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## Advanced Data Comm Standards – WG78/SC214 roadmap

Complex deployment plans for air/ground data communications in US and Europe domestic airspace are currently being prepared.

The European data comm roadmap follows a straightforward and incremental path over ATN, with 2 implementation steps:

- ATN B1, providing en-route services from 2013;
- ATN B2 (Baseline 2), the data comm solution intended to be a single global standard for oceanic and domestic operations, enabling advanced TBO, with an Initial Operational Capability promoted by the SESAR implementation program in 2018.

The FAA's current roadmap will introduce two data comm standards in the US domestic airspace. These are, in order of introduction:

- FANS-1/A, providing departure clearance service in 2015 and en-route services not later than 2019;
- ATN B2, potentially augmented with FAA specific services (D-RNP, Adv-IM...) and planned for implementation at a later stage still to be consolidated (2021/22).

Boeing and Airbus support these deployment plans, albeit they are not aligned. Together they provide a viable migration path from early data comm operations to the advanced TBO supported by ATN B2.

**However, in order to enable these deployment plans and accommodate the gaps in timelines and contents, a consensual approach has to be found within SC214/WG78, the joint RTCA/EUROCAE committee in charge of the development of ATS data link standards.**

Airbus and Boeing would strongly oppose any scenario that could end up with an inconsistent set of standards (which would likely be the case if B2 SPR and Interop documents were not released simultaneously), or that would force EUROCAE and RTCA to deliver separate standards. Such a scenario would perpetuate the current situation of divergent air/ground data communications systems and capabilities, which creates significant unnecessary cost for aircraft operators who have to carry multiple systems, increases the costs on Air Navigation Service Providers (ANSP) who have to support multiple technical capabilities to serve significant aircraft numbers, and results in severely delayed realization of services and benefits for the entire community.

Final convergence towards B2 Standards must remain the overarching objective of WG78/SC214<sup>1</sup>.

Airbus and Boeing fully support the following approach in order to meet this objective:

- **Publish, as initially scheduled in Mar 2014, B2 SPR and Interoperability Standards**, including air-ground Data Link services and applications as currently specified in common EUROCAE/RTCA Terms of Reference (except for FIS, which is now proposed for removal by the joint committee). This initial release shall provide a joint EUROCAE and RTCA set of standards;

<sup>1</sup> *Considering that participation in the standard-setting is unrestricted to other members of the industry, the procedure for adopting the standards is transparent, there is no obligation to comply with the standard on the members of the standard-setting organisation and there is effective access to the standard on fair, reasonable and non-discriminatory terms.*



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- Pursue work on Revision A of SPR and Interoperability B2 standards (also intended to be joint EUROCAE and RTCA), to investigate addition of the Dynamic RNP, Advanced IM and ATC Winds operational capabilities, as requested by FAA. Target date for this revision will be mainly dictated by FAA needs with regards to their B2 deployment schedule.

Airbus and Boeing consider this approach to be the best strategy, as it will:

- Secure the SESAR deployment plan, e.g. Large Scale Demonstration (LSD) and Pilot Common Project (PCP) with IOC in 2018, as B2 standards will be available in due time to support associated investment decisions expected in 2014;
- Mature the capabilities requested by FAA, ensure proper coordination is done with other standardization committees (SC227 for D-RNP, SC186 for Adv-IM and SC206 for ATC Winds) and deliver a set of consistent standards to support FAA B2 operations.

Airbus and Boeing commit to support the WG78/SC214 in achieving these two consecutive standards releases.

In order to facilitate Revision A of the standards, Airbus and Boeing would like to highlight the importance for WG78/SC214 to:

- Ensure that the scope of evolution for the revision of B2 is strictly limited to the operational capabilities requested by the FAA. The scenario where this update would become the opportunity for a full revamp of the Baseline 2 standards is to be avoided at all costs. This would initiate a divergent path for ATN implementation, washout years of harmonization efforts and create an interoperability issue between EU and US; and
- Investigate all possible options to ease the operational and technical backwards compatibility between the two versions. The ideal scenario would clearly limit the work to the new Services, so that Revision A represents a clear addition to the material published in the March 2014 B2 SPR and Interoperability Standards, not a change the March 2014 material. This might be accomplished, for example, by limiting the change to additional message elements in CPDLC only, without any change to the B2 CPDLC initial message elements.

Airbus and Boeing are convinced this approach is the best way to support final convergence towards B2, which would ultimately allow aircraft to hold one single package able to serve ATS Data Link services worldwide. The costs to the community of losing sight of the overarching objective of WG78/SC214 at this late stage would be enormous, involving high risk of again requiring multi-system requirements for similar functions on aircraft operators and ANSPs around the world.

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