social imaginaries played a large role in shaping the rhetoric of the various parties involved, for example in my discussion of standards-essential patents and RAND agreements. Here too I found that allusion played a part in these rhetorical choices. In this case, Google executives allude to the romantic past and independent inventors such as Benjamin Franklin; they also frequently cite the Useful Arts clause of the US Constitution. Metaphor also plays a role in establishing the social imaginaries at play in this case study. For example, Microsoft often refers to intellectual property as an economic engine. This viewpoint is also found in the rhetoric of several key regulatory agencies. Indeed, Google executives also used a variety of metaphors to help justify their purchase of Motorola Mobility, as I discussed in Chapter 4.

The various sides in this dispute also made extensive use of enthymeme in their rhetoric. Google executives made heavy use of unstated premises and conclusions in

statements that they filed with the US Securities and Exchange Commission (SEC). By following Walton (2001) I was able to separate needed assumptions from used assumptions in these arguments. Recall that Walton described needed assumptions as parts of the argument that are required to make it structurally correct, while used assumptions are parts of the argument required for it to make sense. In many ways, used assumptions are the very things that give enthymeme its persuasive power. Generally speaking, however, enthymeme is more effective if the author can find the assumptions that the audience will fill in to make the argument make sense. In Chapter 4 I found several instances of Google deploying such used assumptions to help justify the layoff of Motorola Mobility employees shortly after the two companies merged. Enthymeme also plays a role in the post-trial briefs discussed in Chapter 6. In this case, Motorola uses an enthymematic argument regarding the necessity of Wi-Fi technology for Microsoft's Xbox 360 game console. This particular enthymeme is tied to a *locus of quantity*: the Xbox 360s market share with and without Wi-Fi.

In fact, other *loci of quantity* arguments make up the third major rhetorical device I uncovered. This kind of reasoning is involved in a great deal of the legal rhetoric I analyzed in Chapter 6. I found that Microsoft and Motorola both use such arguments in their legal reasoning, but that they use different types of quantitative *loci*. Microsoft generally argues that more of a good thing is better, while Motorola's arguments involve the concept of durability. In other words, Motorola relies on time and precedent for many of its quantitative arguments. But in many ways, appealing to a *locus of quantity* rests on a similar foundation as does constructing a universal audience, invoking a rhetorical

communion, or relying on enthymeme.

I end this section by suggesting a number of ways that this dissertation has contributed to the field. First, I have gained insight into the case at hand and demonstrated the ways in which rhetoric informs this particular slice of the patent wars, extending previous work on the rhetoric of patents, such as Bazerman (2002) and Vee (2010). Second, and more importantly, I have constructed and tested a theoretical framework that helps reveal the function of rhetoric in creating notions of technological common sense. This theoretical lens draws from a similar approach taken by Kelty (2008). However, I add several rhetorical tools essential to a holistic approach to technology and values, a la Feenberg (2002). Despite the fact that technologies eventually cease to seem magical and disappear into the everyday, this dissertation has demonstrated and interrogated a number of the values that are embedded into mobile computing technologies. Finally, I have suggested one way in which these values become embedded in technology—and I have found that rhetoric is crucial in this process.

Limitations

Any study has its limitations, and this dissertation is no exception. As a case study, this research is not easily generalizable to other disputes within the patent wars or other questions concerning technology and rhetoric. Of course, this is a limitation of the case study framework itself. That being said, case study is well-suited to gaining insight into a novel situation about which little is known. In that regard, such an approach made sense for an exploratory study of this particular dispute. Similarly, rhetorical analysis itself comes with certain limitations. In many ways, rhetorical analysis is essentially an

exercise in classification; this has been true since at least the days of Aristotle. This means that although rhetorical analysis can reveal a great deal about the values and actions associated with a certain text, such an approach can also get caught up in description, and never move into criticism. I have attempted to address this limitation by incorporating the works of Feenberg and Taylor, which helped me to move beyond description and towards a critical discussion of technology and the social imaginaries it participates in.

Further Research

The rhetoric used to discuss technology plays a role in creating that technology. Rhetoric is also one means by which human values are imparted into technologies. As Rainie and Wellman (2012) make clear, a technology as ubiquitous and pervasive as the smartphone has the potential to radically alter the ways in which we organize our societies, changing the ways we see ourselves fitting with and communicating with others. Therefore, further study of these technologies, how they are created, and what kinds of values they are being built upon is warranted. In this final section, I suggest possible avenues for further research.

A study extending the analysis that I have begun in this dissertation to other disputes within the patent wars is the logical next step. Such a study could attempt to use the insights I have gained and apply them more broadly. In order to do that, a wider selection of texts should be collected and analyzed using methodological tools such as textual analysis (following Berkenkotter and Huckin [1994]) or discourse analysis (following Fairclough [2010]). In essence, such a study would provide a test of the

findings of this dissertation and allow the researcher to move past the inherent limitations of the case study framework.

Genre analysis of the patents themselves provides another possible avenue for research. Bazerman (1994) provides an excellent starting point for such an approach, arguing that patents function within the framework of speech act theory. A similar approach would look for ways that patents and their supporting documents function as technologies themselves. In other words, a generic approach to patents might examine how patents help create things in the social and material worlds.

Similarly, a rhetorical analysis following a single patent would cast light upon how these documents work within the broader technological landscape. This approach might follow a patent through all of the places where it is mentioned in other texts. When was it first filed? Where is it listed as prior art for other patents? When is it mentioned in standards proceedings? How is it eventually incorporated into a standard? How is it discussed in any legal disputes? Such an approach would provide insight into the effects that a patent has over its lifetime.

Regardless of what direction future research takes, rhetorical analysis of technology will continue to grow in importance. Smartphones and their successors will continue to become smaller and more powerful. The impact that these networked computers will have on societal and communicative practices will continue to grow. As these changes take place, it will become ever more important to understand how rhetoric shapes these technologies. It will be even more important to understand the values that are embedded into these technological choices and how these choices come to be seen as

common sense.

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Appendices

Appendix A: Fank X. Shaw's Tweets

Frank X. Shaw@fxshaw

Free advice for David Drummond – next time check with Kent Walker before you blog. :)
pic.twitter.com/PfKle9H

6:43 PM - 3 Aug 11

Frank X. Shaw@fxshaw

Hello again David Drummond. This is going to take a few tweets, so here we go. Let's look at what Google does not dispute in their reply.

1:35 PM - 4 Aug 11

Frank X. Shaw@fxshaw

We offered Google the opportunity to bid with us to buy the Novell patents; they said no.

1:37 PM - 4 Aug 11

Frank X. Shaw@fxshaw

SO partnering with others & reducing patent liability across industry is not something they wanted to help do

1:38 PM - 4 Aug 11

Frank X. Shaw@fxshaw

Why? BECAUSE they wanted to buy something that they could use to assert against someone else.

1:38 PM - 4 Aug 11

Appendix B: Brad Smith's Tweet

Brad Smith@BradSmi

Google says we bought Novell patents to keep them from Google. Really? We asked them to bid jointly with us. They said no.

4:44 PM - 3 Aug 11

Appendix C: “Intellectual Property: The Engine of U.S. Economic Growth”

11 Apr 2012 11:06 AM 2

Posted by Jason Albert

Associate General Counsel for IP Policy & Strategy, Microsoft

Today, Victoria Espinel, the U.S. Intellectual Property Enforcement Coordinator, together with John Bryson, the U.S. Secretary of Commerce and David Kappos, the Director of the U.S. Patent and Trademark Office, released Intellectual Property and the U.S. Economy: Industries in Focus. This report is notable for what it shows about the role IP plays in driving U.S. jobs and economic growth. A few facts stand out in particular:

- IP-intensive industries directly employ 27.1 million Americans, and indirectly contribute to another 12.9 million jobs. All told, 27.7 percent of all U.S. jobs are attributable to IP-intensive industries.
- IP-intensive industries account for \$5.06 trillion in value added, representing 34.8 percent of U.S. gross domestic product (GDP) in 2010.
- Respondents in the computer industry indicated that patents were an effective means for securing competitive advantage from innovations over 40 percent of the time, a higher rate than in most other industries.

This study demonstrates that intellectual property is an enabler of innovation, resulting in the creation of businesses and jobs. And jobs in IP-intensive industries are high paying, with average weekly wages 42 percent higher than in other industries.

Of course, none of this would be possible without a strong and effective IP system in the U.S. Policymakers across the political spectrum have long recognized the importance of IP in driving jobs and economic growth, and today’s report provides strong confirmation of their approach.

Appendix D “Microsoft’s Support for Industry Standards”

8 Feb 2012 11:15 AM 4

Posted by Dave Heiner

Vice President & Deputy General Counsel, Corporate Standards Group & Antitrust Group, Microsoft

Earlier today, Microsoft posted a statement concerning our commitment to industry standards. The statement sets forth Microsoft’s long-standing approach to patents that are essential to industry standards: we license them to other firms. We don’t seek to block other firms from shipping products on the basis of these patents. Our approach is shared by Apple, Cisco and many others in the industry.

Why are “standards essential patents” so important to the industry and to consumers?

You may not realize it, but anytime you use the Internet, your cell phone or a computer, you are benefitting from international technical standards. Watching a video? You’re probably using a standard called H.264. Connected to a wireless network? You’re using another standard called 802.11. These and other standards enable a wide variety of devices and websites to work well with one another. In fact, the whole Internet is built on standards like these.

Standards are developed in a collaborative process. Engineers from a variety of firms (and other stakeholder groups) come together over the course of months, or years, contributing ideas on how best to define new standards. Those ideas often include patented inventions—new and better ways to perform various functions. Firms benefit from having their ideas included in new standards, and in exchange for this, firms usually make a promise: that if they have any patents they have that are “essential” to implementing a standard, they will make these patents available to all. In particular, these firms typically promise that they will make these “standard essential patents” available to any firm that wishes to implement the standard on reasonable and nondiscriminatory terms. That way every firm can build products based upon the standard, secure in the knowledge that it can obtain a license to any essential patents. And it means that every consumer can reasonably expect to be able to watch videos or connect to a wireless network regardless of the device they are using.

This system works really well, almost all of the time. For example, a typical personal computer implements a few hundred standards in software and hardware. These standards are available for implementation by any firm. It is probably safe to say that no license fees were exchanged for most of these standards. Every firm building on the standard just relies on the fact that a license is available, if needed. For example, Microsoft has contributed patented technology to hundreds of standards, yet we are seldom asked to provide a license for our standard essential patents, and we rarely seek such licenses from other contributors.

