HungaroControl

Hungarian Air Navigation Services

PROCEED TO BUD

WILCO

DESCEND TO FLIGHT LEVEL 310

CPDLC

CONTROLLER-PILOT DATA-LINK COMMUNICATIONS

Co-financed by the European Union

Trans-European Transport Network (TEN-T)

HungaroControl launched its large-scale CPDLC project with the aim of developing the Hungarian air traffic infrastructure with the most modern technology in accordance with European integration requirements (Single European Sky, SES).

Straight to the point

Controller-Pilot Data-Link Communications (CPDLC) provides an additional communication channel that reduces the occupancy on the regular VHF channels. It helps to reduce the workload of controllers thus increases capacity and the level of safety by taking advantage of the clarity of text messages.

The CPDLC project, being in accordance with relevant recommendations of EUROCONTROL and ICAO (International Civil Aviation Organization), includes setting up the communication infrastructure, the establishment of the Hungarian regulatory background, the selection of the network telecommunication service provider, as well as educational/ training and simulation activities.

- The new software needed for the operation of CPDLC is jointly developed by THALES and HungaroControl as an integral part of MATIAS, the cutting edge air traffic control system of the company.
- The new Data-Link data transfer connections provide the necessary link between air traffic controllers and the controlled aircraft. In deploying the system, responding to the request of airlines, HungaroControl cooperates with SITA and ARINC, two major communication providers.
- The simulation tests related to the use of CPDLC, and the practical training of the personnel were carried out in CRDS, the international R&D Centre of HungaroControl.

The total budget amounts to EUR 6.8 million, 80 percent of which is financed by HungaroControl, while the remaining amount, more than EUR 1.4 million will be co-financed by the European Union through the Trans-European Transport Network (TEN-T).

PURPOSE

In many ATC sectors the congestion on voice communication radio channels has become by today a bit of a bottleneck limiting the available capacity of the airspace. According to forecasts, by 2025-2030 air traffic controllers will have to handle twice the present traffic in certain upper level sectors, that is, above FL285 (8700 metres), and the load on radio frequencies, which can no longer be extended, will further increase. Thus, an alternative means of communication is needed, which is independent of presently used voice frequencies. CPDLC is an additional digital data link channel, through which air traffic controllers and pilots are able to send information to each other in the form of text messages.

The introduction of CPDLC technology is mandatory for each EUROCONTROL member state. HungaroControl has always endeavoured to be among the first to introduce technological innovations, and is doing its best to provide this efficient and necessary means of communication to pilots and air traffic controllers as soon as possible, regardless of the introduction deadline.

FEATURES, BENEFITS AND SOLUTIONS

With the introduction of CPDLC, an additional communication channel will be available for pilots and controllers to send non-time critical messages. Thus, in addition to verbal dialogues, information can be exchanged within a shorter time, and as opposed to the previous practice, controllers will be able to communicate with several pilots simultaneously, which will greatly increase air traffic management capacity. CPDLC will accelerate routine performance, and the congestion of voice channels used in air traffic control may be reduced if the radio frequency load is released. Data-Link communication will also reduce misunderstandings caused by interferences as well as errors due to aircrew fatigue, as a result of which flight safety will further be improved. HungaroControl's MATIAS Build 10.1 air navigation software will also be able to prevent accidental posting of messages as a result of 'misclicking'.

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