

SUNIVERSITY OF MISSOURI SYSTEM SPECTRUM

UM demonstrates telecommunications technology

Dozens of University of Missouri faculty and staff members combined their talents and expertise in a widely-distributed interactive videoconference on "Telecommunications Technology in the Modern Land-Grant University" Monday, June 27. The program originated from all four UM campuses and from Missouri's original Community Telecommunications Resource Center (CTRC) in Poplar Bluff.

The program was sponsored by the Curators' Committee on Telecommunications Technology, chaired by James L. McHugh, chair of the committee and President of the Board of Curators. Its timing complements the work of an advisory committee recently appointed by University of Missouri President George A. Russell to study the changing role of the land-grant university in the 21st century.

The teleconference was distributed on the University of Missouri Video Network — a fiber-optic interactive video system linking the campuses in Columbia, Kansas City, Rolla and St. Louis — and was made available by satellite uplink to 88 University Extension downlink sites throughout the state. It was also available to Missouri cable systems and was available nationally through the AgSat network.

McHugh introduced the program, which was subdivided to address the three land-grant missions — instruction, research and outreach — and how they might be affected by communications technology.

The Outreach portion of the program included a live, interactive report from Tom Lawson, city manager of Poplar Bluff, and Genise Denton, Poplar Bluff's CTRC program chairperson. They joined the teleconference from the locally-funded CTRC — the first of a series of such centers designed to link Missouri communities with the University of Missouri — and sources beyond — through voice, video and data telecommunications technologies.

The two-hour teleconference included examples of innovative applications of telecommunications technology to learning, through KCEDNET, inter-campus cooperative nursing courses, music instruction and national distribution of engineering courses from UM-Rolla. □

Russell describes impact of capital bond issue on UM System

Missouri voters will have an opportunity Aug. 2 to approve a series of capital improvements designed to attack juvenile and adult crime and to improve facilities for higher education without raising taxes, according to George A. Russell, president of the University of Missouri System.



George A. Russell

"The University of Missouri has led the nation in fixing its buildings and providing for their annual maintenance and repair," he said. The bond issue, which is supported by Governor Carnahan and the legislative leadership, "would help the University of Missouri obtain its top priority building needs" Russell said, "and it would help us attract significant matching funds to complete and equip the new facilities."

The \$250-million bond issue would include approximately \$64 million to fund the following University of Missouri projects:

Library Storage Facility, UM System, \$3.1 million; Busch Natural Resources Build-

ing, UM-Columbia, \$10.6 million; Science and Technology Building, UM-Kansas City, \$21.7 million; Electrical Engineering, UM-Rolla, \$6.9 million; Land Acquisition, UM-St. Louis, \$15.8 million; Schlundt Hall Renovation, UM-Columbia, \$3.9 million; Schrenk Hall Renovation, UM-Rolla, \$2.4 million.

About \$115.8 million would be used for correctional facilities and the remainder for improvements at other public colleges and universities, including about \$5.7 million for community colleges.

For those who wish to vote absentee, ballots can be obtained by writing to the local County Clerk's office. Voters should include the correct address to which the absentee ballot should be mailed. The last day to request an absentee ballot by mail for the Aug. 2 election is July 27.

The deadline for voting absentee in person is 5 p.m., Monday, Aug. 1. Voters should contact their local County Clerk's office for more information on absentee voting. Polls will be open from 6 a.m. to 7 p.m. on the day of the election. □

Board approves FY 1995-96 appropriations request

At its July 14-15 meeting at UM-Columbia, the UM Board of Curators took the following action:

- The board approved an appropriations request for 1995-96, including an inflationary increase from the current budget year of 4.5 percent (or \$24.3 million); \$4 million for preventative maintenance; \$13 million for technological improvements to support teaching and research; and increases in funding for the State Historical Society of Missouri and Alzheimer's research. The total state appropriation request is \$346 million.
- Board President James McHugh praised University administrators for accomplishing reallocation goals set by the five-year plan. He also called the board's attention to the Aug. 2 bond issue and the possibility of a November vote on Hancock II. McHugh said the extraordinary accomplishments of the Russell administration have been "shadowed by the failure of fidelity of but a very few within this institution in whom trust has been misplaced..." — a reference to the Tutin embezzlement case.
- The board approved new general education assessment tests for UMKC, UMR, and UMSL. UMKC and UMR will use the Academic Profile Test beginning in Fall 1994; UMSL will use the Academic Profile II.
- The board approved a pair of capital appropriations requests for 1995-96 — one to be submitted if a statewide bond issue passes on Aug. 2, the other to be submitted if the issue fails. If the capital bond issue is approved by the voters, the university will request \$189.5 million. If the bond issue fails, the request will be for \$165.9 million.
- The board approved a new master plan and covenants for University Park, the research park planned at the UMKC campus, and revised protective covenants for the Missouri Research Park. □

Parks promote technology and economic development

To help fulfill its mission to serve the economic needs of the state, the University of Missouri has established two research and development parks designed to promote alliances with technology-intensive companies. A company must conduct research in association with a UM department or division to qualify to locate in either park.