In other cases, firms that contribute to standards may proactively seek to obtain royalties

for use of their standard essential patents. They are entitled to do so under the policies of most standard setting organizations. This usually works out fine, too. In nearly all cases, firms work out reasonable royalty rates and other license terms so that standards can be built upon without fear of patent infringement litigation. In a few cases, firms with standard essential patents may join together in a “patent pool” to offer all their patents to other firms for a single, reasonable fee. For example, the cost to implement the thousands of patents that are offered in the H.264 patent pool when building a personal computer is typically less than 20 cents, and often much less.

Every now and then a patent holder may break its promise to make its standards essential patents available on reasonable and nondiscriminatory terms. These outliers create a lot of trouble for the international standards ecosystem. Once a standard like H.264 or 802.11 is widely adopted, firms have no choice but to implement the standard in their products. Would you buy a smartphone, an iPad or a personal computer that couldn't play video or connect to wireless networks? Probably not. This is why antitrust enforcers have taken a keen interest recently in patent acquisitions and attempts by patent holders to block their competitors from shipping products that implement industry standards.

Microsoft is one of several firms that have been discussing these concerns with antitrust enforcers over the past few months. In these discussions, we have offered our view that any patent holder that promises to make its standard essential patents available on reasonable and nondiscriminatory terms should do just that. That means that such patent holders should not seek to block shipments of competing products just because they implement an industry standard— a license on reasonable terms is always available. That also means that such patent holders should not require other firms to license back their patents, except for patents that are essential to the same standard. And if a patent holder sells its patents, it should contractually require the buyer to live up to these points. A promise to license patents on reasonable and nondiscriminatory terms, absent these three points, is an empty promise.

Appendix E “FTC Speaks Out Against Standard Essential Patent Abuse”

6 Jun 2012 4:19 PM 2

Posted by David Howard

Corporate Vice President & Deputy General Counsel, Microsoft

Today’s FTC statement filed in the International Trade Commission adds to the growing chorus of regulators and other government officials around the world who agree that injunctions and exclusion orders based on standard essential patents jeopardize competition and the availability and price of consumer technology.

From China’s Ministry of Commerce, to the EU’s Directorate-General for Competition, to the U.S. Department of Justice, and now the FTC, the world’s regulators are speaking clearly and consistently: companies should not misuse standard essential patents.

Industry standards don’t sound like something you should spend a lot of time worrying about, and in normal times you’d be able to take the benefits of standards for granted. But industry standards are the behind-the-scenes underpinning to wireless connectivity and the Internet, indeed, a foundation on which virtually all modern electronic devices and networks are built. Without industry standards, your computer, smartphone, tablet, home wireless network and the Internet would be far more expensive and not work together the way you’ve become accustomed – if at all.

Standards work because companies and other inventors contribute their technologies and ideas for others’ use. In doing so, they promise to make any patents they hold on the resulting standard available on reasonable and non-discriminatory licensing terms. They promise not to renege on that commitment and abuse their advantage when others start relying on the standard.

The system depends on these promises, and when companies break them, the system breaks down. Costs go up and popular technology products become less available. This harms both the companies that build products implementing those standards and consumers who depend on those products.

The reason you need to worry about industry standards now is that Motorola decided to break the system by using its standard essential patents to block other companies from selling their products. Google, Motorola’s new owner, had the opportunity to reverse Motorola’s abusive policies, but has chosen instead to embrace them. The FTC clearly understands what’s at stake, and it has taken its stand on the side of consumers, innovation, and competition.

Appendix F “Our Licensing Deal with Samsung: How IP Drives Innovation and Collaboration”

28 Sep 2011 5:30 AM 75

Posted by Brad Smith & Horacio Gutierrez

General Counsel & Deputy General Counsel, Microsoft

Today, Microsoft announced a patent cross-licensing agreement with Samsung that will provide coverage under Microsoft’s patent portfolio for Samsung’s mobile phones and tablets. The agreement also gives both companies greater patent coverage relating to each other’s technologies, and opens the door to a deeper partnership in the development of new phones for the Windows Phone platform.

In the context of all the attention intellectual property matters have received in recent months, it’s worth taking a moment to reflect on the meaning and impact of these agreements. The Samsung license agreement marks the seventh agreement Microsoft has signed in the past three months with hardware manufacturers that use Android as an operating system for their smartphones and tablets. The previous six were with Acer, General Dynamics Itronix, Onkyo, Velocity Micro, ViewSonic and Wistron.

Together with the license agreement signed last year with HTC, today’s agreement with Samsung means that the top two Android handset manufacturers in the United States have now acquired licenses to Microsoft’s patent portfolio. These two companies together accounted for more than half of all Android phones sold in the U.S. over the past year. That leaves Motorola Mobility, with which Microsoft is currently in litigation, as the only major Android smartphone manufacturer in the U.S. without a license.

These agreements prove that licensing works. They show what can be achieved when companies sit down and address intellectual property issues in a responsible manner. The rapid growth of the technology industry, and its continued fast pace of innovation are founded on mutual respect for IP. Intellectual property continues to provide the engine that incentivizes research and development, leading to inventions that put new products and services in the hands of millions of consumers and businesses.

We recognize that some businesses and commentators – Google chief among them – have complained about the potential impact of patents on Android and software innovation. To them, we say this: look at today’s announcement. If industry leaders such as Samsung and HTC can enter into these agreements, doesn’t this provide a clear path forward?

Some carriers have called for companies to enter into precisely these types of agreements to address the patent issues that are important to the mobile marketplace. This clearly makes sense. This is how companies have dealt with prior patent issues relating to radio and media technologies for mobile devices. As today’s announcement illustrates, we have now done this for software technologies as well, and we’re committed to entering into similar agreements with other handset manufacturers.

There undoubtedly will be a good deal of additional drama before this new generation of patent issues sorts itself out in its entirety. But as all of our agreements illustrate, a solution is increasingly in sight. Put in this context, today's announcement does not yet represent the beginning of the end for this industry-wide assortment of issues. But to borrow a well-known phrase, perhaps we've now reached the end of the beginning.

Appendix G: “Microsoft's Open Letter to Standards-Setting Organizations”

Published: February 08, 2012

Like other leading high-tech firms, Microsoft regularly contributes to the development of industry standards. Industry standards are vitally important to the development of the Internet and to interoperability among mobile devices and other computers. The international standards system works well because firms that contribute to standards promise to make their essential patents available to others on fair, reasonable and nondiscriminatory terms. Consumers and the entire industry will suffer if, in disregard of this promise, firms seek to block others from shipping products on the basis of such standard essential patents.

Microsoft's approach is straight-forward:

1. Microsoft will always adhere to the promises it has made to standards organizations to make its standard essential patents available on fair, reasonable and nondiscriminatory terms.
2. This means that Microsoft will not seek an injunction or exclusion order against any firm on the basis of those essential patents.
3. This also means that Microsoft will make those essential patents available for license to other firms without requiring that those firms license their patents back to Microsoft, except for any patents they have that are essential to the same industry standard.
4. Microsoft will not transfer those standard essential patents to any other firm unless that firm agrees to adhere to the points outlined above.

Appendix H: “Joining OIN”

Posted: Monday, August 06, 2007

Posted by Chris DiBona, Open Source Programs Manager

You'll often hear members of our open source team say, “Every time you use Google, you're using Linux.” It's absolutely true. Check a Google engineer's workstation, and you'll probably find it's running Linux. Do a search on Google.com, and a Linux server will return your results. Ever since Google got its start, Linux has given us the power and flexibility we need to serve millions of users around the world.

In turn, we feel a strong responsibility to the Linux community, and we're always looking for creative ways to put our resources in the hands of Linux developers. That's why today we became a licensee of the Open Invention Network (OIN), an innovative patent-sharing organization founded to create a legally protected environment for anyone who works with Linux.

The concept behind OIN is simple. All OIN licensees, including participants such as IBM, Oracle, NEC and Sony, agree to cross-license their Linux-related patents to the others free of charge. Patent issues therefore become a much smaller concern inside the community, and OIN members can focus their energy on writing and releasing software rather than vetting their code for intellectual property issues. It's the legal equivalent of taking a long, deep breath.

For us, today's announcement marks the latest development in a long, fruitful relationship with the open source community. The Google Summer of Code program has trained over 2,000 students as open source developers, many on Linux-related projects. We continue to fund external projects and host events like the Ubuntu Developer Summit and the Linux Foundation Innovation Summit. Hundreds of Googlers are submitting patches to Linux, and we've open-sourced over a million lines of code.

We believe Linux innovation moves fastest when developers can share their knowledge with full peace of mind. We're proud to participate in an organization that's making that possible, and we look forward to seeing OIN grow and thrive.

Appendix I “Patent reform needed more than ever”

Tuesday, March 3, 2009 at 11:53 AM ET

Posted by Michelle Lee, Head of Patents and Patent Strategy

After the last time I blogged about patent reform in late 2007, the House went on to approve the Patent Reform Act. The bill unfortunately got bogged down in the Senate the following year. Since then the problems of the current system — and the need for reform — have only grown.

Consider this: Of the 20 patent lawsuits filed against Google since late 2007, all but two have been filed by plaintiffs who don't make or sell any real product or service — in other words, by non-practicing entities or “patent trolls.” Most of these cases seem to feature the same small set of contingent fee plaintiff's lawyers asserting patent claims against the same small set of companies. We've also noticed a more disturbing trend: in many of these cases, the patents being asserted against us are owned by — and in a surprising number of cases, are even “invented” by — patent lawyers themselves.

Unfortunately, the temptations and opportunities for abuse have gotten too high. Lawyers and plaintiffs have seen the potentially huge payoffs available in patent litigation. Before 1990, there had been just one patent damage award of over \$100 million. Since 1990, there have been at least 15, with at least five topping \$500 million.

That's why I'm excited that patent reform legislation is slated to be reintroduced today by Senators Patrick Leahy and Orrin Hatch and Representatives John Conyers and Lamar Smith. Once a driver of creativity, our patent system now poses a hurdle for innovation. All too often, Google and other companies face mounting legal costs to defend against questionable patent claims from speculators gaming the system to reap windfall profits. And those lawsuits make it more difficult and costly to introduce the next revolutionary product.

I wrote a bit last Congress about the reform provisions that Google cares the most about. The most pressing of those is ensuring fair damage awards. The current system too easily allows damages to be assessed based on the value of the whole product often containing many features — not just the value of the innovation of the allegedly infringed patent — which means the threat of potentially massive awards forces defendants to settle. Balance should be restored by requiring damages to be based on the value of the innovation's contribution to the product.

As members of the Coalition for Patent Fairness, we're optimistic that patent reform faces better odds in 2009 than it has before — not least because President Obama has pledged his support. Passage of patent reform is long overdue.

