Annual Report to the Faculty Senate
Research Council

J. D. Birdwell, Chair
April 21, 2003

A Message from the Chair

I am stepping down as Chair of the Research Council, effective with the election of the new Chair at the Research Council meeting on April 21, 2003, and because of other volunteer obligations I have agreed to assume I will not be on the Research Council next year. I want to take this opportunity to thank all of the members of the Research Council and the campus and college administrations who have worked with me over the past two years, and indeed over the past several years that I have served as a member of the Research Council. I look back over these years, and I strongly believe that the Research Council has had, and continues to have, a significant and positive impact upon the Knoxville campus. I want to thank, in particular, Drs. Bill Blass and Gayle Baker, who have served as Vice Co-Chairs of the Research Council from 2001-2003, and Dr. Billie Collier, who has served as Interim Associate Vice President and Chief Research Officer of the Knoxville campus. Their experience and their efforts were invaluable.

While I am stepping down as chair and will not be on the Research Council or Faculty Senate next year, I am not disappearing. I want all of the members of the Research Council, and in particular the new Chair, to know that anyone can always call me, and I will do whatever I can to advise or assist. I will always be very interested in the continued activities of the Research Council, and I wish its members, and the members of the administration who work with the Research Council, the very best.

Sincerely,

Doug Birdwell
Chair, Research Council, 2001-2003

Report

The Research Council was given the following charge by the Faculty Senate for the 2002-2003 academic year. Each of these points will be discussed in turn.

Faculty Senate Charge to Research Council, 2002-2003

The Research Council shall engage the Administration including but not limited to the President, the Vice President for Research and Information Technology, the Associate Vice-President for Research, and the Provost regarding all aspects of the University's research mission, including but not limited to:

1. Assistance in the creation and processes of the UT Research Foundation, as requested by the Vice President for Research and Information Technology and the Associate Vice-President for Research
2. Review of the University's Conflict of Interest policy and comparison with AUP guideline documents
3. Recommendations for uniform procedures governing establishment, funding, review, and abolition of multidisciplinary centers, and revision of the University's Centers Evaluation document.
4. Recommendations based upon the results of the audit of the Office of Research
5. Allocation of facilities and administrative receipts, startup funds for new faculty, faculty accounts, and incentives to work with centers
6. Leave time accumulations and charges to contracts and grants; contract and grant management, and IRIS
7. Articulate the importance of research to the Educational Marketing Group and other activities to promote the University's research mission

8. Research space allocation and utilization policies and procedures
9. Overview of IRB/Human Subjects, Federal requirements, and compliance at UT

The Research Council shall remain engaged in:

1. The functioning of the faculty workstation refresh program
2. Analyses and recommendations for information technology policies and plans that affect the University's research environment
3. Its historically close collaboration and supportive activities with the Office of Research.

The UT Research Foundation

Conversion of the UT Research Corporation to the UT Research Foundation (UTRF) was an active topic of discussion at several meetings of the Research Council. Dr. Dwayne McCay, Vice President for Research and Information Technology, presented his plans for the UTRF at the September 16, 2002 meeting. This was followed by review by Research Council members of the various revisions of the proposed Bylaws, Charter, and other documents for the UTRF and submission of comments to the administration.

Dr. Michael Combs, President of the Faculty Senate, Dr. Lou Gross, Chair of the Faculty Senate Budget Committee, and Dr. Birdwell organized an Open Forum with the President to discuss the proposed UT Research Foundation. This was held on February 18, 2003. Questions were solicited from all faculty and staff, and information was also exchanged with the Faculty Senate on the Memphis campus. Drs. Gross and Birdwell organized the responses into a list of 16 questions to which the President responded at the Open Forum. All UT faculty and staff were invited to attend the event. Dr. Sam Jordan, Secretary of the Faculty Senate, recorded minutes. These minutes are attached as Appendix A.

Review of the University's Conflict of Interest Policies

The Special Projects Committee met on March 12, 2003.

The committee reviewed the charge (from the Faculty Senate charge to Research Council, 2002-2003): Review of the University's Conflict of Interest Policy and compare it with AAU guideline documents. The consensus was that the group would need to work through the summer to complete the review.

Among the areas of concern with the current policy voiced by committee members are: full disclosure vs. disclosure of relevant information and the Tennessee open records law; inclusion of graduate students as "investigators" (from a definition of "investigator" added to the UT policy Oct. 2002); lack of implementation of some elements of the policy; and changes brought about by the new UT Research Foundation.

Before the meeting Baker contacted Dr. Marian Moffett, chair of the Faculty Senate committee reviewing the UT Faculty Handbook. Dr. Moffett suggested that we might want to consult with Ms. Alice Woody of the UT General Counsel's Office. The Faculty Handbook committee has not yet begun work on the section on Conflict of Interest.

The committee agreed to begin the review by answering the 14 questions at the end of the AAU Report on Individual and Institutional Financial Conflict of Interest. The questions will be put into MS Word format, one question per page. The following will be added to each page:

Answers:

Concerns:

Recommendations:

Each committee member will try to answer all 14 questions, and include any concerns and recommendations. These are to be sent back, electronically, to the chair (Baker, gsbaker@utk.edu) by April 14. Baker will combine the responses into one document and email it to members by April 21. At that point the committee will determine the next meeting.

Uniform Procedures Governing Centers

There is a continuing need to review the procedures that govern centers and related organizations at UT; however, this review was not accomplished this year. This charge should be given to the Research Council next year.

Recommendations Based upon Results of the Audit of the Office of Research

An internal audit of the Office of Research was conducted during the 2001-2002 academic year. One weakness is insufficient staff in the Office of Research, and the problems that this has caused in contract management. These staffing problems directly affected the Research Council this academic year when Ms. Margaret Ashworth left for another position, leaving the Research Council without administrative support for a portion of the Spring semester. Dr. Billie Collier was able to find some assistance for the Research Council by reallocating staff duties, and has requested funding for a position in the Office of Research that should provide better support in the future.

