

March 5, 2003 Drafting Subgroup Telecon Notes

Participants:

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Latency / Accuracy Discussion (continued from Feb 26 Telecon):

Resumed discussion on page 9 of Joel's "Latency Discussion Topic for ASA Application – Feb 17, 2003" paper discussed also at Feb. 26 telecon (refer to Feb 26, 2003 telecon notes for details).

The subgroup agreed that approach #1 is the preferred method, which allows the end user of the data (at the receiver) to do all the latency compensations. This requires provision of the "time of applicability" of the respective data elements being compensated.

Jim – what other data elements and their associated latencies must be considered?

Joel on Position data latency processing – Data is obtained from Nav source, is encoded into NIC and NAC, and is transmitted, along with time of applicability, and then at the receiver it is processed and compensated for.

Jonathan – for ASIA and for CSPA (Shahar's work) assumed an allocated latency budget and did not require time of applicability information explicitly.

Jim – MOPS are out there already; 1090 doesn't follow the ADS-B MASPS. 1090 MHz does compensate, but a manageable / small amount.

Stu in response to Steve's question on time-of-applicability as defined in ADS-B – for high NAC/NIC, must meet a small latency, need time of applicability of report

Jim on ADS-B MASPS text on latency / time of applicability: p. 99 definitions on latency; p. 100 in ADS-B MASPS 3.3.3.2.2.

Discussion ensued on how 1090 MHz MOPS outputs reports (time of applicability of reports, etc.) are developed and also how it affects the interface between ADS-B and ASSAP.

An issue to keep in mind: State ASA requirements of latency and report outputs from a top-level, and then ameliorate these with how 1090 MHz requirements are currently stated.

Back to the Latency Compensation Alternatives:

Alternative #1:

Includes a need to transmit the “time of measurement” of the HFOM/HIL sensor data. The only compensation allowed is to update the position data to the aircraft’s ADS-B position reference point.

Alternative #2:

Must establish requirements how compensation is done. Allocations to transmit side could be on Service Levels.

Alternative #3:

Similar to #2, but also try to account in NIC and NAC, the impact / uncertainty of our projections.

Generally, the group preferred Alternative #1 (especially from a clean sheet perspective). Some concern about backward compatibility with the Link MOPS.

Jim action item – to review how Latency Alternative #1 affects backward compatibility to prior link MOPS.

Joel action item – definition on latency for Jonathan’s section 2.4.7.1.3.3. A brief discussion ensued on the perspective to of where latency is to be considered, i.e., for which interfaces (interface(s), e.g. B to E, A to G, etc). Provide latency definition for Chapter 2. May also provide definition of latency for for Chapter 3 allocations to sub-systems. Also, may need two rows of latency, e.g., latency from interface B-E, A-G, etc.

Joel action item - begin to develop text for the ASA MASPS on the latency / time of applicability topic based on us having selected Alternative #1.