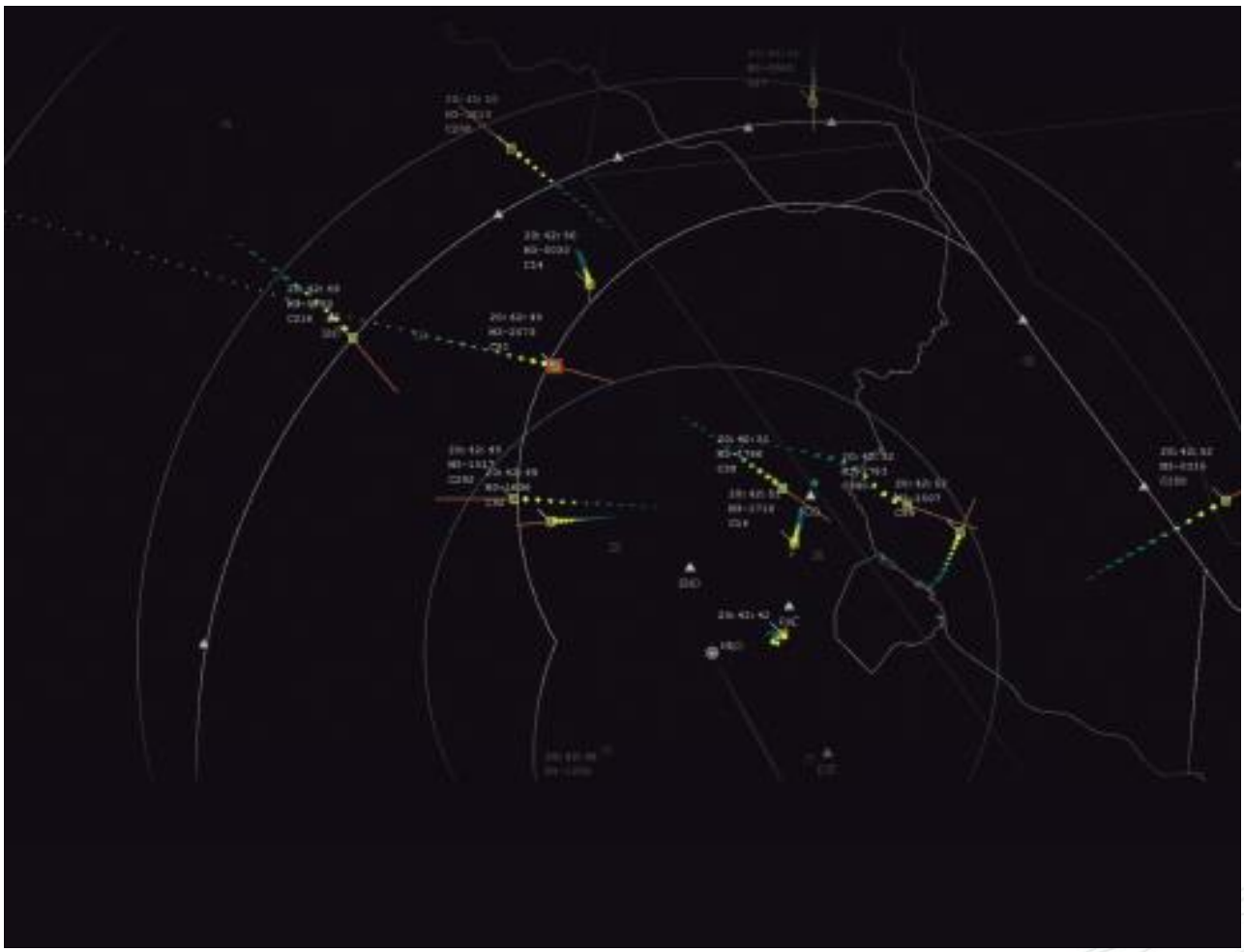
SCODA

AIR DEFENSE RADAR SURVILLANCE CONSOLE SYSTEM



The Air Defense Radar Surveillance Console System (SCODA for its Spanish acronym) provides the needed functionality to support surveillance aerospace operations in military environments. Through its distributed capabilities allows users to collaborate during operations in classification and identification tasks. The operator can easily visualize the operational picture and control the radar sensor through a digital and intuitive graphic environment, offering support tools for air defense operations.

Each SCODA console can work autonomously or in cooperation with other terminals over the network, according to operational needs and the role assigned to each operator.

