

Difficulty accessing critical information, including calendars, bed availability, and waiting lists, across nine separate hospitals and community centers

Reports showing calendars, bed availability, and waiting lists are automatically created every half-hour and posted on the UBHT's intranet for easy access by all clinicians.

## **UNITED BRISTOL HEALTHCARE TRUST SIMPLIFIES COMMUNICATION ACROSS NINE HOSPITALS**

Providing a comprehensive range of health care services for Central and South Bristol and surrounding areas, the United Bristol Healthcare Trust (UBHT) is a major UK teaching Trust of nine hospitals and community centers. The UBHT's 7500 staff manage 1320 beds across nine hospitals that see attendance figures of 330,000 outpatients, 55,000 inpatients, 45,000 day cases and 92,000 Accident & Emergency (A&E) visits per year—in addition to the constant thoroughfare at local community centers.

Nearly two million UBHT patient records are stored centrally on a MUMPS-based OpenVMS host system. The information held on this host system covers a huge range of subjects, such as patient administration information from maternity, theater, A&E, medical audit, and community activities. It's essential that all UBHT professionals have quick and reliable access to such details in order to maintain an up-to-date view of all areas of the Trust, such as bed availability or patient waiting lists.

### **Accessing Host Information**

In the early 1990s, the Trust's medical information was stored at a number of disparate National Health Service (NHS) locations across the Central and South Bristol region. To enable easy access to this information, UBHT needed to offer its users access to its host systems via PCs and phase out the traditional green screen terminals. As with most legacy systems, getting at the mainframe data often requires cryptic commands that only experts can navigate. This makes managing the systems difficult, yet host data is often mission-critical. A solution to combat these issues was in great demand.

The Trust aims for its health care services, teaching, and research activities to be characterized by high quality, evident value for the money, and demonstrably beneficial outcomes for patients. In line with this philosophy and in reviewing the market for suitable

host-access products, WRQ Reflection®, a Windows®-based terminal emulation product, was identified as the most appropriate match for UBHT.

WRQ Reflection breaks down the barriers between host-intensive environments and the people who need access to host information by providing easy access, automating tasks, and simplifying management. By using WRQ's solution, UBHT medical professionals have been able to access the huge silos of information that reside on their host system.

### **Sharing Host Information**

It became clear that facilitating communication between the Trust's dispersed care sites would require one interface to a variety of host systems from any Windows desktop. This would enable all medical staff to access Trust data and coordinate patient care in the Central and South Bristol areas.

The decision was taken to give 2000 Microsoft® Windows desktop users access to all UBHT medical records over an intranet 'clinical portal', which would provide a single point-of-access. This access had to be fast, reliable, and intuitive for all professionals—regardless of their level of IT knowledge.

With the introduction of an intranet at UBHT in 1998, WRQ Reflection was able to introduce constant monitoring of patient information records and Trust data. As a result, reports—which typically include

calendars, bed availability, and waiting lists—can now be automatically created every half-hour, offering managers and clinicians immediate access to vital information.

Arthur Matthews, head of Systems Development at the UBHT, was behind the drive to deploy a terminal emulation solution to link desktop PCs to the main data servers across the entire Trust. “WRQ Reflection has enabled us to completely turn around the management of such vital information and provide a constant flow of up-to-date information within the Trust,” commented Matthews. “In conjunction with the intranet, WRQ Reflection has enabled the Trust to provide clinicians and managers with ‘real-time’ reports, allowing the information to be used operationally and highlight the areas where data quality needs improvement. This is crucial to the efficiency of the NHS and our ultimate success.”

A key feature of WRQ Reflection is its ability to provide IT staff with macros to automate tasks. In the case of UBHT, its IT staff created a macro that could interrogate records and pull off specific activity reports, then automatically offload them into a Microsoft SQL Server database before sending them to the UBHT intranet via ASP.

As a result, all UBHT employees now have pertinent access to all patient and Trust information across the entire organization. Reflection is ideally suited to a ‘closed environment,’ where all users are known—a feature that enables varying levels of authorization to maintain the privacy of certain activities. There is one general administration level with basic legacy access and another with added functionality in the form of the ability to download information onto the PC.

