Deviation Request ETSO-C195a#1 for an ETSO approval for CS-ETSO applicable to Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance Applications (ASA) (ETSO-C195a) Consultation Paper

1 Introductory Note

The hereby presented deviation requests shall be subject to public consultation, in accordance with EASA Management Board Decision No 7-2004 as amended by EASA Management Board Decision No 12-2007 products certification procedure dated 11th September 2007, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

2 ETSO-C195a#1 Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance Applications (ASA)

2.1 Summary of Deviation

To not system perform TIS-B to TIS-B airborne spatial correlation and to limit the use of the TIS-B function to the US.

2.2 Original Requirement

RTCA DO-317A 2.2.3.2.4 Intra-Source Correlation of TIS-B with TIS-B Tracks.

TIS-B to TIS-B spatial correlation shall (2344) be implemented when ASSAP implements TIS-B for airborne traffic.

2.3 Industry

Systems that include TCAS are not required to process airborne TIS-B targets. However, to improve the display near the airport surface for surface applications the system may process airborne TIS-B in certain limited situations.

RTCA DO-317A requires spatial TIS-B to TIS-B correlation because the Surveillance Broadcast Service System (SBSS) does not ensure that a TIS-B track will maintain the same track identifier when transitioning from one en-route volume to another en-route volume. (per 3.2.3.1.2 *Surveillance and Broadcast Services Description Document SRT-047, Revision 02 October 22, 2012).*

RTCA DO-317A does not require spatial TIS-B to TIS-B correlation between on-ground traffic because the SBSS Service system does ensure that a TIS-B track will maintain the same track identifier when transitioning between Terminal Service Volumes and Surface Service Volumes (3.2.3.1.2 *Surveillance and Broadcast Services Description Document SRT-047, Revision 02 October 22, 2012).*

In order to avoid performing TIS-B to TIS-B spatial correlation, the system must restrict the usage of TIS-B to aircraft that are in the Terminal Service Volume or Surface Service Volume. The system must only process airborne TIS-B traffic under the following conditions:

- Own ship is near the surface (< ~2600 ft AGL)
- Target is within 15 NM range of own ship,
- Target altitude is within +/- 3500 ft. of own.
- Average TIS-B update interval is < 2 seconds

Systems that support these restrictions on TIS-B usage do not need to perform TIS-B to TIS-B spatial correlation.

2.4 Equivalent Level of Safety

Equivalent level of safety is maintained without the system performing spatial correlation between airborne TIS-B tracks because the system's use of TIS-B is limited to areas near the airport surface (Surface Service Volume and Terminal Service Volume) where the TIS-B track identifier for traffic does not change; ground systems are performing the TIS-B to TIS-B spatial correlation for aircraft in these volumes.

2.5 EASA position

We accept the deviation which was already approved by FAA. The usage of the TIS-B function has to be limited to the US in the installation and user manual, as the equivalent level of safety depends on the special features of the US ground segment implementation not required by international standards.