



## Secure Situation Awareness for Operational Management

### SECURE SITUATION AWARENESS

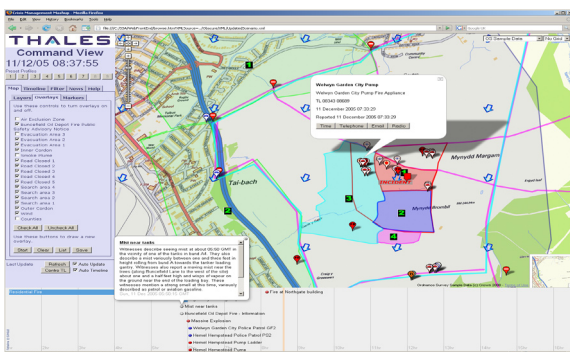
Strong situation awareness is required for the effective management and overview of events and activities, ranging from sports events to operational requirements in complex environments. Managers at varying levels require access to timely, sometimes diverse sources of information, that are visualised in a way that produce a data-rich environment, enabling improved decision management and event tracking. Additionally, many situations and events require data to be shared between disparate points of operation and different aspects of data to be available to varying levels of management and control.

To meet this, Thales Research and Technology (UK) Ltd (TRT (UK)) have developed a Secure Situation Awareness (SSA) system. The SSA utilises public and private information sources to provide a single situation awareness representation. The SSA interface is based on the concept of a “web mashup” and uses OBSCURE<sup>®</sup> technology to securely share information across sites and the filtering of data with multiple levels of access rights.

The combination of these two technologies makes the SSA system and environment quick to construct, flexible and easy to customise, in terms of user displays and data security policies. The system is applicable to a wide range of applications, for example use by the oil and gas industry, emergency services, defence activities (e.g. area surveillance, command and control, network-centre operations and asset protection) and civilian activities (e.g. event management, resource management and transport logistics).



Example Situation



Command Overview

Mashups are in general quite simple, but the potential exists to be more elaborate. Complex applications can be produced quickly and easily, and can rival the sophistication of existing commercial products at a fraction of the cost. Private information can be enhanced by integrating publicly and freely available data, such as those provided by BBC News, weather forecasts and traffic updates.

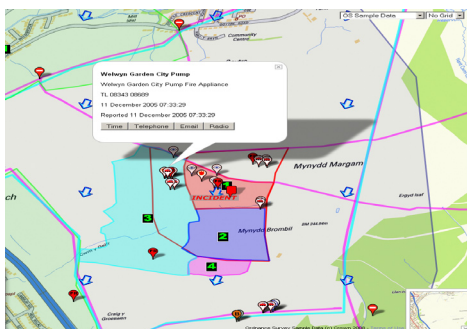
# >> Secure Information Sharing for Multi Agencies

## PROTECTING SENSITIVE DATA USING OBSCURE®

OBSCURE® is a security architecture that applies protection to data rather than to the underlying communications infrastructure. Data is protected in 'digital containers' which hold the data together with authorisation policies and metadata descriptions. To access data in a container, a user requests the decryption key from an authorisation server. If authorised, the server generates and provides the appropriate decryption key.

Advantages:

- Support for every day operational requirements of industrial processes. Suitable for use in control rooms and similar environments
- Data is protected, rather than infrastructure, so multiple organisations can more easily share data securely
- Lifetime protection of data. Policies persist with data, making misuse or inappropriate release much harder and with less impact
- Data can be protected at any granularity. e.g. from large multimedia files to individual sentences in a document
- Authorisation policies can be written at any level of granularity, allowing fine-grained rules to be applied to content
- Distribution architecture scales to multiple organisations through the use of a network of authorisation servers



Public View

## SITUATION AWARENESS

- Simultaneous temporal and geographical display of public and private information
- Option menus allow the user to choose which information to display

- Ability to zoom in / out and pan around on the map and timeline Graphical Use Interface (GUI) windows
- Geographical based information can be overlaid on the map, e.g. detailed maps, aerial photographs, terrain data, event data and planning information
- Filtering and searching of displayed information on the map and the timeline
- Detailed information e.g. text and images about items can be displayed by selecting the icon on the timeline or map

## APPLICATIONS

- Support for the every day operational requirements of industrial processes - e.g. Control Room environments
- For use by emergency services' commanders, large area overviews are useful for monitoring multiple incidents, managing resources and for shift change briefings. Detailed views of specific incidents are useful for assessing incidents, and planning / monitoring responses
- For use by emergency responders with limited display facilities and limited time, the relevant filtered information is useful for plan dissemination and for monitoring response progress
- For post incident analysis and training, the tool is useful for incident debriefs, for spotting and analysing incident trends, for planning preventative work and for preparing for future incidents
- For commercial users, the tool is useful for media liaison and for providing information / instructions to the public

## ABOUT TRT (UK)

Thales UK's Reading-based research & technology facility is the UK arm of the Thales corporate research centre. Its activities focus on providing solutions: Security and Communication Systems, Galileo and Position-Based Systems, and Enhanced Digital Environments. These are based on the key technologies of IP Networks and Network Security, Wireless Communications, Sensors and Signal Processing, and Navigation and Positioning. The facility offers a wide range of consultancy and development services to European Government Agencies and to industry throughout the world.