

Minutes*

**Senate Research Committee
Monday, April 28, 2003
1:15 - 3:00
238A Morrill Hall**

- Present: Gary Balas (chair), Victor Bloomfield, Sharon Danes, Sabine Fritz, Steve Gantt, Yev Garif, David Hamilton, Lawrence Jacobs, Paul Johnson, James Luby, Sharon Neet, James Orf, Mark Paller, Virginia Seybold, Thomas Schumacher, Charles Spetland, Charles Stech, George Trachte, Barbara VanDrasek
- Absent: Melissa Anderson, Gerry Baldrige, Kathleen Conklin, James Cotter, Robin Dittman, Katherine Klink, Phillip Larsen, Scott McConnell, Ted Powell
- Guests: Vice President Charles Muscoplat, Regents' Professor Tom Clayton; Associate Deans Steven Crouch, Charles Moldow, and Judd Sheridan; Edward Wink, (Sponsored Projects Administration); Win Ann Schumi (Oversight Analysis and Reporting)
- Other: none

[In these minutes: (1) service and productivity initiative; (2) status of research at the University; (3) cost-sharing and internal taxes]

1. Service and Productivity Initiative

Professor Balas convened the meeting at 1:15 and welcomed Vice President Muscoplat and Regents' Professor Tom Clayton to talk about the service and productivity initiative and how it relates to research.

Dr. Muscoplat recalled that President Bruininks had formed a task force late in the summer, the service and productivity initiative, and asked Vice President Carrier and him to serve as co-chairs. The task force is looking into four areas: improved service; how to leverage the enterprise system; space and the internal University economy, and accountability. The task force set up four committees to deal with these issues, each with its own chair; there are about 80 people serving on the four committees, which have been working since last October. They have identified dozens of things to improve service and productivity and save money; some are small and some are large.

Will they look at improving service even if the improvement does not save money, Professor Balas asked? That is the intent, Dr. Hamilton said; such changes could save money indirectly by improving service. Some changes require investments, Dr. Muscoplat said (e.g., the University must have good information systems). The goal is to make the University a better place; if they can save money, so much the better. In some cases, the savings may be hard to measure. For example, the paperless financial aid system means that applications now take five days to process, rather than six

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weeks, takes five fewer people and saves \$20,000 in paper—but there is also no need for copy machines, file cabinets, rooms to heat, employees to pick up mail, and so on. They are trying to identify ripple/downstream effects such as this. If the system can process more students, the University could end up with perhaps 500 more students on its campuses, students who are the University because it is more efficient, which in turn could mean about \$3 - 5 million more in tuition income because the University could attract more students. There was an investment in PeopleSoft software but that in turn saved in labor costs and led to better service and savings in paper, employees, and so on. Many of these improvements are hard to quantify.

They are also trying to standardize computer hardware and software purchasing. Costs for these products are dropping but they believe the University can use its bulk purchasing power to drive costs down even further. The University negotiated a 15% price reduction with Dell for a few systems, for example, that are below the best catalogue price one can find—perhaps the best in the United States. If the University were to achieve widespread standardization it could save perhaps \$4 million per year—but the savings would accumulate at the point of purchase, in departments, not at the central level. Units would save a few hundred dollars with every purchase.

The University spends about \$800,000 for Microsoft office systems, each purchased by colleges and units. There could be an institutional agreement that might not save money but then all units would have the same system and the University could save on support costs. Right now the Office of Information Technology (OIT) supports nine operating systems; if that number could be reduced to four or five, the University would save money. That will not mean everyone must give up their Macintoshes; savings could be achieved with a 60-70% buy-in. They (the service and productivity committees) recognize the complexity of the University and no one would be asked to give up anything if there is a critical programmatic need, but secretaries and administrators would be asked to use the same system in order to save units money.

