

Approved: February 5, 2007

Date

MINUTES OF THE HOUSE GOVERNMENT EFFICIENCY AND TECHNOLOGY COMMITTEE

The meeting was called to order by Chairman Jim Morrison at 3:30 P.M. on January 29, 2007, in Room 526-S of the Capitol.

All members were present except Representatives Ruiz, Wilk, Frownfelter, and Tafanelli, all of whom were excused.

Committee staff present:

Mary Galligan, Kansas Legislative Research  
Tatiana Lin, Kansas Legislative Research  
Renaë Jefferies, Office of Revisor of Statutes  
Gary Deeter, Committee Assistant

Conferees appearing before the committee:

Jerry Smith, Pittsburg State University  
Jim Bingham, KU Medical Center  
Ravi Pendse, Wichita State University  
David Schmidt, Fort Hays State University  
Sue Peterson, appearing for Beth Unger, Kansas State University  
Denise Stephens, University of Kansas  
Bruce Vieweg, Emporia State University

Others attending:

See attached list.

The minutes for January 24 were approved. (Motion, Representative Loganbill; second, Representative Sharp)

The Chair noted that a Calence study of the KAN-Ed, KANREN (Kansas Research and Education Network), and KANWIN (Kansas Wide-Area Information Network) networks is due March 1, a study which will assess duplication of services, inefficiencies, and opportunities for coordination.

The Chair expressed appreciation for the document provided by the Kansas Board of Regents CIOs (Chief Information Officers) dealing with collaboration among the Regents institutions (Attachment 1).

Jim Bingham, University of Kansas Medical Center (KUMC), stated that the Regents Information Technology Council (RITC) is composed of the CIOs of each Regents institution and that members meet on a monthly basis to share ideas and collaborate on initiatives and programs. He noted that IT is driven by programs, not the inverse, and that IT facilitates collaboration. He cited the nurse-practitioner partnership among KUMC, Wichita State, Pittsburg State, and Fort Hays State, noting further the security officers who meet each month with the Executive Chief Information Technology Officer, Denise Moore.

Jerry Smith, Pittsburg State University, who organized the collaborative testimony, contrasted Regents

## CONTINUATION SHEET

MINUTES OF THE House Government Efficiency and Technology Committee at 3:30 P.M. on January 29, 2007, in Room 526-S of the Capitol.

institutions with a business model, observing that a business model often emphasizes competition, whereas the Regents emphasize cooperation and collaboration through peer relationships. He cited the document imaging system initiated by Wichita State which was then adopted by other universities.

A significant issue was identified during Committee discussion with the conferees: the need for more bandwidth at several universities. Ravi Pendse, Wichita State, noted that limited bandwidth is a barrier to building a back-up system. Denise Stephens, University of Kansas, said KU is approaching a saturation point, a problem that threatens to bring down the university IT system, since instruction is increasingly media-rich, students are increasingly computer-savvy, and research often requires transfer of large amounts of data. Mr. Smith added that costs inhibit expanding bandwidth, and sometimes connectivity is deterred because a larger data pipeline is inaccessible. Ms. Stephens commented that university bandwidth capacity is one factor in awarding research grants.

Members discussed the possibility of a central planning authority to deal with IT issues and considered a "supercomputer" system for central data processing and research. Mr. Smith replied that Kansas does not have one university with multiple campuses, but six different universities, each with a uniquely complex environment; centralizing could create inefficiencies. He cited KU's use of PeopleSoft, which, if imposed on Pittsburg State, would complicate IT applications. Mr. Pendse cited collaboration between Wichita State and Emporia State in building a system that saved about \$500,000 in costs. A member questioned whether any research had been done to establish the value of a central processing center; he requested that staff determine if a California proposal to centralize computing ever materialized.

Further discussion regarding bandwidth elicited comments from conferees that often the pipeline exists, but contractual limitations keep universities from accessing it. Committee members noted that perhaps the legislature could address the contractual issues to facilitate connectivity. Bruce Vieweg, Emporia State, observed that the Calence study may also offer solutions.

