Network Manager
nominated by
the European Commission

BUILDING ON 20 YEARS OF CENTRAL FLOW MANAGEMENT

EUROCONTROL

AUTOMATIC SAFETY MONITORING TOOL

ASMT is EUROCONTROL's unique tool for recording safety-related events by using radar track data, flight plans and ATC system alert messages.

ASMT detection modules

- **Proximity** - infringements of separation minima between aircraft
- **Altitude Deviation** - detection of aircraft that do not comply with the cleared flight level (e.g. Level Bust)
- **Airspace Penetration** - detection of unauthorized penetrations of a segregated airspace
- **Rate of Closure** - infringements of vertical and horizontal distances occurring with the Rate Of Closure exceeding a specified value
- **Short Term Conflict Alert** for predicted infrigement of separation minima, triggered by the reception of an STCA message series from the ATC system
- **Area Proximity Warning** for predicted infringement of segregated airspace
- **Airborne Collision Avoidance System Resolution Advisory** - Collision Avoidance System (TCAS) following the detection of a threat from another aircraft. Triggered by the reception, through the Mode-S downlink data, of an ACAS Resolution Advisory message generated by an aircraft Traffic.

Uses for ASMT

ASMT supports users in monitoring safety performance of the overall ATM safety. The information obtained can help ANSPs gain a broader and more objective perspective of the current safety issues, such as strategic conflict management, separation provision, acceptable risk level, identification of hazards, quality and reporting level.

ASMT recorded data can contribute to improvement actions in the following domains:

- SMS efficiency
- Airspace / airways structure design & sector configuration
- Local procedures review
- Operational analysis of the impact of traffic distribution / Sector charge on safety
- Regulation / flow management
- Alert equipment and operational techniques

Outcomes

ASMT users are gathering and storing an impressive set of safety data, on which to base their safety decisions. Safety decisions are typically informed by the following ASMT outcomes:

- Geographical and density maps of safety occurrence distribution (fig 1 and 2)
- 'Time based' series and trends to monitor variations in safety levels (fig 3 and 4)
- Correlation between metrics: risk of collision and flight level, risk of collision and geographical position (fig 5 and 6).

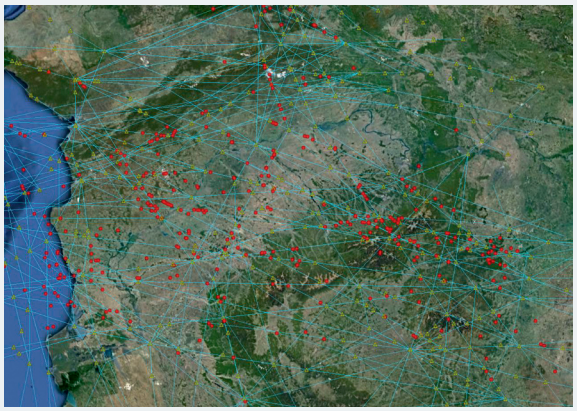
(See reverse for figures)

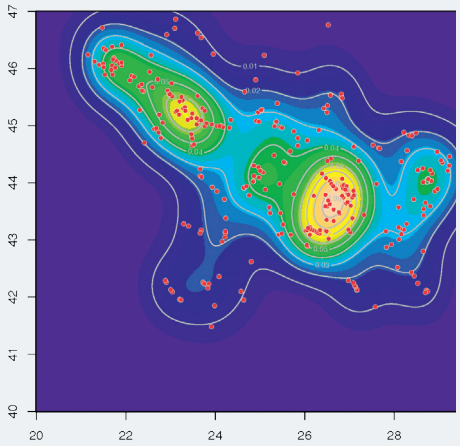
Added value & opportunities for users

ASMT users are gathering and storing an impressive set of safety data, on which to base their safety decisions. Safety decisions are typically informed by the following ASMT outcomes:

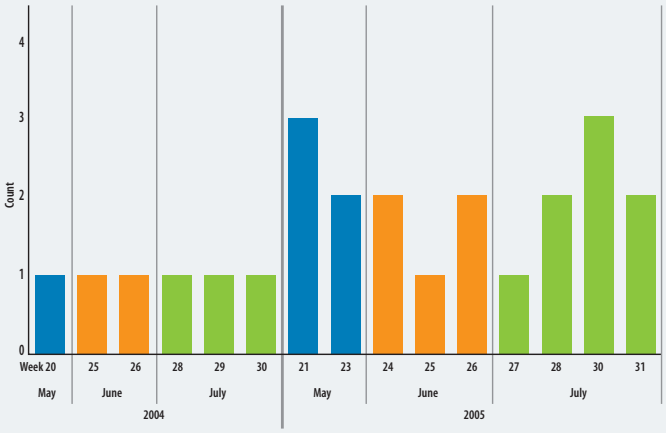
- Automatic recording and storing of all relevant data
- Easy access to recorded data providing immediate understanding of the situation by means of a quick replay tool
- Contribution to performance monitoring, feeding into operational and technical Key Performance Indicators.

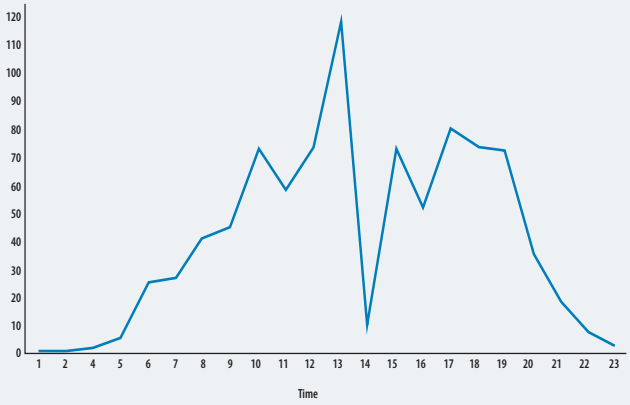
Geographical and density maps of safety occurrence distribution (figures 1 and 2)





Time-based series and trends to monitor variations in safety levels (figures 3 and 4)





Correlation between metrics: risk of collision & flight level, risk of collision & geographical position (figures 5 and 6)