MICHIGAN
STATEWIDE EDUCATIONAL NETWORK (SEN)
(Building a Framework for Collaboration in Michigan)

What is a Statewide Educational Network (SEN)? When most states speak of a SEN it generally consists of three major components:

1) Intranet Backbone: statewide network backbone providing access to voice, video and data services and the public Internet to all participating educational entities (e.g. Arkansas, California, Delaware, Florida, Illinois, Iowa, Mississippi, Missouri, Nebraska, North Carolina, Ohio, Utah, Wisconsin).
   - We intend to facilitate the interconnections of ISD and district Wide Area Networks (WAN) to establish a common "backbone" under the direction of the Category Five awardees.

2) E-rate Eligible State Master Contracts (SMCs): to provide least cost pricing regionally and statewide for all necessary services and electronics for participating educational applicants (e.g. Arkansas, California, Delaware, Florida, Illinois, Iowa, Kentucky, Mississippi, Nebraska, North Carolina, North Dakota, Ohio, South Carolina, South Dakota, Utah, West Virginia, Wisconsin, Wyoming).
   - The Michigan Department of Technology Management, and Budget (DTMB) is putting together the bid proposal that will form the SMC. The goal is to have the SMC in place by June 2013.

3) E-rate Statewide Consortium: The E-rate statewide consortium will be under the direction of the Category Three Activity One awardee and will be made up of all Category Two consortiums. This provides for the combined expertise of all of consortiums to work with DTMB to bid for E-rate services needed statewide and in each region. States with SMC typically have an E-rate consortium function associated with the program. The actual review and selection of services from these SMCs would be done by the consortium leads working with their individual districts, evaluating these services in the context of state, local and E-rate applicable bid regulations.
   - Under the Michigan model, the resulting statewide E-rate consortium would be a step removed from the SMC and this should allow the E-rate consortium to be more selective when purchasing services on behalf of participating regional consortia, ISDs, and districts.

It should be noted that each state manages the connectivity to the internet backbone through a variety of configurations from actual physical fiber to leased data circuits and every combination in between. The connectivity of SENs also range from those being owned and operated entirely by state or educational agencies to those that are outsourced to 3rd party vendors.

Who will form and lead the SEN?
The goal of the grant is to bring the winning Category Two consortium leaders together to lead the effort collaboratively in forming Michigan's SEN. The MDE believes the field is more experienced and more knowledgeable about establishing the interconnectivity a SEN requires. Because of the nature of the competitive grant funding the work, the SEN leadership must be selected through the Category Two application process.

How close are Michigan districts to having a managed backbone that would support a SEN? At present, a majority of Michigan's educational entities are provided Intranet and Internet services through local ISD Wide Area Networks (WANs). These ISD WANs consist of a combination of purchased fiber and leased circuits that typically span several counties; interconnecting their respective local districts. For the most part each WAN was built in isolation; however as opportunities for collaboration and consolidation have occurredvarious ISD WAN interconnections have been put into place. The resulting ISD WAN interconnects have been documented in the attached map (dated: April 2012). Although portions of the state lack the necessary WAN infrastructure and interconnects, the map illustrates that Michigan is not far from a managed backbone.

Bottom Line: who needs the SEN the most? First and foremost, districts that have high commercial internet costs stand to benefit the most from the SEN because the collaborative bidding and interconnecting that will lower overall connectivity costs. Secondly, districts that have low connectivity and low service levels because higher services levels are not widely available. The SEN promises to increase services levels while maintaining cost-effective connections. Thirdly, ISDs that want to restructure the current service offerings.

It should be noted that in certain situations, the benefit to certain districts may be limited because they 1) already belong to a WAN connected to an internet backbone, 2) they bid their service purchasing collaboratively, and 3) they use an E-rate consortium effectively to lower high levels of services.

ISD Map: The following map inspired the "what if" of forming the SEN. Only short lengths of fiber are missing to provide the high level of ISD interconnectivity, establishing an intranet backbone for most school districts, and providing a means of collaboratively bidding (i.e., SMC) and purchasing high levels of service (i.e., E-rate consortium).

ISDs/RESAs with
Existing Connections———
Future Connections ----------
Leased Connections ———
Leased/Owned --------------

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