

MINUTES OF THE House COMMITTEE ON Computers, Communications & Technology

The meeting was called to order by George Dean  
Chairperson

7:30 a.m./p.m. on March 5, 1991, 19\_\_ in room 529-S of the Capito

All members were present except:

Committee staff present:

Norman Furse, Revisor of Statutes  
Julian Efird, Research  
Mary Valdivia, Committee Secretary

Conferees appearing before the committee:

Mr. Carl E. Locke, Jr. Dean, School of Engrg.  
Director, Center for Research Inc.  
Dr. Julian C. Holtzman, Director  
KTEC's CACASE, KU

Meeting called to order by Chairman George Dean.

Chairman Dean introduced Carl E. Locke, Jr. Dean, School of Engineering, Director, Center for Research Inc., and Dr. Julian C. Holtzman, Director, KTEC's Center for Excellence in Computer Aided Systems Engineering (CACASE), KU, Lawrence, Kansas.

Mr. Locke gave a brief history of how KTEC's center came about.

Universities are adding an additional mission. The universities have adopted various economic development legislative packages which call for activities at the universities a little different from that in the past. The fundamental mission in these cases is to have activities that can relate directly to economic development.

Universities have been involved in economic development for many years through the fruits of their education as well as some of research results eventually making their way into business. However, this particular mission given by the state agencies around the country encouraged more and more economic development type activities. When it became known that KTEC was going to add an additional center of excellence in addition to the ones in existence throughout the state, we began looking at our strengths and began examining activities that occurred in the university that led to economic development type activities.

One such activity was development of a computer software package by a faculty member package under contract with a company from the west coast, TRW. As part of this development contract from TRW the university acquired the rights to market that particular software and TRW retained the rights.

A spinoff company was formed and the software was licensed this company. The spin off company has now been purchased by a national organization who established and maintains an office in Lawrence. This local office is now working with about twelve engineering positions that did not exist three or four years ago.

In reviewing these developments it was felt that there was expertise within the School of Engineering and Computer Science Department that could do other developments of similar nature. Have worked with industry throughout the state for last year and a half as to what they needed and out of this came the Center for Excellence in Computer Aided Systems Engineering (CECASE). This has been in existence for a little over a year.

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Dr. Holtzman gave a brief report about the mission of this center as well as the activities.

The center is about the marriage of computer and telecommunications technology. The experts develop the technology and engage in technology transfer to enhance the economic status in Kansas. We have organized into three types of activities.

- 1) Research: The type of research engaged in and sponsored is research with commercial potential, investment grade technology. Software is developed to the point of a prototype that can be licensed to a Kansas Company, a spinoff company can be created, and then this prototype is further developed, productized, marketed and maintained. These are not university functions.
- 2) Applied Research and Development: Predominantly working with Kansas companies that do not have engineering staff to complete or improve products or make new products. These companies have good ideas they can only carry so far, but do not have the necessary staff to develop them further. Through joint projects, some partially funded by the company, some receive KTEC's matching research grants funds. KTEC works with them to develop their product which remain with the company.
- 3) Technical Assistance: Provide technical assistance, consulting type of services and general type of services to the many small Kansas industries in software telecommunications, areas of expertise of the faculty in the five Engineering Departments and the Department of Computer Science.

The first year the center received \$150,000 in core funding and had a rather successful year. This was leveraged with about \$400,000 from external sponsors. Funding was increased to \$300,000 the second year. The core funding money has gone predominantly to the research projects and building an infrastructure. In the last two years have invested \$170,000 and \$270,000 in computer and communications equipment. Of that total which is in excess of \$400,000, about 70% came from industry matching, 20% came from the university and other from CECASE funds.

We not only provide technical assistance, but provide facilities on a non-competing basis.

Mr. Locke discussed other aspects of CECASE.

One of the first projects to come out of CECASE in a commercial way was development of aircraft software by a faculty member. It began as an educational venture by writing a series of books on aircraft design, then decided it would be better to computerize this bookshelf full of designs. It was computerized using some support from General Dynamics in Ft. Worth.

As part of the deal General Dynamics got the Software and from our standpoint the University acquired the rights to do with the software whatever we wanted to do. As a result a small software company has been formed in Lawrence in order to further develop and sell the software. We possibly have an interest from SAAB in Sweden to handle the first sale of this software.

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Mr. Locke discussed the controversy involving engineering equipment fees. These fees allow all engineering institutions to maintain, operate and replace lab equipment and computers. KU will spend half for lab equipment that goes into the various instructional laboratories and the other half for computing that is also being used by the instructional needs. If lab fees go into place the funds will be distributed 1/3 to Engineering Department to maintain, operate and replace some school wide laboratories, approximately 2/3 will go to each department based on credit hours generated in that particular department. In each level, the department level and school level, we will be involving the students in helping us to determine where those will be used. The faculty and administration retain final decision as to what is done but we are getting student input.

Computers will continue to proliferate, everyone will have one, and will see a revolution on how we educate engineers. Before long will see students walk into classroom with small notebook type computers with a lot of software at their fingertips.

Same thing will be happening in the work place. Computers will help do jobs in a better way. Will continue to see software revolutions. More time will be spent with students on how to use software packages. Will continue to see more powerful software packages and lower cost. Maintenance of the hardware is not the problem, but the maintenance of the software is becoming more and more of a problem. There are always new updates of the software being made and will have to keep spending money on software maintenance.

In telecommunications it will be the same as in computers. Wireless communications is one aspect being talked about by United Telecom.

Assistance is drawn from staff and graduate students for all the applications that we have requests for. As time progresses and the center has a firmer funding base we hope to hire some engineers, BS and MS level engineers, to provide technical assistance to companies up to the point where it could possibly be a self paying venture, we will then spin off a company and they will operate as a consulting company.

Budget for the Center: Started at \$150,000, this year it is \$300,000 from the state. Number of permanent employees 1-1/4 to administer activities in the Center. The rest of the people involved in research or research support number about 6 or 7 people.

All licensing has been done in Kansas. There was one that was licensed as a spin off company and sold to a nationwide company, but as part of the sales arrangement the company agreed to maintain the office and expand in Lawrence.

The Center develops software but does not develop chips, however this may change. The first software package developed by the Center was licensed and licensing income from that particular software was received. New software packages will receive a portion of each sale as a license comes back to the university and the university has intellectual rights to that software. Income goes back to the Center and the University. There is an arrangement in the policy of the University to share income among the various groups that had input.

There is a small research group working on more exotic techniques of wireless communications.

Minutes of February 19, 20 and 21, 1991, meeting were approved.

Next meeting Wednesday, March 6, 1991, 7:30 AM, 529-S.

Julia Hein	Topeka	Unisys
John C. Bottenberg	Topeka	Self
Bob A. Russell	"	KIDOR
Lewell Johnston	"	KSDE
Mawin Trout		IBM
MATT BRUER	TOPEKA	DSI
Julian Halgeman	Lawrence	KU
Carl Locke		KU
Jim BOSSERAND	Lawrence	KU