Appendix J “Debating the future of innovation at the Supreme Court”

Monday, November 9, 2009 at 4:06 PM ET

Posted by Michelle Lee, Deputy General Counsel and Head of Patents and Patent Strategy

This afternoon the U.S. Supreme Court considered oral arguments in *Bilski v. Kappos*, a potential landmark case in intellectual property law that will determine what kinds of business methods and software processes deserve patent protection.

The case has to do with two businessmen who sued the Patent and Trademark Office after it denied them a patent on a method for hedging risks in energy commodities trading. In a 9-3 decision, the U.S. Court of Appeals for the Federal Circuit ruled against the plaintiffs, holding that abstract ideas and mental processes are not eligible for patent protection. Under the law, a patentable method must either be tied to a particular machine, or transform an article from one state to another.

This case is critical to the future of innovation in the United States. A recent flood of patents on business methods and abstract software processes has contributed to uncertainty and an explosion of expensive lawsuits. The Constitution permits Congress to create patent laws "to promote the progress of science and the useful arts," and we support patent rules that effectively further that goal. But awarding patents on abstract ideas and processes, like the claim at issue in the *Bilski* case, poses a serious threat to innovation, job creation, and economic growth.

An editorial in Sunday's New York Times hits the nail on the head:

"Patents perform a useful function, promoting innovation by ensuring inventors the right to profit from their creations for a period of time. But overprotection through patents is as dangerous as under protection. It can stifle competition... Not every bright idea should be protected as a property right."

Earlier this year we joined a number of companies in filing an amicus curiae brief, asking the Supreme Court to uphold the lower court's decision and the original intent and language of the law. The revolution in information technology should be built on innovation, not litigation.

Appendix K “The meaning of open”

Posted: Monday, December 21, 2009

Last week I sent an email to Googlers about the meaning of "open" as it relates to the Internet, Google, and our users. In the spirit of openness, I thought it would be appropriate to share these thoughts with those outside of Google as well.

At Google we believe that open systems win. They lead to more innovation, value, and freedom of choice for consumers, and a vibrant, profitable, and competitive ecosystem for businesses. Many companies will claim roughly the same thing since they know that declaring themselves to be open is both good for their brand and completely without risk. After all, in our industry there is no clear definition of what open really means. It is a Rashomon-like term: highly subjective and vitally important.

The topic of open seems to be coming up a lot lately at Google. I've been in meetings where we're discussing a product and someone says something to the effect that we should be more open. Then a debate ensues which reveals that even though most everyone in the room believes in open we don't necessarily agree on what it means in practice.

This is happening often enough for me to conclude that we need to lay out our definition of open in clear terms that we can all understand and support. What follows is that definition based on my experiences at Google and the input of several colleagues. We run the company and make our product decisions based on these principles, so I encourage you to carefully read, review, and debate them. Then own them and try to incorporate them into your work. This is a complex subject and if there is debate (and I'm sure there will be) it should be in the open! Please feel free to comment.

There are two components to our definition of open: open technology and open information. Open technology includes open source, meaning we release and actively support code that helps grow the Internet, and open standards, meaning we adhere to accepted standards and, if none exist, work to create standards that improve the entire Internet (and not just benefit Google). Open information means that when we have information about users we use it to provide something that is valuable to them, we are transparent about what information we have about them, and we give them ultimate control over their information. These are the things we should be doing. In many cases we aren't there, but I hope that with this note we can start working to close the gap between reality and aspiration.

If we can embody a consistent commitment to open — which I believe we can — then we have a big opportunity to lead by example and encourage other companies and industries to adopt the same commitment. If they do, the world will be a better place.

Open systems win

To understand our position in more detail, it helps to start with the assertion that open systems win. This is counter-intuitive to the traditionally trained MBA who is taught to

generate a sustainable competitive advantage by creating a closed system, making it popular, then milking it through the product life cycle. The conventional wisdom goes that companies should lock in customers to lock out competitors. There are different tactical approaches — razor companies make the razor cheap and the blades expensive, while the old IBM made the mainframes expensive and the software ... expensive too. Either way, a well-managed closed system can deliver plenty of profits. They can also deliver well-designed products in the short run — the iPod and iPhone being the obvious examples — but eventually innovation in a closed system tends towards being incremental at best (is a four blade razor really that much better than a three blade one?) because the whole point is to preserve the status quo. Complacency is the hallmark of any closed system. If you don't have to work that hard to keep your customers, you won't.

Open systems are just the opposite. They are competitive and far more dynamic. In an open system, a competitive advantage doesn't derive from locking in customers, but rather from understanding the fast-moving system better than anyone else and using that knowledge to generate better, more innovative products. The successful company in an open system is both a fast innovator and a thought leader; the brand value of thought leadership attracts customers and then fast innovation keeps them. This isn't easy — far from it — but fast companies have nothing to fear, and when they are successful they can generate great shareholder value.

Open systems have the potential to spawn industries. They harness the intellect of the general population and spur businesses to compete, innovate, and win based on the merits of their products and not just the brilliance of their business tactics. The race to map the human genome is one example.

In the book *Wikinomics*, Don Tapscott and Anthony Williams explain how in the mid-1990s private firms were discovering and patenting large amounts of DNA sequence data and then assuming control over who could access that information and at what price. Having so much of the genome under private ownership raised costs and made drug discovery far less efficient. Then, in 1995, Merck Pharmaceuticals and the Gene Sequencing Center at Washington University changed the game by creating a new, open initiative called the Merck Gene Index. Within three years they had published over 800,000 gene sequences into the public domain, and soon other collaborative projects followed suit. This in an industry where early stage R&D was traditionally pursued individually in closed labs, so Merck's open approach not only changed the culture of the entire field but also accelerated the pace of biomedical research and drug development. It gave researchers everywhere unrestricted access to an open resource of genetic information.

Another way to look at the difference between open and closed systems is that open systems allow innovation at all levels — from the operating system to the application layer — not just at the top. This means that one company doesn't have to depend on another's benevolence to ship a product. If the GNU C compiler that I'm using has a bug, I can fix it since the compiler is open source. I don't have to file a bug report and hope for a timely response.

So if you are trying to grow an entire industry as broadly as possible, open systems trump closed. And that is exactly what we are trying to do with the Internet. Our commitment to open systems is not altruistic. Rather it's good business, since an open Internet creates a steady stream of innovations that attracts users and usage and grows the entire industry. Hal Varian has an equation in his book *Information Rules* that applies here:

$$\text{Reward} = (\text{Total value added to the industry}) * (\text{Our share of industry value})$$

All other things being equal, a 10 percent increase in share or a 10 percent increase in industry value should lead to the same outcome. But in our industry a 10 percent increase in industry value will yield a much bigger reward because it will stimulate economies of scale across the entire industry, increasing productivity and reducing costs for all competitors. As long as we contribute a steady stream of great products we will prosper along with the entire ecosystem. We may get a smaller piece, but it will come from a bigger pie.

In other words, Google's future depends on the Internet staying an open system, and our advocacy of open will grow the web for everyone - including Google.

Open Technology

The definition of open starts with the technologies upon which the Internet was founded: open standards and open source software.

Open Standards

Networks have always depended on standards to flourish. When railroad tracks were first being laid across the U.S. in the early 19th century, there were seven different standards for track width. The network didn't flourish and expand west until the different railway companies agreed upon a standard width of 4' 8.5". (In this case the standards war was an actual war: Southern railroads were forced to convert over 11,000 miles of track to the new standard after the Confederacy lost to the Union in the Civil War.)

So there was some precedent in 1974 when Vint Cerf and his colleagues proposed using an open standard (which became TCP/IP) to connect the several computer networks that had emerged around the U.S. They didn't know exactly how many networks were out there so the "Internet" — a term Vint coined — had to be open. Any network could connect using TCP/IP, and now, as a result of that decision, there are about 681 million hosts on the Internet.

Today, we base our developer products on open standards because interoperability is a critical element of user choice. What does this mean for Google Product Managers and Engineers? Simple: whenever possible, use existing open standards. If you are venturing into an area where open standards don't exist, create them. If existing standards aren't as good as they should be, work to improve them and make those improvements as simple and well documented as you can. Our top priorities should always be users and the industry at large and not just the good of Google, and you should work with standards committees to make our changes part of the accepted specification.

We have a good history of doing this. In the formative years of the Google Data Protocol

(our standard API protocol, which is based on XML/Atom), we worked as part of the IETF Atom Protocol Working Group to shape the Atom specification. There's also our recent work with the W3C to create a standard geolocation API that will make it easy for developers to build browser-based, location-sensitive applications. This standard helps everyone, not just us, and will lead to users having access to many more compelling apps from thousands of developers.

Open Source

Most of those apps will be built on open source software, a phenomenon responsible for the web's explosive growth in the past 15 years. There is a historic precedent here: while the term "open source" was coined in the late 1990s, the concept of sharing valuable information to catalyze an industry existed long before the Internet. In the early 1900s, the U.S. automobile industry instituted a cross-licensing agreement whereby patents were shared openly and freely amongst manufacturers. Prior to this agreement, the owners of the patent for the two-cycle gasoline engine had effectively bottled up the industry.

Today's open source goes far beyond the "patent pooling" of the early auto manufacturers, and has led to the development of the sophisticated software components — Linux, Apache, SSH, and others — upon which Google is built. In fact, we use tens of millions of lines of open source code to run our products. We also give back: we are the largest open source contributor in the world, contributing over 800 projects that total over 20 million lines of code to open source, with four projects (Chrome, Android, Chrome OS, and Google Web Toolkit) of over a million lines of code each. We have teams that work to support Mozilla and Apache, and an open source project hosting service (code.google.com/hosting) that hosts over 250,000 projects. These activities not only ensure that others can help us build the best products, they also mean that others can use our software as a base for their own products if we fail to innovate adequately.

When we open source our code we use standard, open Apache 2.0 licensing, which means we don't control the code. Others can take our open source code, modify it, close it up and ship it as their own. Android is a classic example of this, as several OEMs have already taken the code and done great things with it. There are risks to this approach, however, as the software can fragment into different branches which don't work well together (remember how Unix for workstations devolved into various flavors — Apollo, Sun, HP, etc.). This is something we are working hard to avoid with Android.

While we are committed to opening the code for our developer tools, not all Google products are open source. Our goal is to keep the Internet open, which promotes choice and competition and keeps users and developers from getting locked in. In many cases, most notably our search and ads products, opening up the code would not contribute to these goals and would actually hurt users. The search and advertising markets are already highly competitive with very low switching costs, so users and advertisers already have plenty of choice and are not locked in. Not to mention the fact that opening up these systems would allow people to "game" our algorithms to manipulate search and ads quality rankings, reducing our quality for everyone.

