

Staffordshire Ambulance Service

Open Text Fax Server, RightFax Edition
Answers Mobile Problems

The Customer:

Staffordshire Ambulance Service is at the forefront of technology when it comes to improving Ambulance response times. For the past 7 years Staffordshire Ambulance Service has topped the National League for emergency response. So as an organisation, standards are very high, in 85% of emergencies an Ambulance is at the scene within 8 minutes.

The Problem:

To raise the standards even higher, Staffordshire Ambulance investigated the use of Defibrillator Monitors. The machines are used by Paramedics as resuscitation and patient monitoring devices.

A system was required to receive the ECG output and then forward it to whoever requires the information, so a quick decision can be made on the patient's condition. A standard 'off the shelf' package was tried with simple data modems. The modems of course were unreliable and insecure, while the package itself could not deal with demand

The Solution:

The Zoll M-Series Defibrillator Monitor was selected as the preferred device as it is the smallest, lightest and most advanced device on the market. The Zoll M-Series provides biphasic defibrillation, external cardiac pacing, diagnostic quality 12-lead ECGs and continuous cardiac, respiratory, oxygen saturation, end-tidal CO2 and noninvasive blood pressure monitoring. 12-lead ECGs can be transmitted by fax for immediate interpretation by a Doctor or suitably qualified Paramedic contributing to a rapid decision to administer life saving 'clot-busting' drugs to a patient undergoing a heart attack. To transmit the ECG results, a GSM mobile fax modem is connected to the device to send the output via fax to doctors and other response personnel.

The information being transmitted from the machines is obviously vitally important and must be transmitted in the most efficient and reliable way possible.

Fax Server was eventually selected as a trial system. Fax Server was set-up to receive the fax messages from the Zoll machines and then automatically forward the fax via email and fax to a list of recipients, including doctors with Nokia handheld devices, the key was speed and accuracy of transmission. A mixture of Fax Server and NHS approved Brooktrout fax cards provided the perfect solution.

The main difficulty with implementing the system was the quality of output from the GSM modems in the devices, Fax Server and Brooktrout were able to combine to become flexible enough to receive the fax messages and make them readable from almost any location.

Throughout the trials of the Fax Server aspect, we were very lucky to be working with a very proactive team at Staffordshire Ambulance, Colin Thomas (Clinical Services Manager), Tony Carne (Telemedicine



Development Officer) and Nisha Rani (IT Support Officer). Between them and ProcessFlows the system was adapted to deliver what was required. Through this exercise ProcessFlows are now able to provide the same system to Ambulance Services across the UK.

The Benefits:

"ProcessFlows have made a significant contribution to the provision of a mission critical and potentially life-saving system for the rapid review of ECGs and the subsequent treatment of patients with serious heart conditions in Staffordshire. It is the intention of Staffordshire Ambulance Service NHS Trust and its partners to utilise state of the art systems, such as Fax Server, along with telemedicine processes and technology to continue to improve on the record breaking service, treatment and outcomes it provides for patients within the county. ProcessFlows have also demonstrated a similar commitment to customer care and service and have proven to be a valued partner"

**Tony Carne, Telemedicine
Development Officer Staffordshire
Ambulance Service**