INTERGRAPH

INTERGRAPH CAD Solutions for the UK Ambulance Service

HELPING YOU DELIVER AGAINST PERFORMANCE TARGETS AND RESPOND TO THE CHALLENGES OF REORGANISATION

The reorganisation of the UK Ambulance Services has given rise to a range of challenges stemming from the merging of neighbouring services. These include assimilating and coordinating the merged services and ensuring the performance and resilience of core functions, such as CAD, are maintained despite having a greatly increased user base, substantially higher call volumes and more complex structure.

I/CAD

Intergraph's highly-resilient Computer Aided Dispatch system, I/CAD provides the core of the decision support process – seamlessly integrating an interactive, real-time map display with call handling, dispatching, records and information management, remote access, and mobile data. In this way, I/CAD transforms large volumes of complex information into clear and actionable forms, enabling our customers to make effective use of resources and reduce response times when seconds count most.

Driving Service Improvement

A range of functions aim to help Ambulance Services meet the key performance standards that are so critical to their success. For example, Pre-Alert and Auto-Dispatch offer the possibility to further reduce response times by using the gap between call connect and answering to automatically pre-prepare notifications for dispatchers and selected vehicle crews.

From the point at which a call's location is confirmed by the system from EISEC/ALSEC data, locations are sent to the selected vehicle and plotted on the dispatcher's map. When the call is answered, the call taker sees the notification flag on their map. Used appropriately, this technique has the potential to cut minutes from the call taking and dispatch process during busy periods when it is not possible to answer calls immediately.

I/CAD's smart, rules-based allocation techniques can focus Ambulance allocations to those cases where emergency transport is deemed necessary. The smarter allocation of resources helps reduce arrival times and instances of unnecessary mobilisation of Ambulances. Similarly, when Ambulance transport is required, the most appropriate transport destinations can be recommended, reducing waiting at crowded A&E departments and the potential for multi-leg trips. By cutting unproductive waiting and travel times, Ambulances and their crews have higher availability for emergency responses.

User Testimony

"The key is to have the policy and the ability to implement it. We are now in a performance-led culture, which is not only about having targets but also about having systems like I/CAD that make it happen".

Chief Inspector Sims
Surrey Police

"When an officer presses the button on an Airwave set this is highlighted on iCAD and shows exactly where the unit is, at that moment. This feature alone will deliver substantial safety benefits. "Status updates appear on I/CAD almost instantly - this is a sub-second response, and very impressive".

Bob Reed, Implementation Manager
Suffolk Constabulary

"We have been using Intergraph Computer-Aided Dispatch since 1991 & have never experienced a system failure of any kind. We're talking complete reliability."

Ken Warrick, Manager
Chicago O'Hare International Airport Communications Center

"I/CAD is effectively the heart of RAC's breakdown service; it is integrated with just about every IT system we have. The system is specifically designed to enable RAC colleagues to deliver the high levels of service that RAC customers demand".

Neil Thompson. Business Transformation Director
RAC

In addition to time-saving functions built into dispatching, data that are automatically generated during day-to-day operations provide a rich resource for service improvement. As well as supporting audit trails, event histories can also feed performance reporting and spatial/temporal analysis functions such as system status planning and monitoring, dynamic resource allocation and incident analysis for emergency planning.

INTERFACES

CAD systems can be deployed as stand-alone capabilities. However, it is increasingly common to integrate with other systems within the services or with external organisations. Intergraph provides a broad range of interfaces to standard packages including: Airwave/ARP, telephony, mobile data and pagers, primary and secondary triage systems (ranging from ProQA to PSIAM and TAS) and ADASTRA.

Open, XML-based interfaces support bidirectional event communication between external systems, such as CAD systems (both between agencies – e.g. for mutual support - and between different vendors' systems), other operational systems and information sharing in the context of the Civil Contingencies Act and e-GIF.

I/CAD FLEXIBILITY AND RESILIENCE

The radical changes to the structure of the UK Ambulance services have created demand for more scalable, reliable and flexible CAD platforms. Reflecting the more complex operational requirements, systems will commonly be deployed on a regional scale with multiple physical control rooms that must also be capable of operating as a single virtual system. I/CAD's 'virtual control room' configuration offers a single operational view of all resources and their activities from each control room. This provides multiple benefits such as allowing supervisors to balance workloads between control centres and handle incidents that occur near sector borders more effectively.

In addition to operational flexibility, I/CAD data and interfaces have been engineered to provide exceptional resilience through seamless failover capabilities. These are built on multiple levels of protection provided by Intergraph and commercial database technologies, including Oracle Data Guard and Microsoft SQL Server mirroring. In the event of the loss of a site or database, the only noticeable effect is a slight pause at the remaining sites. All committed transactions across the system will be safe.

Intergraph's I/CAD has proven itself to be highly reliable in regional and national multi-centre environments such as the RAC, where three coordinated control rooms handle thousands of calls every hour from across the nation during peak periods.

ENGINEERED FOR PERFORMANCE

Intergraph's unique experience of spatial technology provides I/CAD with exceptionally fast map display, for almost instantaneous response when zooming to addresses or units and during interactive browsing such as panning and zooming – even with nationwide small-scale map data like Ordnance Survey's MasterMap.

In order to ensure scalability for systems with very large numbers of positions, incident queues are kept synchronised on call taker and dispatcher screens via a lightweight peer-to-peer messaging protocol, enabling updates to occur at all desks in real time without the need to poll the database.

INTERGRAPH FOUR DECADES OF EXPERIENCE AND INNOVATION

Intergraph can help. Intergraph has pioneered map-based 'spatial' computer technology for four decades. For the last 18 years, it has delivered specialised solutions for public safety – improving emergency response and protecting the lives of nearly 500 million people around the world. Intergraph systems support some of the largest and most demanding CAD environments, including nationwide operations and call volumes measured in thousands per hour.

ABOUT INTERGRAPH

As a leading global provider of spatial information management (SIM) software with a history extending almost four decades, Intergraph Corporation helps some of the world's largest government, military and commercial organisations in more than 60 countries create, manage and visualise vast amounts of complex data in clear, actionable forms, enabling our customers to make better and faster operational decisions.

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