So as you are building your product or adding new features, stop and ask yourself: Would

open sourcing this code promote the open Internet? Would it spur greater user, advertiser, and partner choice? Would it lead to greater competition and innovation? If so, then you should make it open source. And when you do, do it right; don't just push it over the wall into the public realm and forget about it. Make sure you have the resources to pay attention to the code and foster developer engagement. Google Web Toolkit, where we have developed in the open and used a public bug tracker and source control system, is a good example of this.

Open Information

The foundation of open standards and open source has led to a web where massive amounts of personal information — photos, contacts, updates — are regularly uploaded. The scale of information being shared, and the fact that it can be saved forever, creates a question that was hardly a consideration a few years ago: How do we treat this information?

Historically, new information technologies have often enabled new forms of commerce. For example, when traders in the Mediterranean region circa 3000 BC invented seals (called bullae) to ensure that their shipments reached their destinations tamper-free, they transformed commerce from local to long distance. Similar transformations were spurred by the advent of the written word, and more recently, computers. At every step of the way, the transaction, a consensual agreement where each party gets something of value, was powered by a new type of information that allowed a contract to be enforced.

On the web, the new form of commerce is the exchange of personal information for something of value. This is a transaction that millions of us participate in every day, and it has potentially great benefits. An auto insurer could monitor a customer's driving habits in real-time and give a discount for good driving — or charge a premium for speeding — powered by information (GPS tracking) that wasn't available only a few years ago. This is a fairly simple transaction, but we will encounter far more sensitive scenarios.

Let's say your child has an allergy to certain medicines. Would you allow her medical data to be accessible by a smart wireless syringe which could prevent an EMT or nurse from accidentally giving her that medicine? I would, but you might decide the metal bracelet around her wrist is sufficient. And that's the point — people can and will reach different decisions, and when it comes to their personal information we need to treat all of those decisions with equal respect.

So while having more personal information online can be quite beneficial to everyone, its uses should be guided by principles that are responsible, scalable, and flexible enough to grow and change with our industry. And unlike open technology, where our objective is to grow the Internet ecosystem, our approach to open information is to build trust with the individuals who engage within that ecosystem (users, partners, and customers). Trust is the most important currency online, so to build it we adhere to three principles of open information: value, transparency, and control.

Value

First and foremost, we need to make products that are valuable to users. In many cases,

we can make our products even better if we know more information about the user, but privacy concerns can arise if people don't understand what value they are getting in return for their information. Explain that value to them, however, and they will often agree to the transaction. For example, millions of people let credit card companies retain information on the purchases they make with their card in exchange for the convenience of not carrying around cash.

We did this well when we launched Interest-Based Advertising in March. IBA makes ads more relevant and more useful. That is the extra value we create based on the information we gather. It also includes a user preferences manager that clearly explains what users are getting in exchange for their information and lets them opt out or adjust their settings. The vast majority of people who visit the preferences manager choose to adjust their settings rather than opt out because they realize the value of receiving ads customized to their interests.

This should be our default approach: tell people, in obvious, plain language, what we know about them and why it's valuable to them that we know it. Think that your product's value is so obvious that it doesn't need explaining? There's a good chance you're wrong.

Transparency

Next, we need to make it easy for users to find out what information we gather and store about them across all of our products. We recently took a big step in this direction with the launch of the Google Dashboard, which is a single place where users can see what personal data is held by each Google product (covering more than 20 products including Gmail, YouTube, and Search) and control their personal settings. We are, to the best of our knowledge, the first Internet company to offer a service like this and we hope it will become the standard. Another good example is our Privacy Policy, which is written for humans and not just lawyers.

We can go even farther than this though. If you manage a consumer product where you collect information from your users, your product should be part of the Dashboard. If you're already there, you're not done. With every new feature or version, ask yourself if you have any additional information (maybe even information that is publicly available about users on other sites) that you can add to the Dashboard.

Think about how you can increase transparency within your product as well. When you download an Android app, for example, the device tells you what information the app will be able to access about you and your phone, and then you get to decide whether or not to proceed. You don't have to dig deep to figure out what information you are divulging - it tells you up front and lets you decide what to do. Is your product like that? How can you increase users' engagement with your product through increasing transparency?

Control

Finally, we must always give control to the user. If we have information about a user, as with IBA, it should be easy for the user to delete that information and opt-out. If they use our products and store content with us, it's their content, not ours. They should be able to

export it or delete it at any time, at no cost, and as easily as possible. Gmail is a great example of this since we offer free forwarding to any address. The ability to switch is critical, so instead of building walls around your product, build bridges. Give users real options.

If there are existing standards for handling user data, then we should adhere to them. If a standard doesn't exist, we should work to create an open one that benefits the entire web, even if a closed standard appears to be better for us (remember — it's not!). In the meantime we need to do whatever we can to make leaving Google as easy as possible. Google is not the Hotel California — you can check out any time you like and you CAN, in fact, leave!

As Eric said in his 2009 strategy memo, "we don't trap users, we make it easy for them to move to our competitors." This policy is sort of like the emergency exits on an airplane — an analogy that our pilot CEO would appreciate. You hope to never use them, but you're glad they're there and would be furious if they weren't.

That's why we have a team — the Data Liberation Front (dataliberation.org) — whose job it is to make "checking out" easy. Recent examples of their work include Blogger (people who choose to leave Blogger for another service can easily take their content with them) and Docs (users can now collect all their documents, presos, and spreadsheets in a zip file and download it). Build your products so that the Data Liberation team can work their magic. One way you can do this is by having a good public API that exposes all your users' data. Don't wait for v2 or v3, discuss this early in your product planning meetings and make it a feature of your product from the start.

When reporters at the Guardian, a leading UK newspaper, reviewed the work of the Data Liberation team, they proclaimed it to be "counter-intuitive" for those "accustomed to the lock-in mentality of previous commercial battles." They are right, it is counterintuitive to people who are stuck in the old MBA way of thinking, but if we do our jobs then soon it won't be. Our goal is to make open the default. People will gravitate towards it, then they will expect and demand it and be furious when they don't get it. When open is intuitive, then we have succeeded.

When bigger is better

Closed systems are well-defined and profitable, but only for those who control them. Open systems are chaotic and profitable, but only for those who understand them well and move faster than everyone else. Closed systems grow quickly while open systems evolve more slowly, so placing your bets on open requires the optimism, will, and means to think long term. Fortunately, at Google we have all three of these.

Because of our reach, technical know-how, and lust for big projects, we can take on big challenges that require large investments and lack an obvious, near-term pay-off. We can photograph the world's streets so that you can explore the neighborhood around an apartment you are considering renting from a thousand miles away. We can scan millions of books and make them widely accessible (while respecting the rights of publishers and authors). We can create an email system that gives away a gigabyte of storage (now over

7 gigs) at a time when all other services allow only a small fraction of that amount. We can instantly translate web pages from any of 51 languages. We can process search data to help public health agencies detect flu outbreaks much earlier. We can build a faster browser (Chrome), a better mobile operating system (Android), and an entirely new communications platform (Wave), and then open them up for the world to build upon, customize, and improve.

We can do these things because they are information problems and we have the computer scientists, technology, and computational power to solve them. When we do, we make numerous platforms - video, maps, mobile, PCs, voice, enterprise - better, more competitive, and more innovative. We are often attacked for being too big, but sometimes being bigger allows us to take on the impossible.

All of this is useless, however, if we fail when it comes to being open. So we need to constantly push ourselves. Are we contributing to open standards that better the industry? What's stopping us from open sourcing our code? Are we giving our users value, transparency, and control? Open up as much as you can as often as you can, and if anyone questions whether this is a good approach, explain to them why it's not just a good approach, but the best approach. It is an approach that will transform business and commerce in this still young century, and when we are successful we will effectively rewrite the MBA curriculum for the next several decades!

An open Internet transforms lives globally. It has the potential to deliver the world's information to the palm of every person and to give everyone the power of freedom of expression. These predictions were in an email I sent you earlier this year (later posted as a blog post) that described my vision for the future of the Internet. But now I'm talking about action, not vision. There are forces aligned against the open Internet — governments who control access, companies who fight in their own self-interests to preserve the status quo. They are powerful, and if they succeed we will find ourselves inhabiting an Internet of fragmentation, stagnation, higher prices, and less competition.

Our skills and our culture give us the opportunity and responsibility to prevent this from happening. We believe in the power of technology to deliver information. We believe in the power of information to do good. We believe that open is the only way for this to have the broadest impact for the most people. We are technology optimists who trust that the chaos of open benefits everyone. We will fight to promote it every chance we get.

Open will win. It will win on the Internet and will then cascade across many walks of life: The future of government is transparency. The future of commerce is information symmetry. The future of culture is freedom. The future of science and medicine is collaboration. The future of entertainment is participation. Each of these futures depends on an open Internet.

As Google product managers, you are building something that will outlast all of us, and none of us can imagine all the ways Google will grow and touch people's lives. In that way, we are like our colleague Vint Cerf, who didn't know exactly how many networks would want to be part of this "Internet" so he set the default to open. Vint certainly got it right. I believe we will too.

Posted by Jonathan Rosenberg, Senior Vice President, Product Management

Appendix L “Patent reform needed more than ever”

Tuesday, March 3, 2009 at 11:53 AM ET

Posted by Michelle Lee, Head of Patents and Patent Strategy

After the last time I blogged about patent reform in late 2007, the House went on to approve the Patent Reform Act. The bill unfortunately got bogged down in the Senate the following year. Since then the problems of the current system — and the need for reform — have only grown.

Consider this: Of the 20 patent lawsuits filed against Google since late 2007, all but two have been filed by plaintiffs who don't make or sell any real product or service — in other words, by non-practicing entities or “patent trolls.” Most of these cases seem to feature the same small set of contingent fee plaintiff's lawyers asserting patent claims against the same small set of companies. We've also noticed a more disturbing trend: in many of these cases, the patents being asserted against us are owned by — and in a surprising number of cases, are even “invented” by — patent lawyers themselves.

Unfortunately, the temptations and opportunities for abuse have gotten too high. Lawyers and plaintiffs have seen the potentially huge payoffs available in patent litigation. Before 1990, there had been just one patent damage award of over \$100 million. Since 1990, there have been at least 15, with at least five topping \$500 million.

That's why I'm excited that patent reform legislation is slated to be reintroduced today by Senators Patrick Leahy and Orrin Hatch and Representatives John Conyers and Lamar Smith. Once a driver of creativity, our patent system now poses a hurdle for innovation. All too often, Google and other companies face mounting legal costs to defend against questionable patent claims from speculators gaming the system to reap windfall profits. And those lawsuits make it more difficult and costly to introduce the next revolutionary product.