The Research Council believes that part of the difficulties in the Office of Research are due to the organizational structure, in which it reports to a system-level vice president (Dr. Dwayne McCay) rather than to the Provost (perhaps soon to be Chancellor) of the Knoxville campus. The Research Council discussed these issues at its February 24, 2003 meeting, and adopted two resolutions asking the Chair to communicate its concerns to President Shumaker. Dr. Birdwell drafted and sent the letter in Appendix B to President Shumaker.

It is clear that additional work is necessary to create an effective Office of Research. Portions of the office work quite well, but there are continuing problems with areas such as contract billings and subcontract review. Additional improvements are necessary.

Allocation of F&A Receipts and Faculty Incentives

The Research Council continues to stand by the draft recommendations contained in its Spring, 2002, report (Appendix I of the 2002 Annual Report). Mr. Ray Hamilton, Director of Budget & Finance, presented a report at the January 27, 2003 meeting outlining the recommendations of his committee on F&A Reallocation, which was established in 2002 by Ms. Sylvia Davis. The Research Council challenged several of those recommendations as not going far enough to address existing problems with the distribution of funds related to F&A receipts. The fundamental problem continues to be the lack of uniform policies that require reinvestment in research infrastructure and research marketing activities at the level of the faculty members who are performing funded research. While the UTRF appears to be designed in part to address these structural problems, the absence in the UTRF Bylaws of strong controls on the manner in which UTRF may commit funds is a potential problem that must now be addressed by the UTRF board. The UTRF is an independent corporate entity, so the University has little direct control over this process beyond the goodwill of the UTRF Board of Directors toward the UT President, Board of Trustees, and Faculty.

Contract and Grant Management, and IRIS

The IRIS financial system continues to be a problem, apparently throughout the University. Dr. Birdwell collected input from a large constituency of IRIS users and of people who depend upon IRIS for data and financial operations last Spring, and although some of the items on the list that resulted have been addressed, problems remain. One problem, in particular, is the IRIS "Effort Certification" process: It is actually a monthly salary certification process, which does not make sense for faculty members on nine

months appointments. Mr. Ron Maples presented information on the effort certification process at the February 24, 2003 meeting of the Research Council, but it is apparent to many of the faculty that the problem is still not understood nor has it been corrected.

The effort certification reporting process requires effort to be certified as a percentage of monthly salary, rather than as a percentage of effort devoted to a contract during a given month. For personnel on nine months, it is impossible to correctly report monthly effort in excess of 75% full-time. For all other personnel, the process requires "juggling the numbers" to determine a percentage of $1/12^{th}$ of an annual salary that corresponds to a percentage of $1/9^{th}$ of the person's effort. The 75% limitation can only be circumvented by utilizing recoveries over multiple months, and this is greatly complicated by any raises that occur over that time period. This causes significant and potentially severe problems with contract sponsors because charges are not billed until well after they occur. The administration has judged it unnecessary to certify faculty salary expenditures that occur during the summer months. Effort certification exists to connect contract and grant charges to an affirmation by individuals that charges correctly correspond to effort. The absence of summer effort certification does not make sense.

A second problem that adversely affects contract and grant management is the IRIS and administrative systems' inability to handle charges for annual leave as they are accrued. This causes severe problems when a staff member transfers from one account to another, and when a contract or grant ends before annual leave is taken. At the Faculty Senate retreat in 2001, it was initially thought that this would be a very simple problem to fix; however, it is still waiting for resolution.

A third problem that continues to surface with the administration of grants and contracts is timely billing to contract and grant sponsors. In the last few months, a case has surfaced where over $1,000,000 in sponsored research expenditures were unpaid by a sponsor, or were never billed to the sponsor. In this case, University personnel did not even appear to be aware of the problem until the sponsor alerted the Principal Investigator. The bills were apparently sent to the wrong address or person, and were not paid. Contract and grant administration procedures need to be reviewed, and modified, to ensure that billings and payments are made in a timely manner, and to ensure that when delays or problems do occur, both administrative personnel and Principal Investigators are alerted to the problem.

Articulate the Importance of Research to the Educational Marketing Group

President Shumaker selected the Educational Marketing Group (EMG) for a contract to study the University's mission and formulate a unified image for the University. The Research Council decided that it was important to provide input to this group, and a letter was drafted and approved by the Research Council for delivery to EMG. Dr. Birdwell and several other Research Council members attended one of the Educational Marketing Group's working sessions, and Dr. Birdwell delivered the letter (included as Appendix C) to EMG.

Research Space Allocation and Utilization Policies and Procedures

This topic was not addressed during the 2002-2003 academic year, except for the previously covered discussions and actions related to the UT Research Foundation.

Overview of IRB/Human Subjects, Federal Requirements, and Compliance at UT

This topic was not addressed during the 2002-2003 academic year.

The Faculty Workstation Refresh Program

The Research Council provided the groundwork that established the Faculty Workstation Refresh Program and continues to take an active interest in its implementation. Over the past couple of years problems have occurred that limited the majority of the faculty workstation purchases to Dell and Apple computers. This has been viewed as a problem, in particular because of the perceived flaws in, and weight of, the Dell

laptops. Dr. Birdwell has remained engaged with Dr. Clif Woods and Dr. Dwayne McCay and has discussed these issues. This year, it appears that the purchase contract for the faculty workstations will be awarded through one or more competitions. The faculty would be best served by a blanket purchase order contracting structure that covered a wide variety of computer equipment vendors and allowed a substantially greater degree of flexibility in selection of workstation and laptop configurations than has occurred in the past few years. We emphasis, however, that the Faculty Workstation Refresh Program continues to be a very good program that offers substantial improvements in computational support for faculty, and its continuation should be a high priority.

Information Technology Acceptable Use Policies

The Research Council invested much of the effort that established an Acceptable Use Policy for UT information technology resources, and continues to take a strong interest in areas related to information technologies and their utilization in research and creative achievements. The Office of Information Technologies adopted a new "Information Technology Policy" (ITP) in the fall of 2002 that replaced the existing Acceptable Use Policy that was drafted jointly with the Research Council, and did so without the involvement of the Research Council or the Faculty Senate. This new policy document contained significant flaws. Chief among these flaws was its attempt to be a policy governing "Information Technology" rather than "Acceptable Use" because it provided very little guidance to providers of information technology resources, concentrating instead upon consumers.

