Integrated Solution for Mobile Device Security Management to be settled at one go

— Tablets based on Intel® architecture and Windows 8 system provide an ideal platform for mobile healthcare

COMPANY PROFILE

• Goodwill Information Technology Co., LTD: One of the most competitive medical software R&D companies. Under the development trend of digital hospitals, Goodwill developed the Goodwill Yirui Doctor System, a digital medical solution that is based on wireless network technology and mobile devices.

• Beijing VRV Software Corporation Limited: Listed among China’s first batch of providers of information security products under its own brand and integrated solutions, VRV has always been the market leader in China’s terminal security management field. The mobile terminal security management solution launched by VRV provides solid security support for digital medical solutions.

CHALLENGES

In the mobile Internet era, it has become a general trend for medical staff to perform their daily work by means of mobile terminals; meanwhile, because of the particularity of the medical industry, the privacy and security of patients’ data in mobile devices need to be effectively guaranteed.

SOLUTIONS

Based on the characteristics of mobile terminals and the special requirements of the medical industry, Goodwill and VRV worked together with Intel to successfully deploy efficient and secure mobile medical solutions on tablets that are equipped with Intel® Atom™ processor and fully compatible with Microsoft’s new generation Windows 8 operating system.

BENEFITS

Tablets deployed with the aforementioned solutions do not only maintain the excellent performance of Intel® architecture, but also perfectly support Windows 8 system and offer smooth touch experience, thereby helping health workers greatly enhance the service quality and efficiency. In particular, featured with unparalleled advantages over other platforms, the Intel® architecture platform provides security engine and firmware features to ensure the successful implementation of the integrated mobile medical solution for security management, and help the medical institutions quickly realize the great-leap-forward development towards mobile healthcare.
Project Background

At present, with the advance of the process of medical informatization, the management and service model in medical industry is undergoing dramatic changes, one of which is medical mobilization, that is, relying on wireless networking technology and mobile terminals to help medical personnel get rid of the time and location constraints in traditional healthcare, so as to complete the work at the patients' bedsides or on the move, instead of working at the doctors' and nurses' workstations in the past.

- Innovative mobile devices represented by Ultrabooks and tablets, have joined the ranks of medical terminals which are increasingly diversified, compact and intelligent. Mobile terminal is an important part of the entire system unit. According to the job characteristics of medical personnel, such as frequently getting to and from the clinic room and inpatient ward, the mobile device is required to have competitive advantages in terms of performance, portability, battery life, and security. Meanwhile, as an important part of the medical system unit, the mobile terminal is required to be seamlessly integrated into the existing medical environment to effectively protect IT investment.

- As the composition of medical terminal becomes increasingly complex, data security is facing tougher challenges than ever before. On the one hand, medical mobile terminals are more vulnerable to attacks, thus terminal security is becoming a fragile part of the overall security of the digital medical system; on the other hand, the large amount of medical data collected by the medical terminals is of great importance to clinical diagnosis. However, there is no doubt that these important health data often involves users' privacy. Therefore, it’s required to focus on security issues and achieve defense in depth for data leakage protection to ensure a successful deployment of mobile medical solution.

VRV, Goodwill and Intel work together to build a secure and intelligent mobile medical platform

- Visible, secure and intelligent mobile medical platform is of important significance for medical institutions to realize the leapfrog development of the digital medical process. To this end, engineers from VRV, Goodwill and Intel have carried out in-depth cooperation in combining the Intel® architecture-specific hardware-based security with VRV’s mobile terminal security management technology to ensure the security of medical mobile terminal. Meanwhile, in addition to the powerful features, tablets installed with Goodwill’s Yirui Doctor System are fully compatible with Microsoft’s Windows 8 operating system and support touch operations, all of which greatly facilitate the daily work of the medical personnel.

- **Goodwill Yirui Doctor System:** As one of the most competitive medical software R&D companies, Goodwill is committed to promoting the integration of information technology with specialized technologies such as disease diagnosis and management to support the innovation and reform of medical health services. Goodwill adheres to the “clinical information-centric” design idea and concept, and has developed a new generation of medical informatization product --- Yirui Doctor System --- to add mobility and accuracy to medical informatization in the medical industry.

