By – John Perkins
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A guide to storing test results centrally

John Perkins

Business Development Manager
Bluewave Optometry Networks

As optometrists look to gain efficiencies through the use of technology, the benefits of centrally storing and accessing information captured by retinal cameras, perimeter testers and other testing equipment become more appealing.

By storing test results on a Microsoft server within the practice, optometrists can review results from consulting rooms, integrate results where possible within their practice management software and automatically back-up all test data from multiple instruments on a daily basis.

For those planning to store test results centrally through an integrated computer network, here are some key points to get you started.

Computer and instrument compatibility

It is essential that the hardware interfaces and capturing software are compatible with modern computer network hardware and software to ensure reliable integration. Capturing software must run on the PC operating system Windows XP Professional. Hardware interfaces must be connected to a USB, Serial or Cat5 network.

A computer networking company like Bluewave can save you time and trouble by working closely with equipment companies and their technicians to obtain the relevant information directly.

Practice management system integration

Successful integration is all about capturing, storing and finding data in a centralised way. It is always a good idea to check with your practice management system vendor the extent to which its system integrates with each instrument's associated software.

Data cabling

Data network cabling is very important as each instrument will need to send data from the capturing device through to the server. Data cabling (Cat5e cables) is located within the walls of the practice and is installed by a qualified electrician, linking each room of the practice with the server.

Often the computer networking company will liaise directly with the electrician to assist the practice in ensuring the network cabling is installed correctly to allow for reliable data centralisation.

Microsoft computer network

A reliable computer network is essential when centralising test results to avoid delaying patients and ensure test results are securely saved on the server. Microsoft's networking and computer software is well suited to optometric practices and, when set up properly by experienced technicians, provides a reliable platform for viewing, editing and backing-up your practice data.

Behind the scenes there should be a constant dialogue between equipment and software companies to ensure your computer network will allow the instruments to effectively capture information and then store the data centrally.

Hardware interfaces

Physically connecting instruments to the computer network is done through a 'hardware interface'. These interfaces are based on a variety of standards developed over a number of decades. Each instrument manufacturer will be able to provide information about the network

interface that its equipment uses. The most up to date interface is a Cat5e network connection. USB and Serial are two other recent interfaces.

Capturing and reviewing software

When centralising instrument data, the capturing and reviewing of data may be done using different computers on the network. The key is to make sure that the data is easily found and reviewed. This will rely on the network as well as the capabilities of the reviewing software.

Factors to consider include:

- Does the reviewing software link to the practice management software?
- Is there an easy way of monitoring multiple images over time?
- What is the review software licensing policy of the vendor?

Multi-branch practices

Centralising data across multiple practices can be achieved through the use of a central Microsoft server, a multi-branch edition of your practice management software and a virtual private network (secure internet connections) between branches.

From large multi-practice partnerships to single boutique practices, storing test results centrally will improve the efficiency of delivering high quality patient care.

John Perkins is the business development manager for Bluewave Optometry Networks, which specialises in the design, implementation and support of computer networks specifically suited to Australian independent optometrists (www.optometry-networks.com).