The new ITP was presented to the Research Council by Ms. Faye Muly, Assistant Vice President for Information Technology, and was met with substantial criticism and opposition from Research Council members. Drs. Birdwell, Combs, and Weber subsequently met with Ms. Muly to discuss the issues that were being raised. A resolution recommended at the Faculty Senate Executive Committee meeting of October 7, 2002 and presented to the Faculty Senate at the October 28, 2002 meeting was discussed and approved. The resolution recommended that the new ITP be rejected. From the minutes of the October 7, 2002 meeting of the Faculty Senate Executive Committee, the resolution reads:

> "In the spirit of shared governance, the Executive Committee has concerns about the adoption and implementation of the new IT Policy, which was created without involvement of any Faculty Senate committee. Therefore, the Executive Committee recommends to the Faculty Senate that the new IT Policy be rejected and the old policy be reinstated."

An ad-hoc committee of the Faculty Senate was formed, chaired by Dr. Weber, to examine the proposed ITP and the existing Acceptable Use Policy, and to propose a new policy that could be adopted by the Faculty Senate. Dr. Birdwell provided input to this committee (Appendix D), and a draft Information Technology Acceptable Use Policy was presented to the Faculty Senate at its April 7, 2003 meeting (available as an attachment to the agenda of the March 3, 2003 meeting of the Faculty Senate). Additional discussions occurred at that meeting, which included amendments to the draft, and it was agreed that a vote on the policy document would be deferred until the April 28, 2003 meeting of the Faculty Senate.

Collaboration with the Office of Research

Members of the Research Council serve as reviewers for the Office of Research on panels to review applications for SARIF Summer Research Assistantships, EPPE proposals to fund exhibit, presentation, and publication expenses, SARIF Equipment and Infrastructure proposals, nominations of candidates for Provost's Awards for Research and Creative Achievement, and for Professional Promise, and review of research centers. At the present time all of these review activities have been completed except for the reviews of the research centers, which are in progress and should be completed in the near future. A list of grant recipients under the EPPE program is provided in Appendix E; listings of recipients under the other award programs are not included in this report because the recipients have not been notified.

Appendix A

Open Conversation with President Shumaker
MINUTES
February 18, 2003

M. Combs called the meeting to order at 3:31 p.m.

Combs announced that President Shumaker is flying into town and has been delayed. Combs then briefly reviewed plans for the meeting and described the two documents distributed at the meeting. One is a list of all questions from faculty, including faculty not in Knoxville. The list was collected and organized by Professors Lou Gross and Doug Birdwell. The other document gives the questions in the order they will be presented to President Shumaker.

President Shumaker arrived and began talking about the Research Foundation. He emphasized that the university needs to be more nimble and better able to move innovations to the market place. The Research Foundation is intended to answer these needs and many more. Shumaker noted that the university cannot hold an equity position in companies arising from its faculty. The Research Foundation will help match faculty innovations with potential investors. It also will eliminate some of the hindrances which necessarily accompany state activities.

Shumaker observed that there has been concern about how the Research Foundation would impact overhead funds, affect efforts to obtain grant, change the way grants are managed, etc. He has recommended to D. McCay that initially the Research Foundation should focus on entrepreneurship, economic development, technology transfer, etc., and the existing processes and structures for grants should continue, but become more streamlined. Grant-seekers and grant-holders would decide whether to proceed with the current system or the Research Foundation. Thus, the Research Foundation would have to evolve with guidance from the researchers.

Shumaker next discussed the clear need to review and revise the way grant money and overhead funds are handled. He favors returning funds as much as possible to the individuals and units generating them.

Combs then began asking the questions submitted by the faculty. Shumaker responded to the first question about the model used for the Research Foundation by saying that it is based on the needs of UT and knowledge of successful foundations elsewhere.

In response to a question about what will happen to the funds currently returned to the colleges, Shumaker noted that the university has needs, but he also understands the needs of colleges to have adequate funding. He believes that, over time, colleges and researchers should receive increased percentages of the funding they generate.

A question about purchasing under grants concerned matters too detailed for Shumaker to answer specifically. However, he said that the administration in general and the Research Foundation need to improve efficiencies and to decrease the bureaucratic aspects of the research structures and procedures. The research community should have a voice in the changes made and their implementation.

In response to a question about how the Research Foundation would be staffed, Shumaker agreed that changes need to be made in our existing system. We need to look at UTRC, and the Office of Research, decide what is not working or can be improved, determine how to correct the situations and then do so. He next said that he believes UTRC currently is understaffed. He also said that it appears to him that things are not working as well as they should and can. Problems

must be identified and corrected quickly. Shumaker also said that he does not want to move campus responsibilities to the system level.

P. Höyng pointed out that research should not mean only research in the natural sciences, but must include research and other scholarly activities in other areas. Shumaker agreed. Another attendee noted that she has found the current research-support staff helpful, but too few in number. She also suggested that if the Research Foundation did not use IRIS, then there would be a rush of researchers to the Research Foundation.

In answer to another question, Shumaker said that the Research Foundation would not address problems with the university's infrastructure. Those are the responsibility of the university. B. Lyons then noted that the university and its employees will be supporting the Research Foundation and the Research Foundation should support the university in a complementary manner. Shumaker then described the anticipated initial efforts of the Research Foundation to incubate new companies, including how money generated by successful start-up companies would provide some funding for the Research Foundation and other projects it supports.

A question about protection of academic freedom when commercial venture partners might want to drive research elicited the response that it will be necessary to proceed very carefully. McCay noted that other university do not seem to have had a problem along these lines and that faculty would know all the conditions before entering an agreement with the Research Foundation.

A student then asked whether the Research Foundation would lead to more research opportunities for undergraduates. Shumaker responded that more and better research should lead to more involvement of students at all levels in the research effort and should offer a better overall environment to students. In response to another question, Shumaker said that the university would not be at risk in ventures entered into by the Research Foundation, because university funding would not be involved; the Research Foundation would be taking the risk. L. Gross noted that the current UTRC is in debt $1.2 million to the university. Shumaker said that his preference is that the Research Foundation be funded from outside sources. McCay noted that there would be endeavors by the Research Foundation which would directly support the university and would be governed by guidelines different from those for ventures. Shumaker then reiterated his believe that there should be a firewall to protect the university's finances.

