

## **WAYNE STATE UNIVERSITY ENTERING "SPACE AGE" WITH ELECTRONIC PUSHBUTTON TEACHING SYSTEM**

*—Tele-Norm System Expands Capacity Without Adding to Staff—*

Detroit, Michigan—Over thirty-thousand students at the century-old Wayne State University here are now able to catch up on missed lectures, cram for exams, or enrich their normal studies by merely pushing buttons at several locations on the 180-acre campus.

This was made possible by the application of "space age" technology to some of the most pressing problems of modern education—soaring enrollments, the knowledge explosion, and a degree of faculty shortage.

Wayne State's newest facility, called the Tele-Norm Electronic Dial Access Information Retrieval System, will allow 159 students at pushbutton dial stations in nine different buildings to instantly tune in on any of 134 pretaped lesson programs. These lessons, easily changeable by faculty, are located in the Systems, Distribution and Utilization Center.

The dial access system is made up of three basic components: (1) automatic audio tape decks; (2) sophisticated switching equipment; and (3) remotely located student carrels equipped with headsets and pushbutton dial units. All elements of the dial access network are interconnected by lines leased at moderate rates from the public telephone company.

Six of the stations are in classrooms where the teacher can dial in the selected instruction material and feed them over a public address system to hundreds of students. All the rest of the pushbutton panels are in individual booths, or carrels.

Further, a study is being undertaken to determine the feasibility of the use of trunk lines of the public telephone company to connect remote learning stations to the system. Six student carrels will be located in the clinical areas of Hutzel Hospital which is located in the new medical center. Medical students will then have the capability of retrieving medical lessons as well as the other learning materials available on the system—thus broadening their cultural experiences beyond the scientific disciplines.

The taped programs, located at the Center, include the whole spectrum of University education from English Literature and Greek Philosophy to Baroque Music Appreciation and Meteorology. Nearly all programs are prepared by Wayne State staff faculty.

The system, completely automatic, is equipped with metering devices which record frequency and duration of programs selected and the number of "customers" on each.

The value of dial access instruction was proved at Wayne State with a small electro-mechanical system which is now being replaced by the Tele-Norm System. Students were generally enthusiastic and many claimed better learning and retention because of the direct individual impact. Instructors were relieved of many routine and repetitive classroom exercises and could devote more time to creating new curriculum material and to working individually with students.

The new Tele-Norm System, being fully electronic, is almost unlimited in its flexibility and expansion modes. Since there are few moving parts—and all main parts are modular plug-in type—maintenance is almost eliminated. Its reed relay switchings designed to operate for billions of operations.

This system is only the beginning of what may become a community-wide, even nation-wide, audiovisual system of information retrieval.

Dr. Thomas Roberts, Director of the Systems Center, said the University is considering expanding the system to an additional 2,000 student stations for use in instruction. Four hundred more stations are planned specifically for a foreign language laboratory.

Video monitors may soon be added to the audio positions, he said, and the entire system may be eventually interconnected with the public phone system. This would allow any student or faculty member in the greater Detroit area to simply dial his home phone to select the program or taped information needed.

To claims that "machines are taking over for people," Dr. Roberts said it was just the other way around. "This Tele-Norm System," he said, "will actually multiply the good teacher and provide sorely needed individualized instruction for many more students." He also pointed out that Wayne State's curriculum could be enhanced without necessarily adding new specialists to the faculty.

Looking to the future, Dr. Roberts predicted that universities all over the nation would soon be linked by such systems to share each others' resources. He also foresees dial access networks being used by industrial and business concerns to central information banks; by cities as a training network for hardcore unemployables; and as an efficient access to stored records and statistics at a regional headquarters by community governments.