MAIN CHARACTERISTICS

• Multi-radar support.
• Representation of plots & tracks, differentiating real targets from simulated ones.
• Representation of estimated trajectories from the latest course and speed available (Dead Reckoning).
• Track identification tools, including labels and symbols.
• Automatic dissemination to other system consoles.
• Bullseyes management.
• Static and dynamic measurement tools referenced to radar, bullseyes, and between tracks.
• Target interception point's calculation and associated trajectory visualization, at the operator's request, according to the selected interception geometry (CutOff, Stern, Pursuit).
• Alarm management, based on area or route assignment (i.e. tracks entering prohibited areas, navigational route abandonment).
• Automatic emergency's code signaling. • Shared Points of Interest (POI) management (i.e. labeling of detected ejection point, incident or demolition points that are disseminated on user's request)
• Text messaging tools.
• Layered maps, user defined areas, POIs, , waypoints, and navigation routes.
• Compatibility with training, planning and debriefing tools.
• Recording and playback of historical data.

REPRESENTATION

• Coordinate system: WGS84.
• Projection: Lambert conic conformal
• Magnetic declination setting.
• Panning, zooming and target centered views.
• Customizable background color.
• User configurable cursor position relative to a radar or bullseye.

RADAR DATA PROCESSING

• ASTERIX data categories: 1, 2, 34 and 48 from Eurocontrol.
• Multiradar: up to 5 radars simultaneously.
• Representation of:
  - Antenna turning.
  - Plots: PSR, SSR, PSR+SSR.
  - Tracks: PSR, SSR, PSR+SSR, navigated.
  - Simulated targets.
• Geographical filtering sectors.
• Jamming Strobes.

TOOLS

• Static or dynamic measurements (follow-up).
• Free line drawing.
• On screen tabular representation of track data supporting up to seven tracks.
• Track history up to 60 points per track.
• Plots history up to 60.000 points.
• Track speed vector
• Configurable track tags
• Local track navigation.
• Local or distributed track tagging: identifier and symbol.

BULLSEYES

• Position, name and color settings.
• Up to 5 different bullseyes definition.

MAPS

• Multiple layers.
• ESRI Shapefile format.
• Label support.
•Transparency level setting for each layer.

GRAPHIC OBJECTS

• Manual definition of graphic objects:
  - Reporting points.
  - Waypoints.
  - Aerodromes.
  - Sections/ Working Areas.
  - Navigation routes.
• Recording and retrieval of objects in database.
• Ability to import objects from ESRI Shapefile files.
• Auto-save and restoration of the work area.

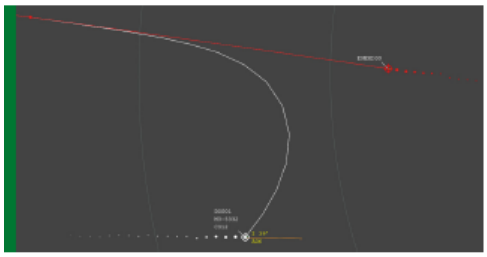
INTERCEPTION

• Target and hunter's track selection.
• Interception methods:
  - Cut Off.
  - Stern.
  - Pursuit.
• Interception advice: direction of turn, final course of attack, altitude.

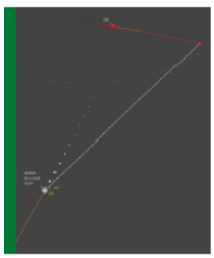
SURVEILLANCE

• Alarm triggered by navigation route abandonment: it allows associating a track to a route and defining tolerance thresholds in both vertical & horizontal planes.
• Alarms triggered by work area abandonment: generates a notification when a track exceeds area limits predefined by the operator.
• Alarm triggered by entry to prohibited areas: generates a notification when a track enters an area predefined by the operator.

Stern Interception



Pursuit Interception



Cut Off Interception

EMERGENCIES

• Over Tracks:
- Automatic identification by transponder mode 3/A.
  - Manual Identification.
  - Type: hijack, radio, general.
• Over Custom POI:
- Ejection/accident/demolition points:
- Definition of type of emergency, geographical coordinates and identifier.

RECORDING AND REPRODUCTION

• Centralized recording..
• Local data playback: console independent playback capabilities.

INTERACTION BETWEEN SYSTEM CONSOLES

• Text messaging.
• Dissemination of maps and graphic objects.
• Dissemination of manually assigned labels to tracks, including emergency condition.
• Automatic dissemination of ejection/accident/demolition points.

INVAP's headquarters are located in San Carlos de Bariloche at the foot of the Patagonian Andes. The company has offices in several cities throughout Argentina and operates in various countries.

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