SEMINARY World ATM Congress HALA Research Network
Thursday, March 12th.
Madrid, Spain

"Identifying open issues for reduced-crew operation in the cockpit of large civil aircrafts and implications for the future ATM system"

ATM Theatre
IFEMA, Feria de Madrid

With special reference to technical, social and legal aspects and their potential implications throughout the future ATM system
ABSTRACT

The air transport sector is facing several challenges to which stakeholders should accommodate in the near future. It is known that the introduction of automation in the aviation sector has changed the role of pilots modifying their roles towards strategic managers and supervisors while reducing their workload and low level interactions within the cockpit. Moreover, due to the increase in traffic, the ATM industry is facing a potential shortage of airline pilots. At the same time, technological advances and specific needs are paving the way for the usage and introduction of RPAS in the future aviation system.

Within this context researchers and experts from different fields of the aviation sector are studying existing open issues for the decrease of pilot workload and reduced crew operation in the cockpit. Reduced crew operation within the cockpit goes together with re-allocating tasks to other players such as flight dispatchers from airlines, ATCOS, maintenance or aircraft manufacturers experts but also towards automation. For that purpose ongoing studies taking place across Europe and United States are evaluating its feasibility from different points of view together with the implied reallocation of task among different stakeholders involved in the operations.

HALA! Research Network (Towards higher levels of automation in the future ATM System) addresses the challenges that impose automation to the whole aviation system. HALA! is looking into future scenarios of the ATM and air transport system and proposes a workshop within the WATM congress. HALA’s intends to examine and discuss the idea of operations with reduced crew taking into account its technical, social and legal aspects and their potential implications throughout the future ATM system especially in terms of reallocation of tasks between the various operators involved in operation beyond classical cooperation between flying crew and ATCOs. The objective of the workshop is to:

- To discuss the feasibility of pilot number reduction by the definition of a large scale collaborative system requiring the reallocation (and/or migration) of task among stakeholders to be able to cope with the long term needs (sometimes conflicting) of the future aviation system in terms of safety, efficiency, sustainability, increase in mobility needs or passengers satisfaction
- To assess the impact of reduced crew operations in the future ATM system including possible migration of tasks to ATCO.
- To debate (not in exclusion with previous point) the process of reduction of crew operation by designing party-autonomous systems that could perform dedicated tasks currently allocated to human operator or perform newly defined tasks (possibly related to the collaboration aspects above)
- To identify open issues and opportunities that could be further explored in this field.
HALA! SESAR Research Network
Towards Higher Levels of Automation in ATM

Agenda

- 10.00-10.10  Welcome and Short introduction from HALA about increase of automation in the aviation sector (Paco Saez Nieto – UPM and Coordinator of HALA¡ SESAR Research Network (Towards Higher Levels of Automation in ATM).
- 10.10-10.20  Implications of automation in cockpit operations: the road towards reduced-crew operations (Philippe Palanque – IRIT)
- 10.20-10.35  Ongoing research on reduced-crew operations (Alberto Pasquini- Deep Blue)
- 10.35-10.50  Technical open issues and main perspectives (José Neves -GMV Portugal).
- 10.50-11.05  Legal open issues and main perspectives. (Prof. Giuseppe Contissa, European University Institute (EUI)).
- 11.25-11.40  Impact on ATM of reduced-crew operations. Related open issues and main perspectives. ATC vision. (Representant from APROCTA (Spanish ATCO Professional Association))
- 11.40-12.00  Open discussion with the audience

Coordinated by Cristina González Rechea. UPM/HALA! Management Team.
For registration and further information about the workshop please contact us in the following e-mail address

hala@hala-sesar.net

As we think it could be of interest of the aeronautical community to develop further contacts and networking among stakeholders interested on this topic we would like to elaborate a list of interesting stakeholders in the industry in the topic for further interaction between all them. The list will be circulated among all interested partners.

Please complete the registration form and send it to the e-mail address hala@hala-sesar.net.
Registration is open until March 12th, day of the seminar, and can be also done at the seminar premises on the spot.

Looking forward to see you there!