ILLINOIS CENTURY NETWORK

MARCH 27, 2002 POLICY COMMITTEE MINUTES

The meeting was called to order by Mary Reynolds.

Members present: Lugene Finley, Illinois State Board of Education; Mary Reynolds, Governor's Office; Keith Sanders, Illinois Board of Higher Education; Don Wilske representing Joe Cipfl, Illinois Community College Board; Bruce McMillan, State Museum; and Michael Schwartz, Department of Central Management Services.

Others attending included: Anne Craig, Illinois State Library; Todd Hart, Illinois Health Education Consortium (AHEC); Dan Layzell, Illinois Board of Higher Education; Alice Engle, Department of Central Management Services, Neil Matkin, Karlin Sink, Lynn Murphy, Lori Sorenson, and Rebecca Dineen all from the Illinois Century Network.

1. Policy Committee Minutes

Staff requests the adoption of the November 14, 2001 and November 29, 2001 meeting minutes.

Motion: Keith made the motion to adopt both sets of minutes; Lugene seconded.

Keith moved that the ICN Policy Committee adopt the November 14, 2001 and November 29, 2001 minutes with any edits as noted. (No edits were noted.)

Motion carried.

2. Announcements

Mary announced that Tech Day 2002, which is sponsored by DCCA and the Illinois Coalition, is Wednesday, April 3rd at the State Capitol. Various high-tech companies, bio-tech companies, and the major research universities will be present. The Governor may be involved as well. Mary also commented about the state budget situation. In relation to the ICN, Mary said that the staff would have to continue to meet the growing needs of constituents while operating within current budget allocations or less. Neil stated that this might prove difficult given current growth trends and market pricing and cited dark fiber as the best option to accommodate growth with limited resources.

3. Remarks

Neil thanked Alice Engle and her staff for their work with the ICN in procuring services between Macomb and Springfield this week. Neil offered special thanks to Tim Fox in appreciation of his efforts in that project.

The ICN has been notified that it will receive a donation of equipment from CISCO Systems, Inc. that will create one of the most advanced fiber optics labs in the Midwest. As the State of Illinois, including CMS and the ICN, start determining the best way to operate state dark fiber resources, this equipment will prove to be very beneficial. The donation has already attracted national press attention from CIO Magazine and InfoWeek. Neil indicated that the press picked up stories about donations of this size.

Neil announced that today, Mike Bernico, an ICN engineer, became nationally certified as a Dense Wavelength Division Multiplexing Dark Fiber/Fiber Optics Engineer. The entire ICN is pleased with Mike's accomplishments as the staff begins to move toward utilizing dark fiber.

4. Regional Technology Center Grants

Lynn explained that this item seeks the renewal of the ICN Regional Technology Center (RTC) grants established two years ago. Having staff in regional areas to provide local support has proven to be extremely valuable. The RTCs have been remarkably successful, and well received by ICN constituents. The availability of local support provided on a regional basis is a unique characteristic of the ICN that other statewide networks admire and are working to emulate. As part of the continued funding for the RTCs, the ICN management staff will be conducting regular evaluations of the centers. With some minor modifications to reflect the new customer service direction of the ICN, the intent is that everything will remain the same obviously depending on potential budget restrictions. Lynn offered to answer any additional questions.

Neil added that having 100% certified staff around the state has enabled the ICN to support connections across sectors. The addition of regional staff in the last two years has enabled the network to minimize outages and maintain extremely high reliability, resulting in less than 5 hours of total downtime for the entire state all of last year. Neil expressed that the RTCs had done a tremendous job, and have proven to be a valuable resource for the ICN.

Don Wilske questioned whether the figures presented were fixed or subject to appropriation. Neil replied that the figures are fixed at the current time, but are subject to any changes in appropriation. The figures do assume a flat appropriation for FY2003. The figures reflect a net decrease of $700,000 in operating expenses from the previous grants awarded over the two-year period.

At Lugene's suggestion, the motion was changed to include the phrase "subject to sufficient budget appropriation".