It was next asked whether the Research Foundation should be launched when the state has serious budget problems. Shumaker said that he does not know that a large amount of funding will be needed to start the Research Foundation. He is concerned that there not be "hidden" expenses to the university from having a Research Foundation. He noted that the delay in creating the chancellor position reflects his desire to be prudent and to be certain that funds are spent efficiently. He then described some steps already being taken to improve efficiency and to seek more funding. He also noted that he does not want to seek tuition increases without first knowing that university funds are being used well. Downsizing and reshaping the administration will be the first source of funds. McCay then noted that the UTRC has funneled profits to the university for many decades and it should not be characterized as a "loser." These investments have paid off in ways that are not reflected in the current bottom line. Shumaker agreed and noted that most people in the state do not realize that the state provides only about 35% of the university's funding. He also said that the research enterprise is the area with the most flexibility for expanding funding.

Shumaker next responded to a submitted question by saying that the Research Foundation will not create another layer of bureaucracy through which grant proposals will have to go. In response to another submitted question Shumaker said that recommendations by an external auditor will guide a review of the Office of Research Administration and actions should be taken during this academic year. R. Roth then commented on the uselessness of the financial reports grant-holders now receive. Shumaker said he understands the comment and hopes that the situation will be corrected.

A submitted question asked whether performance measures for the Office of Research and other research support offices would be included in the president's scorecard. Shumaker said that the research funding level is an indirect measure, but agreed that there must be clear performance measures for those units.

Another submitted question about expenditures on the Research Foundation was declared moot.

Shumaker then responded to a question about all Research Foundation board members being appointed by the president by saying that he expects to start with a small board, including some researchers. He then talked again about returning funds to colleges and individuals and his desire to see a larger amount being returned.

Shumaker next responded to a question about guaranteeing the existing rates of reinvestment. He said that he hopes to increase those rates and decisions about appropriate rates would be made with the advice of the researchers.

The next submitted question noted that the Chief Research Administrator is to report to the chancellor and to the Research Foundation's Executive Director. It then asked whether it would be better to have a Vice Chancellor reporting to the Provost/Chancellor. Shumaker responded that it will be necessary to work out the campus/system relationship.

In response to the next question Shumaker said that the Research Foundation would be more able to guarantee privacy of proprietary information of a company partner than would be the university.

In response to a question about why the Research Foundation should be expected to succeed better than the UTRC has, Shumaker noted again that it is necessary to identify problems with the UTRC and determine how to correct them and to avoid them with the Research Foundation. He also noted that a sufficient portion of income generated by an invention should be returned to the inventor to keep that person motivated.

Combs then asked Shumaker if he would like to make any further comments. Shumaker then said that the governor asked him and others to attend a recent budget meeting in Nashville. He believes the governor understands the importance of the university to the state and is approaching the budget discussions in good faith. The Knoxville campus's share of the reduction currently is about $37 million. Shumaker's approach is to try to help the governor with the understanding that, when the state's budget situation improves, the university will seek increased state support. He and other administrators are seeking ways to cut expenses. Enrollment increases at the upper division and graduate level will be encouraged, but inadequately prepared applicants will not be admitted at the freshman level. At some point tuition will be an issue, but only much later.

Shumaker next reported that the number of alternatives for using lottery funds has been cut to one by a subcommittee of the task force considering the matter. The approach is to be financially conservative and initially to support qualified students with some consideration of need. He expects there will be attempts to modify the proposed plan. Any savings to the university will be recommitted to additional scholarships. There is a concern that minority and rural students be included in the lottery plan.

Shumaker next said that he has given the governor a "top-five" list of no-cost changes which the governor can cause to occur and which will make the university's life easier. A second list of five such actions is being created.

The floor then was opened to questions. In response to the first one, Shumaker said that any contributions a donor might wish to make would go to the University Foundation, not the

Research Foundation. In response to a question about how to deal with conflicts of interest in connection with entrepreneurial efforts, Shumaker said that other foundations have handled such matters. McCay added that conflicts of interest cannot be eliminated, but can be managed. Shumaker then added that UT can learn from the mistakes of others.

The meeting adjourned at 5:40 p.m. with Shumaker publicly thanking McCay for his work.

Respectfully submitted by
Sam Jordan, Secretary

List of questions asked in order:

1. What model is the UTRF based upon? Is there an existing RF at a Top 25 Research University that UTRF is based upon?

2. 25% of the F&A recovered from grants currently is returned to the colleges to help defray operating expenses and to add funds to the research budgets of faculty generating the grants.   Will this practice continue or will this money be used to help fund the proposed Research Foundation?

3. What changes, if any, will occur relative to the current way that 25 percent of F&A return is returned to Colleges/Centers/Departments/Principal Investigators?

4. Much has been discussed about how the RF will handle getting grants, but little has been said about how purchasing will be done under the new system. How will purchasing rules change? How will accounts be kept? Who will own the equipment, maintain the inventory, and cover equipment maintenance costs?

5. We discussed the UT Research Foundation at the department meeting this week and generally people are very enthusiastic about the proposed plan if it is something new.   We all feel change is needed. The greatest area of concern with the UT foundation had to do with staffing. Will new people be hired (seen as a requirement for this to mean anything) or will existing staff be imported into the new structure. There is a strong feeling in our department that new, competent people who are facilitators and who will be dedicated to speeding up all issues involving grant submissions and administration are needed. Simply creating a new Foundation with the same people won't work.

6. We seem at UTK to be generating funds for infrastructure improvement, yet floors are left unclean and electrical wiring upgrades are one and two years behind request. How will the Foundation address these issues of infrastructure? How will the University address these issues?

7. Can we realistically invest this large amount up front to launch the Foundation when we are being asked to significantly reduce spending because of the state's budget problems? We've postponed new administrative positions, wisely in my opinion. Why would it not be prudent to also postpone starting the Foundation?

8. We often submit proposals at the eleventh hour because of the time needed to gather the people and incorporate their input, craft a proposal, obtain letters of support from collaborators outside the University, et cetera. Routing proposals through an additional administrative layer before submission adds to the problems of meeting deadlines. Is it necessary? What will it add?