I wrote a bit last Congress about the reform provisions that Google cares the most about. The most pressing of those is ensuring fair damage awards. The current system too easily allows damages to be assessed based on the value of the whole product often containing many features — not just the value of the innovation of the allegedly infringed patent — which means the threat of potentially massive awards forces defendants to settle. Balance should be restored by requiring damages to be based on the value of the innovation's contribution to the product.

As members of the Coalition for Patent Fairness, we're optimistic that patent reform faces better odds in 2009 than it has before — not least because President Obama has pledged his support. Passage of patent reform is long overdue.

Appendix M “Patents and innovation”

Posted: Monday, April 04, 2011

The tech world has recently seen an explosion in patent litigation, often involving low-quality software patents, which threatens to stifle innovation. Some of these lawsuits have been filed by people or companies that have never actually created anything; others are motivated by a desire to block competing products or profit from the success of a rival’s new technology. The patent system should reward those who create the most useful innovations for society, not those who stake bogus claims or file dubious lawsuits. It’s for these reasons that Google has long argued in favor of real patent reform, which we believe will benefit users and the U.S. economy as a whole.

But as things stand today, one of a company’s best defenses against this kind of litigation is (ironically) to have a formidable patent portfolio, as this helps maintain your freedom to develop new products and services. Google is a relatively young company, and although we have a growing number of patents, many of our competitors have larger portfolios given their longer histories.

So after a lot of thought, we’ve decided to bid for Nortel’s patent portfolio in the company’s bankruptcy auction. Today, Nortel selected our bid as the “stalking-horse bid,” which is the starting point against which others will bid prior to the auction. If successful, we hope this portfolio will not only create a disincentive for others to sue Google, but also help us, our partners and the open source community—which is integrally involved in projects like Android and Chrome—continue to innovate. In the absence of meaningful reform, we believe it’s the best long-term solution for Google, our users and our partners.

Posted by Kent Walker, Senior Vice President & General Counsel

Appendix N: “When patents attack Android”

Posted: Wednesday, August 03, 2011

I have worked in the tech sector for over two decades. Microsoft and Apple have always been at each other’s throats, so when they get into bed together you have to start wondering what’s going on. Here is what’s happening:

Android is on fire. More than 550,000 Android devices are [activated every day](#), through a network of 39 manufacturers and 231 carriers. Android and other platforms are competing hard against each other, and that’s yielding cool new devices and amazing mobile apps for consumers.

But Android’s success has yielded something else: a hostile, organized campaign against Android by Microsoft, Oracle, Apple and other companies, waged through bogus patents.

They’re doing this by banding together to acquire Novell’s old patents (the “[CPTN](#)” group including Microsoft and Apple) and Nortel’s old patents (the “[Rockstar](#)” group including Microsoft and Apple), to make sure Google didn’t get them; [seeking](#) \$15 licensing fees for every Android device; [attempting](#) to make it more expensive for phone manufacturers to license Android (which we provide free of charge) than Windows Phone 7; and even [suing](#) Barnes & Noble, HTC, Motorola, and Samsung. Patents were meant to encourage innovation, but lately they are being used as a weapon to stop it.

A smartphone [might](#) involve as many as 250,000 (largely questionable) patent claims, and our competitors want to impose a “tax” for these dubious patents that makes Android devices more expensive for consumers. They want to make it harder for manufacturers to sell Android devices. Instead of competing by building new features or devices, they are [fighting through litigation](#).

This anti-competitive strategy is also escalating the cost of patents way beyond what they’re really worth. The winning \$4.5 billion for Nortel’s patent portfolio was nearly five times larger than the pre-auction estimate of \$1 billion. Fortunately, the law [frowns on](#) the accumulation of dubious patents for anti-competitive means — which means these deals are likely to draw regulatory scrutiny, and this patent bubble will pop.

We’re not naive; technology is a tough and ever-changing industry and we work very hard to stay focused on our own business and make better products. But in this instance we thought it was important to speak out and make it clear that we’re determined to preserve Android as a competitive choice for consumers, by stopping those who are trying to strangle it.

We’re looking intensely at a number of ways to do that. We’re encouraged that the Department of Justice [forced](#) the group I mentioned earlier to license the former Novell patents on fair terms, and that it’s [looking into](#) whether Microsoft and Apple acquired the Nortel patents for anti-competitive means. We’re also looking at other ways to reduce the anti-competitive threats against Android by strengthening our own patent portfolio. Unless we act, consumers could face rising costs for Android devices — and fewer

choices for their next phone.

UPDATE August 4, 2011 - 12:25pm PT

It's not surprising that Microsoft would want to divert attention by pushing a false "gotcha!" while failing to address the substance of the issues we raised. If you think about it, it's obvious why we turned down Microsoft's offer. Microsoft's objective has been to keep from Google and Android device-makers any patents that might be used to defend against their attacks. A joint acquisition of the Novell patents that gave all parties a license would have eliminated any protection these patents could offer to Android against attacks from Microsoft and its bidding partners. Making sure that we would be unable to assert these patents to defend Android — and having us pay for the privilege — must have seemed like an ingenious strategy to them. We didn't fall for it.

Ultimately, the U.S. Department of Justice intervened, forcing Microsoft to sell the patents it bought and demanding that the winning group (Microsoft, Oracle, Apple, EMC) give a license to the open-source community, changes the DoJ said were [“necessary to protect competition and innovation in the open source software community.”](#) This only reaffirms our point: Our competitors are waging a patent war on Android and working together to keep us from getting patents that would help balance the scales.

Posted by David Drummond, Senior Vice President and Chief Legal Officer

Appendix O: “European Commission clears Motorola deal”

Posted: Monday, February 13, 2012

We're happy that today the European Commission [approved](#) our proposed acquisition of Motorola Mobility, which we [announced](#) in August. This is an important milestone in the approval process and it moves us closer to closing the deal. We are now just waiting for decisions from a few other jurisdictions before we can close this transaction.

As we outlined in August, the combination of Google and Motorola Mobility will help supercharge Android. It will also enhance competition and offer consumers faster innovation, greater choice and wonderful user experiences.

Posted by Don Harrison, Vice President & Deputy General Counsel

Update February 13, 2012, 2:00pm: The U.S. Department of Justice has also [announced](#) that it has closed its investigation of this acquisition.

Appendix P: “We’ve acquired Motorola Mobility”

Posted: Tuesday, May 22, 2012

The phones in our pockets have become supercomputers that are changing the way we live. It’s now possible to do things we used to think were magic, or only possible on Star Trek—like get directions right from where we are standing; watch a video on YouTube; or take a picture and share the moment instantly with friends.

It’s why I’m excited to announce today that our Motorola Mobility deal has closed. Motorola is a great American tech company that has driven the mobile revolution, with a track record of over 80 years of innovation, including the creation of the first cell phone. We all remember Motorola’s StarTAC, which at the time seemed tiny and showed the real potential of these devices. And as a company who made a big, early bet on Android, Motorola has become an incredibly valuable partner to Google.

Sanjay Jha, who was responsible for building the company and placing that big bet on Android, has stepped down as CEO. I would like to thank him for his efforts and am tremendously pleased that he will be working to ensure a smooth transition as long-time Googler Dennis Woodside takes over as CEO of Motorola Mobility.

I’ve known Dennis for nearly a decade, and he’s been phenomenal at building teams and delivering on some of Google’s biggest bets. One of his first jobs at Google was to put on his backpack and build our businesses across the Middle East, Africa, Eastern Europe and Russia. More recently he helped increase our revenue in the U.S. from \$10.8 billion to \$17.5 billion in under three years as President of the Americas region. Dennis has always been a committed partner to our customers and I know he will be an outstanding leader of Motorola. As an Ironman triathlete, he’s got plenty of energy for the journey ahead—and he’s already off to great start with some very strong new hires for the Motorola team.

It’s a well known fact that people tend to overestimate the impact technology will have in the short term, but underestimate its significance in the longer term. Many users coming online today may never use a desktop machine, and the impact of that transition will be profound—as will the ability to just tap and pay with your phone. That’s why it’s a great time to be in the mobile business, and why I’m confident Dennis and the team at Motorola will be creating the next generation of mobile devices that will improve lives for years to come.

Posted by Larry Page, CEO

Appendix Q: “Supercharging Android: Google to Acquire Motorola Mobility”

Posted: Monday, August 15, 2011

Since its launch in November 2007, Android has not only dramatically increased consumer choice but also improved the entire mobile experience for users. Today, more than 150 million Android devices have been activated worldwide—with over 550,000 devices now lit up every day—through a network of about 39 manufacturers and 231 carriers in 123 countries. Given Android’s phenomenal success, we are always looking for new ways to supercharge the Android ecosystem. That is why I am so excited today to announce that we have agreed to [acquire Motorola](#).

Motorola has a history of over 80 years of innovation in communications technology and products, and in the development of intellectual property, which have helped drive the remarkable revolution in mobile computing we are all enjoying today. Its many industry milestones include the introduction of the world’s first portable cell phone nearly 30 years ago, and the StarTAC—the smallest and lightest phone on earth at time of launch. In 2007, Motorola was a founding member of the [Open Handset Alliance](#) that worked to make Android the first truly open and comprehensive platform for mobile devices. I have loved my Motorola phones from the StarTAC era up to the current DROIDS.

In 2008, Motorola bet big on Android as the sole operating system across all of its smartphone devices. It was a smart bet and we’re thrilled at the success they’ve achieved so far. We believe that their mobile business is on an upward trajectory and poised for explosive growth.

Motorola is also a market leader in the home devices and video solutions business. With the transition to Internet Protocol, we are excited to work together with Motorola and the industry to support our partners and cooperate with them to accelerate innovation in this space.

Motorola’s total commitment to Android in mobile devices is one of many reasons that there is a natural fit between our two companies. Together, we will create amazing user experiences that supercharge the entire Android ecosystem for the benefit of consumers, partners and developers everywhere.

This acquisition will not change our commitment to run Android as an open platform. Motorola will remain a licensee of Android and Android will remain open. We will run Motorola as a separate business. Many hardware partners have contributed to Android’s success and we look forward to continuing to work with all of them to deliver outstanding user experiences.

We recently [explained](#) how companies including Microsoft and Apple are banding together in anti-competitive patent attacks on Android. The U.S. Department of Justice had to intervene in the results of one recent patent auction to “protect competition and innovation in the open source software community” and it is currently looking into the

results of the Nortel auction. Our acquisition of Motorola will increase competition by strengthening Google's patent portfolio, which will enable us to better protect Android from anti-competitive threats from Microsoft, Apple and other companies.

The combination of Google and Motorola will not only supercharge Android, but will also enhance competition and offer consumers accelerating innovation, greater choice, and wonderful user experiences. I am confident that these great experiences will create huge value for shareholders.

