



## Lido/eRouteManual

Charting your way to a paperless cockpit

### Benefits

- > **Fully fleet and hardware independent**
- > **Reduction of printing costs down to zero**
- > **Less training and lower training costs for dual-rated pilots through one single solution**
- > **Increased situational awareness and enhanced safety**
- > **One common data source for all navigation products**

### > Lido/FlightOps Suite

Powerful, high-availability IT systems are critical to ensure reliable and efficient flight operations. Our Lido/FlightOps Suite provides airlines with the necessary tools and innovative solutions to enable them to optimize processes, save fuel, and reduce costs.

Electronic navigation charts increase situational awareness in the cockpit and provide airlines with detailed information at any time. Switching to our Lido/eRouteManual can ease your way to the paperless cockpit. Even more, your crew benefits from reduced head-down time and easier sharing of the workload. Lido/eRouteManual is suitable for all EFB classes from regional jets to the A380 or B777, in portrait and landscape format.

Lufthansa Systems' electronic charting solution contains terminal and approach charts as well as seamless, worldwide enroute charts. All charts are electronically generated, relying on our proven, comprehensive, worldwide geographic database and aviation library. With airlines increasingly demanding integrated cockpit solutions, our Lido/eRouteManual is a must for any electronic flight bag.

### The scope

Our charting solution supports your airline in all phases of your flight – from taxi, departure, enroute to arrival and approach to your destination. All navigational information, route segments, topographical information, etc., are shown precisely to scale and the appropriate chart projection selected automatically. Information on

airports, nav aids, waypoints, airways, FIRs, and other objects can be looked up to view frequencies, coordinates, tracks, altitudes, and so on.

### Intuitive use

Developed in close collaboration with pilots, the user interface of Lido/eRouteManual is designed for intuitive use in accordance with standard cockpit workflows. The level of detail is optimized according to the chosen zoom level to ensure good readability and avoid cluttering. Additionally, the pilot can configure the enroute chart exactly to the needs of the situation and decide which information should be shown or hidden. Our enroute chart presents information either freely pannable or centered to the present aircraft position (moving map).



### Highlights & benefits:

- Lido/eRouteManual combines three applications in one: a terminal chart viewer, an enroute moving map, and a document browser.
- The entire application can be operated via touch screen, keyboard or mouse/trackball – according to availability or preference.
- Lido/eRouteManual can be an integral part of Lido/FlightBag but can also be integrated in all EFB classes, from regional jets to the A380 and B777, in portrait and landscape format.
- The pilot can select terminal charts from the index according to the runway. Arrival and departure charts can also be selected according to cardinal direction (N, S, E, W or combinations of quadrants), greatly speeding up the selection process.
- Important information such as communication frequencies, topography legend or conversion tables are constantly displayed on screen for terminal charts, regardless of the zoom step and chart position.
- Departure and arrival procedures are highlighted on the chart, yet the procedures and corresponding notes which would be displayed on a paper chart can be dimmed for situational awareness. Lido/eRouteManual is the first application to offer such a feature.
- The enroute chart is automatically de-cluttered according to the zoom level. The pilot can show or hide the displayed layers of information (airports, airways, waypoints...) at the touch of a button for instant customization of the chart.
- Safety altitudes on airways are color-coded in the enroute chart, allowing determination of the critical areas at a glance.
- The enroute map is centered on the aircraft position retrieved from Avionics in real time.
- Lido/eRouteManual can be easily synchronized with the FMS or the EFB's electronic flight folder to share the same flight plan and to minimize errors during cockpit preparation.
- High-workload situations are simplified with the Sync and Send functions of Lido/eRouteManual, allowing crew members to synchronize their displays dynamically and to send each other charts.
- Tailoring and customization is possible, so that your specific flight policy, airlines' minima data and tables are reflected.

### Successfully from paper to paperless

As Lufthansa Systems also provides the paper-based charting solution Lido/RouteManual, we support you pro-

fessionally on your way to the paperless cockpit. To smooth your path from paper to paperless, we provide you with a modular concept that can be tailored to your operational needs. Specific chart types can be reduced to a safe one-paper concept, providing you with our Airport Facility Chart (AFC) only, with the Airport Ground Chart (AGC) on its reverse side. These two charts combine all information required for take-off and landing, the most critical phases of flight.

We designed the user interface and the functionality of Lido/eRouteManual by taking into account the Volpe and Federal Aviation Authority "Human Factor Considerations in the Design and Evaluation of EFBs". On top of that, we incorporated the approved international standards for user interfaces and cockpit design recommended by Volpe and NASA.

### Common database

The source for our Lido/eRouteManual charts is our Lido navigation database. Here, we pool aeronautical data with worldwide coverage. Our Lido/RouteManual navigation charts are generated from the same data source, which is another valuable benefit during transition from paper to paperless. In addition, our successful Lido/FMS for flight management systems as well as our flight planning solutions Lido/Flight and Lido/FPLS rely on these aeronautical data and select the relevant data for their purposes from that pool. This concept allows the traceability of data to their source.