9. The Office of Research Administration continues to be barely able to handle grant proposal submission in a timely fashion, and is still 5-6 months behind on processing new awards,

despite very forceful recommendations made by an external auditor. These problems are a result of significant understaffing. It is clear that the way to recruit and retain competent personnel is to offer them competitive salaries plus concrete assurances that they will not be overloaded with work. What provisions are being made to ensure that with the new system, this will happen?

10. Based on the discussion with many faculty members who are active in research, and from concerns expressed by the faculty during the town hall meeting on February 11, it appears that the majority of the faculty is opposed to the proposed Research Foundation. Also, there have been enough legitimate complaints expressed by the legislature about increasing administrative costs in the University over the past decade, and the Foundation is going to further increase administrative costs. At this time, how can you justify forming this foundation to the faculty, students, and the taxpayers?

11. I do not see any performance standards pertaining to the research office or research foundation on your scorecard. The performance of the research office services greatly affects our research productivity as a faculty. Are you going to have performance measures such as goals for time to negotiate contracts, time to process subcontracts, etc.? I feel these are needed.

12. Given that the UT Research Corporation has been losing more than $300,000 per year for the past three years, and currently is in debt to UT for more than $1,200,000, how can UT possibly justify the tremendous expenditure (more than $8,000,000) of the University's limited resources to expand such a financially-failing operation, that would benefit a very small fraction of UT faculty, particularly as the Business Plan has no description for how such a Foundation could ever be financially self-sufficient without depletion of the F&A currently being used to fund basic operations throughout UT?

13. We are about to establish an independent entity whose board members are all appointed by the UT President and whose Bylaws place few restrictions upon the manner in which F&A funds may be distributed or used. I believe a much safer course of action would be appointment of members of the board by the Faculty Senate rather than the President, or at least appointment of a majority of the members by the Faculty Senate. Why do you wish to place this power of appointment under the exclusive control of the President of the University, and why don't the Bylaws place additional constraints upon the financial relationships between the UTRF and the University?

14. The proposed Research Foundation has the campus Chief Research Administrator reporting to the Chancellor and also being accountable directly to the Foundation's Executive Director so there are two masters to serve.

    a. Would it not be more direct and responsive to the University's colleges and faculty simply have a Vice Chancellor reporting directly to the campus Provost/Chancellor?

    b. Won't an unhealthy situation develop for the Campus if the Research Foundation is established quickly but the Chancellor search is slowed?

15. Most businesses require confidentiality regarding their sponsored research activities. Will the proposed research foundation be able to handle this requirement? If so, how?

16. Another basic premise of the Research Foundation is that technology transfer and licensing of patents will generate income for the University, inventors and the Research Foundation.

a. Given the fact that UTRC has not accomplished this in many years of operation, how can the Research Foundation make money for the University even if it <u>theoretically</u> manages these activities better than UTRC?

b. Given the large amount of work usually asked of inventors to commercialize an invention, wouldn't drastically reducing the share of income to inventors as proposed by the new Research Foundation reduce the incentive of faculty to obtain patents and commercialize their work?

Appendix B

President John Shumaker
831 Andy Holt Tower
CAMPUS

President Shumaker,

At the February 24, 2003 meeting of the Research Council, the organizational placement of the Office of Research for the Knoxville campus was discussed in the context of the reorganizations that will occur with the creation of the Chancellor's position. The discussion focused upon the widely held belief by members of the Research Council that the Office of Research should report to the chief officer of the Knoxville campus rather than to a system-level position. This represents a division of labor between strategic multi-campus tasks, which are the purview of the President and his staff, and campus-wide research operations, which should be the province of the Chancellor. The Research Council also discussed whether it was appropriate for it to express these views to the President, and it was determined that I should communicate the Council's views by letter. The following resolution was approved unanimously:

> "It is the Research Council's view that the Office of Research for the Knoxville Campus should report directly to the Chancellor of that campus. The Research Council should work in concert with the University to define the roles of the Office of Research both at the campus and system level."

The Research Council remains very interested in creation of effective and adequately funded and staffed administrative structures to support research on the Knoxville campus and throughout the University system. We hope to continue to be involved in this process and look forward to working with you and the Chancellor to further the goals of improved research processes and productivity.

Sincerely,

J. Douglas Birdwell
Chair, Research Council

Appendix C

An Open Letter to the Educational Marketing Group

From the Research Council of the Faculty Senate
The University of Tennessee
Knoxville Campus

November 14, 2002

The Research Council encourages the Educational Marketing Group in its efforts to promote the University and urges it to emphasize to the public the important role of research in the University's mission. We are prepared to offer our assistance in any way possible.

The creation of new knowledge is fundamentally different from the dissemination of existing knowledge, and the skills of a new generation of researchers can be honed only in the context of a vibrant research environment. With $75,000,000 in annual grants at the Knoxville campus alone, each year The University of Tennessee trains thousands of students, both graduate and undergraduate, in diverse fields of research, many in programs with national and international prominence. In addition to the activities of individual faculty members and teams within our academic departments, dozens of University centers, institutes, and bureaus conduct interdisciplinary research and development. Our researchers represent the University at laboratories and in meetings around the world, and students trained in our facilities become our ambassadors as they begin their own careers.

Attraction and retention of top faculty requires a strong institutional culture of research. It is this emphasis on research that makes UT at Knoxville unique among Tennessee's public institutions of higher learning, offering students opportunities not available elsewhere in the state. Although research is traditionally the province of graduate work, opportunities for undergraduates at UT to work hand-in-hand with faculty at the forefront of their fields among research universities are substantial. Top researchers have been awarded Chancellor's/Provost's Awards for Research and Creative Achievement since 1976 in recognition of their national and/or international prominence, to stimulate research and creative achievement, and to emphasize that research and creative achievement are central to the mission of The University of Tennessee at Knoxville.

The University of Tennessee has a tremendous impact on our region and nation that frequently goes unrecognized. The following examples illustrate the breadth of UT's impact upon our region and nation:

- Founded by a UTK PhD, Knoxville's CTI Molecular Imaging, Inc. (NASDAQ symbol: CTMI), currently employs over 700 people and is the number one manufacturer of positron emission tomography (PET) scanners. These scanners are used worldwide for medical diagnoses and research. CTI's new PET/CT scanners meld PET and the more conventional computerized tomography (CT) technologies, and were featured in *Time* magazine's November 30, 2000 issue.

