# CYBERGUARD CORPORATION

MEDICAL RECORDS & PUBLIC NETWORKS

Health care organizations must make a reasonable effort to maintain the privacy of patients' medical information according to the Health Insurance Portability and Accountability Act of 1996 and the Fair Health Information Practices Act of 1997. The CyberGuard Firewall, together with RedCreek Communications' Ravlin, offers an ideal solution to medical records privacy on public and private networks.

In recent years, the health care industry has aggressively redesigned the way that health care is delivered. Vastly improved diagnostics and treatment programs have meant better medical care, but also much higher medical costs.
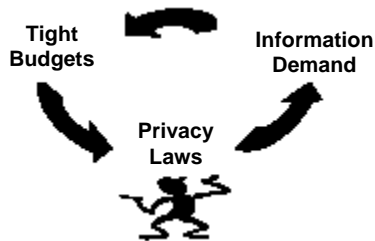
The industry has addressed the cost issue by centralizing support services, distributing care facilities, and leveraging information technology such as the Internet. Information flow is the key to quality care and cost efficiency. But as both clinical and claims information are transmitted across low cost public networks to hospitals, labs, and insurance companies, protecting the privacy of information is a serious concern.

Medical records privacy has escalated into federal law via two congressional acts: the **Health Insurance Portability and Accountability Act of 1996** and the **Fair Health Information Practices Act of 1997**. The acts require anyone who handles medical records to use reasonable means to protect the privacy of the records. Suddenly information privacy has become both a necessity and a potential liability.

Choosing a Solution
The solution to protecting the privacy of medical records on the Internet is the Secure Virtual Private Network (SVPN). SVPNs authenticate people on the network and encrypt transmissions so that if transmissions are intercepted, they can't be read.

Effectively, SVPNs build a secure tunnel through which records pass among authorized recipients. The popularity of SVPNs has resulted in many products and SVPN designs. But as the technology has matured, a set of fundamental characteristics has emerged.

The first characteristic to consider is transparent operation. Any security system is more reliable when it works automatically. The less human intervention, the less chance of error. In smaller clinics or any place where technical expertise is in short supply, transparent operation is important because it also reduces the costs for training and system support.

Speed is the next characteristic. A SVPN solution should not reduce network performance. Encryption is processor-intensive, however, this normally slows performance. New, stronger encryption techniques often add to the performance problem.

A slow system either requires people to accept delays or it requires additional expensive hardware to improve performance. Neither choice is desirable. The answer is to select an encryption system designed to operate at wireline speed – the maximum speed of the network.

> - *Transparent Operation*
> - *High Speed*
> - *Cost-Effective*
> - *Industry Standard*

SVPN cost is a combination of multiple factors. The cost of the SVPN equipment is often the smallest issue. For example, if the SVPN system isn't compatible with the existing network, replacing network components will drive up the cost of the SVPN solution.

Another cost consideration is installation complexity. SVPN solutions that require lengthy operations and technical expertise are common, but costly.

Standards support also needs to be considered. In the health care industry, standards may not be an issue for a new SVPN. When components are later added to the SVPN or when medical sites join the network, however, a standards-based system becomes the key to easy migration. Standards are also important as a way to validate that medical records are adequately protected.

CyberGuard Firewalls and RedCreek Ravlin

The proven security of CyberGuard, combined with the Ravlin technology, brings you a breakthrough product to meet these SVPN criteria. Ravlin is based on unique technology, CryptoCore (patent pending).

High Security. The CyberGuard Firewall with SVPN offers the highest level of security available today in a firewall.

Ease of installation. Installation takes seconds with the Ravlin Manager, which supports the CyberGuard Firewall and Ravlin stand alone devices.

Ease of use. New SVPNs are created using Ravlin with drag-and-drop simplicity. The only requirement of Ravlin users is to respond to authentication challenges.

High performance. Ravlin CryptoCore is optimized for speed and with its onboard processor delivers wire-line speed even with state-of-the-art, Triple DES (3DES) encryption.

Scalability. Users select the right price-performance components to meet their needs, from single users to enterprise.

Standards. Supports the IETF, IP Security (IPSec) standard for SVPNs, and the requirement for NIST validation according to FIPS-140-1.

Health Care Applications

The following are examples of the CyberGuard Firewall with SVPN applications in health care networks.

MEDICAL AND CLAIMS CENTERS
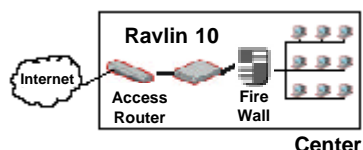
The large medical center is the most critical site in the SVPN. Its large number of records and large number of physicians and others who rely on those records mean

that the center needs a fast, highly secure, and reliable SVPN. In the illustration, above, a Ravlin 10 is installed and will maintain the throughput of the 10Mbps Ethernet network in the medical center. The Ravlin 10 works in conjunction with the center's access router and CyberGuard Firewall.

CLINICS AND SMALLER SITES
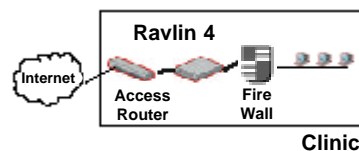
For clinics, research facilities, or other sites that are smaller and less demanding, a Ravlin 4 may be the most cost-effective solution. The Ravlin 4 is fully compatible with the Ravlin 10 and allows secure SVPN communication with the medical center in the previous example.

The easy installation of the Ravlin 4, as well as its low cost, makes it ideal for smaller, remote sites. A Ravlin 4 can be managed locally, or remotely through the medical center's Ravlin unit.

HOME OFFICE
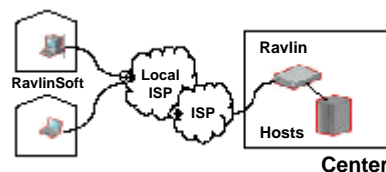
Increasingly, people are using the mobility of the laptop computer to work wherever they wish. In the illustration above, a doctor is working at home. The doctor's laptop is running RavlinSoft, the software-only version of Ravlin. RavlinSoft gives the doctor access to the medical center, or the clinic, or to any other facilities on the SVPN, and maintains the security of the system.

**CyberGuard Solutions
for Health Care**
For more information on meeting your
Secure VPN requirements,
contact CyberGuard Corporation at
800-666-4273 or 954-958-3900.