Ad Hoc Discussion Group

Comparison of Concepts
Using predetermined criteria

		Responses		
Criteria		**Municipal Utilities**	**ICN**	**Status Quo**
How does this proposal provide fair, reasonable and predictable access to advanced telecommunications technology for current ICN users?		Under the Open-Access Model or Open Service Provider Network the ICN retains ownership of the infrastructure and provides carrier-class wholesale transport services over it's excess capacity. Operational control of the excess capacity for contract and scheduling purposes could remain under the ICN or it could be shifted to an independent, but regulated, public or private entity. Current users would be assured fair, reasonable, and predictable access to advanced telecommunications technology because the state would earn revenue on the ICN's excess network capacity though sales to competitive service providers. Revenue from the use of excess capacity could be used to upgrade technology for current ICN users as well as for tariff users of network capacity. A variation of this concept would be for the whole of the ICN facilities to be transferred to the open access tariff, reserving contract rights for current users at tariff rates. To the extent that tariff rates were higher than acceptable to the users and the state, credits from the tariff rates paid to the ICN for use of excess backbone capacity could be applied to the benefit of current users. Other fiber owners may be more willing to transfer operational control of their excess fiber to an independent entity. In either model, the state would recognize revenue from facilities it placed under the tariff. This revenue should fund upgrades to technology for current users. Rates for use	The ICN is required by law to provide users with equitable access to services. ICN services are tailored to meet user capacity requirements for full motion video and data transport, while striving to exceed industry standards for reliability and predictability. This proposal will allow users continued access to these fair, reasonable and predictable advanced telecommunications technology.	The ICN is required by law to provide users with equitable access to services. ICN services are tailored to meet user capacity requirements for full motion video and data transport, while striving to exceed industry standards for reliability and predictability.

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	of the open access network would be regulated (presumably by the IUB) at levels that ensured a fair and reasonable return on equity, whether the network facilities were owned by the state (in the case of the ICN backbone) or by other fiber owners who elected to transfer operational control of their fiber in exchange for a share of the regulated revenue. Access by new users would be predictable to the extent that there was sufficient capacity available under the open access tariff. If demand for open access facilities exceeded the supply available through the open access tariff, the independent operator could either build new facilities to meet demand or attract additional transfers of existing excess capacity from others. Network rates could be set at a level sufficient to allow construction and operation of new facilities. In areas of the state where the network infrastructure was inadequate, the independent operator, the incumbent telecommunications utility, or some other market entrant could build the needed infrastructure and turn over control to the network operator. In areas where there was excess capacity not available for open access, the owner's self-interest, would likely be served by turning over operation control of needed excess capacity, as the monopoly value of the excess capacity would be diminished by further construction, i.e., the returns from the tariff rate would exceed the future value of the excess capacity. An alternative response from the owner of needed excess capacity would be to offer services at below tariff rates to current tariff users or to entities whose new demand had triggered the need for network expansion. Either way, advanced telecommunications users are served and service providers are forced to		

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	accept the market forces under which the industry is supposed to thrive.		
How does this proposal provide fair, reasonable and affordable prices for current ICN authorized users?	See answer to question 1. The net change that would occur under the *muni* concept is that revenues would accrue to the state from tariff use of excess backbone capacity. That revenue would help ensure stable and affordable rates for authorized users in two principle ways. First, it would be a source of new revenue outside the general fund. As such the ICN would not have to compete against other uses of limited public funds. This funding source would also tend to limit the extent to which incumbent telecommunications providers could exercise political pressure to restrict development of a more robust ICN. No one who has observed the political fortunes of the ICN could reasonably deny that incumbents have used their political power to hamper development of the ICN, because it is in their self-interests to limit competition for telecommunications services.	Continuation of favorable rates for Iowa educational users is a high priority regardless of ICN ownership structure if the current user base and required capacity is retained.	Providing favorable rates for Iowa educational users is a high priority of the ICN.
How does this proposal provide equity for all constituents?	Equal and universal access to advanced telecommunications services benefits all users of telecommunications services. To the extent that open access to network capacity increased competition for advanced telecommunications services, there are numerous studies to show that the economy benefits. However, if "all constituents" were defined to include incumbent telecommunications providers, the concept would not be equitable. The naked truth is that whatever decision is made for the future of the ICN, there will necessarily be winners and losers. The question is what will be the measure of equity between users and providers. An open access network enables competition. It diminishes the monopoly	Consistent with the original ICN mission to equalize rural and urban access to education, every Iowan is within fifteen (15) miles of an ICN video site, regardless of where they live or work within the state. All ICN users pay the same rates for the same services, as required by rule. Equitable access would not be affected if the current user base is retained.	Consistent with the ICN mission to equalize rural and urban access to education, every Iowan is within fifteen (15) miles of an ICN video site, regardless of where they live or work within the state. All ICN users pay the same rates for the same services, as required by rule.