- The Clarence Brown Theater (CBT) Company is one of only a few university theaters that maintain membership in the League of Resident Theaters, a group of 76 theaters that promotes theater on a national level. Many area residents are familiar with the excellent CBT performances. The Department of Theater has collaborative relationships with theaters and programs in Russia, Hungary, France, and Austria, and provides graduate programs leading to the Master of Fine Arts degree in Performance, Lighting Design, and Theater Design.

- The UT Cloning Project at the Agricultural Experiment Station has received considerable media exposure due to their successes in cloning of cattle. According to Dr. Steve Oliver, "the overall goal of this research effort is to enhance the quantity, quality and safety of milk and meat produced by dairy cows while simultaneously increasing farmer profitability." Additional information, including the

announcement on October 31, 2002 of 10 new clones of a single Jersey cow, can be found on the web at http://www.agriculture.utk.edu/news/1031Clones.htm.

- The war against terrorism is aided by inventions of local company Perceptics, founded by a UTK Electrical Engineering professor, whose license-plate scanning and image analysis equipment is used at US border crossings. The US Customs Service's web site documents an example of this technology's utility in an article describing the role played by a Perceptics license plate reader in a drug smuggler's conviction (http://www.customs.gov/custoday/jul2000/lpr.htm).

- Atmospheric Glow Technologies received a R&D100 award in 2002 for their commercialization of the One Atmosphere Uniform Glow Discharge Plasma (OAUGDP), which was developed in the Electrical and Computer Engineering Department at UTK. OAUGDP can be used in sterilization applications, including sterilization of building air, which has become extremely important after the 2001 anthrax incidents in Washington, D.C. and Florida. Additional information can be found at http://www.a-gtech.com/.

- The Textiles and Nonwovens Development Center (TANDEC), located on campus, is a cooperative multimillion dollar project as a result of the partnership between ExxonMobil and the University of Tennessee. It features near industrial-scale processing equipment for nonwoven fabrics used in diapers, filters, and other disposable products.

- Research conducted by the Tennessee Agricultural Experiment Station has resulted in the release of a dogwood that can do something no other named variety has been able to do so far: resist the deadly anthracnose disease which has devastated plants in the south. Subsequent research promises a tree resistant to both anthracnose and powdery mildew.

Without attempting to list other specific programs or achievements, we wish to highlight several dimensions of research and scholarly activity on the Knoxville campus that should be investigated and considered in a marketing plan for UT. Although not exhaustive, these include (in no particular order):

- The diversity of research efforts and other scholarly and creative activities spanned by the President's Initiatives in Teaching, Research, and Service.

- Past recipients of the Chancellor's and Provost's Awards for Research and Creative Achievement.

- The breadth of the University's research and scholarly efforts across the physical and social sciences, the humanities, the arts, engineering, music, business, law, and theater.

- The many one-on-one relationships among faculty members who are nationally or internationally recognized and undergraduates whom these faculty mentor and incorporate in their research programs and scholarly endeavors.

- The presence of nationally and internationally recognized scholars in our classrooms and the level of experience and perspective they bring to our undergraduate and graduate students.

- The Distinguished Scientists and other jointly appointed faculty, and their research programs at UT and the Oak Ridge National Laboratory.

- The positive contributions of UT faculty to K-12 education both within Tennessee and beyond its borders.

- The multicultural environment provided by both international education and research programs and the presence of students from diverse countries, religions, ethnic heritages, political systems, and economic backgrounds, and the breadth of experience this environment offers to our graduate and undergraduate students.

- The impacts of UT research on the economy of Tennessee, the health of Tennessee's citizens, and Tennessee's natural and agricultural resources.

- Tennessee's and the University's commitments to a collaborative environment and synergistic relationships at the Oak Ridge National Laboratory, including the Joint Institutes of Neutron Science, Computational Science, and Biological Science that are under construction in Oak Ridge.

- Objective measures of the performance, capabilities, and reputation of faculty members at UT, such as the frequency of citations to scholarly works, the prevalence at UT of Fellows in national and international scholarly and professional societies, and the leadership roles that have been held by many UT faculty in these societies.

- The targeted growth of selected research, creative, and scholarly programs, incuding those in the fields of nursing, engineering, music, materials science, computer science, theater, neutron science applications, and biomedical and biological sciences.

The members of the Research Council are ready to assist the Educational Marketing Group's efforts as it explores the institutional culture, history, and future of our University. We urge you to explore these dimensions of the University's research and scholarly missions, and their contributions, which make the University of Tennessee the preeminent public university in our state.

Sincerely,

J. Douglas Birdwell
Chair, Research Council

Appendix D

Comments on the report of the ad-hoc IT committee's review of the Information Technology Policy provided in e-mail by Dr. Birdwell to Dr. Weber:

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Return-Path: <birdwell@lit.net>
Received: from scooby.lit.net (www.lit.net [160.36.40.74])
      by hickory.engr.utk.edu (8.11.6/8.11.2) with ESMTP id
h2RHwdf21988;
      Thu, 27 Mar 2003 12:58:39 -0500
Received: from scooby.lit.net (localhost.localdomain [127.0.0.1])
      by scooby.lit.net (8.12.5/8.12.5) with ESMTP id h2RHmIe8011655;
      Thu, 27 Mar 2003 12:48:18 -0500
Received: from scooby.lit.net (birdwell@localhost)
      by scooby.lit.net (8.12.5/8.12.5/Submit) with ESMTP id
h2RHmIT4011651;
      Thu, 27 Mar 2003 12:48:18 -0500
Message-Id: <200303271748.h2RHmIT4011651@scooby.lit.net>
X-Mailer: exmh version 2.4 06/23/2000 with nmh-1.0.4
To: fweber@utk.edu
cc: birdwell@lit.net, mcombs@utk.edu
Subject: comments on IT AUP committee report (new draft)
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Date: Thu, 27 Mar 2003 12:48:18 -0500
From: "J. Douglas Birdwell" <birdwell@lit.net>
Status:

Fred,

I spent this morning going over your report, and here are my comments &
concerns with the IT AUP draft.  Most are minor (although in some cases
lengthy) modification & additions.  The wireless LAN changes are not
minor, and I've suggested text to replace what is there now.  Also, I've
added text in several places referring to federally-accepted guidelines
on how to handle IT security.  I'm sorry to be so late; I've just been
too busy to work on this, and I'd hoped that your committee would handle
most of my concerns.

