

OLDI Generator

Purpose

The purpose of the OLDI (On-Line Data Interchange) Generator System (OGS) is using the data processed by the civil air traffic control system in order to facilitate the identification of flying objects in air surveillance systems. To identify a flying object it is necessary to create an association between the radar SSR-code and the flight plan. The appropriate associations are available in the air control system in the form of:

- a) OLDI transit messages exchanged with other air traffic control centres
- b) association events created by the operator of the air traffic controller workstation.

The OGS separates from the air traffic control system the thus created associations between the radar targets and flight plans and transmits them as OLDI messages in the format standardised by Eurocontrol. The messages used for transmitting plan–target associations are: ABI (Advanced Boundary Information), ACT (Activation) and flight plan message EST (Estimation).

Work principle

The OLDI Generator is based on the air traffic control system EUROCAT 2000. The basic information for identifying flying objects is obtained from the flight data servers. In addition to the received and transmitted OLDI transit messages containing the associations between the flight plan and the radar SSR- code, connections created by air traffic controller not formulated as OLDI messages are also used.

The data extracted from the server is transmitted for further processing to the central component of the OGS – the OLDI generator. The OLDI generator stores the data in its local flights database. In case of an association created by the air traffic controller or receipt of an OLDI transit message, an appropriate OLDI message is formulated by using the data from the flight database to fill in the form. The formulated OLDI messages are released to the customer system(s) via a unidirectional channel. OGS does not allow any release of data from the air surveillance system nor any interference with the flight control system, because the connections between the components are unidirectional. In addition to software the one-way direction of the data flow can be supported by hardware (cabling).

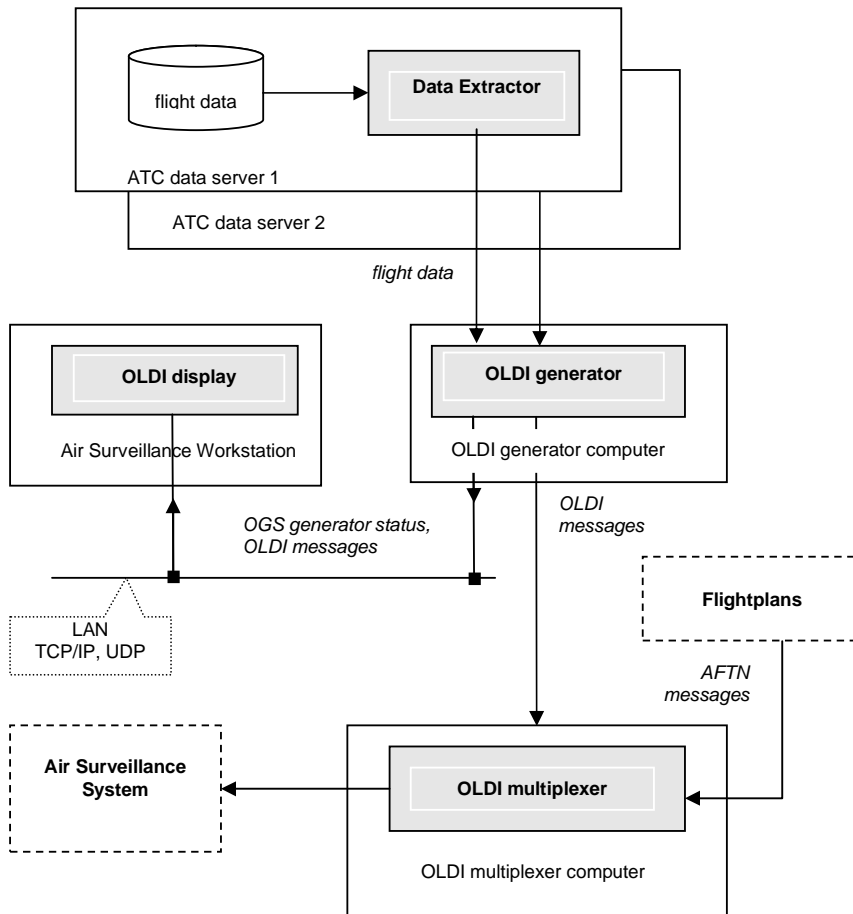
Build-up

The Data Extractor extracts from the flight data servers the flight plan messages, the OLDI transit messages exchanged with other flight management centres and the association events created by air traffic controllers.

The OLDI Generator compiles OLDI messages about the flights for which the air traffic controllers have created associations between the SSR code and the flight plan.

The OLDI Display or status indicator allows monitoring both the state of the OLDI generator system and the flow of the released OLDI messages.

The OLDI Multiplexer puts the OLDI messages and the flight plan data coming from the AFTN channel together into one data channel.



Usage

The Oldi Generator System is operational in Estonian Air Force.