

Faculty Empowerment through Common Tools

Faculty Technology Training Grant Program
FY 2000
PROPOSAL FORMS CHECKLIST

- Application Cover Sheet
- Proposal Abstract
- Narrative
- Budget
- Budget Narrative
- Supporting Documents
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Faculty Empowerment through Common Tools

Faculty Technology Training Grant Program
of the
Maryland Higher Education Commission

FY 2000 APPLICATION COVER SHEET

TITLE: Faculty Empowerment through Common Tools (FaCT)

CATEGORY: Short-term _____ Long-term _____

COMBINATION ____X_____

AMOUNT REQUESTED: \$199,799 NUMBER OF TRAINEES: 300

SUBMITTING INSTITUTION: University of Maryland, Baltimore County

PARTICIPATING ENTITIES:

Coppin State College
Microsoft Corporation

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CERTIFICATION BY AUTHORIZING OFFICIAL (VP LEVEL OR ABOVE)

NAME _____ TITLE: _____

SIGNATURE: _____ DATE: _____

Faculty Empowerment through Common Tools

Faculty Technology Training Grant Program
of the
Maryland Higher Education Commission

FY 2000 PROPOSAL ABSTRACT

TITLE: Faculty Empowerment through Common Tools (FaCT)

SUBMITTING INSTITUTION: University of Maryland, Baltimore County

SYNOPSIS OF PROPOSAL:

One of the significant challenges to widespread use of information technology in education has been the lack of standardization in the tool set. In the summer of 1999 the University System of Maryland entered into a Microsoft Education Enterprise Agreement. Now the challenge is to take advantage of this site license. University of Maryland, Baltimore County and Coppin State College (call them together the Consortium) join in this 'Faculty Empowerment through Common Tools' (FaCT) proposal to leverage our Microsoft site licenses to help faculty improve education. Microsoft Corporation has agreed to collaborate with us in this proposal, and altogether the partners are committing more than twice as much resource as we are requesting from MHEC.

FaCT will train and certify one-quarter of the Consortium faculty in the use of the Microsoft software for educational purposes in our first eighteen months. Our training will emphasize relevant competencies, assessments of competency that lead to certifications, and courses that guide one to mastery of the competency. We will extensively reuse existing definitions of educational technology competencies and existing courseware but refine or create material as necessary.

To help faculty commit to learning the tools and improving education, we will initiate institutional reform. FaCT will work with academic units and faculty governance groups to introduce our certifications as evidence in teaching portfolios for promotion, tenure, and post-tenure review.

As the Consortium and USM connect their web-based student services system to individual and classroom productivity tools, FaCT will be working side-by-side to provide the necessary training in the use of these increasingly integrated tools. Furthermore, our efforts will address how the tools and methods can support entire degree programs and how faculty can be trained to work in these extended environments.

The leadership of the Consortium is fully committed to this proposal. Through a shared vision, a standard platform, and concerted action we will transform ourselves. We will educate our people in both the features of the tools and the ways of working to improve education with the tools. We will raise the effectiveness and efficiency of the Consortium and work from this example to assist the rest of USM.

NARRATIVE:

Faculty Empowerment through Common Tools (FaCT)

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1 Purpose

University of Maryland, Baltimore County and Coppin State College (call them together the Consortium) are learning organizations that take advantage of their information technology infrastructure so as to empower their people. The diffusion of information technology has reached a critical point where we now can improve education significantly with the right strategic decisions. The Microsoft Site License creates for us that special opportunity to boost productivity. Our people will now have access to common tools. If we can motivate and train our people to use these tools, then we can significantly improve education. We have discussed our plans with Microsoft Corporation, and Microsoft believes its software will support our lofty goals and is prepared to help us utilize our site licenses as indicated in this proposal.

One of the significant challenges to widespread use of information technology in education has been the lack of standardization in the tool set. In the summer of 1999 the University System of Maryland entered into a Microsoft Education Enterprise Agreement. A Microsoft site license for Microsoft Office and Microsoft Visual Studio is now available to all faculty at many institutions, including the Consortium institutions. The Consortium will build on its site licenses a new training program for faculty that will help faculty educate students. Our training will emphasize relevant competencies, assessments of competency that lead to certifications, and courses that guide a faculty member to mastery of the competency.

Faculty want to learn how to use information technology tools and to improve education, but the institution must reward the faculty effort to ensure continued investment by faculty. The notion of Teaching Portfolios is not yet commonplace in the Consortium, but we will work with faculty to help them appreciate how a Teaching Portfolio can be worthwhile. In

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particular, we will ask that such Portfolios include certificates of competence and other evidence of using information technology tools in education.

Another incentive for faculty to develop courseware is the realization that such products can be useful to many others across the Internet. The Instructional Management Systems initiative has identified courseware standards as vital to progress in the diffusion of information technology in education. We will help faculty work to standards for courseware modules that allow faculty to interchange modules and that publishers are adopting. This will help faculty develop contracts with publishing houses for publishing the faculty's courseware. Furthermore, this emphasis on standards will help faculty incorporate content produced elsewhere into the curriculum.

We will measure our progress in our ability to reach individual faculty but also in our ability to effect Consortium-wide change. We will certify a substantial number of faculty as competent in the tools of the Microsoft site license. Furthermore, our efforts will address how the tools can support entire degree programs and how faculty can be trained to work in these extended environments. Through the FaCT initiative, the Consortium will train approximately one-quarter of its faculty to utilize information technology resources in support of instruction. Our goal for the year 2005 is to have 100% of our faculty certified as competent to deliver technology-enhanced education and, in fact, doing so.

Through a shared vision, a standard platform, and concerted action, we will transform ourselves. We will educate our people in both the features of the tools and the ways of working to improve education with the tools. We will raise the effectiveness and efficiency of the Consortium and provide an example to the rest of the UMS as to how this can be done.

2 The Need for Diffusion

The demand for online education has never been greater and the importance of technological innovation is high. However these technical innovations must be balanced with successful diffusion of the innovation. Gabriel Jacobs, the founding editor of an

international journal devoted to research and good practice in the use of learning technologies within higher education, said¹:

The reality is that take-up has not been as widespread as we imagined it would be - not by a long way - and neither the hardware nor the courseware is fully able to match user-expectations. Why? The most ambitious courseware, ..., disappoints those teachers ... who are not impressed by technical achievement *per se*, or who ... rebel against the constraints the computer imposes on them.

Jacobs has confronted the challenges of converting innovative technology into commonly used technology.

In an interview with Professor Larry Cuban of Stanford University, the following question was asked²: "I've heard you quoted as saying that technology will never make headway in schools because of resistance on the part of teachers." Cuban replied:

No, I wouldn't use the word "resistance." Teachers don't resist. They simply realize that the costs of adopting technology are very high and many of them don't like it. "Adaptation" is a better word. ... Many teachers want to use the technology but others don't because the people who make the decisions for them don't understand their needs. People who push

¹ Jacobs, Gabriel (1998) 'Time for a Change' editorial in *ALT-Journal Vol. 6, No. 2*, retrieved from www.warwick.ac.uk/alt-E/publish/alt-J/Contents/vol6no2/vol6no2.htm#ed in May 1999.

² "Taking Stock: What Does the Research Say About Technology's Impact on Education?" Interview with Larry Cuban conducted by Judy Salpeter, Editor, *Technology & Learning* at <http://www.techlearning.com/cuban.htm>, 1999

technology on teachers minimize the impact of workplace conditions and the culture of the classroom.