I look forward to welcoming Motorolans to our family of Googlers.

Posted by Larry Page, CEO

Appendix R: "Form 8-K"

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of The

Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)

August 3, 2012

GOOGLE INC.

(Exact name of registrant as specified in its charter)

Delaware
**(State or other jurisdiction
of incorporation)**

0-50726
**(Commission
File Number)**
1600 Amphitheatre Parkway

77-0493581
**(IRS Employer
Identification No.)**

Mountain View, CA 94043

(Address of principal executive offices, including zip code)

(650) 253-0000

(Registrant's telephone number, including area code)

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- .. Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- .. Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- .. Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- .. Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.0 Costs Associated with Exit or Disposal Activities.

5

On August 3, 2012, Motorola Mobility (Motorola), a wholly owned subsidiary of Google Inc. (Google), determined that it would reduce its headcount by approximately 4,000 out of a total of about 20,000 employees. Two-thirds of the reduction is set to occur outside of the U.S. In addition, Motorola plans to close or consolidate about one-third of its 90 facilities, as well as simplify its mobile product portfolio—shifting the emphasis from feature phones to more innovative and profitable devices.

These changes are designed to return Motorola's mobile devices unit to profitability, after it lost money in fourteen of the last sixteen quarters. That said, investors should expect to see significant revenue variability for Motorola for several quarters. While lower expenses are likely to lag the immediate negative impact to revenue, Google sees these actions as a key step for Motorola to achieve sustainable profitability.

Motorola understands how hard these changes will be for the employees concerned and is committed to helping them through this difficult transition. Motorola will be providing generous severance packages, as well as outplacement services to help the employees find new jobs. Google expects to incur a severance-related charge of no greater than \$275 million, which it believes will be largely recognized in the third quarter, with the remaining severance-related costs recognized by the end of 2012. Google also expects to incur other restructuring charges related to the actions described above, the majority of which will be recognized in the third quarter. Although Google cannot currently predict the amount of these other charges at this time, these additional charges could be significant.

Appendix S: European Commission Press Release

Antitrust: Commission opens proceedings against Motorola

Reference: IP/12/345 Event Date: 03/04/2012 Export pdf word

Other available languages : FR DE

European Commission - Press release

Antitrust: Commission opens proceedings against Motorola

Brussels, 03 April 2012 - The European Commission has opened two formal antitrust investigations against Motorola Mobility Inc. The Commission will assess whether Motorola has abusively, and in contravention of commitments it gave to standard setting organisations, used certain of its standard essential patents to distort competition in the Internal Market in breach of EU antitrust rules. The opening of proceedings means that the Commission will examine the cases as a matter of priority. It does not prejudice the outcome of the investigations.

Following complaints by Apple and Microsoft, the Commission will investigate, in particular, whether by seeking and enforcing injunctions against Apple's and Microsoft's flagship products such as iPhone, iPad, Windows and Xbox on the basis of patents it had declared essential to produce standard-compliant products, Motorola has failed to honour its irrevocable commitments made to standard setting organisations. In these commitments, Motorola engaged to license those standard-essential patents on fair, reasonable and non-discriminatory (FRAND) terms. The Commission will examine whether Motorola's behaviour amounts to an abuse of a dominant market position prohibited by Article 102 of the Treaty on the Functioning of the EU (TFEU).

In addition, the Commission will also assess the allegation by both Apple and Microsoft that Motorola offered unfair licensing conditions for its standard-essential patents in breach of Article 102 TFEU.

Background

In line with the Commission's guidelines on horizontal cooperation agreements (see IP/10/1702 and MEMO/10/676), standard setting organisations require the owners of patents that are essential for the implementation of a standard to commit to license these patents on fair reasonable and non-discriminatory ("FRAND") terms. This commitment serves to ensure effective access to standardised technology.

Motorola gave such FRAND commitments to the relevant standard setting organisations, when the second and third generation ("2G" and "3G") mobile and wireless telecommunications system standards, the H.264 video compression standard and the standards for wireless local area network (WLAN) technologies were adopted.

In order to guarantee undistorted competition and to reap the positive economic effects of

standardisation it is important that FRAND commitments be fully honoured by the companies concerned.

On 30 January 2012, the Commission has opened proceedings against Samsung (see IP/12/89) in order to investigate whether Samsung has failed to honour a FRAND commitment in licensing negotiations, including by seeking injunctive relief before the courts of certain Member States in relation to standard essential patents.

On 13 February 2012, the Commission approved the acquisition of Motorola Mobility Inc. by Google (see IP/12/129), without prejudice to potential antitrust concerns related to the use of standard essential patents.

Article 102 TFEU prohibits the abuse of a dominant position which may affect trade and prevent or restrict competition. The implementation of this provision is defined in the Antitrust Regulation (Council Regulation No 1/2003) which can be applied by the Commission and by the national competition authorities and courts of EU Member States. Pursuant to Article 16 of that Regulation, national courts must avoid giving decisions which would conflict with a decision contemplated by the Commission in proceedings it has initiated.

The Commission has informed Motorola and the Member States' competition authorities that it has formally opened proceedings in this case.

Appendix T: “Motorola Mobility Files Patent Infringement Complaints Against Microsoft”

Nov. 10, 2010

LIBERTYVILLE, Ill. – Nov. 10, 2010 – Motorola, Inc. (NYSE: MOT) today announced that its subsidiary, Motorola Mobility, Inc. has filed complaints against Microsoft Corp. (NASDAQ: MSFT) with the U.S. District Courts for the Southern District of Florida and the Western District of Wisconsin alleging infringement of sixteen patents by Microsoft’s PC and Server software, Windows mobile software and Xbox products.

The Motorola patents directed to PC and Server software relate to Windows OS, digital video coding, email technology including Exchange, Messenger and Outlook, Windows Live instant messaging and object oriented software architecture. The Motorola patents directed to Windows mobile software relate to Windows Marketplace, Bing maps and object oriented software architecture. The Motorola patents directed to Xbox relate to digital video coding, WiFi technology, and graphical passwords. Motorola Mobility has requested that Microsoft cease using Motorola's patented technology and provide compensation for Microsoft's past infringement.

Kirk Dailey, corporate vice president of intellectual property at Motorola Mobility, said, “Motorola’s R&D and intellectual property are of great importance to the Company and are renowned worldwide. We are committed to protecting the interests of our shareholders, customers and other stakeholders and are bringing this action against Microsoft in order to halt its infringement of key Motorola patents. Motorola has invested billions of dollars in R&D to create a deep and broad intellectual property portfolio and we will continue to do what is necessary to protect our proprietary technology.”

Mr. Dailey noted that Microsoft also has filed separate patent infringement litigation against Motorola. “It is unfortunate,” he said, “that Microsoft has chosen the litigation path rather than entering into comprehensive licensing negotiations, as Motorola has mutually beneficial licensing relationships with the great majority of technology companies industry-wide.”

Appendix U: Transcript of President Obama's Speech, "Remarks by the President"

East Room

5:25 P.M. EST

THE PRESIDENT: Thank you so much, everybody. Wonderful to see you. Please, everyone sit down, sit down. We've got a lot of work to do here. (Laughter.) Have a seat.

Welcome to the White House. It is a great honor to be joined by so many leading researchers and innovators. I want to give some special thanks to a few members of my Cabinet, members of Congress who are here today: Secretary Gary Locke, our Commerce Secretary is here. Members of Congress -- we have Arlen Specter of Pennsylvania, and Bart Gordon of Tennessee. Please give them a big round of applause for their great work. (Applause.)

We also have NASA Administrator Bolden who is here. (Applause.) Charlie. Dr. Subra Suresh, who's the Director of our National Science Foundation, is here. (Applause.) Mr. Dave Kappos, who's the Director of the Patent and Trademark Office. (Applause.) He was here. He may have had some work to do. (Laughter.)

Dr. Patrick Gallagher, who is the Director of our National Institute of Standards and Technology. (Applause.) And Dr. Larry Strickling, Administrator of the National Telecommunications and Information Administration. (Applause.)

Now, the achievements of the men and women who are onstage today stand as a testament to the ingenuity, to their zeal for discovery, and to the willingness to give of themselves and to sacrifice in order to expand the reach of human understanding.

All of us have benefited from their work. The scientists in this room helped develop the semiconductors and microprocessors that have propelled the Information Age. They've modeled the inner workings of the human mind and the complex processes that shape the Earth's climate. They've conducted pioneering research -- from mathematics to quantum physics -- into the sometimes strange and unexpected laws that govern our universe.

Folks here can also claim inventions like the digital camera, which has revolutionized photography -- as all these folks back here will testify. (Laughter.) As well as superglue, which, in addition to fascinating children -- (laughter) -- has actually saved lives as a means of sealing wounds.

And the men and women we celebrate today have helped to unlock the secrets of genetics and disease, of nanotechnology and solar energy, of chemistry and biology -- breakthroughs that provide so many benefits and hold so much potential, from new sources of electricity to new ways of diagnosing and treating illness.

Along the way, many of these folks have broken down barriers for women and

minorities who've traditionally been underrepresented in scientific fields -- but obviously are no less capable of contributing to the scientific enterprise.

Just as an example, at the start of her career, decades ago, Esther Cornwell [sic] was hired as an assistant engineer. But soon after she was told that this position wasn't open to a woman. She had to serve as an engineer's assistant instead. Of course, that didn't stop her from becoming a pioneer in semiconductors and materials science.

It's no exaggeration to say that the scientists and innovators in this room have saved lives, improved our health and well-being, helped unleash whole new industries and millions of jobs, transformed the way we work and learn and communicate. And this incredible contribution serves as proof not only of their incredible creativity and skill but of the promise of science itself.

Every day, in research laboratories and on proving grounds, in private labs and university campuses, men and women conduct the difficult, often frustrating work of discovery. It isn't easy. It may take years to prove a hypothesis correct -- or decades to learn that it isn't correct. Often the competition can be fierce -- whether in designing a product or securing a grant. And rarely do those who give their all to this pursuit receive the attention or the acclaim they deserve.

Yet it is in these labs -- often late at night, often fueled by a dangerous combination of coffee and obsession -- (laughter) -- that our future is being won. For in a global economy, the key to our prosperity will never be to compete by paying our workers less or building cheaper, lower-quality products. That's not our advantage. The key to our success -- as it has always been -- will be to compete by developing new products, by generating new industries, by maintaining our role as the world's engine of scientific discovery and technological innovation. It's absolutely essential to our future.

And that's why we're here today, and why I look forward to events like these. I believe one of the most important jobs that I have as President is to restore science to its rightful place. (Applause.) That means strengthening our commitment to research. It means ensuring that our government makes decisions based on the best evidence, rather than politics. It means reforming and improving math and science education -- and encouraging the private sector to inspire young people to pursue careers in science and engineering.

