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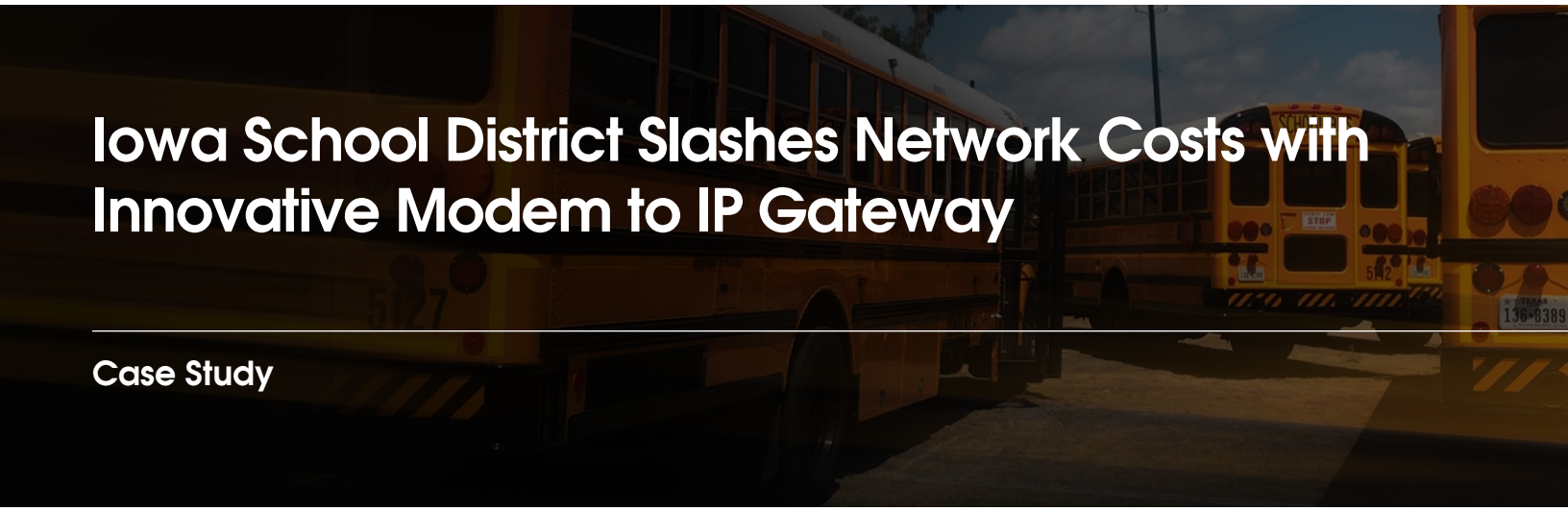


Iowa School District Slashes Network Costs with Innovative Modem to IP Gateway

Case Study

The Challenge:
Reducing Ongoing Monthly Costs

Serving more than 30,000 students across more than 60 schools, the Des Moines Public School (DMPS) district was experiencing two network issues that needed immediate attention:

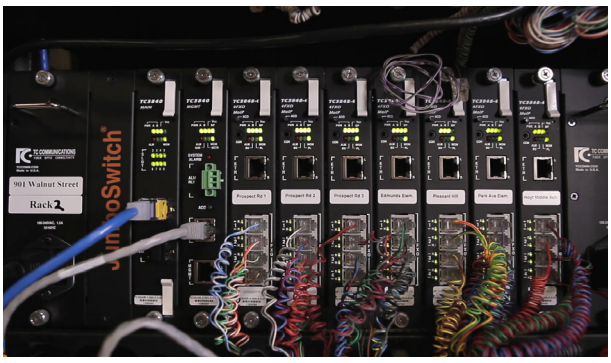
- First, the district needed to reduce its ongoing monthly costs for existing 1 flat business (1FB) analog lines, which connected fax machines, auto dialers and emergency elevator telephones at schools throughout the district to a central computer center.
- Second, it needed an analog connection for the district's paging system. During a recent building renovation, DMPS installed VoIP phones and needed a way for school personnel to access the paging system from building phones. Because VoIP is designed for voice, it doesn't support 1FB dial-up connections.

Solution:
Modem over IP

The DMPS effectively eliminated the costly 2-wire 1FB analog lines using a JumboSwitch Modem-to-IP Gateway from TC Communications. Each TC3848-3/4 MoIP Gateway interface card provided four FXS/FXO ports, enabling DMPS to connect directly to its campus Ethernet network (see network diagram on page 2).

Currently, DMPS is using a 4U chassis with seven TC3848-3/4 4-port FXO cards at its Walnut Street computer center to connect through the DMPS Ethernet network to 13 remote schools using smaller standalone chassis units with single 4-port FXS cards.

Remote school sites use the MoIP Gateway ports to connect to fax machines, and an auto-dialer for the alarm panel and paging system. Remote school sites with elevators also use the MoIP Gateway to connect elevator emergency telephones.