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	power inherent in a capital-intensive industry, especially an industry in which incumbents built facilities under a regulatory system that guaranteed a recovery of investment. The fact that incumbent telecommunications providers have expressed interest in buying the ICN for the primary purpose of removing it from the market is proof in point. It should be noted that there are protections for incumbent providers in the IAMU concept. First, the state does not expand its presence in the retail market. Second, the open access tariff provides a potential revenue source for fiber owners with excess capacity. Third, incumbents have already won the ability to escape price regulation on the basis that they face competition. An analogy to describe the concept: Advanced telecommunications services, when provided at all in this state, are delivered over a highly segmented and sometimes redundant system of private highways, private side roads, private streets and private driveways. These facilities are largely owned by the same firms that provide retail telecommunications services – the ones whose prices are being deregulated because they are presumed to be facing competition. To the extent that non-owners are allowed to drive over facilities of another, they must pay a toll. Furthermore, the owners of the existing roadways in most cases can decide not to allow access at all. Owners of streets and driveways almost never allow a competitor access to those facilities, as that would enable a competitor to deliver services to the end user. Under the concept, the ICN would become the initial backbone of an open access expressway – one that anyone could drive		

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	on by paying a common toll. If a traveler could get around a roadblock on the private roadway by using the open access toll road, the roadblock would be replaced with a competing tollbooth. Before long, commerce and competition would occur. The open roadways would not likely get travelers up the driveway. In fact, it might leave them at the edge of town. However, given the chance to complete the long haul, travelers would find a way to reach the door.		
How does this proposal provide an efficient, transparent delivery system for services currently provided by the ICN?	The open access model provides ensures that services currently provided by the ICN will keep up with technological advances. Services will be delivered efficiently, because new market participants will pay for use of the ICN facilities and other facilities available under the open access tariff.	The ICN currently uses a seamless full-motion video conference service for scheduling and production that does not interfere with Iowans' learning opportunities. This service will not change if the ICN manages user capacity.	The ICN provides a seamless full-motion video conference service for scheduling and production that does not interfere with Iowans' learning opportunities.
How will the governance structure providing the current ICN telecommunications services represent the public good and include representatives from currently authorized users in decision making?	The concept does not assume a specific governing structure for the ICN capacity used by current authorized users. That capacity could remain under ICN control. A more logical governance structure for the open access facilities (and probably for the current user capacity as well) would be an independent governing body and operator. The governing body would have to be outside the control or undue influence of fiber owners or users, but if the electric transmission model were followed, there would be an institutional mechanism for owner and user representation. Fiber owners, including the ICN, would transfer control to an independent organization in return for incentive rates of return authorized by a regulatory agency – under this concept, the IUB.	The Iowa Telecommunications and Technology Commission (ITTC), is the five-member, politically neutral governing board of the ICN. Set up in 1994, the ITTC sets video rates in an open forum with public input and comment and conducts its business in accordance with Iowa open meetings laws. The ITTC also reviews and approves waiver requests from certified users according to applicable administrative rules.	The Iowa Telecommunications and Technology Commission (ITTC), is the five-member, politically neutral governing board of the ICN. Set up in 1994, the ITTC sets video rates in an open forum with public input and comment and conducts its business in accordance with Iowa open meetings laws. The ITTC also reviews and approves waiver requests from certified users according to applicable administrative rules.