And it means fostering a climate of innovation and entrepreneurship -- from incentives in clean energy to tax breaks to start-ups. I'd also point out that's not just a job for government. Creating this climate depends on all of us, including businesses and universities and nonprofits.

One of the most important ways in which we can restore science to its rightful place is by celebrating the contributions of men and women like all of you. Because that's how we'll excite a new generation to follow in your footsteps. That's how we can spark the imagination of a young person who just might change the world. I was reminded of how important this is just a few weeks ago. We held a science fair here at the White House. Some of you may have heard about it.

We welcome all the time championship sports teams to the White House to celebrate their victories. I thought we ought to do the same thing for the winners of science fairs and robotic contests and math competitions -- because those young people often don't get the credit that they deserve. Nobody rushes on the field and dumps Gatorade on them -- (laughter) -- when you win a science award. Maybe they should. (Laughter.)

So I got to meet these incredibly talented and enthusiastic young men and women. There was a team of high school kids from Tennessee that had designed a self-powered water purification system. We had robots running all over through the State Dining Room. (Laughter.)

The last young person I spoke to was a young woman from Texas -- she was 16 years old. She was studying biology as a freshman, decided she was interested in cancer research, so taught herself chemistry during the summer; then designed a science project to look at new cancer drugs, based on some experimental drugs that are activated by light. They could allow a more focused treatment that targets the cancer cells while living, healthy cells remain unharmed.

She goes on to design her own drug; wins the international science competition. And she told me that she and her high school science teacher are being approached by laboratories across the country to collaborate -- (laughter) -- on this potential new cancer treatment. This is a true story -- 16 years old, taught herself chemistry. Incredibly inspiring.

And at a time of significant challenge in this country -- at a moment when people are feeling so much hardship in their lives -- this has to give us hope for the future. It ought to remind us of the incredible potential of this country and its people -- as long as we unlock it; as long as we put resources into it and we celebrate it and we encourage it, we embrace it.

You know, Carl Sagan once said, "Science is a way of thinking much more than it is a body of knowledge." That way of thinking -- that combination of curiosity and skepticism, the sense of wonder and the willingness to test our assumptions -- it's what, at root, we are honoring today. It's what has spurred countless advances and conferred untold benefits on our society. And it's an idea that has driven our success for as long as we have been a nation.

And I'm confident that this spirit of discovery and invention will continue to help us succeed in the years and decades to come. And our country owes every one of our laureates with us today a big measure of thanks for nurturing that spirit and expanding the boundaries of human knowledge.

So it is now my privilege to present the National Medals of Science and the National Medals of Technology and Innovation.

(The citations are read.)

Yakir Aharonov. The 2009 National Medal of Science to Yakir Aharonov, Chapman University, for his contributions to the foundations of quantum physics and for drawing out unexpected implications of that field ranging from the Aharonov-Bohm effect to the

theory of weak measurement.

(The medal is presented.) (Applause.)

Stephen J. Benkovic. The 2009 National Medal of Science to Stephen J. Benkovic, Pennsylvania State University, for his research contributions in the field of bioorganic chemistry, which have changed our understanding of how enzymes function and advanced the identification of targets and strategies for drug design.

(The medal is presented.) (Applause.)

Esther M. Conwell. The 2009 National Medal of Science to Esther M. Conwell, University of Rochester, for her broad contributions to understanding electron and hole transport in semiconducting materials, which helped to enable commercial applications of semiconductor and organic electronic devices, and for extending her analysis to studying the electronic properties of DNA.

(The medal is presented.) (Applause.)

Marye Anne Fox. The 2009 National Medal of Science to Marye Anne Fox, University of California San Diego, for her research contributions in the areas of organic photochemistry and electrochemistry, and for enhancing our understanding of excited-state and charge-transfer processes with interdisciplinary applications in material science, solar energy conversion, and environmental chemistry.

(The medal is presented.) (Applause.)

Susan Lee Lindquist. The 2009 National Medal of Science to Susan Lee Lindquist, Whitehead Institute, Massachusetts Institute of Technology, for her studies of protein folding, demonstrating that alternative protein conformations and aggregations can have profound and unexpected biological influences, facilitating insights in fields as wide-ranging as human disease, evolution, and biomaterials.

(The medal is presented.) (Applause.)

Mortimer Mishkin. The 2009 National Medal of Science to Mortimer Mishkin, National Institutes of Health, for his contributions to understanding the neural basis of perception and memory in primates, notably the delineation of sensory neocortical processing systems, especially for vision, audition, and somatic sensation, and the organization of memory systems in the brain.

(The medal is presented.) (Applause.)

David B. Mumford. The 2009 National Medal of Science to David B. Mumford, Brown University, for his contributions to the field of mathematics, which fundamentally changed algebraic geometry, and for connecting mathematics to other disciplines such as computer vision and neurobiology.

(The medal is presented.) (Applause.)

Stanley B. Prusiner. The 2009 National Medal of Science to Stanley B. Prusiner, University of California San Francisco, for his discovery of prions, the causative agent of bovine spongiform encephalopathy and other related neurodegenerative diseases, and his

continuing efforts to develop effective methods for detecting and treating prion diseases.

(The medal is presented.) (Applause.)

Warren M. Washington. The 2009 National Medal of Science to Warren M. Washington, National Center for Atmospheric Research, for his development and use of global climate models to understand climate and explain the role of human activities and natural processes in the Earth's climate system, and for his work to support a diverse science and engineering workforce.

(The medal is presented.) (Applause.)

Amnon Yariv. The 2009 National Medal of Science to Amnon Yariv, California Institute of Technology, for foundational contributions to photonics and quantum electronics, including the demonstration of the semiconductor distributed feedback laser that underpins today's high-speed, optical fiber communications.

(The medal is presented.) (Applause.)

Harry W. Coover. The 2009 National Medal of Technology and Innovation to Harry W. Coover, Eastman Chemical Company, for his invention of cyanoacrylates -- novel adhesives known widely to consumers as "super glues" -- (laughter) -- which today play significant roles in medicine and industry.

(The medal is presented.) (Applause.)

Helen M. Free. The 2009 National Medal of Technology and Innovation to Helen M. Free, Miles Laboratories, for her seminal contributions to diagnostic chemistry through development of dip-and-read urinalysis, which gave rise to a technological revolution in convenient, reliable, point-of-care tests and patient self-monitoring.

(The medal is presented.) (Applause.)

Steven J. Sasson. The 2009 National Medal of Technology and Innovation to Steven J. Sasson, Eastman Kodak Company, for the invention of the digital camera, which has revolutionized -- (laughter) -- which has revolutionized the way images are captured, stored, and created, creating new opportunities in commerce, education, and global communication.

THE PRESIDENT: This picture better be good. (Laughter and applause.)

Federico Faggin, Marcian E. Hoff Jr., and Stanley Mazor. The 2009 National Medal of Technology and Innovation to Federico Faggin, Marcian E. Hoff Jr., and Stanley Mazor, Intel Corporation, for the conception, design and application of the first microprocessor, which was commercially adopted and became the universal building block of digital electronic systems, significantly impacting the global economy and people's day-to-day lives.

(The medals are presented.) (Applause.)

THE PRESIDENT: Well, let me make two closing points. Number one, I feel really smart just standing up here with these folks. (Laughter.) I think it kind of rubbed off on me. (Laughter.)

Number two, I want to congratulate our military aide for being able to read all those things. (Laughter and applause.) I want to assure you he practiced a lot. (Laughter.)

And finally, let me just once again say to all the honorees who are here tonight, you have truly revolutionized the world in ways that are profoundly important to people in their day-to-day lives, but also help to create those steps in human progress that really make us who we are as human beings. And so we could not be prouder of you, could not be more grateful to you for your contributions.

Please give them one last big round of applause. (Applause.)

Everybody, enjoy the party. (Laughter and applause.)

END

5:47 P.M. EST

Appendix V: Department of Justice Press Release Regarding Google's Acquisition of Motorola Mobility and other Patent Transfers

Department of Justice
Office of Public Affairs

FOR IMMEDIATE RELEASE Monday, February 13, 2012

Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd.

WASHINGTON – The Department of Justice's Antitrust Division issued the following statement today after announcing the closing of its investigations into Google Inc.'s acquisition of Motorola Mobility Holdings Inc., the acquisitions by Apple Inc., Microsoft Corp. and Research in Motion Ltd. (RIM) of certain Nortel Networks Corporation patents, and the acquisition by Apple of certain Novell Inc. patents:

“After a thorough review of the proposed transactions, the Antitrust Division has determined that each acquisition is unlikely to substantially lessen competition and has closed these three investigations. In all of the transactions, the division conducted an in-depth analysis into the potential ability and incentives of the acquiring firms to use the patents they proposed acquiring to foreclose competitors. In particular, the division focused on standard essential patents (SEPs) that Motorola Mobility and Nortel had committed to license to industry participants through their participation in standard-setting organizations (SSOs). The division's investigations focused on whether the acquiring firms could use these patents to raise rivals' costs or foreclose competition.

“The division concluded that the specific transactions at issue are not likely to significantly change existing market dynamics.

“During the course of the division's investigation, several of the principal competitors, including Google, Apple and Microsoft, made commitments concerning their SEP licensing policies. The division's concerns about the potential anticompetitive use of SEPs was lessened by the clear commitments by Apple and Microsoft to license SEPs on fair, reasonable and non-discriminatory terms, as well as their commitments not to seek injunctions in disputes involving SEPs. Google's commitments were more ambiguous and do not provide the same direct confirmation of its SEP licensing policies.

“In light of the importance of this industry to consumers and the complex issues raised by the intersection of the intellectual property rights and antitrust law at issue here, as well as uncertainty as to the exercise of the acquired rights, the division continues to monitor the use of SEPs in the wireless device industry, particularly in the smartphone and computer tablet markets. The division will not hesitate to take appropriate enforcement action to stop any anticompetitive use of SEP rights.”

BACKGROUND

Google/ Motorola Mobility

On Aug. 25, 2011, Google entered into an agreement to acquire Motorola Mobility, a manufacturer of smartphones and computer tablets and the holder of a portfolio of approximately 17,000 issued patents and 6,800 applications, including hundreds of SEPs relevant to wireless devices that Motorola Mobility committed to license through its participation in SSOs.

Rockstar Bidco

Rockstar Bidco, a partnership that includes, among others, RIM, Microsoft and Apple, was formed to acquire patents at the June 2011 Nortel bankruptcy auction, and to license and distribute them to certain partners. Nortel's portfolio of approximately 6,000 patents and patent applications includes many SEPs that Nortel committed to license through its participation in SSOs and that are relevant to wireless devices (the Nortel SEPs).

