Highlights from a recent webcast on centralized single image management featuring California Polytechnic State University

CREATING CONSISTENCY OUT OF CHAOS

## Single image management solution emerges to help IT meet organizational drivers without breaking the bank

Educational IT departments face many challenges: growing lists of user needs, tight budgets, increasingly complex systems, and limited support staffs. To survive nowadays, they need help, help keeping their systems running in a consistent manner. A recent webinar "IT Tips for Managing Campus Computers" outlined how to address those issues with SmartDeploy, a computer imaging solution focused on centralized, single image management.

While each classroom is unique, common pain points emerge in educational (K-12 as well as higher education) IT departments. "Typically, money and budgeting is tight," said Spencer Dunford, General Manager at SmartDeploy. The list of possible expenses is longer than the available funding, and IT's needs are seldom at the top of the priority list.

Consequently, managers often have to be ingenious when they require new hardware. Instead of buying the latest solutions, many times, they refurbish and repurpose older systems. As a result, the techies wind up overseeing a hodgepodge of devices, with various makes, models, and configurations.

The Upgrade Pace Quickens
Compounding the problem, the pace of technological innovation has dramatically picked up recently. In the past, product refresh cycles stretched
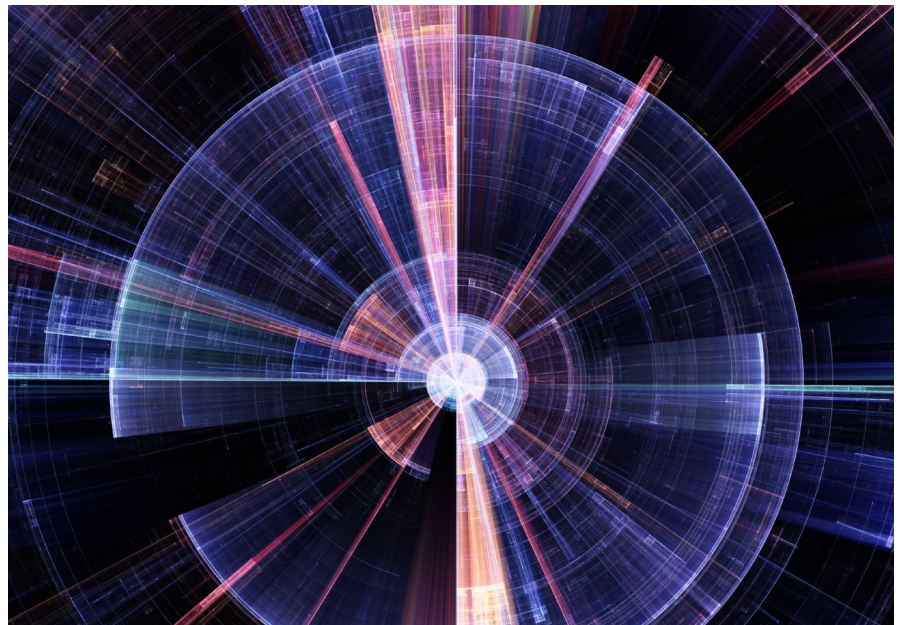
out for a handful of years. Nowadays, upgrades come fast and furious.

For instance, Microsoft Corp.'s Windows operating system has been quite popular in academia. "The sun is now setting on Windows 7 so schools need to move to Windows 10," noted SmartDeploy's Dunford. To keep pace with competitors, Microsoft has become more aggressive with its update cycles. The vendor is pushing out releases at a rapid pace, but such changes often are not compatible with older machines.

Another challenge is staff need training to understand how new solutions work. But IT managers are

hard pressed finding the time and the money to send their team for training.

Servicing systems has been difficult. In many cases, IT oversees district systems. The support group is in one building but problems arise in another location. Consequently, staff needs to jump into a car when major issues arise.

School Specific Maintenance Challenges
In the business world, users are adults and take a level of pride in maintaining their systems. In the academic environment, the opposite is often true. Students view systems as toys and regularly

experiment with them, so hardware faces significant wear and tear.

Compounding the problem, academic systems have long life cycles. Businesses write cost justification cases, so they revamp their equipment every few years. In academic institutions, systems are often handed from one department to another, in a manner like clothes in a family with many children. Consequently, devices need to last many years.

Security threats today are greater than any time in the past. The connectivity found with networking and the Internet, the complexity of today's software mean that systems have many possible entry points. Academic systems are under constant attack. "In schools, students present a threat because they try to skirt security policies," explained SmartDeploy's Dunford.

No Rest for the Weary
Maintaining model-specific images to support various systems can be challenging. The IT team is often small, in some cases one or two employees. With systems and applications growing larger and more complex, academic institutions have trouble keeping pace with maintenance demands.

Infrastructure upgrades are done during the quiet periods: at night, on weekend, during vacations, and during the summer. As a result, the IT team can feel disgruntled because the job disconnects them from their families.

Given the long list of demands, IT departments need tools that are simple and easy to use. Also schools using a virtual reference machine will reduce hardware costs because they won't need an extra of each model they need

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to support. The system should produce images that work with Windows tools, are hardware independent, and provide device driver support for popular computer models. The product should scale up and out. The staff should be able to complete quarterly, monthly or even daily refreshes.

Finding the Right Solution
In sum, academic institutions need a solution with zero-touch remote deployments, simple driver management, and built-in best practices. Larry Coolidge, California Polytechnic State University, Tech Support Manager, Mechanical Engineering Department, found such a system. His group oversees technology used by 1,100 undergraduate students, 50 graduate pupils, 40 faculty and staff, and 16 labs.

In August 2010, his department was using a Symantec imaging tool and Microsoft Corp.'s System Center but was overwhelmed with the hundreds of images it needed to maintain. After attending a webinar, he began testing SmartDeploy.

The solution had attractive features, such as ease of use. The system has wizards to help with system creation, installation, and management. "The software arrived in the morning and was up and running in the afternoon," Coolidge said.

The IT team reduced the number of system images for 350 systems to three. The change reduced maintenance require-

ments by about 25 percent. With the new system, the department pushes out updates and patches faster, so systems are more secure.

Realizing Many Benefits
The university IT department saved money. They no longer need to maintain a dedicated system to run the different images. In addition, the department is able to repurpose older systems. The school library has five floors and every year, they replace one floor's PCs. The Mechanical Engineering Department now takes those old systems, adds a Solid State Drive (SSD), loads an image on them, and are good to go.

Security has improved, according to Coolidge. The department has locked down the PC BIOS. As a result, students no longer can walk up to a system with a Linux stick and take over the system.

If problems arise, the SmartDeploy tech support team is quickly on it. "If we send the company an email, we receive an answer—not a note telling us someone is working on the problem—in about 15 minutes," Coolidge stated.

Many schools struggle to keep pace with changing hardware support requirements. In response, tools, such as SmartDeploy, have emerged to help them manage their systems in a simpler, more consistent, more secure manner.