Bundeswehr

National Air Policing Center
Shared situational awareness for air force, police and civil air traffic

Located in Uedem in the north-western part of Germany, the National Air Policing Centre (NAPC) shares a building with NATO's Combined Air Operations Centre (CAOC) and is the national facility responsible for managing air traffic incidents. The German Air Force is the host organisation and has been a Frequentis customer for over 25 years in the fields of military air traffic management and command and control. Frequentis was commissioned by the German Armed Forces (Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support – BAAINBw) to equip the NAPC with Air Policing – its integrated communication and information system tailored to the centre's specific operational needs.

The initial system demonstrator was built to verify the solution's operational capabilities and minimise the risks that might impact the success of the follow-on project.

Client profile
The National Air Policing Centre (NAPC) is Germany's joint control centre for air policing providing airspace security. It manages the cooperation between: The Federal Ministries of Defence (German Air Force), Interior (German Federal Police) and Transport (DFS – the German Air Navigation Service Provider) and their corresponding agencies.

Business situation
NAPC required an efficient and effective interagency system for automated situational display and awareness, homogenous information processing, seamless communication integrated with situational information and operational process documentation for legal purposes.

Solution
The integrated communication and information system provides a Common Operational Picture (COP) based on a Geographical Information System (GIS), as well as interfaces to central data sources. A collaboration and decision support service with multi-user support based on role and rights assignment, an integrated link to the voice communication system (VCS) and legal recording functionality complete the picture.

Impact
The implemented solution serves to protect air, land and sea, providing surveillance of movements within the German airspace focused on critical infrastructure and major events. It assists with civil emergencies, while also monitoring the enforcement of flight restricted areas.

"This is a major step forward in the fusion of [real-time] data from various civil and military sources. The goal of combining all data and adding value through enhanced networked safety has been achieved and is a significant accomplishment."

Colonel (GS) Hornung, Branch Chief at the Centre for Air Operation

Defence

FREQUENTIS
FOR A SAFER WORLD

A significant contribution to the security of German airspace

A flexible, customer-centric approach

Some 80% of the solution draws on COTS products using the Frequentis Component Framework – a flexible software framework for emergency and incident management. This powerful software suite can be used as a coherent software platform and was adapted to the customer's processes using an iterative approach. Additionally, off-the-shelf software components were integrated into this framework, e.g. Standard Office Applications, GIS.

Enabling civil-military cooperation

The success of the system is based on the versatility and usability of its core features; A COP is displayed using a GIS. As a vital part of the system, it combines a correlated recognised air picture based on military and civil radar data sources and the NATO (Link 1) recognised air picture with ground information and relevant aeronautical information from within the German territory. It also provides the user with a broad feature set that supports the decision-making process when incidents occur.

Mobile situational awareness

The Air Policing solution hosts extensive capabilities to share the common operational picture, current incident status, and other relevant data with the decision makers.

Extensive documentation and recording

The Collaboration and Decision Support Service improves operator actionability by providing appropriate forms and checklists to guide them through the complete incident. All required information is added automatically or, wherever possible, preselected by the system. Operator decisions are assisted by pre-evaluation and provision of weighted scores to defined rules on available information. All incidents and actions taken are documented in full to support subsequent evaluation and provide comprehensive records that satisfy all legal requirements.

The Integrated Voice Communication Service connects the system with the operational Voice Communication System used by the German Air Force (also supplied by Frequentis). A critical operator task is to quickly contact the relevant stakeholders. The system supports this by using different Integrated Communication Services. For example, it takes multiple numbers listed for a single contact and calls each number in turn until a connection is established. It also supports direct calls to contacts associated with objects in the GIS: the operator simply clicks on the object on the map (click-to-dial).