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DECLOS

Key Features

- > The DECLOS system complies strictly with EuroCae ED-85A
- > The DECLOS system can be used with data link providers such as ARINC, SITA or indeed both simultaneously
- > Other data link technologies can be easily integrated
- > DECLOS can be easily adapted for local ANSP procedures
- > A simple list-based HMI is available if there is no Electronic Flight Strip System available that can be used as a front-end for a controller
- > DECLOS supports XML messages to support quick and simple integration into existing tower automation systems
- > Departure Clearances are given automatically
- > The DECLOS system can also be operated in "manual mode" if required

Benefits

- > The implementation of Digital Departure Clearance (DCL) will ensure that any potential misunderstanding between controller and pilot using Voice Communication are eliminated. This ensures that ATC is able to provide a safer and more efficient service to its customers
- > DCL will reduce controller workload as DCL requests can be handled and processed by a simple single button-click. In automatic mode, not even a single keystroke is required
- > DCL assists pilots when performing flight preparation as a pilot can request a clearance and continue to prepare a flight rather than monitor the ATC frequency
- > This is of particular relevance at busy airports where the DCL data link will significantly reduce the congestion of ATC tower frequencies

SAFECONTROL SUITE

ACEMAX
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DIGITAL DEPARTURE CLEARANCE SYSTEM

Automated Departure Clearance

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HOW DOES THE DIGITAL DEPARTURE CLEARING SYSTEM WORK?

The Challenge

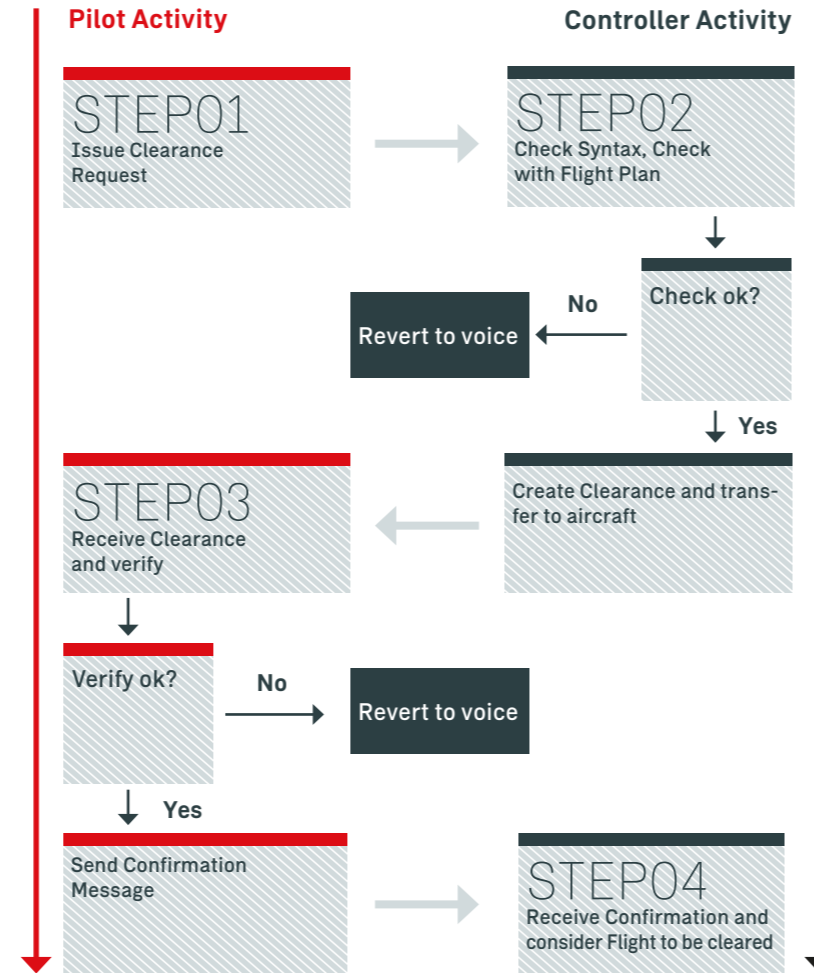
Conventional procedures to deliver Pre Departure Clearances are based on voice communication consisting of multiple read and read-back sequences to verify clearance reception. This requires dedicated manpower and frequency capacity. The latter can cause problems during peak hours where many flight crews simultaneously request their Pre Departure Clearance.

The AviBit Solution

DECLOS – as a part of the SafeControl Suite ATM package – provides ATC and Airlines with the option of retrieving a Pre Departure clearance using the on-board Data link equipment. ACARS is used as a communication vehicle and Pre Departure Clearances are transmitted automatically negating the need for any further Air Traffic Controller action. Implementing DECLOS marks an important step to reduce frequency congestion and freeing up Air Traffic Controllers workload.

Digital Departure Clearance (DCL) Procedure

Digital departure clearance is supported as follows (simplified):



Different Modes of Operation

DECLOS has been designed to support different operational modes. The mode that is ultimately used for an application depends on the operational needs at a control tower.

Manual mode: Manual mode involves every clearance request message being presented to a controller on a dedicated HMI. A controller will decide if a flight should be cleared or not.

Automatic mode: Automatic Mode involves every clearance request message being automatically responded to with an appropriate clearance, on the condition that the clearance request matches a flight plan in the flight plan database. In turn, the system will only inform a controller that a clearance has been given.

A HIGHLY INTEGRATED SOLUTION

System Architecture

At the heart of the AviBit DCL data link system is the DCL server, consisting of an operational and a hot-standby, forming a fully redundant system. The server is connected with the flight plan database, ATIS system and other data sources as required. The server communicates with the HMI, which can either be a dedicated DCL HMI or an Electronic Flight Strip System. In addition to this, data can be exchanged with any automation system installed at a tower. Data communication between a connected tower uses XML messages.

Integration with Electronic Flight Strips

DECLOS has been developed for integration with an Electronic Flight Strip System, which reduces the need for an additional DECLOS HMI monitor. In manual mode, reception of a clearance request is indicated on an electronic strip at the clearance delivery position. By pressing a button on the strip, the controller is able to clear a flight and the necessary communication to the pilot is automatically initiated in the background. In automatic mode, clearance is given automatically, the strip marked accordingly and transferred to the appropriate position, which is usually the ground controller. In automatic mode no further intervention is required by a controller.