Along the same line, there are about one thousand email servers at the University. OIT offers free email for everyone and has the best security system; email could be handled on very few systems. Not all of the servers around the institution are dedicated to email, Dr. Muscoplat observed, but with all these systems there is more forwarding; reducing the number of systems would reduce the volume of traffic, cut costs marginally, and improve security. What incentive is there for the units to change, Professor Balas asked? A lot of the servers are for individual labs, Dr. Hamilton said—they are like vanity license plates—they are vanity domains.

Dr. Muscoplat said there is no fixed strategy. The intent is to provide units with knowledge and understanding of what they can save. He said they do not intend to use sticks but rather improved knowledge and improved tools.

Dr. Hamilton said the University spends \$2 million per year on manual efforts for reporting effort. That function will be put on line, which will change the ground rules, but units must still comply. Half of the money saved, however, will be in the units.

Dr. Muscoplat said there is also no set strategy to consolidate savings in any one pot; any such effort would come through the Internal Revenue Sharing tax or base adjustments. The task force will provide the analytical tools to identify where the University could save money. Other examples include document imaging (if done electronically, there would be no need for file cabinets and documents would

be easily searchable), job postings, the course schedule (which typically has 5,000 to 10,000 changes the day it goes into print)—these things might not save a lot of money, but few things save a lot, but many small savings aggregate to a large sum of money. But there are dozens of changes that would save a few hundred dollars per year. Another example is computer monitors: the flat-panel monitors cost more but they have four times the life of the CRT monitors and use \$60 less per year in electricity, which means a lower electricity bill which means the central administration needs fewer dollars. Many of these ideas percolated up from the units, Dr. Muscoplat said.

Professor Balas asked Professor Clayton about the service unit productivity and accountability effort, which Professor Clayton co-chairs with Vice President O'Brien. Professor Clayton began by noting this was the first time he had spoken with the Senate Research Committee and that over his career here he had had a hard time persuading people that research in the humanities is worth supporting. It is the most difficult area in which to obtain research funding.

The main contribution of the service unit productivity and accountability committee may be the way that performance is measured, Professor Clayton told the Committee. It is a way that is not used much: a way for people to issue complaints/commendations/suggestions. This will not cost much but right now if people have complaints, they have no idea where to lodge them; the same is true for commendations and suggestions. That is one idea about ways to assess performance; it is voluntary but real.

Their province is support units, both those that report to the Vice President for University Services and others across the University. They have interviewed about 25 support and service units with a questionnaire; unit heads were asked about their business plan, their compact, efficiency, and so on. Based on what they learned, they have undertaken a pilot project of self-evaluation by three large units (Boynton Health Service, Human Resources, and Parking and Transportation). The goal is for support units to optimize efficiency and to optimize satisfaction; the two are closely correlated. If units do not pay attention to the attitude of people performing the service they will not perform well. But what those units do is crucial to the functioning of the University.

Their report will call for a system of evaluations that can be used throughout the University, Professor Clayton said. They do not have firm ideas about how often units should be evaluated, but it should not be too often because evaluations can have a demoralizing effect. They are also asking what kind of funding is needed to provide what kind of service. It is not possible to compare across units but the information is needed for evaluation.

Professor Clayton said he serves as co-chair of the committee to provide a faculty perspective because there is strong interest in seeing that units serve faculty as well as they can. He said he does not have any sense of what constituents are served individually, such as research, but he can bring questions back to the committee.

This did not start as an effort to serve research, Dr. Muscoplat said, but it does so in every way. The results will have a profound effect on research, but all in indirect ways. They will make the University more efficient in many ways. Vice President Hamilton said he was struck that the committee had only selected for review two units in the Office of the Vice President for Research, and those two units have only an indirect connection with the faculty: Oversight Analysis and Reporting and Patents and Technology Marketing. They did not select Sponsored Projects Administration, the Institutional

Review Board, the Institutional Animal Care and Use Committee. His office is proceeding on its own to review these units and will provide the results to the Committee.

How much of the work is comparisons with best practices outside the University, Dean Bloomfield asked? That is part of the effort, Professor Clayton said; they are also considering whether an external review would help a unit.