Doug

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p. 3:  Definition of "UT IT resources" (2nd paragraph).  UT owns
network, computing, and other IT resources, and it also serves as an ISP
to students, faculty, and staff who own equipment that is connected to
the Internet through the UT network.  Somehow, that first sentence needs
to be reworded to reflect that UT can require certain things for UT-
owned equipment, but may not be able to require all of this for
equipment they do not own.  For example, as long as information
published is legal and does not infringe intellectual property rights,
if it is published through the UT network to the Internet (e.g., a web
server) but resides on equipment not owned by UT, I doubt that UT can
take any action to restrict what is published.  This came up in
Engineering once when students published some very derogatory comments
about the Engage program, and my understanding is UT's legal council
told the dean to back off.

p. 3: escrow of encryption keys:  I suggest that the last sentence be
removed until OIT and the Treasurer's Office decide how they want to
implement a key escrow policy.  The policy also needs to provide for
exceptions, such as my laboratory.  The people we work with would have a
fit if anyone outside our lab had the encryption keys, and in past cases
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where we did this (such as with an encrypted tunnel to NYPD in New York City that we maintained for some time), key escrow would not have been feasible anyway because the encryption keys changed every 90 seconds. The document needs to reflect the realities of the technologies that are involved.

p. 4: First paragraph: Replace "however, ... UT networks." with "however, they must at a minimum implement policies and procedures consistent with these principles."

p. 4: Second paragraph: Replace the entire paragraph: "The central directory ... central directory." with: "OIT provides a central directory service and procedures that can be used for authentication and authorization of access to IT resources owned by the University. OIT will utilize industry-accepted best practices to maintain the security of this service, and recommends that this authentication service be utilized when a shared authentication database is desired." The document should not recommend that it be used "whenever technically possible," as there are many instances when it is not desirable to use it. Two examples: ECE and CS both provide user accounts for alumni, and they are not in the LDAP database. For a secure lab such as mine, a service such as this can not be used.

p. 4: Third paragraph: change to "collaboration from the Faculty Senate IT Committee and the Research Council."

p. 5: Add an Item 6. This is important. Add: "All aspects of the Information Security Program shall be consistent with federally-accepted best practices for information security and information assurance, as specified by the National Institute of Standards and Technology and the National Security Administration." Note that these guidelines can be accessed via the NIST Computer Security Resource Center (http://csrc.nist.gov/), but I don't recommend putting the specific web site in the document, as it changes from time to time.

p. 5: 2rd paragraph under "System & Network Administrator Responsibilities": Delete the last "and will not recur" -- it's simply impossible to make an absolute assurance that a problem won't recur.

p. 5: Replace 3rd paragraph with: "System and network administrators are responsible for the implementation of appropriate technical security on their computer systems. Critical security updates provided by vendors must be applied in a timely manner to all systems in order to minimize vulnerabilities and their security implications. All authentication data must be appropriately protected using federally-accepted best practices for information security and information assurance.

p. 5: 4th paragraph (wireless infrastructure). I don't think it is wise to give OIT absolute control over the ISM (Instrumentation, Scientific, and Medical) unlicensed frequency bands just because the university has implemented an 802.11b wireless network. Lots of other devices use these bands (which have been around for decades; 802.11b is a newcomer). What is important is to have policies and procedures in place to resolve interference issues when they occur -- and not necessarily always in OIT's favor. Therefore, I don't believe OIT has the ultimate authority to set up their "Guidelines for the Use of the 2.4 and 5 GHz Radio Frequency [bands]" unilaterally. The technology is also changing -- rapidly. UT was forced into becoming an "early adopter" of the 802.11b technology, and in some ways has paid the price for this (such as the broken encryption system).

I recommend (strongly) replacement of this paragraph with the following, which should probably become its own section.

"OIT provides an 802.11b wireless area network on the Knoxville campus. This network operates in the 2.4GHz ISM (Instrumentation, Scientific, and Medical) unlicensed radio frequency band, as do other types of equipment such as cordless telephones, microwave ovens, certain classes of instrumentation, and other wireless communications protocols such as Bluetooth (TM). Interference between different types of equipment, or even between different vendors of equipment offering the same technology, can occur if the devices are located in close proximity (where "close proximity" means several to tens of meters). For wireless area network equipment, this interference manifests as dropped packets of information and reduced data transfer rates. This policy recognizes that all users of the ISM radio frequency band have legitimate needs. When interference occurs, problems can often be mitigated by relocation or repositioning of the equipment, but in some cases it may not be possible to operate both devices reliably.

"This policy endeavors to maintain a balance between the needs of the wireless area network users and the needs of other individuals who utilize equipment operating within the ISM radio frequency bands. When interference occurs in areas where students are commonly expected to utilize wireless area network equipment, such as classrooms, study areas and the library, and some laboratories, the students' needs are to take priority, and the interference with the 802.11b network must either be satisfactorily mitigated through repositioning or relocation of devices, or other uses of the same ISM radio frequency band in that area must be discontinued. In other areas, the relative needs of the various users are to be considered, and OIT is to work with the other users of the ISM radio frequency band to provide a compromise solution that is satisfactory to all parties.

"This policy recognizes that OIT will upgrade portions of the wireless area network in the future to 802.11a, which operates in the 5GHz ISM radio frequency band, and these policies apply equally in this case."

If you want to see some of the documents on interference problems, go to www.google.com and search on "802.11b and bluetooth interference".

