

## Finnair automates journey log processing and complies with IATA safety standards using eLog developed by Type 2 Solutions

### The Company

Finnair, one of the world's oldest operating airlines, was established on November 1<sup>st</sup>, 1923. Its operations focus on transporting passengers between Europe and Asia, via Helsinki. The number of personnel of the Finnair Group is approximately 8,000. The Finnair fleet comprises more than 60 aircraft. During the calendar year 2009 Finnair carried a total of 7,433,000 passengers (source: <http://www.finnairgroup.com>).

### The Challenge

*Replace the manual journey log process*

Replace the manual process of entering paper journey logs and make it possible for Finnair to comply with the IATA safety regulations.

Data entry was slow and cumbersome in the crew management system because data had to be entered in several screens, resulting in an error-prone process. Further, the crew management system didn't provide the logging functionality necessary to comply with the IATA safety standards for auto landing logging.

*Integrate with Finnair's crew management system*

To prevent repetitive data entry and ensure good data quality, the new system had to seamlessly integrate with Finnair's crew management system (Jeppesen CMS) and communicate with Jeppesen CMS via the existing message queues protocol (IBM WebSphere MQ).

### The Solution

*eLog: electronic journey logging*

Type 2 Solutions decided to use eLog and tailor it to fit Finnair's specific needs. eLog is a web-based electronic journey log registration system. To provide online connectivity a communication hub between eLog and Jeppesen CMS using IBM WebSphere message queues had to be developed.

*Simplicity*

eLog standard functionality provides the simplicity of paper-based logging, combined with the reliability of an automated logging system. A log proposal is generated based on the available information. Users can edit the proposal, or accept it as it is, before it is approved and automatically submitted to the appropriate back-office systems for processing.

*Data quality*

To ensure good data quality, journey log data entry has to be centrally managed, thereby avoiding repetitive manual data entry. eLog serves as a single entry point for journey logs, and provides the distribution to all other systems. Furthermore, users receive immediate notification when data is missing or incomplete. It is not possible to approve a log without the required data being present.

**Authorization** To facilitate Finnair’s journey log approval process, eLog’s default authorization scheme was used. This allows different users to have different roles and permission within the eLog application, and ensures that only a member of the operator group can approve journey logs.

**Adapt to change** eLog’s business rule engine, which is part of Type 2 Solutions’ Application Development Framework (T2SADF), enables Finnair to easily adapt to process or market changes by simply changing the business rule instead of modifying the software. It also proved very useful in supporting eLog users with an “intelligent” automatic proposal based on business rules. Automation using business rules helped further in reducing manual input.

**Traceability** Modifications applied to the journey logs by users can be traced back in detail. Besides this possibility, reports can be generated on, for example, auto landings, CAA-codes, de-icing and fuel use.

### The Result

eLog makes it possible for Finnair to easily adapt to process or market changes through the use of an external rule engine.

eLog fulfilled Finnairs needs to log auto landing information necessary to comply with the IATA safety standards. It has significantly reduced the workload associated with entering journey logs, as well as human errors during manual entry. It allows data quality control and traceability by tracking the information entered throughout the entire logging process.

*eLog screenshot;*

*logging auto landing information necessary to comply with the IATA safety standards*



The screenshot shows the Finnair eLog application interface. At the top, it displays the Finnair logo and 'eLog' text. Below this, there is a navigation menu with options: HOME, CANCEL, HELP, and LOGOUT. The main content area shows flight details for 'AY 845 HEL-AMS 20090827'. There are tabs for 'TIMETABLE', 'CREW', 'MISC', and 'WARNINGS'. The 'CAA INFORMATION' section includes a dropdown for 'CAA-CODE' (set to '0 NONE') and a text field for 'CAA-NAME'. The 'DE-ICING' section has a table with columns 'FLUID', 'TAKEOFFS', and 'LANDINGS', and rows for 'START' and 'HOLDING TIME'. The 'FUEL USE' section has a table with columns 'START', 'REMAIN', and 'OTHER', and rows for 'TRAFFIC TYPE' (set to '3A') and 'SERVICE TYPE' (set to 'J'). The 'AUTOLANDING' section has a table with columns 'AUTOLAND', 'SLIP NO.', 'AIRPORT', 'SUCCESSFUL', 'CAT', and 'RUNWAY', and rows for 'REASON' and 'REASON'. The 't2s' logo is visible in the bottom left corner of the application window.