MoIP Implemented by Des Moines School District

Objective

Reduce monthly costs for 1 flat business (1FB) analog lines
Connect the paging system via analog connection

Products Used

- JumboSwitch®
- TC3848-3/-4: Modem over IP

Key Benefits

- Eliminated costly 2-wire 1FB analog lines
- Successfully connected 13 remote schools

Cost savings and an improved paging system, along with emergency phone and alarm access were immediate. Replacing 1FB lines with the MoIP Gateway will result in a positive ROI in less than two years. In addition, the MoIP Gateway solution gave us the necessary analog connections to our paging, elevator phone and alarm systems. Making a page is as simple as picking up a phone and dialing the designated access extension number.

- Doug Mundil
DMPS Telecommunications Manager

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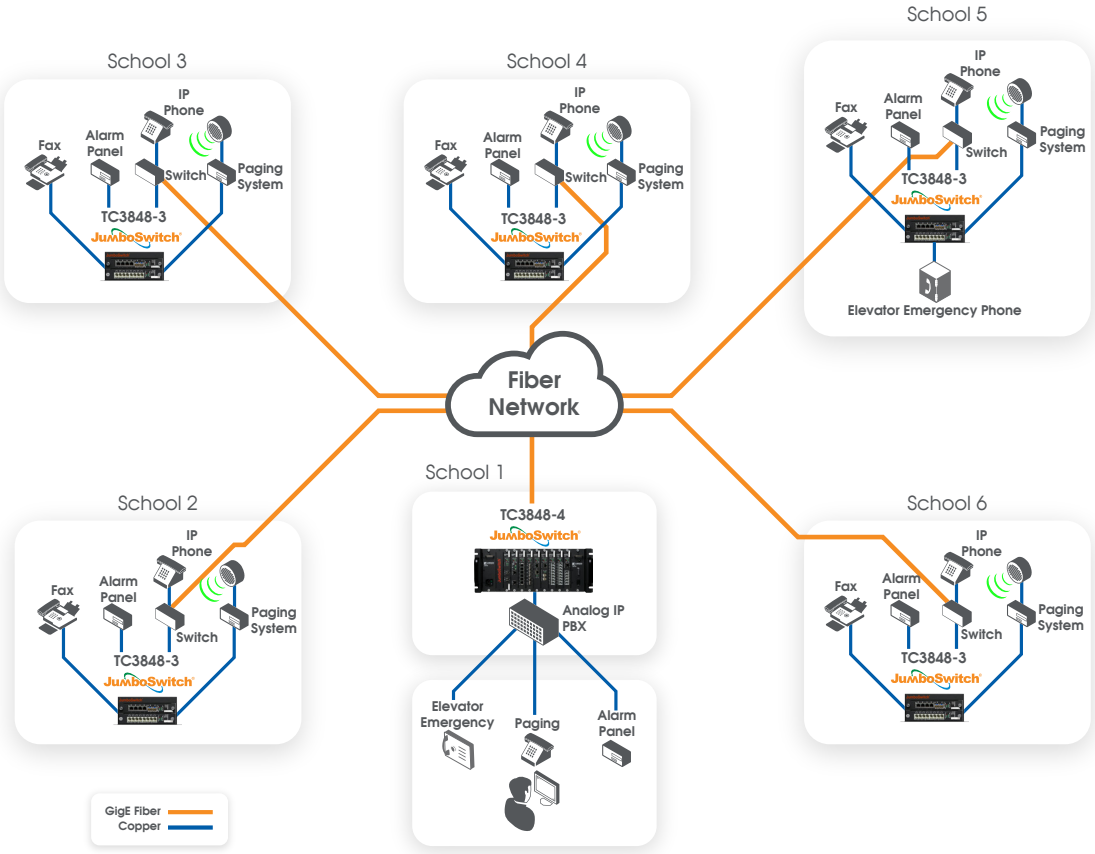
Results:
Reduced Costs and a Better System

With the MoIP Gateway, the paging system, emergency elevator phones and auto-dialer for the alarm panel connect through the DMPS Ethernet network to the PBX at the computer center and on to the DMPS off site security center – all via telephone lines.

According to Doug, the TC3848-3/4 MoIP Gateway "has been a valuable cost saving and life safety product for our school district," and DMPS is already planning to add more MoIP Gateways as it continues to renovate its many school buildings."

Rack of TC3848-4 FXO on Des Moines School District Campus



Simplified representation of the De Moines School District Modem & Fax application

About TC Communications

TC Communications specializes in TDM over IP network solutions including Analog Radio, Voice, Serial and T1 products. Applications include Leased Line Replacement, Voter Comparator over IP and Multi-Service communication networks. Focused on mission-critical applications, TC products are designed to help Public Safety networks transition to IP/Ethernet without replacing existing analog equipment. All services including engineering, manufacturing, and support located in Irvine, California, USA since 1991.

Certified System SAI GLOBAL ISO 9001 Quality

Designed and made in Irvine CA since 1991

17881 Cartwright Road Irvine, CA 92614 | +1-949-852-1972 | tccomm.com

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