

OPScenter™ Display



Advanced display application for traffic management

The state-of-the-art solution for Operational Display Systems

Mission-critical applications like air traffic and vessel traffic control require a clearly arranged and concise display of the traffic situation.

Data should be presented efficiently to minimize the traffic controllers' cognitive workload, enhance situational awareness and improve system safety and security.

OPSCENTER™ DISPLAY component is a ready-to-use solution offering the functionality which is deemed necessary for different types of command & control Human Machine Interfaces (HMI).

Standard functions covering the common and domain specific interaction functionality are already included. Individual adaptations (e.g. language, color scheme, fonts) can be easily configured to your users' requirements.

BARCO

Visibly yours

Always in the picture - with OPScenter™ Display

Integrated display features for traffic applications



OPSCENTER™ DISPLAY provides integrated ready-to-use display components especially suited for visualization and simulation of complex traffic situations in the domains of Air Traffic Control (ATC), Vessel Traffic Services (VTS), Coastal Surveillance (CSS) and Defense & Security (D&S).

OPSCENTER™ DISPLAY provides a solid foundation for mission-critical display applications yet also affords the developer the highest flexibility to accommodate user and domain specific requirements thereby reducing the time to field an operationally usable system.

Based on ODS Toolbox®

OPSCENTER™ DISPLAY is based on the ODS TOOLBOX® which is the standard development tool for systems where highly dynamic objects are visualized within an interactive graphical user interface. Display systems developed with the ODS TOOLBOX® are capable to display an almost unlimited number of highly dynamic objects without significant loss in performance.

ODS TOOLBOX® itself has become the de-facto standard for most European ATC projects within the framework of the Eurocontrol EATCHIP (European Air Traffic Control Harmonisation and Integration Programme) activities.

Your ready-to-use display

Highly dynamic traffic situations can be visually realized with OPSCENTER™ DISPLAY; an ergonomic design guarantees maximum usability for the controllers.

A large number of ready-to-use features and functions are included in the OPSCENTER™ DISPLAY:

- Raw video support (radar scan conversion)
- Multi format map presentation
- Multi layer display of information
- Track display and interaction
- Electronic Flight Strips
- Online drawing facility
- Recording & playback
- 3D OpenGL extensibility

Furthermore, OPSCENTER™ DISPLAY allows you to seamlessly integrate additional information like NOTAM, METAR and TAF. It provides toolbars, context sensitive menu bars and all the features that can be expected from a modern graphical user interface system. To represent traffic conflict situations, OPSCENTER™ DISPLAY can interface to OPSCENTER™ SAFETY NET - a plug-compatible option to custom configure your system.



Radar window

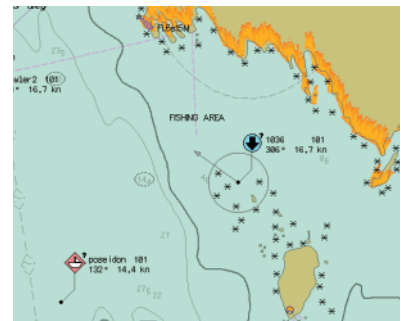
Multi sensor radar data are presented in two or three dimensional situation displays including an optional raw radar video overlay. Within the radar window hierarchy a variety of different maps and other tactical objects are superimposed on the display. The visual complexity of the display is reduced because of our ability to seamlessly fuse the data which readily translates into improved usability and decreased operator workload.

Map presentation

OPSCENTER™ DISPLAY supports standard map types used in mission-critical applications like ARINC 424, ECDIS and NIMA formats. Additionally, the built-in online drawing tool supports user-defined areas including free drawing, color shading and standard shapes/areas.

Unlimited layers

With OPSCENTER™ DISPLAY, a display system is no longer restricted to a limited number of layers. An application may have as many layers as needed for the specific display task. Different radar sources, map information, dynamic objects or online drawings can be assigned to individual layers.



Comprehensive information at a glance

The display system growing with your demands

Display features and interactions

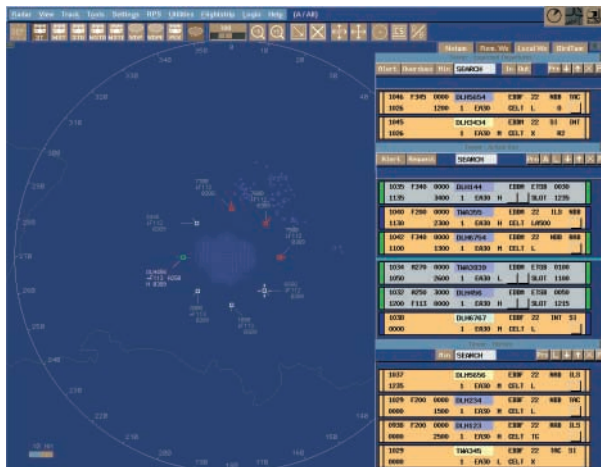
OPSCENTER™ DISPLAY supports common track presentation and interaction features including application specific track symbology, highly configurable track labels, speed vectors, track history, conflict representation, automatic label deconfliction, slaved areas and more.