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How will this proposal leverage public and private assets for the benefit of all constituents and taxpayers?	This concept assumes that conversion of the ICN (public assets) to an open access network, at least with respect to excess capacity, would enable entry of retail service providers into the market. New competitors would enter the market, because the open access network would lower one of the key barriers to entry – the fiber transmission network. In this way, the public's assets leverage competition that would not otherwise be expected to develop in Iowa. Expanding competition – the basic tenet of current federal telecommunications policy – will benefit all consumers and the economy. This concept also assumes that transferal of ICN assets to an open access tariff will leverage the extent to which private infrastructure will be made available on an open access basis. Once new competitors arrive in areas where the ICN infrastructure enables it, the monopoly value of existing telecommunication infrastructure is diminished. Consequently, it is reasonable to assume that incumbent providers, acting in their own self-interest, will transfer operational control of at least some of their network facilities, because the returns they would receive from the open access tariff outweigh the remaining monopoly value of leaving the facilities idle. This rationale for this assumption is that incumbent providers seem willing to queue up to purchase the ICN for the sole purpose of taking it out of service. In the present environment, the monopoly value from limiting competition is greater than the value derived from making the capacity available to potential competitors. At the risk of repetition, the current model is bad for Iowa consumers and the economy, because we lack the population density to otherwise attract the kind of aggressive retail	Wise use of Iowa's $300 million investment in ICN infrastructure must continue. This ownership option would be to offer continuing service to currently authorized ICN users and allow the private sector to deliver additional services to rural customers over the network.	Use of the infrastructure would remain the same. The ICN would continue to partner with the private sector to obtain the services needed to provide the complete ICN product.

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	competition upon which federal policy is based. We have the worst of all worlds – nominally competitive and therefore deregulated rates with the reality of very limited competition.		
How will this proposal ensure the vendors providing current ICN services will be eligible to allow schools and libraries to qualify for all current telecommunications discounts?	Under the proposed concept, eligible users reserve current capacity for transmission over the network, whether control of the capacity is retained by the ICN or transferred to an independent entity. The services they receive over the network could also be provided by the existing ICN structure or, farmed out to a competitive service provider, whichever offered the greatest opportunities for long-term savings and continued enhancement of services as technology improves.	Award of common carrier status to the ICN in 2001 by the Federal Communications Commission (FCC) and ICN designation as an eligible provider for voice and video services, made ICN users eligible to receive Universal Services Fund reimbursement. Maintaining this status is an important way to keep ICN services affordable for schools and libraries,.	Award of common carrier status to the ICN in 2001 by the Federal Communications Commission (FCC) and ICN designation as an eligible provider for voice and video services, made ICN users eligible to receive Universal Services Fund reimbursement. Maintaining this status is an important way to keep ICN services affordable for schools and libraries.
How will this proposal insure future bandwidth requirements for current authorized users are met?	See previous answers. Revenue from the tariff services should both fund upgrades to the network and create an incentive to do so. The higher the level of technology, the more network capacity is available to other tariff users.	ICN bandwidth capacity currently available to serve authorized users would not be deployed in a manner that would prevent its application to meet future user needs.	ICN bandwidth capacity currently available to serve authorized users would not be deployed in a manner that would prevent its application to meet future user needs.
How will this proposal meet current and future telecommunications and Internet protocol application requirements without additional burden on currently authorized users?	See previous answers, especially 1, 2, 4 and 8.	This concept proposes a single private vendor purchase the fiber comprising the five backbone ATM rings and related backbone optronics. The purchase in turn would allow the State to retain an ample amount of backbone capacity in optical wavelengths to meet all future bandwidth needs of current users.	The ICN currently has adequate bandwidth to meet current and future needs of authorized users.
How will this proposal ensure funding for the (a) current level of regional technical support for existing authorized users is maintained; and (b) for maintenance and upgrade of video classroom equipment and computers/hardware?	a. The costs of operation and maintenance of the network, along with a return on equity, constitute the basis for determining the open access tariff rate. b. The revenue that accrues to the state from tariff services would offset at least some of the costs of maintaining and upgrading end-use equipment. However, the notion that earnings from the current	The ICN was created to facilitate distance learning opportunities to Iowa students, providing tools that fit educational applications (rather than requiring educators to tailor their applications around service offerings) has been and would remain a standing goal.	The ICN was created to facilitate distance learning opportunities to Iowa students, providing tools that fit educational applications (rather than requiring educators to tailor their applications around service offerings) has been and would remain a standing goal.

