

Simplify PC Fleet Management with a Standardized Platform

Thailand's Siriraj Hospital went full-scale into Intel® vPro™ technology to improve the responsiveness of its IT in helping to deliver medical care



Siriraj Hospital is the oldest and largest hospital in Thailand. It is the primary teaching hospital of the Faculty of Medicine Siriraj Hospital, Mahidol University.

"Intel® vPro™ technology has enabled us to manage our IT resources more effectively, improving PC uptime that leads to better outcomes in terms of efficient usage of our limited resources and supporting healthcare delivery."

Dr. Viroje Chongkolwatana
Deputy Dean of IT
Faculty of Medicine Siriraj Hospital,
Mahidol University.

CHALLENGES

- **Standardize platform.** Enable overall hospital IT efficiencies with a standard platform with the performance capability and environment to handle a variety of applications, including the benefits of in-band and out-of-band management through a management console.
- **Improve medical care delivery.** Increase efficiency in the delivery of medical care by ensuring the uptime of computing resources.
- **Increase work productivity.** Reduce work delays caused by PC breakdowns and increase IT support responsiveness in bringing disabled PCs back into service rapidly.

SOLUTION

- **Deploy Intel® vPro™ technology.** Standardize the hospital's cyclical refresh with Dell OptiPlex* desktop PCs based on the Intel® Core™ i5 vPro™ processor.

Introduction

With a capacity of more than 2,200 beds, 69 operating rooms, 109 wards and more than three million out-patient department (OPD) cases a year, Siriraj is one of the busiest medical centers in Thailand. The medical school accepts about 250 medical students and more than 100 for postgraduate residency training each year. Siriraj is the largest public hospital in Thailand. Due to its excellent reputation, its tertiary care unit is the referral center for all hospitals in Thailand. The hospital's Medical Informatics Department supports and maintains thousands of PCs across its huge campus that it uses for the hospital's information systems, academic teaching applications and financial and administrative functions. To maintain the efficiency and responsiveness of its PC infrastructure in supporting the hospital's operations, Siriraj Hospital standardized on a PC environment running the Intel Core i5 vPro processor.

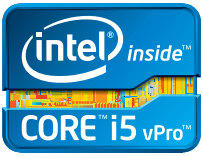
Challenges in managing a large PC fleet

Like many modern and large medical centers, The Faculty of Medicine Siriraj Hospital relies on its IT infrastructure of PC systems to run its daily operations including medical, administrative and financial systems. Maintaining the thousands of PCs in top operating condition is a task the hospital takes seriously, since hospital staff depend on the machines to do their work effectively. This is especially true with PCs running the hospital information system as PC breakdowns can adversely affect the speed and quality of healthcare delivery.

With over 4,000 PCs spread across a campus of more than 70 buildings running the hospital's medical, academic, and administrative functions, maintenance and management are demanding tasks handled by the Siriraj Information Technology Department (SiIT). The department has a staff of 140, 14 of which are engineers and technicians. The department also operates a 24x7 helpdesk. With limited resources, and in such a diverse and expansive environment, the support team encountered PC problems every day. The limited manpower resources also meant that many of those problems took longer to address than necessary, causing frustration to users and slowing down their work.

"PC failure issues not only reduce staff productivity but also affect efficiency in the delivery of medical care," explains Dr. Viroje Chongkolwatana, deputy dean of IT at Siriraj Hospital. In providing support to our end-user base, it is important for us to be able to react rapidly to bring computing resources back online.

"In the past, when we received a helpdesk call, our support staff would almost always have to pay a visit to the user's desk," Chongkolwatana explained. "This was quite a challenge across a campus of over 70 buildings. We wanted a solution that would reduce the strain on our limited IT support resources and bring disabled PCs back into service rapidly."



Embracing the Intel Core i5 vPro processor enabled Siriraj Hospital to manage its PC fleet more effectively and increase PC uptime

Standardizing on Intel vPro technology

Like many other medical centers, Siriraj recognized the value of technology in advancing healthcare delivery. The hospital also realized early on that in bringing IT into the hospital, it also needed a way to manage its growing IT resources in order to make the most efficient use of its investments in technology. Siriraj needed to invest wisely in its IT to extend the reach of its limited manpower resources. "I have always believed that if you do not evolve your management of technical operations for dealing with complex and changing environments, then you can't improve," says Viroje. "Smart spending means investing in the right fitting solution for your technical and operational changes."