Apple/Novell

Apple also proposes to acquire patents held by CPTN Holdings LLC, formerly owned by Novell, following CPTN's acquisition in April 2011 of those patents on behalf of Apple, Oracle Corporation and EMC Corporation. As a member of the Open Invention Network (OIN), Novell committed to cross-license its patents on a royalty-free basis for use in the open source "Linux system," a defined term in the OIN.

Competitive Landscape

Google, Apple, Microsoft and RIM have each developed mobile operating systems for smartphones and tablets. Apple and RIM manufacture and sell the smartphones and tablets that run on their proprietary mobile operating systems. In contrast, Microsoft licenses its proprietary mobile operating systems, Windows Phone 7 and Windows Mobile, to non-affiliated wireless handset original equipment manufacturers (OEMs). Google, in turn, sponsors Android, a mobile operating system that it distributes to OEMs without monetary charge under an open source license. These operating systems provide platforms for a variety of products and services offered by competing handset and tablet manufacturers, as well as, application developers.

At the end of 2011, Google's Android accounted for approximately 46 percent of the U.S. smartphone operating system platform subscribers and Apple's iOS was used by about 30 percent of subscribers. RIM and Microsoft accounted for approximately 15 percent and 6 percent of the share of smartphone subscribers, respectively.

Apple's iPad is the leading tablet in the market, although the recently introduced Android-based tablets are rapidly gaining share. Thus far, tablets running RIM's and Microsoft's operating systems have a minimal presence in the marketplace.

The Importance of Standard Setting in the Wireless Industry

Today's wireless device industry, which includes smartphones and tablets, relies on complex operating systems that allow seamless interaction with wireless communications

technologies while providing audio, video and computer functionalities.

To facilitate seamless interoperability, industry participants work through SSOs collectively to develop technical standards that establish precise specifications for essential components of the technology. For example, wireless devices typically implement a significant number of telecommunication and computer standards, including cellular air interface standards (e.g., 3G and 4G LTE standards), wireless broadband technologies (e.g., WiFi and WiMax) and video compression technologies (e.g., H.264). As with other industries, these standards facilitate compatibility among products and provide consumers with a wider range of products and capabilities than would otherwise be available.

Often, many technologies adopted by the SSOs fall within the scope of existing patents or patent applications. Once a patent is included in a standard, it becomes essential to the implementation of that standard, thus the term “Standard Essential Patent.” After industry participants make complementary investments, abandoning the standard can be extremely costly. Thus, after the standard is set, the patent holder could seek to extract a higher payment than was attributable to the value of the patented technology before the standard was set. Such behavior can distort innovation and raise prices to consumers. A comparable harm may also arise in situations outside of the SSO context where a patent holder’s prior actions, such as open source commitments, lead others to make complementary investments (See U.S. Department of Justice and Federal Trade Commission, Antitrust Enforcement & Intellectual Property Rights: Promoting Innovation and Competition, April 17, 2007 at 35-6).

Most SSOs therefore require the owners of patents essential to the proposed standard that are participating in the SSO’s standard-setting activities to make disclosure and licensing commitments with respect to their essential patents. These commitments are intended to reduce the subsequent inappropriate use of the patent rights at issue, and thus prevent disputes that can inhibit innovation and competition. One common licensing requirement is to require SSO members to commit to license patented technologies essential to a standard on reasonable and nondiscriminatory (RAND) terms (for SSOs based in the United States) or on fair, reasonable and nondiscriminatory (FRAND) terms (for SSOs based outside the United States) (collectively F/RAND). In practice, however, SSO F/RAND requirements have not prevented significant disputes from arising in connection with the licensing of SEPs, including actions by patent holders seeking injunctive or exclusionary relief that could alter competitive market outcomes.

ANALYSIS

The division’s investigations regarding the acquisitions of the Motorola Mobility and Nortel SEPs focused on whether the acquiring firms would have the incentive and ability to exploit ambiguities in the SSOs’ F/RAND licensing commitments to hold up rivals, thus preventing or inhibiting innovation and competition (The division’s analysis was limited to SEPs encumbered by F/RAND commitments). Such hold up could include raising the costs to rivals by demanding supracompetitive licensing rates, compelling prospective licensees to grant the SEP holder the right to use the licensee’s differentiating

intellectual property, charging licensees the entire portfolio royalty rate when licensing only a small subset of the patent holder's SEPs in its portfolio, or seeking to prevent or exclude products practicing those SEPs from the market altogether. In this analysis, the critical issue is whether the patent holder has the incentive and ability to hold up its competitors, particularly through the threat of an injunction or exclusion order. The division's analysis focused on how the proposed transactions might change that incentive and ability to do so.

The division concluded that each of the transactions was unlikely to substantially lessen competition for wireless devices. With respect to RIM's and Microsoft's acquisition of Nortel patents, their low market shares in mobile platforms would likely make a strategy to harm rivals either through injunctions or supracompetitive royalties based on the acquired Nortel SEPs unprofitable. Because of their low market shares, they are unlikely to attract a sufficient number of new customers to their mobile platforms to compensate for the lost patent royalty revenues. Moreover, Microsoft has cross-license agreements in place with the majority of its Android-based OEM competitors, making such a strategy even less plausible for it.

Apple's and Google's substantial share of mobile platforms makes it more likely that as the owners of additional SEPs they could hold up rivals, thus harming competition and innovation. For example, Apple would likely benefit significantly through increased sales of its devices if it could exclude Android-based phones from the market or raise the costs of such phones through IP-licenses or patent litigation. Google could similarly benefit by raising the costs of, or excluding, Apple devices because of the revenues it derives from Android-based devices.

The specific transactions at issue, however, are not likely to substantially lessen competition. The evidence shows that Motorola Mobility has had a long and aggressive history of seeking to capitalize on its intellectual property and has been engaged in extended disputes with Apple, Microsoft and others. As Google's acquisition of Motorola Mobility is unlikely to materially alter that policy, the division concluded that transferring ownership of the patents would not substantially alter current market dynamics. This conclusion is limited to the transfer of ownership rights and not the exercise of those transferred rights.

With respect to Apple/Novell, the division concluded that the acquisition of the patents from CPTN, formerly owned by Novell, is unlikely to harm competition. While the patents Apple would acquire are important to the open source community and to Linux-based software in particular, the OIN, to which Novell belonged, requires its participating patent holders to offer a perpetual, royalty-free license for use in the "Linux-system." The division investigated whether the change in ownership would permit Apple to avoid OIN commitments and seek royalties from Linux users. The division concluded it would not, a conclusion made easier by Apple's commitment to honor Novell's OIN licensing commitments.

In its analysis of the transactions, the division took into account the fact that during the pendency of these investigations, Apple, Google and Microsoft each made public

statements explaining their respective SEP licensing practices. Both Apple and Microsoft made clear that they will not seek to prevent or exclude rivals' products from the market in exercising their SEP rights.

Apple outlined its view of F/RAND in a letter to the European Telecommunications Standards Institute (ETSI) on Nov. 11, 2011, stating among other things:

“A party who made a FRAND commitment to license its cellular standards essential patents or otherwise acquired assets/rights from a party who made the FRAND commitment must not seek injunctive relief on such patents. Seeking an injunction would be a violation of the party's commitment to FRAND licensing.” (emphasis supplied)

Microsoft stated publicly on Feb. 8, 2012, among other things:

“This means that Microsoft will not seek an injunction or exclusion order against any firm on the basis of those essential patents.”

If adhered to in practice, these positions could significantly reduce the possibility of a hold up or use of an injunction as a threat to inhibit or preclude innovation and competition.

Google's commitments have been less clear. In particular, Google has stated to the IEEE and others on Feb. 8, 2012, that its policy is to refrain from seeking injunctive relief for the infringement of SEPs against a counter-party, but apparently only for disputes involving future license revenues, and only if the counterparty: forgoes certain defenses such as challenging the validity of the patent; pays the full disputed amount into escrow; and agrees to a reciprocal process regarding injunctions. Google's statement therefore does not directly provide the same assurance as the other companies' statements concerning the exercise of its newly acquired patent rights. Nonetheless, the division determined that the acquisition of the patents by Google did not substantially lessen competition, but how Google may exercise its patents in the future remains a significant concern.

For these reasons the division continues to have concerns about the potential inappropriate use of SEPs to disrupt competition and will continue to monitor the use of SEPs in the wireless device industry, particularly as they relate to smartphones and computer tablets. The division's continued monitoring of how competitors are exercising their patent rights will ensure that competition and innovation are unfettered in this important industry.

All three of the transactions highlight the complex intersection of intellectual property rights and antitrust law and the need to determine the correct balance between the rightful exercise of patent rights and a patent holder's incentive and ability to harm competition through the anticompetitive use of those rights.

Agency Cooperation

During the course of its investigation of the Google/Motorola Mobility transaction, the Department of Justice cooperated closely with the European Commission. In addition,

the Department of Justice had discussions with the Australian Competition and Consumer Commission, Canadian Competition Bureau, Israeli Antitrust Authority and the Korean Fair Trade Commission. In connection with the investigations relating to the Nortel patent assets, the division worked closely with states of New York and California and with the Canadian Competition Bureau.

The Antitrust Division's Closing Statement Policy

The division provides this statement under its policy of issuing statements concerning the closing of investigations in appropriate cases. This statement is limited by the division's obligation to protect the confidentiality of certain information obtained in its investigations. As in most of its investigations, the division's evaluation has been highly fact-specific, and many of the relevant underlying facts are not public. Consequently, readers should not draw overly broad conclusions regarding how the division is likely in the future to analyze other collaborations or activities, or transactions involving particular firms. Enforcement decisions are made on a case-by-case basis, and the analysis and conclusions discussed in this statement do not bind the division in any future enforcement actions. Guidance on the division's policy regarding closing statements is available at: www.usdoj.gov/atr/public/guidelines/201888.htm.

Appendix W: Link to Larger Documents.

Several of the documents analyzed in this dissertation are too large to include in the appendices. These documents can be found at the following addresses. See the References section for proper citations.

1. Google's Proxy Statement:
<http://www.sec.gov/Archives/edgar/data/1288776/000119312512222158/d320628ddef14a.htm>
2. Motorola's Preliminary Special Proxy Statement:
<http://www.sec.gov/Archives/edgar/data/1495569/000119312511246952/d224940dprem14a.htm>
3. The ESA/USPTO report:
http://www.uspto.gov/news/publications/IP_Report_March_2012.pdf
4. Google's letter to standards-setting organizations:
<http://www.google.com/press/motorola/pdf/sso-letter.pdf>