Mary questioned the evolving role of the RTCs. Lynn replied that initially the RTCs were in a construction mode and the technicians were in and out all day long connecting constituents, swapping out equipment, and getting sites established. Now, while growth still continues, a lot more emphasis is moving toward support and the role of the RTCs will change to reflect that direction. ICN management has asked the Advanced Engineering Taskforce (AET) for assistance in helping further define the RTC and user group roles, determine which services to offer, and identify applications the constituents currently want or need. There are subtle differences in the roles of the RTCs based on location and the needs of the local constituents, however the primary goal to balance the distribution of local support has been achieved.

Neil commented that the ICN has plans to increase by about 1,000 connections during the next fiscal year with the largest growth anticipated in the municipality and healthcare sectors. The RTCs will be involved in facilitating and maintaining these connections. As Lynn mentioned, the role of the RTCs has evolved and the ICN has asked the Advanced Engineering Taskforce to provide some goals and steps to ensure that the planned evolution be meaningful and on target with actual client needs.

Mary commented that the original plan was to establish the RTCs and maintain them until they were no longer needed.

Neil replied that the ICN could provide some of the services that constituents are asking for through the RTCs on a cost recovery basis, so they could become more self-supporting over a period of time. That decision would have to be investigated more closely and brought to the Policy Committee to ensure that the provision of services on a cost recovery basis was in concert with the goals of the ICN and the intent of the enabling legislation.

Lugene asked why the budget figures presented for Peoria were significantly lower than the other areas.

Neil explained that the ICN staff had negotiated with a telecommunications provider in Peoria for a POP site that had approximately 1800 square feet of adjacent unused space, which will be leased to the ICN at a very reasonable cost as part of the POP space.

Discussion about the differences between the Learning Technology Centers (LTCs) and the RTCs and the services they provide followed. The LTC's primary purpose is to deliver staff development and training. LTCs and RTCs work closely in some areas of the state and not as closely in others depending on local needs.

Motion: Keith made the motion with added language; Bruce seconded.

Keith moved that the ICN Policy Committee allocate the fiscal year 2003 appropriation of $936,569 for the continued support of the Regional Technology Centers, subject to sufficient budget appropriation.

Motion carried.

5. Dark Fiber White Paper (Draft)

Neil presented a draft of the dark fiber white paper that ICN management has been working on with the AET. Staff is waiting for edits from the members of the AET as well as from CMS staff. Last June, the AET noted a growth rate of 6% to 8% a month on various segments of the network and they anticipated the growth to continue. Due to that growth, one of two things had to happen; the ICN either had to locate resources that were incrementally expandable at low cost or had to negotiate services from telecommunication providers at dramatically reduced pricing. Also, in November the Policy Committee directed the staff to secure resources at the lowest possible cost. Dark fiber provides the solution to both the increase in bandwidth growth rates and the directive to seek lower pricing.

This white paper is intended to make the Policy Committee aware of the potential that dark fiber has for the ICN and the State of Illinois. CMS and ICN have collaborated very closely and continue to work on the document. NCSA and the University of Illinois at Urbana-Champaign are also expected to make comments to ensure that the research community is well served. The staff believes that this plan is workable and expects to have an RFP on the street in the next few weeks.

Keith commented that the use of dark fiber should have a positive impact on costs that translate into lower prices for our constituents.

Neil commented that the type of traffic on the network was another factor. Accepting a minimal charge has given educational entities, especially in higher education, an incentive to monitor their traffic. ICN staff is seeing less recreational traffic and an increase in actual educational traffic. While the ICN does not decide what is and is not educational traffic, some institutions have decided that recreational traffic is not something they are willing to support and pay for at the same levels now that the bandwidth had some cost to the institution.

Mike commented on the ICN's progress on this project, the positive impact on the network, and it's importance. He also suggested seeking legal counsel as the ICN moves into the contract negotiations for dark fiber for two reasons: 1) They can focus on the project and save staff time, and 2) it assures that everything is done properly from a legal perspective.

Neil noted that Mike had given excellent advice, and the ICN has already retained a law firm that specializes in telecommunications out of Washington, D.C. called the Helein Law Group.