What will teachers and students use? Successful new technology (Surry and Farquhar, 1997)³ has these five characteristics:

1. Can be tried on a limited basis before adoption;
2. Offers observable results;
3. Has an advantage relative to the status quo;
4. Is not overly complex; and
5. Is compatible with existing practices and values.

We must pay attention to these criteria for successful diffusion of information technology in the University System of Maryland. We believe that building on the Microsoft site licenses helps us with all five of the conditions for successful diffusion. The Microsoft tools are compatible with existing practices. They can be tried on a limited basis to quickly see observable results, and they are not overly complex.

3 Objectives

Our objectives are guided by the understanding of diffusion theory for educational technology. Our objectives in more detail follow.

A. Competencies, certifications, and courseware

- We will build on the accomplishments of others and reuse competency definitions, certifications of achievement, and courseware wherever practical. In particular, we will carefully evaluate with the help of Microsoft Corporation the courseware that Microsoft offers and that would best help our faculty.

³ Surry, Daniel and John Farquhar (1997) "Diffusion Theory and Instructional Technology" *Journal of Instructional Science and Technology*, Vol. 2, No. 1.

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- In our evolutionary prototype mode of operation, we will have in our first phase of operation (months 2-5) competency definitions, assessments, and courseware that we can deliver to faculty. Then in the subsequent three phases (months 6-9, 10-13, and 14-17) these will be refined based on feedback.
- Through studies of the literature, focus groups, and surveys, we will continually refine the competencies, certificates, and courseware to meet the needs of our faculty.

B. Diffusion of the training in the Consortium through the life cycle of this grant

- have 25% of the Consortium faculty earn significant certification in their ability to use software to support student learning. This means about 110 faculty at the University of Maryland, Baltimore County and about 45 faculty at Coppin State College will benefit during this contract.
- have all faculty in one-degree program extensively use the tools in their teaching. (The particular degree program first targeted is in information technology, an area for which the state has deemed a critical shortage of graduates exists).
- achieve some web presence for courses taught by half the faculty. Thus we will demonstrate that over 300 of the Consortium faculty are directly contributing to information technology enhanced education.

C. Institutionalize the reward system that will sustain faculty to invest effort

- encourage promotion, tenure, and post-tenure review committees to consider certified competency. We will ask the faculty governance organizations at both University of Maryland, Baltimore County and Coppin State College to adopt such a policy.
- follow standards for courseware modules. Since publishers support these standards, our approach will help faculty develop contracts with publishing houses for producing content. This standards-based approach will also help faculty

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incorporate compliant content produced elsewhere into our curriculum, and generally support faculty interchange of courseware modules.

D. Make permanent the training system

- The FaCT project will become the FaCT Center on a permanent basis. The Center will be housed at the University of Maryland, Baltimore County (UMBC). Staff of the Center will include the permanent instructional designer/trainer at UMBC.
- Utilizing the common tools about which we teach, we will develop and maintain a permanent FaCT web site at the FaCT Center. This web site will be the portal for the competency definitions, assessments, instructional modules, and other material germane to the Center.
- By utilizing common tools for support, we can extend support services throughout the Consortium. The information technology, instructional technology, and library units within the institutions of the Consortium will establish online support for software issues, pedagogy issues, and library issues. This support will be available to Consortium faculty anywhere, anytime.

E. Train for an information infrastructure that connects all the information relevant to education and facilitates the coordination of the educational enterprise

- advise on the educational use of the Microsoft tools so that information generated in one tool is readily available in another tool and where necessary create new simple applications that fill voids not met by any existing software
- coordinate with Microsoft Corporation the appropriate training that best anticipates the integration of tools that our Consortium will be able to utilize
- prepare training for the link between central student information services and end-user educational applications. For example, faculty will be taught how to download class lists from the student information services for classroom applications.

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- contribute towards the development of information plans for the institutions in the Consortium that are guided by the feedback from faculty who are learning how to be effective with information tools in education.

F. Diffusion of our results to the rest of the USM

- provide courseware, methodologies, and analysis of results to the rest of USM
- offer our staff support under suitable agreement to other institutions
- work with other institutions to help them address the organizational and other challenges that FaCT experienced
- establish with Microsoft Corporation synergies between the successes at USM and the efforts at other university systems that have Microsoft Site Licenses

The FaCT initiative will be vital to our further goal of guaranteeing that every student entering the Consortium's class of 2001 is capable of effectively utilizing technology within his or her academic discipline when he or she graduates. We also intend to have 50% of our faculty providing some sort of information technology-enhanced education by the end of the MHEC-funded portion of the project.

UMBC and Coppin State College have very different student profiles and missions. Yet, we share a common belief that the key to getting faculty to utilize technology is to take advantage of common tools and create an environment that allows faculty to do this easily and effectively. We will provide our courseware, training materials, methodologies, and online support content to the rest of the USM and our partner schools in MarylandOnline.

4 Competency-based Training

We will develop training to various competencies. Some competencies will address simple matters like organizing class information on web sites and arranging communication tools for students in a course, while other competencies will address

broader objectives, such as coordinating student progress through online degree programs. We will certify people as having obtained certain competencies. We will develop training to various competencies through a large number of training modules that support many different skill levels. Some faculty may need a small number in an area, while other faculty members will need more basic information and training as well. We will acquire the modules we use through existing training modules, or if necessary, we will develop our own.

4.1 Tools for Teachers to Deliver Education

One could gain a large amount of end-user and classroom power by using the Microsoft tools in straightforward ways. Few teachers are using these tools to their full potential. To realize full potential requires both training and a widespread user base. For instance, for one person to put his or her appointments into his or her Outlook calendar and to try to coordinate meetings automatically with another person will only work when the other person also uses a calendar system compatible with Outlook.

Our goal is to train many faculty members in

- the pedagogic issues germane to successful teaching and
- the use of Microsoft tools for such enhanced teaching.

We will develop a large population of knowledgeable users who will find benefits in efficiency and effectiveness by using standard software tools.

Examples of taking advantage of the tools to improve education include:

- With Microsoft Outlook, we can have faculty who team teach a course or students in a course semi-automatically arrange meeting times by agreeing to place calendar

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information into Outlook and by agreeing to work together to share this information with their group.

- With Microsoft Word and an accessible web server on the network, faculty or students can author a wide range of documents and automatically export them to a web site.
- Classroom exercises with spreadsheets in Microsoft Excel can be exported to web sites for online interactive learning.
- Through Microsoft NetMeeting students can collaborate together in multi-party conferences and group activities, regardless of whether they are connected from a dormitory room, off-campus housing, or a work site.

More sophisticated usage could be obtained by, for instance, using FrontPage to develop interactive forms on the web that connect to databases to track student performance online.

4.2 Competencies

FaCT will identify the competencies that faculty will need to effectively use software in education. We will be guided in the early stages by the Standards for Educational Technology in Teacher Preparation, established by The International Society for Technology in Education (ISTE). Although these standards were developed for accreditation of K-12 teacher preparation programs, they define fundamental concepts and skills that are also essential in higher education. ISTE identifies specific behavioral objectives in several areas, including 'Personal and Professional Use of Technology' and 'Application of Technology in Instruction'.

