SmartGlobe
Aeronautical Charting System

Generate Charts automatically... and reduce errors.

The smartGlobe® Aeronautical Charting System will allow you to generate and maintain charts and aeronautical data using a single data source. This way you can be sure that every chart is created using the exact same data. Aeronautical data, such as airports, navigation aids, airways and procedures, can be generated automatically from the aeronautical database.

Objects that are placed in a chart stay connected with the database, allowing you to check the chart against the database at any time, by simply pointing and clicking objects in the chart.

Objects are placed at accurate locations, tracks and distances, using the smartGlobe projection tools. The smartGlobe products are based on the Microstation CAD engine of Bentley Systems, Inc... All Chart objects can be generated automatically, or can be added interactively to a chart.

**Interactive Add and Remove**

Candidate objects for the chart area are listed per object type (e.g. navigation aids). Objects can be previewed graphically by selecting them from the list. Previewed objects can be accepted one-by-one or in a batch, placing the objects permanently in the chart.

Objects can be removed from the chart one-by-one or within a fence, deleting both the graphics and the database link.

**Update for Effective date**

A chart is always generated for an effective date, which may be an AIRAC cycle date or any other date. All objects in the aeronautical database have an effective date as well, to ensure that only updated at any time, entering a new effective date. The system will present a list of all changes, allowing you to preview and compare changes in the chart.

**Interactive clean-up**

The smartGlobe Aeronautical Charting system provides flexible clean-up functions that allow for modifying the graphical appearance of the chart, such as annotation labels and symbols. Clean-up functions have no impact on the database. Label orientation and relative position will be maintained automatically, and labels stay connected with other element they belong to.
Symbolization
The smartGlobe system provided powerful symbolization functions via an easy-to-use graphical user interface. SmartGlobe uses the concept of chart types. All aspects of the graphical appearance of an element, such as symbol, label(s) and line style, can be defined for a chart type (e.g. Instrument Approach Chart) and object properties (e.g. Military airport).

By selecting a Chart Type upon chart setup the default symbolization is automatically used.

Symbols and labels can easily be modified during clean-up, if required.

The system is delivered with standard symbols and label configuration. Additional symbols and labels can be added by a user.

Static Database
The smartGlobe database is based on the ARINC 424 standard for aeronautical data. This means that instead of starting with an empty database, a commercially available dataset in ARINC format can be used for an initial data load. The smartGlobe database is completely transparent for the chart editor. All database access can be initiated from within the graphical environment, interacting with elements in the chart. Over 20 types of aeronautical objects can be stored in the smartGlobe database.

Integration with EAD
With the availability of the European AIS Database (EAD) as a source for European Static Data in 2003, a data source defined quality became available.

SmartGlobe was selected as the standard charting tool for the EAD client interface Terminal (ECIT). The SmartGlobe static database interfaces with the EAD static Data Operation (SDO) using a 'replication module' that retrieves all static data changes real time. EAD SDO stores data in the Eurocontrol AIXM standard format.

The smartGlobe replication module automatically converts data from AIXM to ARINC 424 format.