

C/AFT Core Team Meeting August 31, 2000

C/AFT Core Meeting American Airlines, Dallas Texas August 31, 2000

Attendees:

Russ Chew, American
Rose Hsu, American
Brian Harkness, Air Canada
Dave Jones, United
Norm Fujisaki, FAA
Art Politano, FAA
Joe Sinnott, MITRE/CAASD
Jean-Luc Bersat, Airbus
Chris Scoffield, NASA Ames
Pete Kostiuk, LMI
Steve Kuo, ITRI
Dave Allen, Boeing
Pat Harper, Boeing
Bob Schwab, Boeing
Kathleen Pirotte, Boeing
Monica Alcabin, Boeing

Background

The realities of this past spring and summer are that we are closer to gridlock in 2000 than projected when American Airlines completed its study of congestion in 1996. The Spring and Summer 2000 program was a new exercise in collaboration and collaborative decision making which failed because ATC and the airlines do not have common goals. In discussions it was pointed out that collaboration only works if all parties have the same goals and in the case of the NAS, airlines and ATC do not have the same goals. We airlines' goal is to maximize system throughput, while ATC does not appear to be as focused on moving the maximum traffic throughout the system. For example, some centers are not accepting and moving the traffic through their sectors when constraints such as weather are present. This is a fundamental issue that we need to resolve. The ATC system appears very insensitive to airline requirements and very conservative with the way they are dealing with the weather. With this environment as a backdrop, it is imperative that the airlines make a better case for ATC modernization and improvement with the FAA, and more importantly with and for their customers. To meet this challenge the C/AFT group is proposing re-orienting its business case methodology to more focus on impact on customer demand for air travel, as discussed in the following sections.

Proposal for future C/AFT Organization

Between January and June of this year a preliminary work program was developed for a proposed new C/AFT subgroup, the Operational Enhancement Integrated Analysis group. After reviewing this work, the Core group concluded the entire work program for C/AFT should be restructured to work these tasks. We are proposing redirecting C/AFT into 3 new groups: Operations Analysis FG, Integrated Solutions FG, and Financial Performance FG. The ATSP Cost Accounting FG will finalize its work this year and then will get folded into a more public forum.

We propose to reorient our C/AFT analysis to a more market based approach rather than a functional based. In total 55,000 U.S. markets makes up 100% of the Origin and Destination markets in the US.

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However, 91.6% of the passenger demand is in just 10% of these markets. Conversely 90% of the market makes up only 8.4% of passenger demand. We want to concentrate industry priorities on improving ATC in the top ten markets and to bring this focus C/AFT is intending to analyze demand for air travel and ATC constraints in these areas. We will need airline expertise to help develop the high value markets. The analysis will define both current and projected market size out to year 2015 based on both Revenue Passenger Miles (RPMs) and the number of movements (the gage) This will define demands for the ATC system and then we will examine the capability of the ATC system to meet the demand, identifying constraints in the enroute, terminal and runway environments. We will focus on high value markets east of Chicago. The value of the market will form the basis for the aggregate business case and we will quantify the "value" of constraints on demand.

Russ Chew recommended the C/AFT first deliverable under its new structure be a presentation to the RTCA Free Flight Steering Committee's December 2000 meeting. The deliverable discussed is to be a strawman business case for a major Northeast corridor market, with the analysis concentrated on the market demand "value" to ATC modernization. The purpose of the strawman is threefold:

- To demonstrate a quantitative market driven business case for a set of ATC improvement transitions that meet the needs of a specific market.
- To "sell" the Free Flight Steering Committee (and the industry) on the "market driven" analysis approach.
- To gain consensus that the analysis should be applied to all the high value markets in the NAS.

Following completion of the work outlined below the Core C/AFT group plan to meet November 29 and 30 to develop the proposed presentation to the RTCA Free Flight Steering Committee. In the following paragraphs the initial work scope of the two of the three focus groups is discussed, and interaction is proposed with the new ATA ATC Steering Committee.

Operations Analysis FG.