The ISTE Guidelines (see appendix) will serve as a point of departure in developing our own standards. While several will not be appropriate for our needs, many will. During our assessment phase additional competencies will also be identified. We will

- Work from ISTE Competencies

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- Do surveys and task analyses to determine what further changes might be needed to our refined ISTE competencies to make them appropriate to the Consortium and USM
- Circulate the resultant competencies among faculty and others to confirm their relevance

An Intern in the UMBC 'Master of Arts in Training Systems' program will devote her efforts to this elaboration of competencies in accordance with best practice.

4.3 Certification of Competence

We will focus on two types of competency assessment. One is through online quizzes that we will develop that give faculty immediate feedback on whether they have learned, or already know, the material in a module. Our competencies, however, also include integrative abilities that are not best tested by quizzes. Accordingly, the second, and most important, assessment method revolves around the faculty member demonstrating an ability to build something useful for a course. Faculty who believe that they already have a competency can seek certification without first engaging in training.

Our instructional designers and trainers, the information technology training staff, the Ph.D. student in Information Systems, and an Intern in Training Systems will work together to define the assessment of competency that must be passed in order to gain certification. We will also involve peer-peer assessment in this certification process.

4.4 Courseware to Support Learning by Faculty

We could recreate our own courseware and instructional technology products and strategies. Or we could leverage extensively the work already done and focus on selecting for the Consortium the best combination of existing faculty development material. Our proposal is to use largely the existing courseware and technology tools.

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A graduate student in the Information Systems Department working under the supervision of the Director of the Flexible Masters Degree will be involved in a continuous assessment of the educational use of Microsoft products and of courseware for learning how to use those products. The student's research will be about the strategies necessary for successful diffusion of technology in university education through faculty training via existing courseware with a case study of the FaCT initiative. The student will work with other staff to choose, organize, manage, and assess the delivery of the courseware and training sessions for our faculty.

Microsoft Workshops are available for free at <http://www.microsoft.com/education/curric/workshop/>. Microsoft also facilitates access to various solution provider tools. For instance, UMBC received from Microsoft a package of five CD-ROMs entitled 'Online Learning Resource Kit, Volumes 1 and 2'. That package includes a CD-ROM from Suvan College Offline which is an extensive computerized quiz system built on Microsoft products and available for free for the next academic year. Generally, Microsoft focuses on developing software applications that are to be used by large numbers of people and encourages solution providers develop applications tailored to particular purposes, like grade books.

Possible models for structuring on-line training have been developed elsewhere and will be exploited by the Consortium. For instance, California State University Faculty Development Institute's "Tools, Templates and Training" program (<http://EdWebiii.sdsu.edu/T3/index.html>) offers a five-module course covering strategies for teaching on-line, as well as the technical aspects of creating materials. Each module requires approximately two hours to complete. While that Institute utilizes Claris Homepage for the development of course templates, the same approach could be taken using Microsoft Office. "Tools, Templates and Training" modules cover:

- Strategies and tactics for on-line teaching and learning
- Document preparation for on-line courses
- On-line student learning activities

- Growing an on-line learning community.
- Management of on-line course resources

The University of Alberta's Educational Technology Professional Development Program (<http://www.atl.ualberta.ca/etpd/home.cfm>) offers 25 modules in its program. It outlines the "basic technological skills that instructors require to function effectively in today's educational environment. These skills fall into four sequential categories: computer literacy, institution-specific topics, educational technology core, and areas of specialization." Modules typically take 4-6 hours to complete. Alberta's materials are distributed in printed form; however, their programmed learning approach could easily be applied to the development of on-line modules.

We will also consider licensing or purchasing existing on-line materials for integration into the program. One possible source is Netskills Internet Training (<http://www.netskills.ac.uk/>). Netskills offers an extensive list of modules, many of which are relevant to our anticipated needs. FaCT may license these modules. The license would allow us to modify the content of the modules to meet our specific needs.

4.5 Delivery of Training

FaCT training will be made available face-to-face and online. Online training will consist of self-paced modules dealing with each competency. This material will be supported through a combination of

- the traditional information technology, library, and instructional technology help desks at the institutions in the Consortium and
- new NetMeeting "office-hours" provided by these units.

Where appropriate, support may be via Virtual Network Computer (free multi-platform software documented at <http://www.uk.research.att.com/vnc/>). Using this tool, support staff can take control of the user's screen in order to remedy a problem or demonstrate a procedure (a good model for this approach is available from the California State University's Faculty Development Institute).

Through the Consortium's entry into the 'Microsoft Mentor Program', we have established already one specific plan for delivery. Microsoft will provide a certified trainer who will deliver a 2-day workshop. The workshop will occur in a special laboratory that we are committed to provide and will help faculty learn how to use Microsoft Office 2000 in the classroom. The curriculum for the two-day workshop has been elaborated and is consonant with the curriculum suggested at <http://www.microsoft.com/education/curric/workshop/>. The workshop includes frequent question-answer periods and an extensive plan for nurturing after the workshop the community that begins to develop during the workshop. Our delivery of training will be substantially augmented with online training and other workshops, but the Microsoft Mentor Program is an important part of our delivery plans.

5 Integration

We aim to diffuse technology and described earlier the keys to successful diffusion. The technology must fit smoothly into the workflow of those who are to use it. This requires integration of the technology for the individual, for the classroom, across the curriculum, and throughout the higher educational system. We look next at technical, curricular, and organizational issues relative to support of diffusion.

5.1 Technical Integration

The Instructional Management Systems (IMS) Consortium (described at <http://www.imsproject.org/index.html>) has developed a specification for an integrated system to serve instructional purposes at educational institutions. Originally, IMS was attempting to develop prototype applications compliant with its own standards. However, IMS has realized that the challenge is to describe how components of a system might operate together rather than to try to build the entire system. The FaCT project believes that the USM site license covers tools that are likely candidates to be the end-user applications at our university. Thus we want to focus on helping people use these tools

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and understand the integration among these tools and across the web to serve educational purposes. We will assess the various needs of our faculty and the tools available to them. We will help steer our training to the use of these tools in ways that help them anticipate the integration that is occurring.

Beyond the communication of the Microsoft tools with one another and with the students and faculty via the World Wide Web, we intend to work with University of Maryland, Baltimore County's University Computing Services and Coppin State College's Office of Information Technology to seek integration with the central student services software and other software central to university operation. For instance, faculty may want to download class lists from the student information system. UMBC has recently introduced a new system called 'myUMBC' (<https://my.umbc.edu/easi.html>). MyUMBC gives students, faculty and staff a dedicated site for information and applications personalized for their needs and interests. The site can also be found by directing any browser to my.umbc.edu. When a student connects to myUMBC, he or she will see his or her schedule of classes, the course name being a hot link to the course web page, a threaded discussion list, and a schedule of class activities. Faculty will be able to quickly import course information into grade books and messaging systems.

The FaCT project will work with University Computing Services to train faculty to use improvements to myUMBC that will create an integrated education infrastructure. FaCT will work similarly with Coppin State College to train faculty in the use of the comparable software there.

5.2 Across the Curriculum, the Consortium, and USM

For one teacher to add information technology support to one course may be valuable for the teacher and students. However, the greater value comes for the students and teachers when the curriculum is enhanced so that information from one course complements information in another. Also the method of learning and the tools for learning should not be something that a student needs to re-learn for each and every course. A set of linked courses that are offered across the same medium and in the same way can be very valuable

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to students. To this end we will strive to work with faculty who come together to enhance an entire degree in a concerted fashion. Our intended test case is the Flexible Masters Degree in Information Systems.