The metrics of units vary, Professor Balas said; how will they measure the way each group serves its constituents? How does one decide whether doing something electronically will be better than using paper? The Electronic Grants Management System, for example, saves money but all faculty must learn how to use it. Dr. Muscoplat said that is difficult but they are asking a number of questions. What does it cost to do something? Can it be done more cheaply? Is there cost-shifting to other units? The financial analysis looks at where the funds are, where they are spent, who receives the benefit, and whether a change creates a burden in another unit. The University must do a better job of understanding the economic impacts; it must think more analytically.

If a unit provides service to someone else, those who receive the service are best able to evaluate it, Professor Balas said; how will the users of the service be involved in the process? Professor Clayton responded that clients often do not know what is best for them (e.g., instruction), but that users must be surveyed. Most units do that, he said. Some units provide survey forms immediately. They will also talk with those who have received service from a unit over a long period of time. The efficiency of an operation is not usually something users know about; evaluation of efficiency is usually best done by the unit—if it is willing to do honestly. In this regard, Vice President Hamilton said, the survey of users of the Institutional Review Board were going out as this meeting was in progress; a survey of faculty who have used Sponsored Projects Administration will be administered this fall.

It would be helpful if there were a place (on a website, for example) that lists all the services, Professor Orf said. There could be some that people don't know about and they throw up their hands trying to find them. Has something like this been sent to all faculty? Professor Clayton said it has not. He suggested the directory as a good place to start because it indicates where all units report. A chart would be useful, Professor Orf said. Dr. Hamilton said there is a chart of all University units and where they report—but he did not know where it is. That is telling, Professor Orf commented.

Professor Seybold told Mr. Volna that she occasionally receives letters from agencies indicating they have not received a final report, twelve months after it was completed. There is a need for service improvement here because research is interrupted when reports are delayed. Mr. Volna explained that new systems have been put in place to improve accuracy and reporting. He commented that some agencies have to receive a report two or three times before they realize they have it.

In terms of the research infrastructure, has there been any thought to looking at how the University might centralize computing or other services so they could be provided across the University to researchers, Professor Balas asked? One example is electron microscopy. Vice President Hamilton recalled that there had been a request for support for buildings and labs but that died with the University's biennial request. He has also argued for years for central support and service in areas such as electron microscopy. Dr. Muscoplat observed that the University has set up groups for bioinformatics and for genomics and there could be more of those kinds of internal service functions. Dr. Bloomfield noted a

facility in IT that responds to a shared instrument need and said there has to be communication internally as well as support from the deans.

Professor Gantt said there is sometimes a disconnect between those who make decisions and those who reap the savings. The LCD monitors, he pointed out, cost more money. Sometimes it is necessary to invest money to save money, Dr. Hamilton said. It will cost a lot of money to put effort certification on line but the University will save money over time.

Professor Orf said that certain functions (for example, electronic grants management) are passed down to people who are then distracted from more important tasks (e.g., faculty must do janitorial work). Is this being considered in the examination of efficiencies? The University can save money in one place but it then has higher-paid people doing things they were not hired for and which takes from doing the job they are supposed to do. Electronic grants management does not have to devolve to the faculty, Dr. Hamilton said. There was a concern, in that regard, that the University's system would not dovetail with what the federal government is doing; as it turns out, it fits exactly, so EGMS will be able to be used with other agencies. They have engaged in a year-long rewrite of the system and will be looking for people to test it in the fall. He said he would welcome Committee member participation.

Professor Balas thanked Professor Clayton for joining the meeting. Dr. Muscoplat had left earlier.

2. Status of Research at the University

Vice President Hamilton told the Committee that the Vice President for Research is required to give a report to the Board of Regents every year on the status of research at the University. He distributed copies of the report he had made to the Board last November.

Does the report track ICR funds, Professor Balas asked? The University does keep track at the macro level, Dr. Hamilton said, but the data are not in this report. The University has a 48.5% "facilities and administrative" cost rate, he said, but it only actually collects about 23-25% on research funding. It receives reduced amounts from foundations and such activities as training grants. The rate the University receives varies considerably.