Responding to a member's question, Mr. Bingham referenced Attachment 2, contrasting distributive systems with centralized systems, noting that centralized systems often cannot be integrated at the university level; he cited the KUMC system, which includes 100 custom modules and eleven interfaces with other systems that are specific to KUMC.

A member asked what was being done with VOIP (Voice-Over Internet Protocol). Mr. Vieweg (ESU), Mr. Pendse (WSU), and Ms. Stephens (KU) said it is being tested at their institutions. Mr. Bingham said KUMC is presently deploying it, a process to be completed within three to four years.

The meeting was adjourned at 5:05 p.m. The next meeting is scheduled for Tuesday, January 30, 2007.



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**Regents information Technology Council (RITC)**

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Testimony before the House Committee on Government Efficiency and Technology

January 29, 2007

Jim Bingham, KU Medical Center  
 Ravi Pendse, Wichita State University  
 David Schmidt, Fort Hays State University  
 Jerry Smith, Pittsburg State University  
 Denise Stephens, University of Kansas  
 Beth Unger, Kansas State University  
 Bruce Vieweg, Emporia State University

As the Regents Information Technology Council Chair and on behalf of the Regents Universities, it is my pleasure to submit this information to the House Committee on Government Efficiency and Technology in advance of our meeting on January 29<sup>th</sup>, 2007.

This is not meant to be a comprehensive list, but instead give the committee members a feel for the significant level of collaboration that is occurring between the Universities at many different levels. There are some comments at the end of this list that will provide the Committee some background on further collaborations and the uniqueness of needs placed upon the University computing environment.

- ESU partnered early with WSU on administrative systems implementation. This partnership resulted in substantial savings of time and lowering of risk of project failure for ESU.
- Shared Primary Care Nurse-Practitioner technology-enabled teaching program includes KUMC, Wichita State, Pittsburgh State, and Fort Hays State (online and interactive teleconferencing).
- RLDC (Regents Libraries Database Committee—29 Kansas libraries including Regents Universities, community colleges, private academics, public libraries, vo-techs, and the Kansas State Library) negotiates joint aggregate purchase of electronic databases (FY 2007 covers 24 separate electronic resources) at discounted rates.
- K-INBRE grant (all Regents Universities plus Haskell, Washburn, and Langston University, Oklahoma). *“The purpose of the Kansas INBRE (K-INBRE) is to strengthen the ability of Kansas researchers to compete effectively for NIH funds by building a "critical mass" of junior and senior investigators as well as undergraduates, graduate students and post-doctoral fellows supported with cutting edge technology within a scientific research theme”*. K-INBRE collaboration is enabled by videoconferencing; one of its key functions is to assure that researchers have state-of-the-art computational equipment.
- KU and KUMC have worked closely on PeopleSoft Student Administration System (4 campus implementation in Lawrence, Kansas City, Wichita, Overland Park), Voyager Library System (4 campus implementation), extensive shared investments in electronic journals, complementary portal development (shared tools, features, etc.), and have a general history of joint research and planning on a number of IT issues (specifically data warehouses, reporting datastores, directories, groupware, network issues, and others).
- FHSU and other Universities have worked closely with each other and the state on interfaces to state systems (SHARP). FHSU and ESU programmers have worked closely together to collaborate on code. WSU provided ESU additional code support.
- KU and KSU have agreed to shared housing of library materials in KU's new high-tech Library Annex, opened in 2006.