This project has the full support of UMBC and Coppin State College. The various administrative and support units that might be involved in faculty training on educational technology have all committed support. We have support from the highest level and including the UMBC Directors of University Computing Services, the Library, and the Office of Instructional Technology and the Coppin State College Director of the Office of Information Technology. Our larger vision has to do with all students and staff being comfortable with these tools. We are concerned with education of everyone in our Consortium and feel faculty are key to this. Our equipment plans of guaranteeing access to everyone are also consonant with our goal of helping everyone be empowered. If our proposal is successful, then we will have an approval from MHEC that will help us spread our results to the USM. Other institutions within USM will be offered our support. We will learn about the progress at the other institutions and strive to create an integrated training program that builds on the progress already made at other institutions towards faculty empowerment through common tools. Our collaboration with Microsoft will also help us understand how the training can work best on a scale wider than our initial consortium membership.

6 Quality Control

Our quality control will come in multiple forms. We will:

- monitor the number of faculty who take our training,
- survey their satisfaction with our training, and
- do pre- and post-surveys of students who are educated by faculty who have completed our training

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- document collaborations with other institutions in USM and assess the extent to which our training is utilized elsewhere and the results from other institutions are integrated into the FaCT results
- monitor the faculty training progress at other university systems with Microsoft site licenses and compare and contrast that progress to our own
- provide monthly progress reports to a FaCT Steering Committee
- provide quarterly progress reports to MHEC.

The questionnaires of students are of particular concern to FaCT because our interest in the impact on faculty training is reflected on the impact in the students. The existing questionnaires for students are not particularly tailored to our concerns. An Intern in the Training Systems Masters will take the student surveys as a primary target.

The FaCT Director will report to the FaCT Steering Committee. The Chair of the Committee will be the UMBC Vice-Provost for Academic Affairs. Other members of the Committee will include from UMBC:

- Director of University Computing Services,
- Director of the Library,
- Director of the Office of Instructional Technology,
- Chair of the Technology-Enhanced Learning Committee,
- Director of the Faculty Development Center,
- Director of Continuing Education,

and from Coppin State College

- Director of the Office of Information Technology,
- Chair of the Faculty Information Technology Committee,
- Director of the Library, and
- Information Technology Training Manager.

We will continually work with faculty to make sure that our work is close to their needs.

7 Schedule

The FaCT project will follow the evolutionary or prototyping life cycle that has proven itself very successful in software engineering. In this approach we aim to accomplish the basic essentials of our goal as much as we can in each phase. Each phase ends with extensive investigation into the usability of or user response to our efforts. Then in the next phase we revise our products and services in line with the feedback. This may mean slight refinements to the products and services, or feedback may dictate that we significantly change our direction. Still we are able to specify milestones in terms of quantifiable objectives. The number of faculty to be trained is noted in the 'Milestones' subsection.

7.1 Prototyping Life Cycle

The first month is a kick-off month, and the last month is a review and dissemination month. Inside that, the FaCT project has four, 4-month, prototype phases. The total duration is 18 months (four 4-month periods plus one month at the beginning and end). We keep our goal in mind at all times, and we adjust based on feedback as we strive in four-month cycles to come as close to our goal as we can.

7.1.1 Month 1 Kick-off

- Submission of paperwork to Human Resources to classify new associate staff position for instructional technology
- Development of smooth working procedures for the people involved in the project
- Establishment of FaCT web site to support operation of the initiative
- Initial work on collection and refinement of competencies and of assessments.
- Development of FaCT catalog of initial courses based on choices largely from Microsoft site

7.1.2 4-Month Prototyping Repeated Four Times

Each four-month cycle will address those key issues outlined elsewhere in this narrative. This means it will include under the heading of competency-based training the continued refinement of relevant

- competency definitions
- assessments for certification
- delivery of training to help faculty achieve competencies.

For integration, each four-month cycle will witness progress in the areas of

- keeping track of the evolving information infrastructure of the university
- supporting faculty reward for certification
- supporting development of degrees that are technology-enhanced and not just individual courses
- working with the USM and Microsoft Corporation to maximize synergies and achieve dissemination of our results

These efforts are continually within a marketing context both in terms of understanding what the market wants, advertising our wares to faculty and others, and performing customer satisfaction surveys. The final four-month cycle focuses on dissemination to the University System of Maryland.

7.1.3 Month 18 Review of Progress

This month will be our opportunity to review the project and to document its successes and failures. We will provide reports to our sponsors and customers. The turnover from this MHEC-sponsored effort to a regular institutional effort will be finalized in this month. For instance, while the Director of the Flexible Masters Degree led this 18-month project, the long-term director of the faculty training effort will be the Director of the Office of

Faculty Empowerment through Common Tools

Instructional Technology, and this last month of the FaCT project will mark this turnover of responsibility.

The FaCT Center will have established itself as a successful venture. UMBC will have converted the FaCT full-time instructor into a permanent position funded by UMBC. The basis for long-term continuation of the progress towards 100% faculty certification will have been established. Synergistic relationships with other institutions in USM and with Microsoft Corporation will have been established for the long-term future.

7.2 Milestones

Months 2-5

- Development of assessments by which competencies will be judged.
- Assessments are done online or face-to-face
- Review existing materials appropriate for training faculty in the use of Microsoft tools.
- Develop lesson plans for competencies integrating existing materials. In addition to face-to-face seminar training, the program will provide curriculum for on-demand, on-line, programmed instruction.
- Training numbers:
 - 10 UMBC and 5 Coppin State College (CSC) faculty members take assessment administered by FaCT.
 - 10 UMBC and 5 CSC faculty members guided by FaCT through use of existing courseware.
- Initiation of Microsoft Mentor Program workshop at the Consortium. This workshop will be taught by a Microsoft Certified Professional provided by Microsoft and will include an intensive 2-day curriculum in utilizing Office 2000 for higher education.

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Months 6-10

- A schedule of face-to-face training sessions coordinates offerings by trainers in information technology and instructional technology across institutions. Depending on demand, these could be presented two-to-three times a week. Each session will last two hours.
- Several staff from FaCT will travel to the Higher Education headquarters of Microsoft Corporation in Redmond, Washington in order to delve deeply into the synergies between what Microsoft is doing and what FaCT is doing.
- On-line training will consist of self-paced modules dealing with each competency. This material will be supported through a combination of the help desks and NetMeeting “office-hours”.
- Revision of courseware based on feedback and formal assessment of summer training
- Training numbers:
 - 20 UMBC and 10 CSC faculty members earn certifications from FaCT.
 - 20 UMBC and 10 CSC faculty members guided by FaCT through use of existing courseware.
- Analyze surveys of faculty before and after taking courses or certification exams.

Months 10-13

- Delivery of revised face-to-face and on-line training during fall semester.
- Work with faculty to establish acceptance of certificates in teaching portfolios of faculty for consideration in promotion and tenure.
- Students impacted by delivery of learning from FaCT-certified faculty are interviewed.
- Integration with student information services in the Consortium.
- Training numbers:
 - 30 UMBC and 10 CSC faculty members earn certifications from FaCT.
 - 30 UMBC and 10 CSC faculty members guided by FaCT through use of existing courseware.