Dr. Hamilton turned to some of the graphs and tables in the report. He noted that research funding increased from 1994 to 1998, stayed stable to 1999, and has increased steadily since then. Sponsored program expenditures are largest in the Medical School; the Academic Health Center accounts for about 45% of the University's research expenditures. How do they account for departments that are split between colleges, Professor Seybold asked? The money is counted in whichever department holds the contract, Dr. Hamilton said.

Federal agencies make up by far the largest source of University research funding, about 72% of the total. The state accounts for about 7%, foundations and non-governmental agencies about 6%, business and industry about 7%, and the remainder comes from private and other governmental sources. The Department of Health and Human Services provides the largest part of the federal funds, providing 48% of the total research funding to the University. The amount of funding for sponsored awards has increased steadily since 1999 and is now over one-half billion dollars. Dr. Hamilton also reviewed quickly the awards by academic unit and by sponsor.

During 2001-02 researchers at the University submitted requests for about \$1.5 billion in sponsored research, a total that has doubled in the last five years. Professor Balas asked if the University kept track of the "hit" rate—is it getting better in getting funded? Ms. Schumi said the University does not formally track the hit rate but she has looked at the number in the past; about 30-40% of requests are funded. That is better than the national average of about 25%, Dr. Hamilton said.

Professor Luby said the numbers should be indexed for inflation (e.g., it should include tuition waivers for graduate students). It was noted that the sponsored program expenditures that Dr. Hamilton first mentioned are presented both in current and constant dollars. Ms. Schumi said she was not sure which index was used; often they will use the Higher Education Price Index because the CPI does not measure increases in the cost of research. Professor Luby said he was concerned that the dollar figures could make the University look like it is better off than it is.

Dr. Hamilton then looked at the source of research proposals by unit. This is a vibrant faculty that submits a lot of proposals all the time, he said. 26% of the proposals come from IT, another 26% from the Medical School, 12% from Public Health, 7% from other AHC units, and the remainder from the other colleges. There were slightly more proposals to the state in 2001-02 than 2000-01, a trend which caused him some worry, but as it turned out, the state lived up to its research commitments and the University has received more research funding this year than the year before. There was also worry about federal funding, because there was no budget for a long time, but the omnibus bill that was passed doubled NIH funding over five years. Because of the late budget, however, there were delays in funding; grants people knew would be funded were very late and some were funded at reduced levels because agencies are looking carefully at administrative costs. Federal income is currently down but it could balloon because of delayed payments.

One of the graphs in the handout plotted facilities and administrative (ICR) reimbursements. The amount has been increasing steadily over the last several years but the amount recovered is less than what the University could have received. He and Mr. Wink are studying this problem, Dr. Hamilton told the Committee. There is a penchant on the part of PIs to ask for indirect cost waivers because they feel it will give them an advantage and enhance grantsmanship. He said he did not believe there is evidence to support that belief, although it may be true, and he is asking units to go slow in what they agree to. The University may have lost more than \$2 million in ICR funds in the last biennium.

The last figure showed the number of intellectual property disclosures in 2001-02; the number has increased 65% in the last five years. Dr. Hamilton said he had a number of ideas about how to increase patents and technology transfer activity but the University is doing very well. There was \$26 million in gross revenue from patent and licensing activity last year, a large jump over the previous year because of one patent for an AIDS drug. It is the nature of patent and technology marketing that an institution rarely has more than one or two big hits in a two-three year period.

The second report he was required to give to the Regents was about the impact of the events of 9/11/01 on the research at the University. He has worked with Mr. Bohnhorst in the General Counsel's office on aspects of the USA PATRIOT act and the Homeland Security bill. The real and potential effects are primarily in research secrecy and publication. The worst problem has been restrictions on publications until after review—that can occur with business or the federal government—and the University has steadfastly refused to accept such restrictions. Thus far it has turned away very little

money as a result of this stance. Dr. Hamilton said he hoped he did not have to produce another report like this one next fall.

Professor Balas thanked Dr. Hamilton for his report.