*Attachment 1  
 GE+T 1-29-07*

- WSU supported ESU as their “grant support team” with weekly meetings to certify their progress.
- There have been a variety of contracts with vendors -- that have been accessible to other Universities. WSU found a certain vendor/application useful and then shared their experience with RITC. As a result the ImageNow document imaging system was implemented at several universities. In this type of situation, contracts are routinely worded so that other universities can take advantage of better terms and pricing.
- FHSU Avaya system telephone staff work with KU, KSU, and WSU on coordinating upgrades and diagnostic issues. FHSU and PSU also work together on telecommunications issues and jointly develop Nortel service contracts with the Department of Purchasing.
- KU and K-State IT administrative staffs meet 1-2/month. User services and other support staff at KU and K-State also meet regularly to share information.
- KSU has worked closely for Access US course delivery with FHSU, WSU, and ESU on technology and other issues.
- IT Security officers meet as the Regents Information Technology Security Workgroup to discuss security issues and procedures.
- Regents Universities host a yearly “CHECK” conference to share best practices on wireless implementations, data warehouse implementations, ERP implementations, security practices, etc. (CHECK = Conference on Higher Education Computing in Kansas). This conference invites ALL higher education in the state, not just the Regents Universities.
- Regents Universities worked together (with KU in the lead) to establish a software Large Account Reseller (LAR) agreement for ALL state agencies.
- KanREN – In 1993, the Regent Institutions, lead by the University of Kansas, formed the Kansas Research and Education Network (KanREN). KanREN provides a high-speed network and high capacity network backbone connecting its members across our state. It also provides broadband connection to both the commercial Internet and to Internet2 – the research Internet – to all Regent Institutions, as well as member K-12 School Districts, Private Colleges, and Public Libraries. The CIOs from the Regent Universities are permanent members of the Board of Directors of KanREN, which is a 501 (c3) not-for-profit organization. Bruce Vieweg currently serves as Board Chair.
- Regent Security Assessment Methodology – This substantial methodology was developed by the University of Kansas and Kansas State University, with input from all of the other Universities. This assessment methodology is used each year to conduct required security evaluations for each of the Regent Universities. Results are provided to the Board of Regents.

Additional Information:

Over the years a question has been asked by many governance groups: "Why don't the Regents Universities all use the same hardware/software?" The question is normally asked in the context of discussions that are exploring ways to ensure the most efficient use of resources among the Regents IT enterprise. Throughout the years there has been an *assumption* that the utilization of the same software or hardware would result in greater financial efficiency. As frequently discussed in RITC meetings, this is not necessarily the case. Given the complexity of the technology and the needs of the campus, use of the same software may or may not be more efficient.

There are differences in the universities: size, complexity, and the nature of the programs being the most obvious. Hardware and software is most efficiently utilized when it is matched to the specific purpose it serves. Size is an important difference, particularly the size of the student population of each institution. Complexity is also important in the number of academic programs supported and also the nature of those programs. Some professional programs required curriculums that have a great deal more complexity than a typical undergraduate major. In addition, three of the Regent's Universities support a research enterprise that requires its own administration in accordance with federal laws and two institutions support operations for human and veterinary medicine. These differences are particularly important in the provision of administrative systems (financial, human resources and student) and the systems that support the research enterprise. Software complex enough to serve one institution may, in fact, be an "over provision" for another institution that only has needs for a more simple set of capabilities. Therefore a use of the same software could, in fact, increase cost for a smaller institution. In addition, since many information technology problems must be solved in the local environment, implementation of a complex system at a smaller university would require that staff expertise be onsite to support the system.

The IT managers of the Regents Universities have chosen a path of close cooperation to take advantage of those areas where it does make sense to cooperate and to take our own individual paths when that is the most cost efficient option. The following actions are taken to ensure the best cost efficiency:

- We participate in buying consortium activities both within the state and with larger regional organizations. Within the state the Regents Universities utilize extensive the state contracts which are bid and offered by the Division of Purchasing. In fact, members of RITC drafted specifications for the *first* statewide microcomputer contract in 1982, and have drafted subsequent specifications for many statewide contracts for both software and hardware. In addition, we have constantly sought to use the power of consortium buying through joint contracts (utilized extensively for database content) and through the provision in contracts that offers "deals" gained by one institution to be offered to the others. Given the small size of our state it has been wise to participate in regional organizations that can bring the power of consortium buying to our advantage. We participate in many of these organizations the most notable being the Midwestern Higher Education Commission and the Greater Western Library Alliance.
- All universities buy hardware and software that meets national IT standards. This ensures that systems can "talk" to each other and that data can be moved between systems as needed. Programs such as the Board of Regents post secondary database that track students as they move through Kansas higher education institutions are possible because we are careful about standards compliance. "Standards" allow us to gain the advantages of having the same software, but at the same time enable appropriate systems for the individual institution. Regents Universities have, in fact, been the catalyst and the leader in the establishment of several IT standards that have been adopted nationally.
- The Regents Universities share staff expertise and customized programs extensively as we find we have common needs and functions. There is extensive staff consultation and sharing of technical solutions and programs at the lowest staff level as well as the managerial communication that takes place at the monthly RITC meetings.