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- Degree program launched that takes advantage of this training and approach.
- Wide advertising of initiative throughout the university

Months 14-17

- Continue a regular schedule of face-to-face and on-line training.
- Finalization of alliances with various members of the USM. We began dialog with Montgomery Community College, Community College of Baltimore County, and others prior to the formal launch of this project. In phases 1-3 of this project, we will be interacting with other institutions of USM, but in the 4th phase of the project, this dissemination throughout USM will become particularly important.
- Training numbers at UMBC:
 - 50 UMBC and 15 CSC faculty members earn certifications from FaCT.
 - 50 UMBC and 15 CSC faculty members guided by FaCT through use of existing courseware.
- Courseware materials from UMBC will be made available throughout USM.

8 Staff

We have a strong, widespread commitment of expertise from various units and institutions. Our staff includes instructional designers and trainers, as well as directors of all the relevant service units. While most of the staff are at UMBC, we also have the direct involvement of the Chief Information Officer of Coppin State College and the Microsoft Manager of Faculty and Professional Development for Higher Education worldwide.

UMBC Instructional Technology will provide one part-time instructional designer who will be responsible for the development of courseware and support materials. MHEC will contribute 1.5 instructional developers/trainers who will report to this staff person.

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The Libraries will maintain online information relative to effective use of the Microsoft tools and will work with each department to help create online libraries of course materials such as online reserve readings. For this the Libraries will commit their own permanent-staff expertise and also employ a part-time student from MHEC funds.

UMBC University Computer Services and Coppin State College Office of Information Technology will install and maintain software through which this program technologically runs. They will also provide basic training in the use of the tools. A component of this basic training will be the bridge to what the Office of Instructional Technology offers. Together the Consortium computing centers will contribute three full-time equivalent staff to the support of the basic training in the use of Microsoft software.

The Director of the Flexible Masters program of the Department of Information Systems will manage the FaCT project. The Director will contribute to the assessment of how Microsoft tools can be used in education and what courseware is relevant to training in the use of those tools for educational purposes. A half-time graduate student assistant will support the Director in this activity.

The Director of the Master of Arts in Instructional Systems Development Training Systems will contribute to the FaCT project. The Training Systems curriculum provides a strong foundation in adult learning, instructional systems design, and training and development principles. The program culminates with a practical and technical experience through internships, and three interns from the Master of Arts degree will work on competencies, certification, and assessment of student learning.

9 Appendix

In the appendix are selected components of:

- an announcement at the USM site about the Maryland Education Enterprise Consortium

Faculty Empowerment through Common Tools

- International Society for Instructional Technology competency standards for teachers
- free online courses that Microsoft offers in its common tool set to which UMBC has access, and finally
- some courses from CBTSystems that we can also use for almost no cost to support our faculty in learning about Microsoft tools.

The CBTSystems courses are not specific to education, but as noted in the body of the proposal, there are many other sites that provide free or low-cost courseware relative to educational technology applications in higher education.

9.1 Maryland Education Enterprise Consortium

The University System of Maryland has taken leadership in putting together the Maryland Education Enterprise Consortium (MEEC), a voluntary agreement among public and independent higher education and county school systems. The first activity of the consortium was to work out a comprehensive, non-exclusive licensing contract with Microsoft. The following is extracted from <http://www.usmsc.edu/meec/meechome.html>:

The \$1.5 million enterprise agreement, established with MEEC, will feature Microsoft's most widely used software suite, Microsoft Office. Under the agreement, students, teachers and staff members in dozens of Maryland school systems, community colleges, independent colleges, and public universities both within and outside the University System, will have access to desktop productivity tools, infrastructure server and messaging products, and operating systems upgrades for three years.

"Microsoft applauds the innovation behind the creation of the MEEC as a solution to meet the technology needs of students and teachers statewide," said Rebecca Needham, higher education marketing manager for Microsoft's Education Group. "The MEEC is an excellent example of how K-12 and higher education leaders in Maryland are using technology to revolutionize the teaching and learning experience, and we are committed to working with these education clients to find new ways to help them make technology decisions that best fit the needs of their institutions. We think the MEEC is a great model

for educators to consider as they work to simplify the process of selecting, managing and supporting technology so they can focus more time and energy on teaching and learning."

9.2 International Society for Technology in Education

The following are recommended educational technology foundations for all teachers

Personal and Professional Use of Technology. Candidates will apply tools for enhancing their own professional growth and productivity. They will use technology in communicating, collaborating, conducting research, and solving problems. In addition, they will plan and participate in activities that encourage lifelong learning and will promote equitable, ethical, and legal use of computer/technology resources.

1. use productivity tools for word processing, database management, and spreadsheet applications.
2. apply productivity tools for creating multimedia presentations.
3. use computer-based technologies including telecommunications to access information and enhance personal and professional productivity.
4. use computers to support problem solving, data collection, information management, communications, presentations, and decision-making.
5. demonstrate knowledge of equity, ethics, legal, and human issues concerning use of computers and technology.
6. identify computer and related technology resources for facilitating lifelong learning and emerging roles of the learner and the educator.
7. use distant learning applications.

Application of Technology in Instruction. Candidates will apply computers and related technologies to support instruction in their course or department. They will plan and deliver instructional units that integrate a variety of software, applications, and learning tools. Lessons developed must reflect effective grouping and assessment strategies for diverse populations.

Faculty Empowerment through Common Tools

1. explore, evaluate, and use computer/technology resources including applications, tools, educational software and associated documentation.
2. describe current instructional principles, research, and appropriate assessment practices as related to the use of computers and technology resources in the curriculum.
3. design, deliver, and assess student learning activities that integrate computers/technology for a variety of student grouping strategies and for diverse student populations.
4. design student-learning activities that foster equitable, ethical, and legal use of technology by students.

9.3 Microsoft Workshops

Four brief descriptions of Microsoft Workshops have been selected from a library of free, online workshop:

- **Collaborating with Others Using NetMeeting:** *NetMeeting* is a powerful Internet conferencing utility. Using *Microsoft NetMeeting*, you can video conference, chat, share applications, and use a shared whiteboard to collaborate with peers across the country, or your students may have an online study meeting.
- **Creating Online Presentations:** Many educators have seen the power of using a presentation tool like *Microsoft PowerPoint* for creating easy to follow in-class presentations. Creating rich presentations, which your students can review from any web browser, is a click away. Creating an online broadcast, which is available to anyone, connected to the Internet, or on-demand for students that missed class (or need to review class notes after a lecture) is now made as simple as just using *PowerPoint* to give a lecture.
- **Creating a Course Web Site:** Whether you want to create a completely online course, or simply create a simple web site for your students to access classroom notes and hand-outs, using *FrontPage 2000* will make this as easy as using your favorite word processor. In this hands-on session, you will learn how to make your web site

easy to navigate, use pre-built class templates, and add threaded discussions to your web to allow students to interact with each other online.

- **Computer Based Quizzing, Testing & Surveying:** In this hands-on session, you can easily create interactive forms for online testing and surveying *without having to be a systems programmer*. We will create online test and/or surveys and store the results to text files, spreadsheets, and/or databases on your server. In a subsequent workshop, we will learn how to analyze the collected data using *Microsoft Excel* and *Access*.