3. Cost-Sharing and Internal Taxes

Professor Balas next welcomed Associate Deans Crouch and Sheridan to the meeting (Associate Dean Moldow came later). He asked if they would discuss cost-sharing and internal taxes and how colleges handle them. He commented that he attends the meetings of the College Research Associate Deans (CRAD) and is amazed at the various ways things are handled across campus.

Dean Sheridan began by distributing a handout about cost-sharing and faculty buy-outs and said he would focus on general issues discussed by CRAD. They include cost-sharing of salaries on grants (which is highly variable across colleges and even within colleges), the nature and policies for "buying out" teaching time from salaries "released" by grants (also highly variable), and the use of salary "release" dollars from grants (some colleges use some of them to provide non-recurring augmentation to faculty generating the funds, which might be considered "bonuses" although that term is not used).

Cost-sharing on grants occurs when a faculty member puts in a lot of effort on a grant but does not include funding for all of that effort in the grant budget, so some of the cost is shared by the college. The amount of money on the grant for salary frees up money in the department, at least for 11-month appointees; how those funds are used varies a great deal. One use is to buy out teaching, which creates the impression that if one does research one need not teach as much. Sometimes the money goes to the faculty member in the form of a "bonus." A recent article in the Chronicle of Higher Education suggested this latter practice is new; it is not. It has been brewing across the country and there are examples of the practice at the University. The University of California system has a formal policy on the matter, Dr. Hamilton noted. It is not unprecedented, Dean Sheridan agreed, although he said he personally does not like it.

Dean Crouch explained how the situation is handled in the Institute of Technology, which receives about \$8 million annually in ICR funds before taxes. They send 20% of the net to the department, in proportion to where the funds were generated. Each department uses the funds differently. Some use them for department infrastructure—accountants, secretaries, etc.; some give some money back to the PIs. None give all the money to the PIs. Eventually, all of the ICR funds go to the departments; the 80% that the dean's office retains is used for set-ups for new faculty and for matching dollars for grants (the vast majority for the former).

Some grant matches involve "in-kind" contributions in which a faculty member commits to devote some portion of his or her academic year effort (with salary and associated fringe benefits) to work on a sponsored project. More typically in IT, grant matches involve an outlay of real money by the University, usually for a piece of research equipment. If the amount is below a certain (and increasing) threshold, the dean's office will pay 2/3 and the department 1/3. Above that threshold, the college will approach the Vice President for Research for funding; it used to be that the Vice President's office would pay half but more recently the college is expected to pay 60%. The amount of ICR funds has grown but the funds in the Vice President's office for matches have not. Departments also usually use ICR funds

for matches, but if they do not have enough money they will use O&M funds, money freed up from buy-outs, and money in open positions.

Buy-outs vary across colleges. Some have a formalized policy (such as CLA, which provides that a single-course buy-out requires 25% of the 9-month salary, including fringe benefits). Some faculty are allowed to buy out all of their teaching and given bonuses, which he said he thought was not a good idea. IT is against bonuses and he said he was surprised to learn there are units at the University that give them.

Use of ICR funds is as variable as everything else; each college has its own policy, Dean Sheridan remarked. Are these college variations a cultural matter or do they change with administrations, Professor Danes asked? Dean Sheridan said it is his sense that the practices have been in place for a long time; it can be difficult to change the formulae. In his college, the dean's office retains nearly all the ICR funds and then uses the funding to support department and faculty needs, e.g., grant matches, set-up packages, as they arise and requested by departments. All of the funds eventually go to support departments and faculty.

Mr. Wink said he found the idea of bonuses for obtaining more grants troubling. The government is willing to pay its fair share of salaries but it does not support paying for bonuses from grants. Professor Balas said that the faculty have had salary freezes three years in the last 12 and it is difficult to reward high performance or to say that faculty cannot balance teaching and research because of the dollar incentive. Mr. Wink said he was concerned with the cost principles, not the balance of teaching and research. If the bonuses are based on overall performance annually, that is acceptable, but it is not acceptable to raise salaries immediately because a faculty member obtains a new grant. Those are "bonuses," not salary increases, Dr. Hamilton pointed out. The largest single determinant of his merit salary increase is his research, Professor Balas said. If salaries are determined on an annual basis, that is fine, Mr. Wink responded; his worry is about receiving a grant and immediately receiving more money as a result.