For Siriraj, smart spending meant standardizing on a platform with the performance and capability for future growth and expansion. This meant a platform based on open standards that could handle a variety of different application builds and functionality for the future. Secondly, the platform environment should also have the capability for in-band and out-of-band management of IT resources through a management console. The hospital decided to standardize its PC fleet on Intel vPro technology.

"We started out in 2007 with systems based on the Intel® Core™2 Duo processor with Intel vPro technology," says Viroje. "The management console and Intel vPro technology activation took place in early 2010 and we are continuing to refresh our older systems on Intel vPro technology-based systems."

Siriraj's PC refresh cycle is continual, with PCs being refreshed when they are between their third and fourth years. These are currently being replaced with Dell OptiPlex* 980 and OptiPlex 990 desktop PCs. The Dell desktop PCs incorporate the latest 2nd-generation Intel Core i5 vPro processor. Today, Siriraj has one of the largest deployments of Intel vPro technology in Thailand.

Intel vPro technology simplifies PC management

A key feature of Intel vPro technology is its remote management capabilities that make PC management easier, more efficient, and more cost-effective. The system's capability includes remote diagnostics and repair, remote power-up, and power cycling for PCs to perform scheduled maintenance and backup. These hardware-based technologies enable Siriraj's engineers to manage and secure PCs through the hospital's wired and wireless network, reducing support costs and the number of support visits to desktops. The new platform also includes technologies such as Intel® KVM technology, which gives support personnel better control of PCs remotely, even in the boot process and in case of operating system or disk failures.

Results

With Siriraj's PCs standardized on Intel vPro technology, the hospital's Medical Informatics Department can more effectively provide remote support to PCs via a central console. If a PC located anywhere on the campus's network experiences a problem, the engineer can immediately use the console to remotely access the failing PC to investigate. This speeds up support and reduces PC downtime. The central console can also ensure that PCs in departments that don't need 24x7 operation are powered down to save on electricity costs. Furthermore, the system can proactively manage security updates of anti-virus and anti-spyware definitions without interrupting staff access to PCs. The ability to push operating system updates also allows support staff to ensure that the PCs are kept up-to-date and functioning as effectively as possible.

"Intel vPro technology enables us to conduct remote diagnostics and, in many cases, perform remote remediation on our PCs anywhere on our network, which significantly reduces the strain on our IT support teams," says Dr. Viroje. "Ultimately, this benefits our end users."

Key benefits Siriraj gained through standardizing on Intel vPro technology include:

▪ Smart spending

- Investing to refresh with Intel vPro technology-enabled PCs puts a cap on the increasing costs of supporting a large PC fleet with limited manpower support resources.
- Reduced deskside support visits means less time wasted traveling across campus to diagnose and fix problems, enabling support staff to better utilize their time.

▪ Do more

- Faster discovery and repair of PC problems.
- With remote management, more PC problems can be handled effectively in less time.
- End-user productivity increases with less PC downtime and interruptions to work.

▪ Better security

- Faster to apply software patches and update anti-virus and anti-spyware definitions.
- PCs and network traffic are automatically inspected, ensuring a secure work environment.
- Proactive PC management enables potential problems to be caught and rectified before they become issues.

Now Siriraj has made Intel vPro technology a requirement for its PC fleet and its PC refresh strategy. It is actively using the platform for remote PC management. However, the hospital is not standing still and has future plans in expanding the use of the platform for improved inventory management and compliance reporting. Ultimately, the technology enables Siriraj to accomplish its goal of delivering a better quality of care to its citizens.

Find a solution that is right for your organization. Contact your Intel® representative or visit www.intel.com/itcasestudies

For more information on Intel vPro technology, visit www.intel.com/vPro

SOLUTION PROVIDED BY:



This document and the information given are for the convenience of Intel's customer base and are provided "AS IS" WITH NO WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. Receipt or possession of this document does not grant any license to any of the Intellectual property described, displayed, or contained herein. Intel products are not intended for use in medical, life-saving, life-sustaining, critical control, or safety systems, or in nuclear facility applications.

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel® products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Intel® may make changes to specifications, product descriptions and plans at any time, without notice.

Copyright © 2011 Intel Corporation. All rights reserved. Intel, the Intel logo, Intel vPro and Intel Core are trademarks or registered trademarks of Intel Corporation in the United States and other countries.

Intel® vPro™ Technology is sophisticated and requires setup and activation. Availability of features and results will depend upon the setup and configuration of your hardware, software and IT environment. To learn more visit: <http://www.intel.com/technology/vpro>.

*Other names and brands may be claimed as the property of others.

0911/JAY/XIC/XX/PDF

326079-001US