

CASE STUDY

New IT system means better emergency care for Östergötland Ambulance Service

Background

Östergötland Ambulance Service provides pre-hospital care in the Linköping municipality, an area in the southern half of Sweden. It serves a hospital catchment area of some 420,000 inhabitants and on average the service responds to 40,000 incidents annually. Supporting the ambulance service is the Centre for Teaching and Research in Disaster Medicine and Traumatology, a team of staff managing its IT infrastructure, including IT developments, as well as their server, desktop and radio requirements.

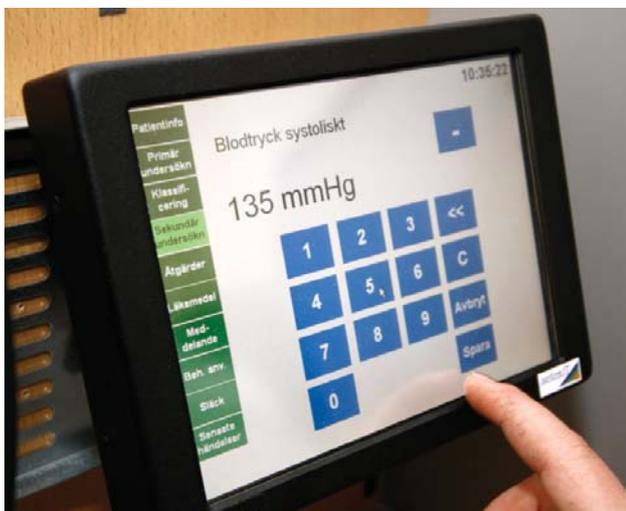
The Challenge

The ambulance service needed to invest in IT support systems to provide their emergency care personnel better control and response capabilities on emergency callouts. There were numerous constraints and demands that had to be met. One was that the IT support system developed had to be completely in line with the methods used locally for pre-hospital command & control and their pre-hospital trauma life support system. Another was that the system would have to be web-based.



The Solution

Microbus M-PC in-vehicle computers were chosen as part of Saab Performit's 'Paratus' mobile data system for the project. The M-PC's high performance and advanced feature-set is proven in the ambulance sector where functionality, flexibility and resilience are key criteria. As well as offering a full desktop PC capability, the Microbus M-PC provides greater connectivity for peripherals within the vehicle, designed to support optimal positioning of antenna to maintain best coverage and most accurate GPS position.



Each ambulance carries a Microbus M-PC in-vehicle computer driving a dual touchscreen solution which has significant benefits for the ambulance staff, enabling dual operation of different functions simultaneously thus improving efficiencies and impacting on the speed of response times.

When the vehicle receives a callout, this can be acknowledged via the touchscreen and the details of the callout are displayed in plain text on the screen. The computer provides navigation instructions for the driver through its digital mapping system.

As soon as the ambulance reaches its callout destination, a status report is sent back to the Command and Control Centre.

This includes an update of the GPS co-ordinates, so the system can, if necessary, be revised to help any other emergency vehicles on their way to go straight to the precise location. If the ambulance is at the scene of an accident, its personnel carry out an initial assessment of the situation with the aid of the computer.

The Benefits

Logging patient notes via a touchscreen is quick and easy. The key advantages are precision and the fact that the notes are complete by the time the patient arrives at the emergency department. Then all that remains to be done is to check them for accuracy and sign them off. Leif Gustafsson at the Centre for Teaching and Research in Disaster Medicine and Traumatology remarked on the benefits the system brings: “Another advantage of the system is that it has an interface with the Swedish population register. This makes patient identification easier, and at some stage in the future it will be possible to download digital patient records from a national database.”

He added, “The Paratus system has brought higher quality to many different areas of both the pre-hospital and the emergency care systems,” A further benefit is greater certainty for the emergency personnel in general. This extends all the way from the vehicle navigation system through to decision support on the job, which means staff have greater peace of mind in the midst of all the stress so often associated with pre-hospital care provision. The staff back at the emergency department have access to the paramedics’ information in real time. They can see how the patient’s condition has been classified, which drugs have been administered, and exactly where the ambulances are. On top of this, both the ambulance service and the emergency department are able to build a substantial database of care response statistics for future use in analysis, planning and organisational decision-making. The analysis tools are right there in this accumulated database, which has immense potential for both the ambulance service and society in general.



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