- Given our role as the educational and research institutions of the state, we have also developed technology that has then proven to be cost effective for the state. Our contributions to the development of Wide Area Networking (WAN) through Internet 1 and Internet2 at KU, K-State and WSU are examples of the contributions that the research and development teams of the Universities have contributed to the state.
- Collaborative activities at Regent's Universities have also been the catalyst for the deployment of new technologies within the state. In the 1980's RITC (formerly RCAC) motivated the creation of a regents-wide computer network based on technology by A.T. & T., following the installation of new campus telecommunications systems. KanREN is another example of this type of collaborative development which was discussed above.

In summary, the Regents Universities have closely cooperated for a number of years and through oversight at the Board of Regents have maintained a cost efficient profile of information technology services for our campus communities. Close cooperation with state agencies on projects such as the state-wide technical architecture as also ensured efficiency in utilization of resources allocated to IT functions.

Technology planning and deployment is a significant challenge at every university whether large or small. In years past, technology (particularly computer hardware) was a very limited and expensive resource, and many business applications were designed around the technology rather than the business objective. Since the development of micro computing, computer hardware has in most cases become a commodity. Today, the planning process at our universities looks at the business and program needs first, and then seeks to identify and deploy the technology required to meet these objectives.

This does not mean that our universities no longer seek to collaborate or jointly develop shared technology infrastructure. But it does mean that in today's environment where computing hardware only has a short lifecycle and makes up a relatively small proportion of a project's total cost, the economies of scale that existed for shared computing centers and systems is much less. Development speed and flexibility is more likely the key to the success in today's environment, and a "just in time" approach for procurement of computer hardware is more likely to deliver the best return on investment.

At the current time, large scale collaboration between Regent's Universities is likely to be most productive in the area of shared infrastructure development, especially in wide-area network planning and deployment. For the past 18 months there has been a RITC sub-committee working on a plan for the next generation of wide-area networking. We are currently in the process of integrating these needs through collaborative planning with KanEd, DISC and KanREN.

While the Regent Institutions cooperate in a significant number of areas, we also need to say something about how our institutions compete. We compete for the best Kansas students, the best out-of-state students, the best faculty, the best staff, the best "distance students" and particularly for our Research Universities, for the best grants and contracts. This is a healthy competition that strengthens each of our institutions and also recognizes the unique roles and responsibilities of each of our universities to serve the citizens of Kansas, the United States, and increasingly the World.

We look forward to meeting with the Committee, and hope this information provides some insights to the respected Members.

Jerry Smith, CIO  
 Pittsburg State University  
*RITC Chair*

Centralized or distributed? Some principles in implementing administrative systems, with examples from the KU Medical Center

Jim Bingham  
Associate Vice Chancellor for Information

Resources

University of Kansas Medical Center

When considering the implementation of a key administrative system (for example, a financial system, a human resource system, a payroll system, a student administration system), 4 principles need to be kept in mind:

1. There is an *inverse* relationship between the span of a system (how many functional entities are served by it) and the granularity of the information it provides.
2. There is an *inverse* relationship between the span of a system and the degree to which it may be customized to meet the specific functional needs of each entity.
3. The acquisition of and implementation of a software package is frequently confused with the development of a functioning system of which the software is an integral part but only a part.
4. Thus, while implementing a system at a relatively high level (for example, statewide), may result in less cost than implementing multiple systems at a lower level (for example, individual university level), the actual functionality provided by that implementation is substantially less and, thus, its value to the entities that use it greatly reduced.

Here's how these principles play out at KU Medical Center.