Mary noted that the I-WIRE dark fiber project is coming closer to completion. Urbana to Argonne, Argonne to downtown, and downtown to San Diego are very close to being

completed this spring. Mary asked how that might impact what the ICN does on the RFP and whether or not there are ways to take advantage of lessons already learned.

Neil replied that the ICN staff has continued in conversations with I-Wire Director Charlie Catlett and his team, taking advantage of their expertise, receiving their counsel, and sharing information on processes they have already experienced. Neil also commented about a clause in the Indefeasible Right of Use contracts for dark fiber that gives the ownership of the fiber to the leasing entity if the telecommunications company goes out of business during the lease term. Lastly, Neil mentioned that he and Charlie have talked about ICN staff joining I-Wire staff for technical training in support of the I-Wire efforts.

Mary acknowledged the continuing assistance of Bill Vetter in these issues. Mary also commented that the most challenging piece is yet to come with dark fiber and that is how to determine who gets it? Who uses it?

Neil noted that the ICN does not want to duplicate efforts and would like to move forward together as closely as possible and if there are honest technical difficulties in the future, then there is enough fiber to compromise and break out pairs to try and meet everyone's needs. The more the state can work together; the more it will save everyone.

Neil assured the Policy Committee they would receive a final copy once the editing process was complete.

6a. Network Updates: Procurement and Inventory

Lori explained that this item provides a brief update on the ICN's procurement and inventory activity. In July 2001, CMS delegated authority to the ICN to purchase telecommunications services and equipment. Since that time, the ICN has been working very well with CMS on purchasing and using existing contracts where available. However, the staff has encountered certain areas where there has been a need to issue ICN procurement opportunities.

To date the ICN has issued three opportunities. The award for Internet Egress went to Global Crossing, but that provider went bankrupt. Lori sought counsel from CMS and had not signed the contracts when the bankruptcy occurred. The ICN is now in the process of awarding to the next successful vendor. As a result, the ICN will be lowering the cost per megabit for egress by $57, which results in $1.4 million per year savings to the ICN. Bandwidth has increased from 934 megabits to 2.17 gigabits.

Procurement has also been issued for CISCO training. ICN staff members are in the process of evaluating a procurement opportunity for caching and filtering services, one of the recommendations of the AET. Two additional procurements in process are dark fiber and three backbone circuits that are in need of upgrading. Those upgrades are needed in remote areas of the state where there are very few telecommunications providers and the providers under contract with the state are ones who do not have the facilities and, due to

the economy, are not interested in expanding facilities at this time. The ICN plans to work from the successful bids and see what can be developed in that area.

In regards to inventory, ICN staff began working with the State Board of Education (ISBE) in July and August of last year to transfer equipment purchased by ISBE for the LincOn Network and ICN Network to the Board of Higher Education (IBHE). In January, staff transferred the vast majority of that equipment to the ICN. There are approximately 200 pieces of equipment remaining that will be transferred by the end of this fiscal year. As part of the transfer, the ICN has moved out of ISBE's warehouse for audit purposes.

Mary noted that the I-WIRE research project is funded by several sources, two of which are the National Science Foundation and the State of Illinois. Page 32 of the agenda noted the National Science Foundation only.

Keith congratulated the ICN on receiving the $500,000 equipment donation from Cisco to create a state-of-the-art fiber optics laboratory. Keith also added that he was confident that ICN's receipt of a half of a million dollars of equipment would in no way influence the ICN's judgment about future purchases.

Neil responded that the ICN's procurement processes were and would remain absolutely uninfluenced by vendor action. Cisco does not provide any training and will not compete in the current Cisco certification training class RFP. The donation of fiber optics equipment will in no way impact ICN's decision-making processes. Neil added that the future equipment procurement would be an open procurement with CMS and ICN participating in the development of the RFP and with ample opportunity for the members of the Advanced Engineering Taskforce to review the documents prior to release.

Neil noted that staff has tracked all the Cisco academies established at community colleges in the past and at one time knew exactly how many of them were out there. Staff also had compiled a list of those established at K-12 institutions. Staff will update that list and present a combined list of all the Cisco academies and their locations to the Policy Committee at Mary's suggestion.

