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PaperTitle: *ATC/Air Carrier Collaborative
Arrival Planning*

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With continued increases in air travel and a shift toward hub-and-spoke operation in the US, the National Airspace is reaching its effective capacity. This paper investigates how collaborative arrival planning between air traffic controllers (ATC) and air carriers can improve air traffic management decision-making while providing improved efficiency of air carrier operations and greater scheduling flexibility. The Collaborative Arrival Planning (CAP) project, is built on the concept that a great deal can be gained through collaboration between air traffic management and the users of the airspace.

The first phase of CAP provides a one-way flow of filtered CTAS TMA scheduling information to the Airline Operation Center (AOC). The next phase involves the transfer of air carrier information to CTAS. The CTAS/TMA system was fielded at the American Airlines Systems Operations Control (AALSOC) in the Dallas/Ft. Worth area of Texas. Two areas were examined: (a) the real time exchange of information between air carriers and ATC and (b) the incorporation of user-preference information into ATC scheduling. Their findings are discussed below.

The authors relate that the more accurate arrival time predictions provided by the system enabled AALSOC personnel to make better scheduling and fleet-planning decisions concerning flights arriving into the DFW hub. Furthermore, results show that more accurate arrival time estimates assist the airline in avoiding flight diversions and reduce the number of status phone calls to the FAA service provider. Another area of noted improvement was in ramp operations. TMA scheduling information aided in scheduling and delegating fueling trucks, baggage handlers, caterers, and gate personnel.

In terms of future research, it is suggested that a mechanism needs to be established to allow the airlines to have a say in how delay is assigned to their flights. That is, some flights may be of higher importance than others may and airlines should be able to relate this information to the ATC. Also, many of the tools that are in use were designed and tested for controllers. From a human factors point of view, these tools need to be modified for airline usage. The way

information is displayed for controllers are, in all likelihood, different from how the airlines would like to view it.

Personal Comments:

This paper, seemed dated to me. While I had just finished my bachelor's degree in December 1998, the information presented in this paper does not seem relevant to the current model of CDM now in place. In one regard, it sets a marker for how far we've come, but the acronyms and mnemonics used are rarely used to day. The paper by Carlson embodies the same message as this one, but in a more succinct, contemporary manner.