9.4 CBT Systems

CBT Systems has a relationship with Microsoft and UMBC such that we can acquire 10 courses from CBT Systems and put them on a CD and sell the CD for \$10 to members of the UMBC community. The catalog has a wide range of quality, courseware products, including some on broad information technology topics, such as “Computing for Beginners” at http://www.cbtsys.com/catalog/curricula/int_core.htm. Some are on Microsoft specific products, such as those at http://www.cbtsys.com/catalog/curricula/int_mic.htm, that include Microsoft web development and Microsoft Internet Explorer.

10 Budget and Budget Narrative

The budget and budget narrative are next provided in the appropriate MHEC-format.

Faculty Empowerment through Common Tools

Faculty Technology Training Grant Program

proposed Budget

Eighteen Months (December 1, 1999-May 31, 2001)

CATEGORY OF EXPENDITURE	GRANT FUNDS REQUESTED	OTHER FUNDS
A. Salaries and Wages		
Professional Personnel (list each with title)		
1. Professor Roy Rada	0	18,000
2. Director UCS Jack Suess	0	15,000
3. Director OIT Victor Aulestia	0	10,000
4. Instructional Designer Bill Shewbridge	0	28,500
5. Librarian Barbara Auchter	0	7,500
6. Director Training Systems Zane Berge	0	6,000
Other Personnel (show number in brackets)		
7. Computer Training Marie Toomes	0	81,000
8. Computer Training Charles Myers	0	27,000
9. Instructional designer/trainer (1.5) at \$40,000 per 12-mos.	90,000	0
10. Ph.D. student	23,736	0
11. Intern from Training Systems (3) at \$2,000 each	6,000	0
12. Library assistant	4,000	0
Total Salaries and Wages	123,736	193,000
B. Fringe Benefits		
Instructional designer and trainer	29,500	0
Ph.D. student (\$3,600 health, \$10,800 tuition)	14,400	0
Personnel from Consortium funds	0	57,900
C. Travel		
	750	4,200
D. Equipment		
		6,000
E. Materials and Supplies		
	1,000	1,000
F. Subcontract: Coppin State College		
	13,000	10,000
G. Other: Microsoft Mentor Program with Microsoft Corp.		
	0	10,000
H. Total Direct Costs (A through G)		
	181,636	282,100
I. Indirect Costs (max. 10% of H)		
	18,163	141,050
TOTAL	199,799	423,150

Faculty Empowerment through Common Tools

Faculty Technology Training Grant Program

proposed Budget NARRATIVE

DECEMBER 1, 1999 – May 31, 2001

A. Salaries and Wages:

- Roy Rada, Jack Sues, Victor Aulestia, Barbara Auchter, and Zane Berge will each contribute significant time to this project. The percentage varies from a little over 10% downward in the order of the listing of the names.
- Instructional designer and trainer Bill Shewbridge will contribute 50% of his time over the full 18 months.
- Computer Trainer Marie Toomes will contribute 100% of her time over the full 18 months, while her colleague Charles Myers will contribute one-third of his time. Three interns from the Masters of Arts in Training Systems will be paid \$10 per hour and each do a 200-hour internship.
- We will hire one full-time and one half-time designer/trainer at each \$40,000 annual salary. For the full-time trainer this is an 18-month salary of \$60,000 and for the half-time designer this is \$30,000. The full-time trainer will be housed in UMBC's Office of Instructional Technology. The half-time trainer will be housed in UMBC's Flexible Masters Laboratory, and this trainer will be dedicated to the needs of Coppin State College and will often be physically at Coppin State College.

C. Travel:

- MHEC funds will support travel to other USM institutions to support dissemination of our results -- 5 trips at \$50 per trip.
- Commuting between Coppin State College and UMBC will cost \$250.
- We will travel to Annapolis to report to MHEC – 5 trips at \$50 per trip.
- The Consortium is contributing \$1,000 to support travel to conference(s) in which we can report our results and further support dissemination.

Faculty Empowerment through Common Tools

- FaCT will send 4 staff to Redmond, Washington for multi-day meetings with Microsoft Corporation Higher Education staff. Cost is \$3,200 for travel.
- Total travel is \$4,950.

D. Equipment: The hosting units will provide workstations for the new staff.

E. Materials and supplies:

- \$1,000 for licensing of courseware from other organizations to be used in our education. We will only do this for site license approaches for material available at very low cost to very large numbers but having high quality.
- \$1,000 for CD-ROMs, photocopying, and other materials to be provided by host units.

F. Subcontract:

Coppin State College will receive a subcontract of \$13,000. This \$13,000 covers:

- \$10,000 for a student assistant at Coppin State College
- \$3,000 for courseware licenses at Coppin State College

Note that \$30,000 is paying for a half-time instructional designer and trainer that will be based at UMBC but will be dedicated to the needs of Coppin State College faculty.

The Chief Information Officer Coppin Ahmad El-Haggan of Coppin will contribute \$10,000 of in-kind salary.

G. Other:

Microsoft Corporation has agreed to provide consulting support through its Microsoft Mentor Program. Part of the manifestation of this support comes in the form of senior Microsoft Higher Education staff (including Dr. Roberto Bamberger, the Manager of Faculty Development worldwide for Microsoft) hosting a visit of FaCT staff to Microsoft

Faculty Empowerment through Common Tools

Higher Education headquarters in Redmond, Washington. This Microsoft support is estimated to be equivalent to a) 10 days of consulting and b) travel costs for Microsoft professionals to come to Baltimore. The estimated in-kind contribution is \$10,000.

I. Indirect Costs:

10% indirect costs are being charged to MHEC. The Consortium's own indirect costs are 50%.

Epilogue: Please note that the Consortium is contributing twice as much resource, as it is requesting from MHEC.

11 Supporting Documents

11.1 Resumes of Staff

The resumes of selected staff are presented here. The Director's resume is presented first and then selected other participants are presented in alphabetical order.

11.1.1 Resume of Roy Rada

Phone 410-455-2645

Email: rada@umbc.edu

University Education

- Ph.D. from University of Illinois at Urbana in Computer Science, 1981.
- M.D. from Baylor College of Medicine, 1977.
- B.A. from Yale University in Psychology, 1973.

Professional Positions

- Professor and 'Director of the Flexible Masters Degree in Information Systems' in the Department of Information Systems at the University of Maryland, Baltimore County, summer 1999-
- Professor of Information Systems and Computer Science and Co-Director of Center for Distance Education at School of Computer Science and Information Systems at Pace University, fall 1998-summer 1999
- Boeing Distinguished Professor of Software Engineering, 1995 - 1998, Washington State University, Pullman, Washington.
- Full Professor and Chair of Computer Science and Director of the Many Using and Creating Hypermedia Laboratory, April 1988 to Aug. 1995, University of Liverpool, England.
- Editor of *Index Medicus* and Chief of the Medical Subject Headings Branch 1984 to 1988, National Library of Medicine, Bethesda, Maryland.
- Assistant Professor, 1981 to 1984, Dept. Computer Science, Wayne State University, Detroit, Michigan.

Fields of Specialization: virtual educational organizations, hypermedia, information systems

Distinctions:

- Chairman of the Board of Globewide Network Academy since fall 1997
- Over \$2 million in research funding since 1977
- Member of editorial board of 16 journals
- Fellow of Association for Computing

Publications

- over 130 referred journal articles.
- over 65 technical essays.
- author of 6 books.
- editor of 4 books and 5 multimedia CD-ROMs.

11.1.2 Resume of Victor Aulestia

(410) 455-3208
aulestia@umbc.edu

QUALIFICATIONS

Strong background in Instructional Technology and Foreign Language Education developed through twenty-six years of experience in the field of Higher Education.