6b. Network Updates: Cost Recovery

Neil provided the Policy Committee with an update on the implementation of cost recovery. Re-allocation of excess RTC funds and E-rate funding, coupled with some very aggressive price negotiations allowed the ICN to meet the demands in network growth during the past year. However, there were also factors that impact the ICN fairly negatively in terms of cost.

One, the longer the state contract for telecommunications services remains incomplete or not fully executed, the longer the ICN has to pay higher prices. The cost savings that the ICN has experienced do not result in a large surplus of funds. The funds are invested back into the Network to accommodate the continued growth and demands placed on the

network. For example, in Chicago, staff just finished a $2.1 million upgrade to the POP site downtown in order to carry the traffic that is generated by 60% of ICN constituents concentrated in the Chicago and collar county areas. It was an upgrade that was planned for summer, but traffic has grown such that it had to be upgraded in December and January. This demonstrates that even with considerable cost savings, if the ICN were to experience a significant budget cut there would be limited options available for continued operation. Neil pointed out that $24 million of the ICN budget is allocated to telecommunications contracts and equipment operation and maintenance that is absolutely essential to continued operations. In the event of significant reductions in funding, one of the choices that would have to be investigated would be to cease operating at a certain level. This would translate into a decrease in the number of constituents or the ability of constituents to utilize the network.

The ICN recently held two meetings with all the Chief Information Officers and Technology Coordinators from higher education. Most are quite pleased with the service, thanks primarily to the reliability and to the service provided by the RTCs, which makes cost recovery a little easier to accept. ICN staff received some very encouraging comments. Staff also received comments from constituents that are not pleased, but overall everyone has been very gracious. The staff is reevaluating and making minor adjustments in regards to large circuits in the Chicago area due to changes in pricing and "community networks". Today, the ICN is funding 68 "community networks". The Regional Supervisors are evaluating each one to determine cost effectiveness and long-term viability.

The staff is also planning to meet with technology representatives from the K-12 sector to solicit input on their unique challenges. The AET, library sector and museum sector will also be solicited for input into the cost recovery process. One issue the staff asked about at the higher education meeting was whether or not cost recovery would impede their current educational delivery plans. The answer so far has been no and the overwhelming response was that the ICN still offers a very favorable operating price. Fortunately, at this time, staff is able to maintain the robust nature of the ICN with the current budget, and the cost recovery plan adopted in November by the Policy Committee gives the ICN a vehicle to tie revenue streams to growth in order to plan for the long-term. Letters have been sent to all 5,500 constituents stating that the ICN will reevaluate cost recovery annually and each November staff will provide the next fiscal year's baseline bandwidth and cost so that institutions can plan their budgets accordingly. Staff will forward each Policy Committee member a list of his/her constituents who are directly affected.

Lugene questioned whether cost recovery has impacted any K-12 institutions.

Neil replied that there have been a few minor circumstances, but the way that cost recovery is set up today, no K-12 district will have to pay at current operational levels. Some have the ability to exceed their baseline if they use all their available bandwidth; however, none are close to approaching that baseline at this time. Neil gave the example of Decatur's community network that is run through Richland Community College. K-12 schools could connect directly for a few dollars less per month; however, they would lose

some of that larger bandwidth of the aggregated connection that allows higher burst traffic. They came together on their own and decided they would rather have this flexibility than the cheapest price. As mentioned previously, constituents are asking about additional services that the ICN can provide and they are willing to pay for these added services when and where the services meet real needs.

Regarding community networks, there have been models that have worked and those that have clearly not. These vary in different parts of the state in how they have evolved. The guideline the staff follows is what the Policy Committee passed last June stating that the aggregate spend has to be less for all parties. The staff will present an item to the Policy Committee in the future outlining the relationship to economic development and the relationship to municipalities that want to resell ICN services to make sure the committee is aware of different issues that have longer term implications to service delivery.