“Easy automation in running time-consuming tasks without complex programming is now a reality at UBHT. This has brought tremendous relief to the UBHT staff, as information can be accessed by far more employees in a more timely manner than ever before. We’ve also found the application simple, efficient and incredibly pain-free to work with,” said Matthews. “I can honestly say that we’ve never had a problem with Reflection. Its overall strength and capability has made for a most refreshing experience. We were looking for a comprehensive yet cost-effective solution to address our need to access host data securely and quickly and found our answer in WRQ Reflection.”

#### **Moving Forward—Web Access to Host Information**

Building on the successful implementation of WRQ Reflection, the Trust is now piloting a number of options for accessing the information held on its host systems via the Web. This is in response to the UK government’s ‘joined up’ initiative and, within this, the NHS modernization strategy. For the medical community, this involves the introduction of Electronic Patient Records (EPR)—making information more widely accessible through the migration of paper

records to electronic records with a view toward having all patient medical records on a computer system by 2005.

EPR systems will make information available to all who assist in the overall clinical care of the practice population. EPRs are physically more accessible to their users than paper records—the ability to interrogate the content of EPRs for audit and analysis purposes is arguably their single greatest advantage over their paper equivalent. However, data entry is far more complex and institutions need to deploy solutions that are easy to negotiate and manage.

Local solutions to facilitate web-based knowledge management are being explored at a variety of NHS locations. WRQ Reflection for the Web is one such solution, as it delivers secure and fast access via web browsers to host applications and PC desktops across the organization. UBHT is evaluating this solution as a means to provide a tactical, easy step towards the ‘webification’ of UBHT information.

Commented Matthews: “WRQ’s Reflection is already providing a significant contribution to our preparations for EPR in ensuring the UBHT data is accurate and timely over the intranet. We are reviewing Reflection for the Web as the next step to integrate the old but very efficient existing systems with the Web.”

The development of the intranet was central to the Trust’s web strategy and the intranet currently in place provides clinical and management effectiveness in the form of direction on protocol, patient health care guidelines, and document control. Moving forward, the UBHT will be phasing out the remaining 500 green screens used for accessing host applications and building on the 2000+ email and intranet users to ensure that the information residing on UBHT’s mainframes is entirely accessible via the UBHT intranet.

Matthews regards the current intranet as an intermediary step to supporting preparation for EPR. Making information available over the intranet encourages staff to access the critical details necessary on a day-to-day basis and familiarize themselves with an environment that has the look and feel of the Web. This also demonstrates the versatility of the intranet and its ability to capture the full breadth of the patient and Trust information as it is driven out of the legacy applications.

Matthews concluded: “WRQ Reflection forms the foundation for UBHT’s evolution toward accessing systems via web browsers and has enabled us to stay ahead of the game with support for the impending changes. We’re in a good position to provide EPRs, as we are already transferring information in the form of automatically created real-time reports from our mainframes to the intranet, which offers access to everyone. This is certainly a solid step toward fully ‘webifying’ UBHT.”

**About WRQ®**

WRQ provides integration software and services for host-intensive environments. For 21 years, we've been helping our customers access and integrate information to transform the way they do business. With more than 26,000 customers representing six million users worldwide, we are one of the top software companies in the U.S. We sell our award-winning Reflection® and Verastream™ products directly and through a global network of business partners.



**Corporate Headquarters**

1500 Dexter Avenue North  
Seattle, Washington 98109  
TEL 206 217 7500  
800 872 2829  
FAX 206 217 7515

**European Headquarters**

The Netherlands  
TEL +31 70 375 1100  
FAX +31 70 356 1244

**Asia Pacific Headquarters**

Singapore  
TEL +65 6336 3122  
FAX +65 6336 5233

**WRQ.COM**

EMAIL [info@wrq.com](mailto:info@wrq.com)

For regional office information, visit [www.wrq.com](http://www.wrq.com).

Copyright © 2002 WRQ, Inc. All rights reserved. WRQ, the WRQ logo, Reflection, and Verastream are either registered trademarks or trademarks of WRQ, Inc., in the USA and other countries. All other trademarks, trade names, or company names referenced herein are used for identification only and are the property of their respective owners. Patents pending for Reflection for the Web. 05/02 3M 40-0787-0000