

## Issue Brief – UEN Satellite Conversion

UTAH EDUCATION NETWORK

NUMBER UEN-03

### **SUMMARY**

Changes in commercial satellite technology require the Utah Education Network (UEN) to update its terrestrial infrastructure. Rather than upgrade its satellite system, UEN is opting to replace satellite technology with more flexible, higher capacity Internet Protocol (IP) Video systems. To do so, UEN requests a \$2,100,000 one-time FY 2007 supplemental appropriation. The Analyst recommends a \$2,280,000 one-time appropriation offset by a \$180,000 ongoing reduction to capture savings from satellite circuit costs.

### **BACKGROUND**

The Utah Education Network currently receives \$1.5 million in ongoing appropriations from the Legislature to operate a satellite-based video delivery system. UEN does so in cooperation with Utah State University (USU). The existing system serves 240 satellite receive sites throughout the state.

Satellite technology has progressed to the point that the commercial company from which UEN leases its “space segment” will require UEN to upgrade its ground equipment to newer MPEG-4 standards. Rather than re-invest in satellite technology, UEN and USU have agreed to convert the satellite system to an Internet-based standard. The replacement system would use Internet Protocol (IP) Video equipment, the same as used elsewhere in UEN’s video conferencing network.

While satellite technology offers better picture quality at receive sites, it only provides one-way video and audio. Return audio from receive sites to the origination site is accomplished using a telephone.

IP Video offers two-way interactive video and audio. It provides more scheduling flexibility as it avoids “bottle-necks” at centralized “uplink” or send sites. It allows greater capacity by using regional bridges to connect classrooms. Finally, it allows users to share data over the Internet.

While the current satellite system has 240 receive sites, many of these are in the same buildings – sometimes the same rooms – as UEN IP video conferencing sites. UEN will leverage its existing IP video conferencing

rooms (see FY 2008 Issue Brief UEN-02) so that it will only need to replace 157 of the 240 satellite sites.

Further, UEN will use the state’s investment in Network Infrastructure (see FY 2008 Issue Brief UEN-01) to avoid purchasing additional data circuits.

Of the \$1.5 million appropriated to UEN for the UEN Satellite System, roughly one-half, or \$750,000, pays for satellite circuits. UEN will continue to pay satellite costs for part of the first year of implementation. The remainder it will use to improve support for all of its video conferencing sites.

UEN proposes to use its ongoing base budget to hire two Technical Operations Center (TOC) Operators and three Tier-2 Network Support Technicians. TOC Operators assist users with testing, setting-up, and switching video conferences. Network Support Technicians troubleshoot technical problems throughout the network.

The UEN Satellite budget and the budget for UEN’s IP video conferencing system are currently in two separate line items. To facilitate the conversion of satellite to IP video, the Legislature will need to reallocate funds from the Satellite budget into UEN’s main line item and potentially into the USU budget.

### **RECOMMENDATION**

The Analyst recommends that the Higher Education Appropriations Subcommittee take the following steps to implement UEN’s satellite conversion project:

1. Reallocate the UEN Satellite line item to the UEN main line item and possibly to Utah State University pending further information for UEN and USU;
2. Place on a priorities list a one-time FY 2007 supplemental appropriation of \$2,200,000 from the Education Fund;
3. Place on a priorities list for FY 2008 a \$180,000 ongoing funding cut offset by a one-time \$180,000 appropriation from the Education Fund to account for satellite circuit savings once the conversion is complete.