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Illinois project saves millions

By *[Carolyn Duffy Marsan](#)*, *Network World*, 12/12/05

The state of Illinois will reap \$7 million per year in savings, thanks to a network consolidation effort that involved merging traffic from two data networks into a single IP backbone.

Illinois migrated traffic from an older, frame-relay network that supported most state agencies to a newer network that provided Internet access to K-12 schools, colleges and libraries. The combined network, known as the [Illinois Century Network](#), was upgraded to use MPLS technology.

Dubbed Project Hercules, this network consolidation is part of a broader statewide initiative to eliminate redundant IT resources. During the past two years, Illinois has saved \$210 million by improving IT governance through centralized purchasing, data center consolidation and shared services such as telecom networks.

"What we saw was an opportunity to better utilize a network that was doing a great job of providing capacity to our schools but had a lot of excess bandwidth," says Tony Daniels, deputy director of Central Management Services for the state of Illinois. "We were able to move traffic off a non state-owned network to a state-owned network."

Today, the Illinois Century Network has 6,100 connections. More than 2 million Illinois citizens have access to this network, which links 4,800 K-12 schools; 114 community colleges; 213 universities; 470 libraries; 30 museums; 72 healthcare facilities; and more than 2,000 municipal, county and state government offices.

The Illinois Century Network provides high-speed data, video and voice communications. It offers access to the Internet and Internet2 with multiple connections at OC-12 or higher speeds. The network's 17 points of presence are linked via 45Mbps connections.

Launched two years ago, Project Hercules was a logistical nightmare. The effort involved moving 1,600 circuits off a frame relay network provided by SBC to the state's existing Illinois Century Network.

Meanwhile, the Illinois Century Network was upgraded with carrier-class routers and increased bandwidth to handle the extra traffic. The network was redesigned to be fully redundant, and it was converted to MPLS with QoS technology.

"The Illinois Century Network was previously a Cisco-routed network" without MPLS, Daniels explains. "We came in and upgraded the backbone links to OC-12 or higher and then enabled MPLS on the backbone."

Illinois released its RFP for Project Hercules in October 2003 and awarded a contract to [EKI Consulting](#) in February 2004. Other bidders included BearingPoint and Deloitte Touche.

EKI subcontractor WilTel Communications handled the network migration component of Project Hercules, earning \$5 million on the deal. WilTel conducted most of the work on this project from January through June 2005.

"WilTel moved 1,600 circuits in a six-month time frame. Obviously, this was a huge accomplishment in terms of accelerating the cost savings for us," says Daniels, who leads the state's Bureau of Communication and Computer Services. "WilTel actually got the job done on time and under budget."

WilTel handled provisioning, testing and migration of 1,600 new T-1 circuits and decommissioned the frame-relay circuits. The company upgraded 1,300 routers to Cisco 2612 models. WilTel also provided a 24/7 network operations center to aid in the transition process. This coordination effort was the most challenging piece of Project Hercules, Daniels says.

"Coordinating maintenance windows between more than 20 state agencies that had different expectations of when traffic could be cut over was a huge effort," Daniels says. "We wanted to have the project done prior to the end of the fiscal year, which is in June. We didn't have a lot of flexibility in terms of getting the work done."

WilTel says Project Hercules was its largest network migration effort.

"We worked with a large enterprise and did provisioning of 2,000 circuits, but we didn't do the physical installation on that project," says Greg Klass, professional services manager for WilTel. "This is the largest deal where we did all of it: provisioning and installation."

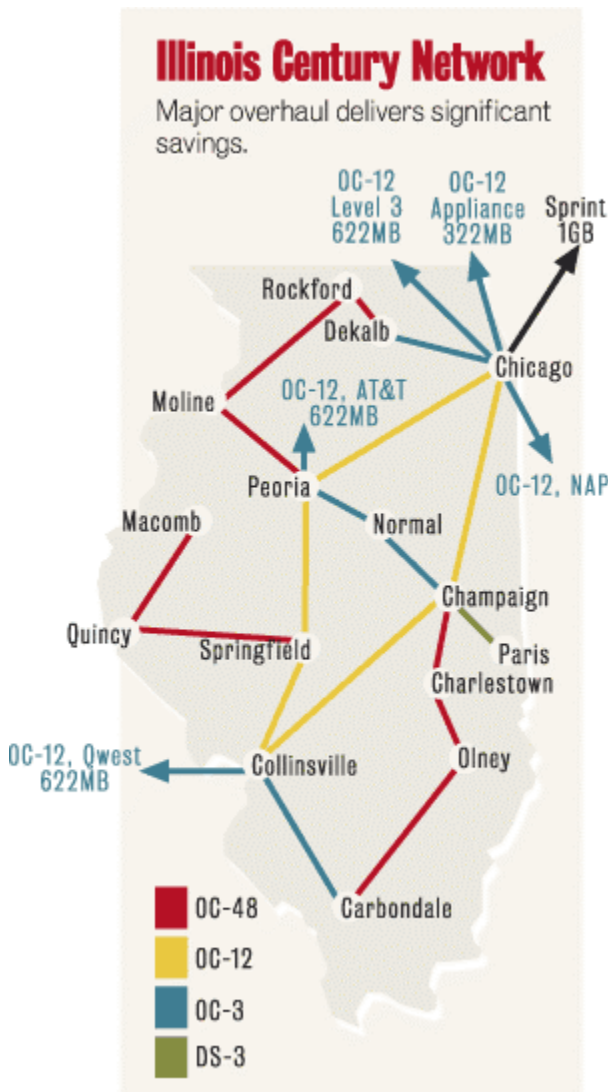
WilTel expects to see other large network migration jobs like this one go out for bid in the future.

"This deal is a good example of the new trend that's happening out there where a large enterprise, in this case a state agency, is making the move off legacy telecom services over to next-generation, converged network services," says Paul Savill, vice president of data services for WilTel.

Although WilTel's piece of Project Hercules is over, testing of the upgraded Illinois Century Network continues. The old frame relay network will be turned off on Dec. 31.

So far, the state of Illinois is happy with its upgraded network.

"The performance of the new network has been absolutely wonderful," says Daniels, who points out that the network has not yet suffered an outage. "A lot of agencies got an increase in bandwidth on the new network. We've had no support issues. We've been able to support the network with the same crew of individuals that were supporting it before the upgrade. Things are working fine."



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