

**C/AFT**  
**European Data Link Focus Group Telecon**  
**August 12, 1999**

**Attendees:**

Steve Giles	FAA
Brad Unnasch	United
Thomas Belitz	DFS
Henk Hof	Eurocontrol
Klauspeter Hauf	DFS
Marie Nugent	Eurocontrol
John Turnbull	UK NATS
Ben Berends	KLM
Norm Fujisaki	FAA
Steve Glickman	Boeing
Yves Sagnier	CENA
Steve Zerkowitz	IATA
Kathleen Pirotte	Boeing

**Actions:**

- Henk Hof to send LINK Drafting Group Operational Scope to Boeing.
- Ben Berends to provide feedback on discussions with SITA prior to next meeting.
- Kathleen Pirotte to study airplane types to determine which should be in the model.
- Henk to provide data on impact of growth on delay.
- Kathleen to update data tables spreadsheet.

**Minutes:**

**Oceanic Data Link**

Norm noted that FAA is currently looking at oceanic data link and that it appears FANS1 compliant data link should be provided in oceanic airspace.

John Turnbull replied that it is desirable to have a global solution with ATN, which is needed in the European environment. FANS is good for low-density airspace and oceanic, certainly as a first step. UK NATS are doing some work with FANS, but it isn't business case driven, it's just to gain experience. UK NATS are taking a longer global view and are specifying ATN.

Norm replied that he would expect that from an airline position there would be an issue because of dual capability question.

**Business Case Discussion**

Henk reported that the LINK Drafting Group Operational Scope Document will supersede the Draft European Implementation Plan (DED6/ATN/ATNI-TF/DOC/37) for the first stage of ATN and ATN-based services. A draft version of this document will be distributed next week.

The group went through the list of assumptions/questions that was sent out by Kathleen prior to the telecon. Results of our discussions are documented in blue below.

**Next Meeting**

The next C/AFT Euro DL FG meeting will be held September 1-3 in Seattle. The goal for that meeting will be to have a draft model structure and completed data tables. We will review the model and required data in detail and assign action items to the team members to provide data. We will also discuss the approach for the strategic model.

## Assumptions/Questions/Issues on C/AFT European Data Link Study

### General

- Assume that analysis covers only High Traffic Level Areas (HTLA) (HTLA = Core Europe)
  - HTLA countries are added at each stage → Definition of Core Europe changes by stage
  - This is ok. Link Operational Scope document defines Core Europe for first stage. Start and end dates of the stages will be variables in the model.
- Initial run of model will assume Stages as defined in Draft European Implementation Plan, DED6/ATN/ATNI-TF/DOC/37.
  - Stages seem artificial, and do not take into account market drivers
  - This is ok. Klauspeter expressed the opinion that traffic growth will be equipage driver, and that traffic growth will not happen without data link.
- Assume area-wide Baseline 1 messages, in En-Route HTLA
  - Not including Local data link services
  - This is not ok. Local data link services will be included in the model.
  - Each stage would implement a subset of the Baseline 1 message set (similar to FAA incremental builds), so each Stage would have a delay reduction effectiveness
  - Baseline 1 will be broken down into Airport equipage (local services) from now to 2005, and En-Route (area-wide services) from 2005 on.
  - Baseline 2 messages are out-of-scope
  - This is ok. Baseline 2 will be included in the strategic business case (details of which will be discussed at the next C/AFT meeting).
- Results from IATA airline ACARS survey indicate AOC congestion problem, and scheduled airlines equipped with ACARS. Regionals not equipped with ACARS.
  - Will probably need two baselines, don't have enough data to know for sure
  - We will keep two baselines for now.
  - Need info from ARINC/SITA about percent ACARS equipage.
  - Ben took the action to get data from ARINC and SITA on percentage of airplanes ACARS equipped.
  - We will leave US pricing assumptions in the model for now, hope to get better information at the next C/AFT meeting.
- Equipage will be with all types of airlines, Benefits will be calculated for scheduled airlines only.
  - Some European airlines operate both "scheduled airlines" and "regional carriers". Do we want to include regional carrier benefits too?
  - Benefits will be categorized based on aircraft type, using the types described in Appendix C of the implementation plan.
  - We will include mandatory equipage in the model as one of our scenarios. Henk stated that the issue of mandatory equipage is under discussion, with no decision as of yet. The first implementation will be benefit-driven, but to get to 100% equipage we may need to go to rulemaking, and this should be evaluated in the model.

### AOC Communication Issues

- Need info on ARINC/SITA Pricing Strategies
- Need help (Russ Chew?) on how to determine cost of AOC unavailable, and benefit of AOC operations to those airlines that don't use ACARS now.
  - We will discuss this at the next C/AFT meeting.

### ATC Communication Issues

- Need data from European study on impact of traffic growth on delay.
  - Henk will provide this information.

### Implementation Stages

- Stage 1. 2000 - 2005
  - Need definition of "Core Europe"
  - [Link Operational Scope document defines Core Europe for first stage.](#)
- Stage 2. 2006 - 2011
- Stage 3. 2012 - end of model
  - End-date of Model does not allow us to take advantage of "Year 2018, representing the full European Region ATN implementation (stable and mature state)."
- [Stages as defined here are ok.](#)
- Each Stage will have a separate constant (or variable, if necessary) for:
  - Total Flights/Year
  - Total number of ~~Scheduled Airline~~ Airplanes
  - ~~Total number of "Other" airplanes~~
  - New Deliveries (Boeing Current Market Outlook and Airbus Global Market Forecast will be used.) Assume that new deliveries are ATN-compliant and will fly in Core Europe.

### Constants

- See spreadsheet for data requirements.
- [Kathleen to update the spreadsheet. Team members to review.](#)

### Infrastructure

- There are different kinds of infrastructure (VDL-2, Airport, ACC/States, Eurocontrol)
  - How will VDL-2 infrastructure readiness vary by stage?
  - [VDL-2 infrastructure will be completely ready at the start of the model.](#)
  - Do we care about airport infrastructure, since we are assuming HTLA area-wide messages?
  - [Yes, because we are including local messages.](#)
  - Should we assume common infrastructure readiness dates (by stage) for ACC/States and Eurocontrol?
  - [Model will have variables for Airport and En-Route infrastructure readiness. For now we will assume that airport infrastructure will be ready in 2000 and En-Route infrastructure will be ready in 2005.](#)
- US Analysis included "Delay Reduction Effectiveness" per build
  - Do we want to break Baseline 1 message set into "builds" and apply an effectiveness factor in a similar manner?
  - [See notes above, under General.](#)

### Equipage

- See spreadsheet for data requirements
- [Kathleen to update the spreadsheet. Team members to review.](#)

### Costs

- Need data for route charges
  - Should we assume an average number for all states/Eurocontrol?
  - [Instead of modeling route charges we will model actual cost to the industry of the ground infrastructure recurring and non-recurring costs.](#)
- See spreadsheet for other data requirements

### Benefits

- See spreadsheet for data requirements
- [We may add a cost-avoidance benefit of not having to hire more controllers with data link.](#)
- [Kathleen to update the spreadsheet. Team members to review.](#)