Expertise in all phases of Distance Education, Television Production, Videoconferencing, Audio-Visual Services, Language Laboratories, and Multimedia and Web-based Production.

International educational technology consultant.

EMPLOYMENT

University of Maryland-Baltimore County, Baltimore, Maryland. 8/72 to Present

DIRECTOR, Department of Instructional Technology, 7/79 to Present.

Television Executive Producer. Manage and provide leadership in all aspects related to the activities of a comprehensive higher education media delivery and production system:

(See <http://www.umbc.edu/oit>)

- -Audio Visual Services
- -Film & Video Library
- -International Media Center
- -Instructional Television (Distance Education: ITFS , Compressed and ISDN)
- -Teleproduction Center (Executive Producer)
- -Videoconference Services
- -Multimedia and Web-based Production
- -Consultation Services

ACCOMPLISHMENTS

Faculty Empowerment through Common Tools

- Fulbright Senior Scholar, 1999-2000. Honduras. Universidad Tecnologica de Centro America.
- EPDA Fellow, 1972.
- Planned, consolidated, and established a centralized non-printed media services to serve all academic and non-academic media needs of the university.
- Brought together under centralized management all audio-visual services, television production, film/video library and multi-media center, videoconference and distance education.
- Established several successful "profit centers" within the department in order to increase the financial resources of the department. The profits obtained from these enterprises have served to supplement the State operating budget and to continuously upgrade equipment and facilities.
- Designed and implemented the UMBC Instructional Television System for the delivery of higher education courses to remote sites via microwave and compressed and digital video.
- Designed and successfully implemented in 1980 and again in 1998 an exemplary multimedia learning center for the learning of foreign languages.
- Designed and successfully implemented an Instructional Materials Development Lab for the production of multi-media and Web-Based instructional materials.
- Designed and successfully implemented the first Videoconference Center in the University of Maryland System (1980).
- International Consultant to colleges and universities on the design and construction of media centers, computer and language labs, ITV studios, conference centers.
- Worked as a consultant for the Academy for Educational Development in two major projects: University of Puebla, Mexico. Language and Computer Labs. University of Hidalgo, Mexico. Advisor to the President. Assessment of various Telecommunication plans for Distance Education.

EDUCATION

- University of Maryland, ABD, Curriculum/Educational Technology
- West Virginia University, M.A. (EPDA Fellow) 1972
- California University of Pa., B.S. Ed. (1971)

PROFESSIONAL ACTIVITIES

- Past President International Association of Language Laboratory Directors
-

11.1.3 Resume of Roberto Bamberger

Manager, Faculty and Professional Development Initiatives
Education Group/Higher Education
Microsoft Corporation

Faculty Empowerment through Common Tools

Roberto Bamberger received his B.E.E. and PhD from the Georgia Institute of Technology in 1986 and 1990 respectively. Dr. Bamberger was an Assistant Professor in the School of Electrical Engineering and Computer Science at Washington State University from January of 1991 through May of 1997. During that period, Dr. Bamberger's research program focused on the design, implementation, and application of non-separable, multidimensional multirate filter banks, and image and video compression. In May of 1997, Dr. Bamberger assumed the role of Director of Computing and Educational Media Services for the College of Engineering and Architecture at Washington State University in order to better focus his energies on the integration and utilization of technology in the educational enterprise. As Director of Computing and Educational Media Services, Dr. Bamberger served as the College's liaison to the WSU Center for Teaching and Learning and as an advisor to the WSU's Vice Provost for Technology and Learning. Dr. Bamberger served on several committees dealing with the design and implementation of online and technology enhanced learning solutions at Washington State University. In February of 1998, Dr. Bamberger joined Microsoft Corporation where he is a Marketing Manager in the Education Customer Unit. Dr. Bamberger is responsible for shaping Microsoft's Faculty Development Initiatives.

Dr. Bamberger was founder and director of the Signal Processing Instructional Facility (SPIF Lab) at Washington State University. The SPIF Lab featured interactive multimedia based tools for teaching concepts related to linear systems theory. Dr. Bamberger was also active in developing multimedia based instructional materials for a variety of courses including introductory courses on signals and systems and digital image processing. The Educational Media Services Laboratory is a multidisciplinary, student staffed service unit within the College of Engineering and Architecture, available to the WSU community at large, to foster the and develop online and technology enhanced learning environments.

In addition to his teaching and research programs, Dr. Bamberger served as an associate editor for the IEEE Transactions on Signal Processing and is a member of the editorial board for the journal, Computer Applications in Engineering Education. Dr. Bamberger served as advisor to the WSU Student Branch of the IEEE and as the Assistant Director of the WSU Cougar Marching Band. He has worked with Asymetrix Learning Systems on the development of Internet Based Testing systems and as a technical consultant to Wolfram Research Inc. Dr. Bamberger has served as a reviewer for several National Science Foundation programs and various journals. Recently, Dr. Bamberger was a judge in the international "Paul Allen Outstanding Online Course Award". Dr. Bamberger is also a member of the editorial board of the journal, Interactive Learning Environments.

Dr. Bamberger received the IEEE Signal Processing Society Outstanding Paper Award in the area of Image and Multidimensional Signal Processing in 1995. He is a member of Phi Eta Sigma, Eta Kappa Nu, Tau Beta Pi, and Kappa Kappa Psi honor societies.

11.1.4 Resume of Zane Berge

Assistant Professor in Department of Education

Expertise: *Training Systems, Distance Education*

Faculty Empowerment through Common Tools

(Ph.D.) Educational Systems Development, Michigan State University, 1987.

Currently Director of Training Systems, Instructional Systems Development Graduate Program at the University of Maryland Baltimore County.

Between January 1992 and July 1995 served as Director of the Center for Teaching and Technology and Assistant Director for Training Services, Academic Computer Center, Georgetown University. The mission of the Center is to promote the use of instructional technology in the classroom.

Prior to Georgetown University, recruited in 1983 to Michigan State University in a highly competitive national competition for a fellowship program with the Institute for Research on Teaching.

Prior to MSU held a variety of positions, ranging from Warehouse Group Leader to Vice President, in both large and small business organizations. This background has allowed accomplishments in the areas of instructional technology, instructional design, distance education, computers in training/education, marketing, sales, accounting, and general management.

Education includes BS (1977), with highest honors in Photo management/Business Administration from Rochester Institute of Technology; attended University of Michigan Graduate School of Business in MBA program, Earned Ph.D. in Educational Systems Development, Michigan State University (1988). Majoring in computers in training and education; with minors in business, learning and cognition, and statistical methods.

Co-editor of eight books: Computer-mediated Communication and the Online Classroom Volumes 1-3; Wired Together: Computer-mediated communication in K-12, Volumes 1-4, and a new title, Distance Training (Jossey-Bass) released in late 1998.

11.1.5 Resume of Antonio Moreira

Phone: 410-455-6576 (Office)
email: moreira@umbc.edu

PROFESSIONAL EXPERIENCE

University of Maryland, Baltimore County

- 1997-Present: Vice Provost for Academic Affairs. Responsible for the academic affairs matters within the Provost's Office. All previous divisions continue reporting into the position as mentioned below, except for Continuing Education, plus now the Library and Gallery, University Computing Services, and the Center for Health Program Development and Management report into the position.