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	investment in network facilities and end-use equipment can save taxpayers from further investments in technology is not only wishful thinking, it is dangerously short-sighted.		
~~Utilize unused ICN capacity as an option for providing access to the private sector, which could generate income for the system and economic development opportunities.~~	The Ad Hoc Discussion Group participants agreed to strike this criteria.		
How does this proposal preserve the ability of the current ICN user base to maintain choice of services used for applications?.	Though the concept reaches no conclusion with regard to operational control of the ICN network capacity or the services provided over that network, independent control of the network would enable competitive service providers to offer a variety of service options. Reasonable requirements could be adopted to ensure compatibility, but substantial benefit could accrue if users could select services that met their needs.	The ICN was created to provide a resource for educational users to provide distance learning opportunities to Iowa students. The goal of the ICN staff has been to provide the tools to fit educational applications rather than having the educational community tailor applications around service offerings. This would not change under would not change under this proposal.	The ICN was created to provide a resource for educational users to provide distance learning opportunities to Iowa students. The goal of the ICN staff has been to provide the tools to fit educational applications rather than having the educational community tailor applications around service offerings.
How does this proposal provide for the State to acquire communications services at competitive rates across the state and manage the services in an efficient manner?	See previous answers, especially 1, 2, 4, 7, 9, and 10.	Its common carrier status allows the ICN to purchase telecommunications service at wholesale rates for state use, conserving state resources. These rates, plus volume discounts for other purchased telecommunications rates, will allow the state to provide affordable services to users.	Its common carrier status allows the ICN to purchase telecommunications service at wholesale rates for state use, conserving state resources. These rates, plus volume discounts for other purchased telecommunications rates, will allow the state to provide affordable services to users.

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How would various ICN assets be owned, and by whom?	See previous answers, especially 1 and 5.	The state would retain: capacity on the fiber outside of the Metro Des Moines Area, ,connections from the backbone network to switch points required to extend the network to all 99 counties and Part III connections, Equipment outside the core backbone electronics including SONET equipment, ATM switches and other equipment required to break down the signal to appropriate capacity for deliver of services to customers, right to participate in future upgrades. The buyer would obtain: the fiber in the out state rings, core equipment to light the fiber (optronics).	No change.
What change in costs and revenues would be expected by the state?	As noted in previous answers, conversion of the ICN backbone to an open access network would provide a new revenue source to ensure the continued investment in advanced telecommunications services. It is in the State's best interest to contract an outside consulting firm that specializes in information infrastructures to assess the current infrastructure, identify market potential and to develop a business plan. Absent this information, it would be impracticable to estimate costs and revenues. The study could be a joint project funded by the State, other public entities and the private sector.	With the dollars from the sale of the fiber, pay off the remaining debt service and have seed money for the equipment fund. Because the maintenance for the fiber would be share, the maintenance costs should be reduced. Equipment account funded with seed money from sale and ability of the state to include depreciation expense in rates.	No change.

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What impact would the proposed ownership configuration have on competition within Iowa's Telecommunication Industry?	Competition would increase. That outcome is consistent with federal telecommunications policy. In 2001, the State of Michigan launched a broadband telecommunications initiative called LinkMichigan. This effort is an attempt to transform the State of Michigan's telecommunications infrastructure into one of the most robust and advanced in the nation. The Michigan Economic Development Corporation's goal is to position Michigan as a high-technology state. Michigan's initiative sites the lack of consistent statewide availability of high-speed broadband telecommunications services as a basic barrier to achieving its full potential. The ICN is Iowa's answer to consistent statewide availability of high-speed broadband telecommunications services. Since the invention of the telephone, the telecommunications industry has operated pretty much the same way—private companies have built networks around the state and have proceeded to provide services across them. To protect their own interest, they have typically prohibited competing service providers from using their infrastructures to deliver services. In time, the owners of these "closed" networks have established monopolies, which largely remain today with the exception of a few communities that have elected to own their own with a goal for sustainable growth. What is a stake is much greater than the impact within Iowa's Telecommunication Industry.	Customer base of the ICN would not change. Give the buyer capacity in rural Iowa. The impact would depend on the assets the buyer currently holds the use of the fiber when purchased. The buyer could have a competitive advantage due to access to a statewide telecommunications infrastructure, ability to light new capacity at a very reasonable cost, and the ability to extend the network to commercially viable access points.	No change.