At KU Medical Center, we've run the PeopleSoft Human Resources/Payroll system since 1995 and PeopleSoft Financial System since 1999. (We also share the PeopleSoft Student Administration System with the Lawrence campus, but that's a story for another day).

We have created more than 100 "bolt-on" modules for our PeopleSoft systems which provide various types of functionality not provided by the PeopleSoft software (note bullet 3 above). This functionality includes:

- Budget module
- Leave accrual
- Time and labor reporting
- Phased retirement reporting
- Compliance module
- United Way
- F & A (for federal Indirect Costs associated with federal grants)

And many, many others.

We have built interfaces into at 11 other systems which provide various kinds of special

Attachment 2  
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functionality and then connect to PeopleSoft for added functionality. These systems include:

- Facilities Management
- Laboratory animal management (Sirius—see below)
- Micro Core Facility
- Information Resources
- Biotechnology
- Telecommunications management (Kansas City campus)
- Telecommunications management (Wichita campus)
- MIP (a KUMC Research Institute system)
- Graduate Medical Education (Akcia—see below)
- PeopleSoft Student Financials (financial information from the PeopleSoft Student administration system housed at the Lawrence campus)
- PeopleSoft Payroll

Here are two examples of how these interfaces work:

1. We use the Sirius system to manage our extensive and highly regulated inventory of laboratory animals. Sirius provides functionality including protocol management, animal procurement, cage card generation, animal and cage census, diagnostic lab & pathology, animal records, personnel training tracking, and associated financials. We connect the Sirius system to PeopleSoft so the financial transactions it handles at the detail level are incorporated into the University's larger accounting and receivables transactions and, thus, managed as a sub-area of the University's budget.
2. We use the Akcia system to manage our Graduate Medical Education (that is, Residency) teaching and clinical care program. Akcia provides scheduling of Residents, duty hours tracking, clinical activity tracking, reimbursement (that is, from Hospitals who use our Residents), and many other features. We take the information about how and where the Residents spend their time; do some magic to it in our data warehouse that converts it into billing information; and then import that information into our PeopleSoft Financial system where we generate bills; track receivables; age the accounts, and (ultimately) recognize revenues and create high-level reports.

Not only have we incorporated more than a hundred locally-developed modules into our PeopleSoft systems and built connectors to other local systems, we have also implemented PeopleSoft modules which state agencies would derive no benefit from. We implemented the Grants Module to enable the KUMC Research Institute—a private, not-for profit entity—to manage grants within the PeopleSoft framework. And we have integrated the Research Institute's grant accounting into our PeopleSoft Financial system so we can get the "big picture" of financial information.

Despite this kind of customization, some of our schools and departments have discrete transactional and information needs that PeopleSoft cannot accommodate. There are literally dozens of "shadow" financial systems in use that provide essential operational functionality because it is cheaper to build the shadow systems than to customize PeopleSoft to provide that functionality. Generally these systems either provide more detail than PeopleSoft or they provide specialized reporting required by auditing, regulatory, or accrediting agencies. These

systems complement our PeopleSoft system in a way not very different from how our PeopleSoft systems currently complement the State's payroll system. They are not redundant and they are not wasteful. They are essential parts of our educational, research, clinical and administrative business operations.

So we have taken the PeopleSoft software and used it to build a financial system (bullet 3 above) that meets innumerable unique and essential business needs of the KU Medical Center. We have augmented it with other systems where appropriate to create an elaborate web of computing systems that perform essential business operations. We prefer to modify PeopleSoft when possible because we benefit from the integration, but the cost/benefit equation drives the outcome.

A financial system implemented at the state level may very well meet the state's high-level needs for financial management and reporting but it will be woefully ill-developed to meet the University's needs ("inverse relationship" bullets 1 and 2 above). There is no way a state-level system can provide even a fraction of the functionality provided by systems distributed at the university level.

And, even if it were able to do so, it would take decades for it to actually get done...decades better spent building next-generation administrative systems *for the State* instead of redeveloping and re-implementing less effective versions of systems already built at the University level.