- Goodwill Yirui Doctor System mainly applies to the clinical scenarios such as medical ward rounds. It seamlessly integrates with the Hospital Information System (HIS), Electronic Medical Record (EMR) system, Clinical Information System (CIS), and Picture Archiving and Communication System (PACS) through the wireless network-based (WLAN or 3G) mobile terminals, so that the medical staff can retrieve the basic information of patients, check-in information, doctors' advice, electronic medical records, vital signs, tests and examinations (including PACS) across time and locations; The unique handwriting support is convenient for the medical staff to add notes and make modifications; The application of multimedia technologies such as recording and photographing, makes it possible to archive the patients’ multi-dimensional data for future reference, ensuring that the patients can receive the most timely, accurate and reliable treatment.

- **VRV’s mobile terminal security management solution:**

  Listed among China’s first batch of providers of information security products under its own brand and integrated solutions, VRV has always been the market leader in China’s terminal security management field. It launched the first domestic terminal security management product in a revolutionary way, emerged as a pioneer in technological innovation in terminal security management.

  - Security threats from the network computer terminals are tricky problems facing many security administrators. According to the characteristics of tablets running Windows 8 and the special requirements of the medical industry, VRV, in collaboration with Intel and Goodwill, came up with the industry-leading mobile terminal security management product and application solution from the perspective of software.

  - **VRV’s terminal security management solution:** Based on C/S and B/S mixed style, supports distributed deployment, and has such advantages as modular software customization,
support for standard API, seamless extension and upgrade. It strengthens the management of the state, behavior and event of mobile terminals, provides the protection that firewall, IDS, anti-virus system and professional network management software cannot provide, and monitors the blind spots under management. It has been extended into a real-time controllable intranet management platform that is able to integrate with other security devices and support alarm linkage. This solution provides such capabilities as terminal (device) registration management, patch distribution and software distribution, hardware and software asset management, process service software monitoring, IP and MAC binding management, remote assistance, automatic shutdown management of the system and time synchronization management of the terminal.

VRV’s terminal security management solution enhances the security in device registration and certification, as well as system recovery and anti-theft security, providing a comprehensive protection for the privacy and security of patients’ data and securing the efficient application of Yirui Doctor System.

Tablets based on Intel® Atom™ processor and Windows 8 system: The high mobility of medical staff in ward rounds imposes a high requirement for mobile devices in terms of portability, performance, battery life, safety and reliability. In response to this requirement, Goodwill, VRV and Intel worked together to deploy and optimize the solution using tablets based on Intel® Atom™ processor to meet the mobile medical requirements.

- Intel® Atom™ processor supports the thinnest and lightest tablet PCs based on Intel® architecture while offering outstanding battery life and promising improved connected standby time and endurance. A number of performance and response technologies optimized specifically for mobile technology and high-density computing, including Intel® Hyper-Threading Technology and Intel® Burst Technology, match performance with applications and workloads so as to improve performance and energy efficiency.

Besides, the security and firmware features of Intel® architecture provide enhanced device management. The firmware and middleware module enhances data protection, authentication and anti-theft functions. Based on these inherent edges of Intel® architecture and VRV’s mobile terminal security technology, the mobile medical solution provides multiple security protections in security certification, user security certification, electronic signature, patient data access, user rights management, firmware recovery, intrusion alert and so on.

In aspect of operating experience, tablet PCs based on Intel® architecture and Windows 8 system are fully optimized for touch operations in hope of further improving the usability of mobile terminals. The medical staff at the patients’ bedside only needs to click on the smart tablet device, or slide on the screen, or use the virtual keyboard to input a few characters for easy access to the patients’ electronic medical records and other information, thus providing greater convenience and accuracy. Moreover, tablet PCs based on Intel® architecture and Windows 8 system provide maximum compatibility with the existing programs, applications and devices of medical institutions.

Benefits and Values

Perfectly integrated with Windows 8, Intel® Atom™ processor-based tablet PCs have outstanding performance, user experiences, portability, and battery life, as well as with the support of VRV’s terminal security management solution, met the requirement of the mobile healthcare for wireless technology-based mobile terminals, which made the successful implementation of the Yirui Doctor System possible.

The launch of the “mobile ward rounds” improves the work efficiency of medical staff, reduces human errors, better ensures the accuracy, timeliness and security of treatment for patients, and allows the medical staff to spare more time and effort to serve patients better, thus improving the satisfaction of patients for medical institutions and benefiting both doctors and patients. Intel® processor-based Windows 8 Tablet PCs are highly compatible with the existing IT resources of medical institutions, can help the institutions maximize their return on investment and lower total cost of ownership.

For more information about Intel® Atom™ processors, visit: http://www.intel.cn/content/www/cn/zh/products/atom/atom-processor.html

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