"Our approach to economic development is to establish programs that are mutually beneficial to businesses and the University," says Rick Finholt, director of economic development for the University of Missouri System. "Companies are used to being solicited for contributions, but that's not what this is about. If the university is doing something that is of direct value to a company, then we propose an alliance."

The Missouri Research Park, which first broke ground in St. Charles County in the mid-1980s, has attracted eight corporate tenants who combine production and research in a unique fashion made possible through partnership with a major research university.

The tenants range from MG Industries Applied Technology Group, the research arm of a major supplier of high-purity industrial gases, to Linco Research Inc., which produces materials needed for diabetes research. Other enterprises combine research and development with production techniques. For example, Pohlman Inc., which uses advanced machine tools to produce high-precision parts for the auto air-bag industry, maintains metrology and gauge laboratories and an engineering staff to study better ways to produce machined parts.

The research park tenants benefit from their relationships with public and private university experts. Zoltek Corporation, a maker of high-tech carbon fibers for the aerospace industry, is working on a joint project with researchers at Washington University and McDonnell-Douglas. The project has been awarded a \$4 million grant from the federal government. Linco is supplying diabetes reagents to researchers at the UM-Columbia School of Medicine, a national leader in the field of diabetes research. Pohlman Inc. has a contract with a UM-Rolla program, Demonstrating Manufacturing Technology (DemMaTec), jointly developing a deburring process for precision-machined aluminum parts.

St. Charles County has benefitted from the jobs being brought to the area by the Missouri Research Park — more than 700 by the end of 1994. The advantages offered to

firms as an incentive to locate at the park result in high-tech jobs for Missouri.

Development at MRP has proven beneficial to the state of Missouri in other ways. Zoltek Corp. relocated its carbon fibers plant from Lowell, Mass., and MG Industries relocated its research center from Valley Forge, PA. And because MG Industries built its national research center at the park, it's hoped that one day they will locate a midwest production facility in Missouri. The research and development being conducted at MRP could result in new products and processes that will someday be manufactured in the vicinity of the research center.



"There is no other facility like the Missouri Research Park in the St. Louis area," says Finholt. "The fact that we've been able to pull in eight companies in the last three years is evidence of the fact that we're creating an environment high-tech businesses find attractive."

Locating in the research park offers many advantages to these companies, Finholt says. There is the prestige of being associated with a major research university, and the possibility of cooperative programs with students or faculty consultants. Or a company that locates in one of the University's research parks could establish a full-scale research contract with a University division, as Novus International has done with the MU College of Agriculture.

A critical need of research companies is the ability to provide state-of-the-art training. Being associated with the University offers access to the best training facilities available. By way of interactive video, companies can utilize resources at any of the four UM campuses.

"We have the ability to create alliances that are of real dollar value to companies," Finholt says. "They can teach a course designed for them under our auspices and give academic credit for it. It's another way to attract and retain people."

Income from the Missouri Research Park also generates funding for research on the four UM campuses. Proceeds from the park have funded a \$1 million endowment for the University of Missouri Research Board, a panel of faculty members that makes competitive awards of crucial start-up funding for promising new research projects.

In addition to pulling dollars into the state, the University's economic development programs work to preserve existing companies. In Kansas City, the University recently has begun to develop University Park, a research park adjacent to the UMKC campus.

"We see the park in Kansas City as an urban redevelopment project," Finholt says. "It is located in the geographic center of Kansas City, Mo., in an area threatened by urban blight and the loss of good-paying jobs to suburban developments. University Park is intended to help rejuvenate that area by providing an attractive location for research companies and University-related organizations."

And, if you can keep a knowledge-intensive technology center within the city, then hopefully you have a good chance of keeping a production facility there as well, he says.

A recent study on the potential economic and fiscal impact of the development of University Park found that the park could accommodate 6,000 employees, if it was fully developed.

The combination of a construction program and building occupancy over 15 years would yield a cumulative economic impact on the Kansas City regional economy of approximately \$6.8 billion (in constant 1993 dollar values).

Possible tenants for University Park include the Kauffman Foundation of Kansas City. The late Ewing Kauffman endowed the foundation to address two areas he considered critical to the U.S. economy: philanthropic youth development and entrepreneurial activities. The foundation administers grants of about \$65 million a year for projects that directly benefit children and entrepreneurs and will have a long-term positive impact on the state's economy. □

UM to study state-wide telecommunications

Governor Mel Carnahan and the state legislature have asked the University of Missouri to study options for providing a state-wide telecommunications system that would make available to Missouri's citizens state-of-the-art business, education, telephone, cable and health services.

The University will provide information and analyses that will be useful to state officials in shaping public policy governing a telecommunications infrastructure.

State planners want to develop an infrastructure that will promote economic development, link Missouri with the national "superhighway," and provide

businesses and homes access to an increasingly sophisticated and complex array of information services.

The state is providing a \$100,000 grant to cover part of the project's cost. Because of its corresponding interest in technological initiatives, President George Russell said the University would commit a matching amount to the project.

The University's Vice President for Academic Affairs, Dr. Richard Wallace, is serving as the project's principal investigator. Wallace told the Board of Curators July 15 that he expects to submit the final report to state officials by Nov. 15. □

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