

SYSTEM WIDE INFORMATION MANAGEMENT (SWIM)

RECEIVE DATA OVER A MODERN NETWORK

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Ten years ago, the International Civil Aviation Organization (ICAO) identified issues hindering the development of air traffic. One of the topics was the lack of information exchanged between aviation stakeholders on flights due to antiquated communication technologies, formats and networks. ICAO then set up an ambitious plan which basically aims to replace over the next 10 years the obsolete old networks with a new modern IP network where the System Wide Information Management (SWIM) can be operated to seamlessly exchange more data between all aviation stakeholders. Ross Wilson is part of a pilot project to receive this SWIM Flight Data notification service to evaluate whether it could be operationally used within the short to medium term.

SKYGUIDE Why would you want to replace a system which, over many years, has proven to be reliable and safe?

ROSS WILSON We are getting to the stage where the existing formats are reaching the limits of their evolution. Basically we need to replace the obsolete old network in order to exchange more data between all aviation stakeholders: between airports, airlines and ATM. The task is to find the most direct route possible with the least obstruction and thus to increase safety and capacity in an airspace which is more and more crowded. The Eurocontrol Network Manager has, since May 2017, started offering some SWIM services. At skyguide, we launched a pilot project to test these SWIM services. We successfully demonstrated the utilisation of this enhanced flight data model and the display of the flight data on a Controller Working Position (CWP). The goal was to receive this data over a modern network, in a modern protocol and modern format and to process it for the Air-Traffic Controller (ATCO). ATCOs are interested in getting the data exactly as it is filed by the Aircraft Operator directly on their CWPs.

Is there a financial goal in the introduction of a new system?

RW SWIM would contribute to deliver prediction based flight data which would show exactly the predicted position of the aircraft at any given time. Optimising the flight plans would reduce flight time, fuel consumption and emissions.

Seeing today's internet being accessible in most areas worldwide, why is aviation using such old communication technology?

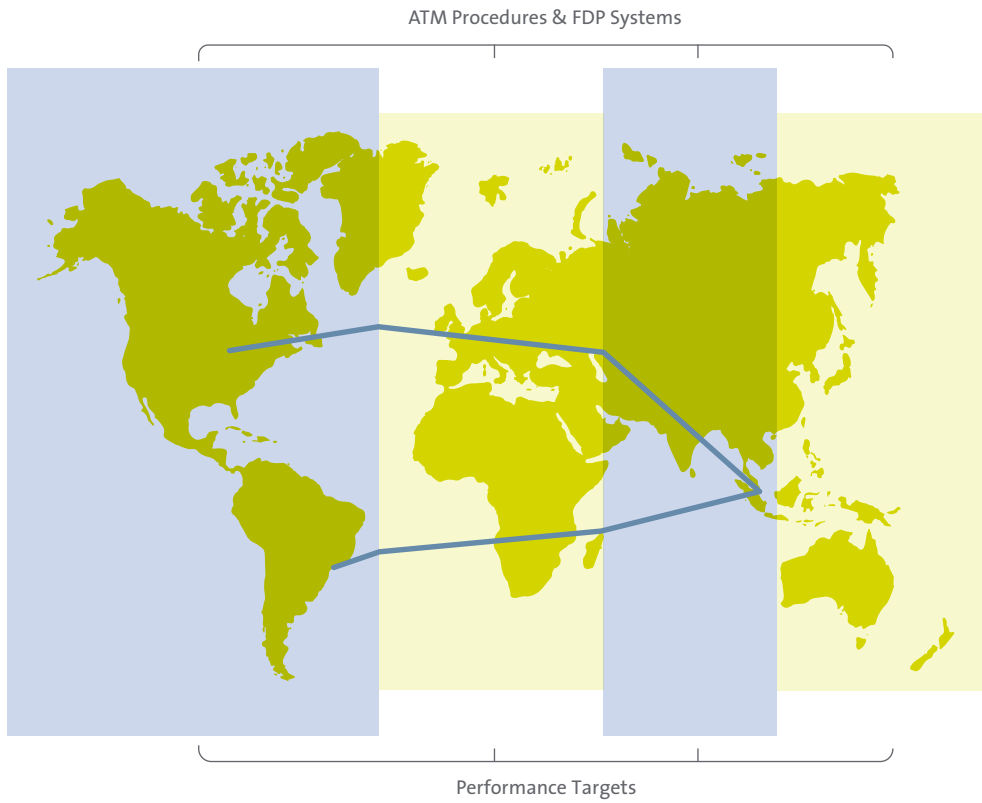
RW It was only in the last 10 years that the internet has become mature and reliable enough to even consider using it as the aviation communication backbone. Our world is also becoming more conscious of security on these networks, which with internet based technologies and tools can now be provided.

What is the time frame for implementing these new means of communication?

RW Europe wants a fully integrated system. The vision from the ICAO SWIM concept supported by SESAR is that everyone in Europe can communicate in these new formats by 2025. ■

“ Optimising the flight plans would reduce flight time, fuel consumption and emissions ”

CURRENT ATM BASED ON REGIONAL/STATE PROCESSES AND TARGETS



FF-ICE FACILITATED ATM BASED ON GLOBAL CONCEPTS, PROCESSES AND TARGETS