Keith expressed concern over the ability of some providers to offer larger circuits or the same services at the same or lower prices than the ICN can offer them. The Policy Committee has defended the cost recovery model on the grounds that the costs passed on to the constituent are considerably less than what they would have to spend for the same quality and amount of service from another vendor, and that principal needs to be maintained.

Neil explained that the ICN is not only investing in the most populous area of the state and connecting people to the commercial Internet; we are connecting people to each other as well. In some cases an institution can procure a large volume low cost service to the commercial Internet cheaper than the ICN can provide it especially in the Chicago region. However, they do not receive the throughput that the ICN offers, so they are not receiving the same product. The challenge comes in educating people that a T1 isn't necessarily equal to this T1 or this DS3 isn't equal to that DS3, and the ICN staff continues to provide information in this regard. Another factor is that an average telecommunications provider is oversubscribed 25 to 1 while the ICN is oversubscribed less than 10 to 1. Other factors include greater intranet throughput with about 16% of all traffic going between subscribers rather than to the commercial Internet. This intranet traffic as well as Internet2 is something that cannot be acquired through a for-profit Internet Service Provider. Soon the ICN will offer video switching services that will make on demand video a reality and this will be yet another area where the ICN will offer unique product. Lastly, in order to keep market share, major ISPs have dramatically reduced pricing to their larger customers – in some cases by more than 50%. Neil mentioned that the ICN has identified cases where ISPs are selling below the market to keep their volume up and they make up the difference on the smaller circuit side of their business. While this doesn't aggregate all of the traffic on the ICN it is clear that the ICN's existence has helped to drive down prices overall.

Another challenge has been setting the baseline bandwidth formula for cost recovery. ICN staff assumed that the full time equivalent (FTE) measurements were common throughout higher education. However, there are several methods to calculate FTE and not all institutions agree on a single method. Some of the community colleges, for

example, feel very strongly that the calculation disfavors them. ICN staff is currently seeking input into these calculations and plans to address this issue in the next iteration of cost recovery.

6c. Network Updates: Internet2 – Sponsored Educational Group Participant

Lynn reported that earlier this month the ICN was the 21st state to achieve sponsored education group participant status in the Internet2 (I2) community. This allows the ICN to provide access to all education institutions to I2 resources. Previous to this arrangement there was really no way for schools, community colleges, smaller universities, or libraries and museums to participate in I2. Not everybody will be able to take advantage of it right away, but as soon as individual institutions are ready, the ICN will provide the means to access I2. The ICN has some individual I2 eligible Carnegie I Research institutions that are able to use the ICN as their transport mechanism to get to I2, which will save them considerable costs, even though they are still required to pay the membership fee separately. ICN staff had to perform some technical mapping on the backbone network with the I2 staff because there are certain constituent groups, such as municipalities and state agencies, who are ineligible to participate in I2. These restrictions are not ICN policies but are policies determined by I2.

Agencies are specifically excluded unless they are sponsored by an educational organization that is a member of Internet2. Even when sponsored by an I2 member organization the agency must have an approved educational purpose to participate or connect via I2 resources. A group external to the ICN reviews these scenarios to determine if an agency is part of a research project. Museums are eligible; however, the Department of Natural Resources geological survey project located at the University of Illinois at Urbana-Champaign may be questionable. At this time, I2 is evaluating each circumstance on a case-by-case basis.

The ICN has three representatives on the I2 SEGP advisory board, providing ICN management the opportunity to discuss I2 related issues with other state network representatives.

Mary suggested that the State Police, Public Health in terms of Center for Disease Control, and potentially EPA in terms of the USEPA would be interested in the option to access I2. Neil reiterated that while the ICN has no objection to these entities connecting to I2 restrictions external to ICN policies prohibit state agencies from accessing or routing over I2 resources and that this was beyond the control of the ICN.

Lynn indicated that over the next months and into the next fiscal year, ICN staff would be sponsoring a series of regional meetings to further explore the potential of Internet2.

