



## ATC Functions

*Controller HMI:* an air/ground situation display can present the surface movements as well as incoming approach and en-route traffic via a secondary surveillance window. The system displays the ground situation map and environment whilst presenting mobiles (i.e. aircraft and vehicle) and if necessary safety net alerts.

*Alert Function:* visible and audio alerts to notify the controller of safety violations.

*Routing:* cleared and actual completed route visible on the ground situation display with input mechanism for editing routes.

## Main Operational Features

- The functionality supports approach and tower operations
- Traffic situation can be shown as “tracks” in a geographical window.
- Flight plan data is presented and operator interaction is performed in lists and labels.
- The design of these HMI objects is to present only the required data, however, additional data is easy to retrieve, with a click of the mouse
- Lists and labels are specially designed to support control of the air traffic in a paperless environment.
- Each flight plan is dynamically updated based upon controller input of clearances/instructions given verbally or as part of CPDLC, e.g. departure clearance (DCL). Input facilities are available in any of the flight’s HMI objects.
- Internal co-ordination is performed silently through system functions, including that co-ordination between controllers in TWR and APP.
- Coordination with adjacent centers is performed by means of OLDI/AIDC where such connections are available.
- The dynamic handling of the operational configuration allows a highly flexible use of the airspace. Reconfiguration of sector jurisdiction is handled in a decentralized manner. The system supports on-line reclassification of sectors.

## Technical Features

### *Commercial hardware and software*

- COTS workstations with monitor(s), keyboard and mouse
- Fault-tolerant servers
- Redundant LAN
- Unix / Linux operating system
- X Window / Motif
- Application software is in C, C++ and ADA

### *General Design aspects*

- Client/server concept
- Open system architecture
- Distributed processing
- Fault-tolerant software



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