Rose Hsu (American Airlines) agreed to chair the Ops Analysis FG.

The group plans to have its first meeting over a day and a half in mid September at United headquarters in Chicago. (Pre-supposing United management support for the program) The objective of the meeting will be to agree on the approach and define the tasks for constructing the single, key market strawman business case. It will involve:

- Identifying top markets and agreeing on which to utilize for the strawman;
- Deciding on how to do the operations analysis that measures historic performance and identifies the constraints in those markets as near, medium and long term for each of the terminal, en route, and airport surface regimes.

Pete Kostiuk indicated that LMI has done a market analysis based on the FAA unconstrained forecasts and the growth by city and city-pairs. He agreed to put together a rank order of the city-pairs. Pete will include RPMs by city pairs and assumptions regarding the number of flights (gage).

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Integrated Solutions FG

Dave Jones of United and Brian Harkness of Air Canada have agreed to co-chair the Integrated Solutions FG.

The first meeting of the IS FG is tentatively set for either Oct 5 - Oct 6, or Oct 12-13 in Seattle. The IS group meeting objective will be:

- To review the constraints identified by the OA group for the strawman market
- Develop a process for analyzing candidate solutions to mitigate the congestion caused by the constraints in each of the enroute, terminal, and runway regimes of flight.

The market demand for ATC services, when matched to capacity, is expected to identify constraints projected to impact performance over the 15 year planning horizon. The solutions suggested will have different time frames. Some will have 2 year horizons; others 3 to 5 years, and others that include major capital expenditures, like new runways, make take 5 to 8 years or longer. We will concentrate on mid-term for action, realizing the long term constraints will require some planning in the near term and the mid term. We will offer limited insights on near term issues where data points to problems and procedural based solutions that can have a significant impact.

The 2nd meeting is to be scheduled the week of Nov 13.

Financial Performance FG

No chairperson has been named for the group. The work program is yet to be defined

ATA ATC Steering Committee Interaction with C/AFT

In the past month, the ATA has formed an ATA ATC Ops Steering Committee to focus on ATC problems. The new group reports directly to the Strategic Advisory Committee made up of CEOs of the airlines, and will be the final ATA policy on ATC issues. The Committee is comprised of Vice Presidents and senior directors with System Operations Control responsibilities and they concentrate on operational issues three to five years out. As American's representative, Russ Chew intends to re-orient them to the ATC demand/capacity problem, introducing the market-based approach that we are proposing for C/AFT. He intends to outline how we propose examining markets, by city, and routings, to project demand for and value of ATC services. The first opportunity to introduce the subject will be at the groups' September 7 meeting. He intends to outline our approach, and indicate the first deliverable will be the strawman market driven analysis of a single market to be presented to the RTCA Free Flight Steering Committee in December. The goal is to seek ATA member airline support for the analysis, and staff assistance on the three teams.

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Appendix

ATC Tactics with Convective Weather - Problems/Solutions

1999 was the worst year for airlines delays because of DSR. The traditional weather index did not show much difference. However, weather problem days between Chicago and NY doubled and the way ATC handled the weather was not as efficiently as in past years.

Today there are four ways that ATC deals with the weather:

- Severe weather avoidance plan (SWAP)
- Ground stops and miles in trail
- Ground delay program

All of these are incredibly unpredictable and it's impossible to run a hub airline that way.

As a snap shot of the current state of ATC, a key problem is routing through and around spring and summer convective weather. Today, when weather is forecast ATC typically closes a route; they are not focused on exploring how to get as much traffic through the system as possible. To improve this situation Air traffic needs to be able to issue and the airlines need to be able to receive and accept dynamic en route clearances. This capability needs to support issuance of a route clearance in real time which is RNAV based. Key is reducing the time it takes me to negotiate the route. Need to re-negotiate and receive re-routings in real time.

On good weather days, the system worked pretty well. This points to airline demand for ATC service and the FAA's ability to provide the service being in balance in most regions on good weather days. (If we were on the edge of the curve, we would see dramatic delays even in these good weather days.)