Faculty Empowerment through Common Tools

- 1995-1997: Associate Provost for Academic Affairs. Responsible for the following divisions: Continuing Education, Instructional Technology, Strategic Alliances and Partnerships, Interdisciplinary Studies, International Education Services, International Programs, Academic Outreach.
- 1992- 1995: Chair and Professor, Department of Chemical and Biochemical Engineering Responsible for all department activities (position was re-named; no change in responsibilities).
- 1990- 1992: Director and Professor, Chemical and Biochemical Engineering Program. Responsible for all department activities.

Schering-Plough Corporation, Union, New Jersey

- 1989-1990: Manager, Bioisolation Pilot Plant. Responsible for Bioisolation Pilot Plant Operations; this responsibility was in addition to the previous responsibility below.
- 1988- 1989: Associate Director, Biotechnology Department. Responsible for Technical and Regulatory Affairs for Fermentation, Cell Culture, Purification and Bioanalytical.
- 1984-1988: Associate Director, Fermentation Process Development. Responsible for Bioengineering Laboratory and Fermentation Pilot Plant.

Colorado State University, Fort Collins, Colorado

- 1982: Associate Professor (with tenure), Department of Agricultural and Chemical Engineering
- 1978- 1982: Assistant Professor, Department of Agricultural and Chemical Engineering

Education

- B.S. University of Oporto, Portugal, Chemical Engineering, 1973.
- M.S. University of Pennsylvania, Chemical and Biochemical Engineering, 1975.
- Ph.D. University of Pennsylvania, Chemical and Biochemical Engineering, 1977.

Publications: Dr. Moreira has authored or co-authored over 100 publications and presentations, including refereed papers, invited lectures, conference presentations and chapters of books.

Board member for BioScience Contract Production Corp., Greater Baltimore Committee High Technology Council, International Society for Pharmaceutical Engineering, Bio Industry Council of Biotechnology Centers.

Consultant to a number of pharmaceutical/biotech companies.

11.1.6 Resume of Bill Shewbridge

office: 410-455-3215

shewbrid@umbc.edu

EDUCATION

- M.S., Instructional Technology/Instructional Development; Towson State University 1985
- B.A., History; University of Maryland, Baltimore County 1980
- Certificate, Environmental Studies; Johns Hopkins University 1994
- Currently enrolled Doctor of Communications Design Program; University of Baltimore

EXPERIENCE

Producer / Instructor / Media Specialist

University of Maryland, Baltimore County (UMBC)

Department of Instructional Technology

October, 1986 to present

Responsible for the development and production of instructional, broadcast and institutional support media. Experienced in all phases of production including:

- program development and scripting
- multimedia authoring
- budgeting and scheduling
- field and studio production
- editing and postproduction
- program evaluation

Supervise operation of Instructional Media Development Lab. Develop courseware for campus and distance education application. Administrator of UMBC's WebCT site, an online courseware resource. Conduct workshops and work with individual faculty on integrating WebCT into existing courses. Serve as technical member of team developing online courses as part of the University of Maryland System's "Web Initiative in Training".

Media produced includes broadcast video, interactive CD-ROM, Web sites, streaming media and videodiscs. Productions have covered a wide variety of subjects, including training, public affairs, instructional materials and documentaries. Work closely with

Faculty Empowerment through Common Tools

content experts, contractors and clients in all stages of instructional development and production. Experienced in developing materials in highly technical subject areas.

Instructor/Lecturer

Villa Julie College; January, 1991 to present

Teach courses in audio and lighting for video production as part of the college's baccalaureate program in television production.

Adjunct Instructor

Catonsville Community College; January, 1996 to June, 1997

Taught a course in Video Field Production in the school's Television Production degree program.

MEMBER

International Television Association
Association for Applied Interactive Media

AWARDS

1997 ITVA Award for Excellence Multimedia - First place
1998 ITVA Award for Excellence Video - Second place

11.1.7 Resume of John J. Suess

email: jack@umbc.edu

URL: <http://umbc.edu/~jack>

EDUCATION

B.A., Mathematics 1981
University of Maryland, Baltimore County

M.S., Information Systems 1995
University of Maryland, Baltimore County
Grade Point Average: 4.00 / 4.00

PROFESSIONAL EXPERIENCE

1981-Present
University of Maryland Baltimore County (UMBC)

Current Position: Director, University Computing Services

1997- Present
Responsibilities

Faculty Empowerment through Common Tools

- Oversee department of 54 full-time staff and 100 student staff;
- Oversee budget of 4.5 million dollars;
- Develop information technology architecture for campus
- Coordinate information technology planning for the campus
- Principal Investigator on \$350,000 NSF High Performance Internet Connection

Associate Director, University Computing Services

1988 – 1997

Responsibilities

- Designed and developed campus Unix infrastructure which now supports 2000 concurrent users each day.
- Designed and implemented campus network LAN and WAN infrastructure.
- Implemented campus WWW services and initial campus WWW site.

SKILLS

Proven capabilities in:

- Unix Systems Administration, SGI and SUN
- Network Design, LAN and WAN
- Oracle DBMS Design and Administration
- Project Management and Planning

TEACHING

- IFSM 498 Unix Systems Administration (3 semesters)
- CSMC 211 Assembly Language (2 semesters)
- Sociology 497 Cyberspace and Culture (2 semesters)

11.1.8 Resume of Larry Wilt

(410) 455-2356 (office)

wilt@umbc.edu

EMPLOYMENT HISTORY

1990 -- **Director of the Library** (Acting, 10/90 - 9/91; Interim, 10/91 - 6/93)

Albin O. Kuhn Library & Gallery, University of Maryland, Baltimore County (UMBC),
Baltimore, Maryland 21250

Responsible for administration of library services and collections. 55 FTE Library and Gallery staff plus student assistants and over \$5M budget. See <http://www.umbc.edu/library>.

Achievements include: implementation of new automated library systems and services; planning and implementation of a 130,000 sq. ft. building addition; reorganization of

Faculty Empowerment through Common Tools

collections and services to realize greater efficiency; retrenchment, in the early 1990's, to provide improved services and collections despite declining resources and an increasing user population; leadership within the University System of Maryland (USM) Library Directors, especially in library automation; development of Friends of the Library & Gallery; fundraising.

1986 – 90 Assoc. Director for Collections & Access/Information Services, UMBC

1983 -- 86 Collection Management Librarian and Head of Reference, UMBC

1981 – 83 Collection Management Librarian, UMBC

1979 -- 81 Head of Reference Department, Boyd Lee Spahr Library, Dickinson College, Carlisle, Pennsylvania.

1977 – 79 Assistant Professor of Library Resources, Boyd Lee Spahr Library, Dickinson College, Carlisle, Pennsylvania.

EDUCATION

Ph.D., 1980, Philosophy, with specialties in Logic and Ethics, Indiana University

M.L.S., 1977, IU Academic Library Management, Information Science.

M.A., 1974, IU, Philosophy

B.A., 1970, Binghamton U. Humanities

PROFESSIONAL RESPONSIBILITIES (national and regional)

- USM Library Directors Review and Evaluation Team (RET).1998-
- Maryland Higher Education Commission and Congress of Academic Library Directors Task Force to Propose a Maryland Digital Library: 1998-
- Maryland Council of Academic Library Directors (CALD), Executive Committee, 1993-5, 1997-

11.2 Letters of Support

11.2.1 Coppin State College

11.2.2 Microsoft Corporation