A separate issue with the wireless area network is security, and the IT AUP document should address this. I recommend insertion of the paragraph:

"The University recognizes that security protocols used on the wireless area network are weak. Therefore, the following guidelines should govern all wireless networking: No software applications that transmit user authentication information, such as passwords, as clear text should be utilized across a wireless network. This includes applications such as telnet and ftp; secure protocols such as ssh and scp should be utilized instead. When sensitive or confidential information, such as student and employee records or sensitive commercial or research data, is to be accessed across a wireless network, an encrypted protocol such as an encrypted virtual local area network (VLAN) should always be utilized. Users should assume that all data transferred across a wireless area network can be intercepted and recorded by an independent third party who does not have to be a member of the university community."

pp. 56: A couple of items need to be added to the System & Network Administrator section before the paragraph on p. 5 stating "System and network administrators or designated security officers may supplement...":

"All University of Tennessee computer servers should display a prominent banner to each user upon login advising the user that the system is for

the use of authorized users only and that system administrators monitor the system. The system's administrator is responsible for writing this banner and ensuring that it is properly displayed to all users as they log into the system. A sample banner is shown below (where SYSTEM-NAME-HERE is replaced by the system's host name):

> "To protect the SYSTEM-NAME-HERE system from unauthorized use and to ensure that SYSTEM-NAME-HERE is functioning properly, system administrators monitor the system. SYSTEM-NAME-HERE is for the use of authorized users only. Individuals using this computer system without authority, or in excess of their authority, are subject to having all of their activities on this system monitored and recorded by system personnel. In the course of monitoring individuals who improperly use this system, or in the course of system maintenance, the activities of authorized users may also be monitored. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials."

In addition, I believe the following paragraph should be added there:

"Administrators of omputer systems and network components that are expected to contain sensitive or confidential data are to take extra precautions to minimize the risk that the data could be revealed to or altered by an unauthorized party. These extra steps must be consistent with federally-accepted recommended practices, and must include, at a minimum: (1) steps to ensure that system and network clocks are accurately maintained with respect to a national standard, using the Network Time Protocol or its equivalent; (2) steps to ensure that the only network services advertised by or available on the computer system or network component are those necessary for its function, by turning off unnecessary services and protocols; (3) steps to ensure that attempts to access computer system or network component services are logged; and (3) steps to ensure that intrusion into or compromise of the computer system or network component can be rapidly detected, using technologies such as Tripwire and intrusion detection systems."

p. 7: 3rd paragraph: change "in the tennessee.edu, utk.edu, utmem.edu, or utsi.edu domains" to "in Internet domains owned or operated by The University of Tennessee." The "Commercial Advertising on the UT Web" needs quotes.

p. 9: item (b): An exception to this is required for our graduate level Network Security class. However, these activities are performed on computers that are isolated from the campus network.

p. 9: item (e): needs to be reworded to reflect the recent change in Fiscal Policy 135.

p. 9: item (g): this is problematic. I would add the sentence: "Waiver of this policy is automatically granted to system and network administrators who utilize such tools to detect and analyze attempts to gain unauthorized access to restricted resources."

p. 9: item (l): this is also a problem. Add the sentence: "This restriction is not applicable to firewalls or other software or hardware that utilize IP address "spoofing" to conceal information about protected network resources."

p. 10: item (r): What, exactly, is an "unauthorized connection to the UT network"? I think that rather than trying to define that we should rely

on the remainder of the document, which I think covers this adequately elsewhere, and delete this item.

p. 13: Related Documents: Here's the place to put the NIST web site. http://csrc.nist.gov/. Also, the National Information Assurance Partnership, at http://niap.nist.gov/. The NIST Information Technology Laboratory, at http://www.itl.nist.gov/. The Common Criteria Evaluation and Validation Scheme, at http://niap.nist.gov/cc-scheme/. Federal Information Processing Standards are at http://csrc.nist.gov/publications/fips/index.html. Federal agency security practices: http://csrc.nist.gov/fasp/, and a reference list for other sources of IT security best practice information is also available here. (This site is probably the most useful.)

Appendix E

EPPE Proposals and Awards, 2002-2003 Academic Year

Name	Department	Project	Amount requested	Amount given
Alligood	Nursing	conference	$1,000.00	$455
Anderson	English	cartoon rights	$150.00	$150
Bassett	Exercise Sci	page charges	$960.00	$320
Bast	History	translation fees	$1,000.00	$750, match to $1000
Brosnan	History	maps for book	$450.00	$300
Brown	Art	shipping of artwork to exhibitions	$735.00	$735
Creel	MFLL	index preparation	$2,600.00	$1200, matching to $2000
Custer	Theatre	framing and shipping for int'l exhibit	$450.00	$450
Dodds	Architecture	rights for illustrations	$450.00	$450
Dodds	Architecture	photo reproduction for book	$5,000.00	$2.5K, match to $5K
Gessell	Classics	copyediting	$1,000.00	$1,000
Hirschfeld	English	publication costs	$1,335.00	$1,335
Horn	Geography	page charges	$100.00	$100
Horn	Geography	translation	$1,171.00	$1,171
Hoyng	MFLL	publication costs	$1,000.00	$1,000
Jung	Art	exhibition costs	$3,020.60	$1,000
Jung	Art	conference costs	$925.00	$925
Kramer	Anthro	slide costs	$99.00	$99
Kulikowski	History	maps for book	$1,920.00	up to $1500
Kupritz	HRDev.	publ/pres. expenses	$500.00	$500
Lee	Art	photo printing costs	$2,000.00	$0
Levy/Romeiser	MFLL	publ. costs	$750.00	$450
Logan	Anthro	translation; photos	$131.00	$0
Lyons/Jung	Art	portfolio expenses	$1,000.00	$1,000
McCutchen	Dance	fees for dance competition	$4,101.00	$1,395
Odem	Art	costs for solo exhibition	$1,875.00	$1,200
Papke	English	production costs	$1,500.00	$500
Park	Biochem	photo charges	$1,200.00	$600
Rouse	Immunology	Page charges (HSV keratis)	$1,000.00	not funded
Sachan	Nutrition	page charges	$652.00	$200
Schroedl	Anthro	purchase of photos	$534.97	$534.97
Small	Architecture	exhibition	$1,380.00	$1,000
Thurlow	Architecture	exhibition	$1,408.00	$1,158
White	History	refurbishing of photos for book	$1,136.00	$600
Wilson	Art	exhibition	$1,000.00	$700
Yen	Agriculture	Page charges (economy of beef)	$609.00	not funded