6d. Network Updates: Legislative

Neil updated the Policy Committee on two bills. House Bill 5910 codifies an existing fund required to receive monies. The wording of the bill has been suggested by the

Comptroller's office and they are supportive of the bill. In committee the bill was amended to add the interest from the fund back into the fund. The staff is not sure who added the amendment but had initiated inquiries.

Mary noted that she believed the addition of the amendment was just an honest confusion, but the sponsor did not revoke it.

House Bill 5911 seeks to make permanent six standing Policy Committee members, the three education boards as well as members from the State Museum, State Library, CMS, and the Governor's office and adds up to seven appointees. It specifies that some of these appointees should come from private education, K-12, and higher education. It also seeks to codify some of the operating practices between CMS and the Board of Higher Education and the ICN and the Policy Committee that have developed over the last two years.

Keith favors the position the ICN takes with these two bills. He noted that the Policy Committee's endorsement of HB5911 is an act of faith and generosity in the ICN and its future and he is pleased the Policy Committee supports it. The proposed legislation does set a limit to the number of Committee members whereas the current legislation states the Governor can appoint as many members as he deems necessary.

6e. Network Updates: E-rate Funding

The network has submitted its fifth application for e-rate funding. E-rate is a federal program created in 1996 with the goal of providing universal service to schools, libraries and world health providers. The State Board of Education has always taken full advantage of the e-rate program with LincOn. This item outlines the e-rate funds that have been received by the network in the last five years. Currently, the staff is waiting to receive year three funding and is hopeful that it will come in before the end of the fiscal year.

There are two priority levels in e-rate funding. First priority is always given to the actual circuits, the connection to the Internet as well as the Internet egress. Priority two has gone to internal connections and equipment. School districts like Chicago Public Schools and East St. Louis Schools are in about the 90% reimbursement category. They have brought in a substantial amount of funding into Illinois for priority two equipment. There is a cap on the available money that can be granted out in any given year for e-rate and the priority one requests are now topping out that funding cap.

Mary noted that the staff should continue to watch these developments and be diligent in their focus.

Mary introduced another item before moving into executive session regarding Keith Sanders' service and dedication to the ICN and its Policy Committee. Mary read the following resolution aloud:

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We the ICN Policy Committee congratulate Keith R. Sanders for his tireless efforts to further Illinois education and particularly his efforts on behalf of the ICN. Under Keith's guidance, the Illinois system of higher educations was recognized nationally as the number one system of higher education. In a like manner the ICN has been recognized as the most successful education network in the nation. Keith's vision and leadership from the inception of the network have produced an extraordinary success that will impact the lives of millions of Illinois students for years to come. Keith's legacy to Illinois not only serves its colleges and universities but all facets of education including elementary and secondary schools, libraries and museums. With the successful operation of the ICN impediments such as distance and time are evaporating and educational opportunities expanding. Ultimately educational attainment and the economic well being of the state will benefit from his efforts. It is therefore with deep gratitude and respect for his record of accomplishments that far surpass the creation and success of the ICN that we the members of the ICN PC applaud and honor Keith R. Sanders for his steadfast commitment to students, dedication to the highest ideals of education, willing collaboration and unsurpassed leadership.

Lugene moved; Mike seconded.

A framed copy of the resolution was given to Keith.

Keith expressed that this gesture was very kind and unexpected. Keith also commented that as everyone finished his or her career and looks back on the establishment of this network, it would be regarded as one of the finer moments of our professional lives. It is already hard at work helping thousands of people better themselves through education and otherwise. Keith said, "The ICN is one of the proudest projects of my 41-year service to higher education. The only way the network got here is because everybody around this table decided to look above and beyond their own territorial imperative and to work together to make this thing happen. This is a beautiful example of collaboration to achieve a purpose that could not have been achieved if we hadn't trusted each other and moved forward in the way we have." Keith thanked Mike especially and thanked the rest of the Policy Committee in whole.

Resolution passed.

Executive Session

Keith moved; Bruce seconded.

Keith moved that the Policy Committee go into executive session at 3:18 p.m. Wednesday, March 27, 2002 for the purpose of discussing the ICN personnel issues pursuant to Section 2(B)(1) of the Open Meetings Act.

Motion carried.