There are other obligations for the released salary funds before a bonus can be given, Professor Seybold observed. And there are cultural differences; faculty on 9-month salaries can use funding to pay themselves in the summer, depending on the research grant. The 9-month faculty MUST obtain grant funds if they are to have salaries equal to 11-month faculty. In fact, 9-month faculty can obtain three months of salary while 11-month faculty are paid for 11 months.

In response to a question from Mr. Stech about how these issues affect the Duluth faculty, Dean Sheridan said he assumed that the medical school faculty are affected the same way while for other faculty, in the bargaining unit, presumably the arrangements are worked out through negotiations.

How do University taxes affect these issues, Professor Balas asked? The IRS will be 7.5% next year, Dean Crouch said, which will cost IT about \$600,000. That is approximately the cost of a set-up for a new hire for an experimental physicist. The college has not stopped hiring but has spread out the payment for a set-up over more years. This is happening across the country, Vice President Hamilton said; with budget shortfalls, schools are taking a big hit. That implies there are changes in the level the departments must compete on to attract top-flight faculty.

Colleges vary in how they handle the IRS, Dean Sheridan said. Some pass the charges to departments, so the college must expect the department to cover them. His college pays the entire amount, not the departments--but the amount is getting large enough that he is not sure they will be able to continue to do so. Dean Crouch said that this is a contentious issue because the IRS is based on all funds, including not only O&M and ICR but also transfers on earnings from funds for endowed chairs and professorships in the University of Minnesota Foundation. IT has argued that Foundation transfers should not be subjected to the IRS assessment because this has a negative impact on fund raising. Central Administration has countered that the all-funds approach give a truer picture of collegiate wealth and that colleges do not have to use Foundation earnings to pay that portion of the IRS assessment; O&M or ICR funds could as well be used. IT's position is that this does not solve the problem because the holders of endowed chairs and professorships are then in effect being subsidized by the other faculty in a department. The problem is worsening as the assessment rate increases.

Dean Moldow reported that there is no bonus plan in the Medical School. In the basic science departments, there is an opportunity to supplement research or salary after certain milestones are achieved. The practice has been in place about two years, as a pilot project. Some departments were vigorous in adopting the plan, others were not. Does the faculty member receive a higher salary, Professor Gantt asked? If they land multiple grants, Dean Moldow said. Is this practice used in recruiting, Professor Gantt asked? Dean Moldow said he did not believe it had been used for that purpose. Expectations nationally are quite diverse; most faculty are expected to support 50% of their salary. The Medical School goal is that a faculty member will do the same, but they do not mandate it. There is need to support GAs and staff, Professor Balas said; the PIs are required to pay the department to be eligible. The bonus plans have a very negative effect on graduate education, Dr. Hamilton said; PIs could opt not to have graduate students. Dean Bloomfield said he has not seen the process work that way.

Has the practice had any effect, Professor Balas asked Dean Moldow? He has not seen any significant effect, Dean Moldow said. There was some controversy in the Basic Science council, Dean Sheridan said, because the plan may not provide a great incentive and it sells faculty short if one believes they will try to get more research funding if they can have more money in their pocket. Professor Seybold said it could be a recruiting tool for young faculty motivated to do research; they would see it as a positive incentive. Dr. Hamilton said that NIH is about to enforce a rule that a faculty member may have no more than five grants. Dean Moldow said that when someone has five grants, there will be rigorous review of effort reporting because agencies believe a grant should be about 20% of someone's time.

Dean Moldow promised to send the Committee a summary of the bonus plans that exist in peer institutions around the country.

Professor Balas thanked Deans Crouch, Moldow, and Sheridan for joining the meeting and adjourned it at 3:00.

-- Gary Engstrand

University of Minnesota