



Iowa Communications Network

ICN@lightspeed™

2012

ANNUAL INFRASTRUCTURE REPORT

DAVID LINGREN
EXECUTIVE DIRECTOR

January 15, 2013

This report is being submitted to the Legislative Services Agency in accordance with several sections of the Iowa Code, including Code Sections 8.57(6)(h) and (i), 8.57A(5), 8.57B(5), 8.57C(4), 12.E12, 12.79, 12.88, and 12.88A.

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Infrastructure Appropriations for the *Equipment Project*

Description:

The ICN has received appropriations to replace and upgrade equipment that is reaching its end of functional life for FY 2007, 2008, 2009, 2010, 2011, and 2012. Following is an explanation of the two multi-year equipment replacement projects funded by the appropriations.

Voice (Local Telephone System) equipment serving state agencies on the Capitol Complex and surrounding areas. The manufacturer no longer supports the equipment and third-party refurbished replacement parts are becoming scarce. So far, the ICN has not experienced large outages. Expenditures are being made to replace telephones and network equipment as well as for labor and training costs.

Internet Services Technology Equipment. Many new video applications for education, medical, and other government services are moving to Internet Protocol (IP) technology. Capabilities offered by the new equipment would allow more simultaneous "IP" sessions and better quality Video over IP conferences than are currently supported. Availability of the IP option meets the current and future needs of the educational community as more video sites deploy and utilize IP connections.

Progress:

Just over 85% of the phones on the legacy equipment have been upgraded with the funds approved. Variations in staffing levels across agencies have caused this number to fluctuate. FY 2010 funding is expended or obligated for the voice project. The majority of the FY 2011 and FY 2012 funding, covering off-Complex locations on the legacy platform, was pending RFP award. That RFP was not awarded due to excessive costs. Recent technology developments and agency demand have led the ICN to add another component as a new option, one that provides unified messaging and unified communications. This project is underway, and legacy phones will be moved to one of the two new platforms.

The funding for FY 2010 and FY 2011 for Internet Services equipment required the selection of technology for the IP Video platform, which was completed earlier in 2011. The ICN selected equipment based on the H.323 protocol, which is an industry standard. The core equipment, purchased under the 2010 appropriation has been installed and accepted. The remaining funding for Fiscal Year 11 and Fiscal Year 12 will be used to provide equipment at the video sites during the transition to the H.323 standard.

Total Estimated Cost of the Projects:

The project is estimated to cost approximately \$9 M for the entire voice portion of the project, including funds that have already been appropriated. The Internet services equipment is anticipated to cost \$11 million, including the funds that have been appropriated.

The total cost for both projects is estimated to be approximately \$20 million - \$9 million for voice and \$11 million for internet service equipment. The total amount includes funds previously appropriated.

Table 1. Appropriations and Spending for the Equipment Project

Revenue Sources	Project	Fiscal Year	Appropriated Amount	Expended	Encumbered	Balance	Percent Complete	Est. Completion Date
0943/04U9	Equipment Project	2009	\$ 2,190,123	\$ 2,190,123	\$ 0	\$ 0	100%	Complete
0943/04U10	Equipment Project	2010	\$ 2,211,863	\$ 2,211,863	\$ 0	\$ 0	100%	Complete
0943/04U11	Equipment Project	2011	\$ 2,244,956	\$ 1,512,965	\$ 731,991	\$ 0	66%	12/31/13

0943/04U12	Equipment Project	2012	\$ 2,248,653	\$ 0	\$ 73,978	\$ 2,174,675	2%	12/31/14
0943/4U13	Equipment Project	2013	\$ 2,198,653	\$ 0	\$ 0	\$ 2,198,653	0%	6/30/2016

Infrastructure Appropriations for the *Capitol Complex Redundancy Project*

Description:

In FY 2009, ICN began a three-year project to ensure greater telecommunications redundancy for the hub of Iowa's State Government. Following is information regarding the appropriations made for the first two years of the project:

FY 2009 - The ICN received an appropriation of \$1,800,000 to provide a redundant fiber ring outside of the Capitol Complex tunnels that leaves the current tunnel based fibers in place as a backup fiber path and connects all the Complex buildings with a second fiber entrance point along with necessary electronics, power systems, and power backup facilities to minimize vulnerability and ensure continuity of operations for the Capitol Complex.

FY 2010 – The ICN received an appropriation of \$2,320,000 to provide voice service redundancy by installing a redundant voice switch off of the Capitol Complex and distributing the building specific voice equipment at appropriate locations. With this decentralization, if the location specific equipment fails, only the building where it is located would be impacted. To date, \$169,108 has been expended with \$51,872 encumbered.

Progress:

The FY 2009 fiber and equipment have been placed and are in-service. The network monitoring tools purchased provide the ability to pinpoint the cause of outages or network anomalies as they occur in a timelier manner.

The distribution of the voice equipment to the various buildings is costing far less to complete than anticipated, mostly due to the ability to expedite the rewiring necessary in each of the buildings. The ICN used a lot more internal labor than external to complete this portion of the project, thus affecting the costs for the appropriation. As of December 2012, all nine buildings have been completed. It is anticipated the FY 2010 funding will also be able to cover Phase 3 – addition of a redundant site to connect to other vendors that currently provide service to Capitol Complex and out-state users today. Additional expenditures have been identified to provide the fiber and switch redundancy are more robust and cover more than the initial nine buildings. ICN expects to have a plan finalized for Phase 3 and these additions by the February 2013.

Total Estimated Cost of the Project:

The total cost of the project is estimated to be less than the \$4.1 million which was appropriated in FY 2009 and FY 2010. The final design will determine the funds to be expended, though ICN does not anticipate spending more than the appropriated funds.

Table 2. Appropriations and Spending for the Capitol Complex Redundancy Project

Revenue Sources	Project	Fiscal Year	Appropriated Amount	Expended	Encumbered	Balance	Percent Complete	Est. Completion Date
0943/07U9	Capitol Complex Redundancy	2009	\$ 1,800,000	\$ 1,800,000	\$ 0	\$0	100%	Complete

0943/06U9	Capitol Complex Redundancy	2010	\$ 2,320,000	\$ 182,055	\$ 51,872	\$2,086,073	50%	6/30/13
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Infrastructure Appropriations for the *Generator Replacement Project*

Description:

The ICN received an appropriation of \$2,755,246 to replace 89 aging generators that have been in the field for over 14 years.

Progress:

An RFP was completed and a contract awarded for the purchase and installation of generators in the beginning of FY 2010. Many sites also required the addition of an Ethernet switch for the management capabilities to function, and these were installed as necessary with the generators. All previously purchased generators are in service. Due to modifications in the network, ICN has discovered additional sites that would benefit from a generator, and is evaluating the options for those sites. All work anticipated is scheduled to be complete by the end of the fiscal year.

Total Estimated Cost of the Project:

The project is estimated to cost \$2,755,246 and this amount was appropriated in FY 2010.

Table 3. Appropriations and Spending for the Generator Replacement Project

Revenue Sources	Project	Fiscal Year	Appropriated Amount	Expended	Encumbered	Balance	Percent Complete	Est. Completion Date
0943/05U9	Generator Replacement	2010	\$2,755,246	\$ 2,585,406	\$ 0	\$ 169,840	95%	6/30/13