Each controller can configure his working position by use of a wide range of customizable features:

- Range/bearing line
- Height filter
- Zooming, panning
- Brightness control
- Night and day view by alternate color palette function
- Online drawing facility
- Measuring functions

Integrated user role management functions can be used to configure individual access rights and roles for users.

OPSCENTER™ DISPLAY can be operated by standard mouse or keyboard devices as well as custom input mechanisms.



Radar Display with Electronic Flight Strip Bays (Tower)

The OPSCENTER™ DISPLAY software is compatible with the very latest display technology like the Barco ISIS™ 28" LCD. OPSCENTER™ DISPLAY also supports operational concepts that require two or more panels per display (e.g. main and auxiliary panel).

Electronic Flight Strip support

Electronic flight strips make Air Traffic Control more efficient by replacing traditional paper flight strips. Current flight plan status is discernable at a glance, due to the automatic spatial sorting of flight data.

OPSCENTER™ DISPLAY combines the advantages of paper flight strips with the advantages of an electronic system.

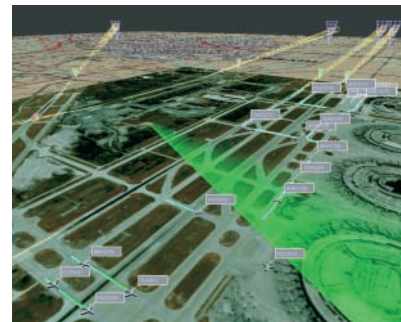
Extended runtime environment

The extended runtime environment contains additional components to custom configure the OPSCENTER™ DISPLAY system functions like:

- Recording and playback
- Multi display component
- Radar scan converter

Easy maintenance

With the help of editors, operational and maintenance staff can easily adapt the display system layout to emerging requirements. By means of rule editors the display functionality can be modified or new functions can be added. Most maintenance demands do not require special programming skills. Hence, there is no need to maintain a large software development staff over the full life cycle of the system.



The 3D OpenGL extension for OPSCENTER™ DISPLAY enables real 3-dimensional view. Radar video conversion is a component of the extended runtime environment.

Specification

Key features

OPSCENTER™ DISPLAY provides a ready-to-use comprehensive display system for mission-critical applications. It provides a solid foundation for further implementation of user and application specific requirements. In other words: highest flexibility and shortest time to field.

- High-level development tools (based on ODS ToolBOX®) for improved productivity
- Rich set of display and interaction functionality
- Real raw radar video overlay (radar scan conversion)
- High update rate for high number of radar targets
- Multi layer concept
- Electronic flight strips
- User role management
- Support of online drawings, for example protected areas
- Standard map formats, e.g.:
 - VPF (Vector Product Format)
 - DAFIF (Digital Aeronautical Flight Information File)
 - ECDIS (Electronic Chart Display and Information System)
 - DTED (Digital Terrain Elevation Data)
- Display developers will benefit from a ready-to-use basic display system and a wide range of standardized tools for further customization
- Operational staff will benefit from a fast and reliable display system that can be easily adapted to their changing needs
- Fully based on standard software and hardware architectures

Added value

OPSCENTER™ DISPLAY can be extended with complementary Barco hardware to complete your operational system. Barco offers a wide range of high-end visualization solutions, e.g. LCD panels, high-performance graphics generators, display servers and archiving solutions.

Pictures courtesy of CZ ANS and Skyguide

OPSCENTER™ is a product suite of Barco Orthogon AG, comprising standardized components for operational systems. All DISPLAY components described in this publication are components of OPSCENTER™.

Barco Orthogon AG offers sophisticated software tools and solutions for mission-critical applications in the fields of Air Traffic Control, Vessel Traffic Services, Coastal Surveillance Systems, and Defense & Security. It maintains offices in Bremen, Stuttgart, Frankfurt (Germany), and a subsidiary in Smithville, New Jersey (USA).

Ref. OPSDisplay 01 - January '04

Technical Specifications are subject to change without prior notice

For more information on our software components, please visit

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