

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

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**AIR TRAFFIC REQUIREMENTS FOR THE DIGITAL AUTOMATIC
TERMINAL INFORMATION SERVICE (ATIS) SYSTEM**

SUBJ:

1. **PURPOSE.** This order sets forth requirements for digital ATIS at qualifying airport traffic control towers.
2. **DISTRIBUTION.** This order is distributed to branch level in Washington Air Traffic offices/services, Systems Maintenance Service, and Research and Development Service, regional Air Traffic and Airway Facilities Divisions, and all Air Traffic field offices and facilities.
3. **BACKGROUND.**
 - a. Digital ATIS is an enhancement of the Tower Data Link Service (TDLS) and uses the Pre-Departure Clearance (PDC) System microcomputer to automate the delivery of airport and terminal area operational and meteorological information to aircraft flightcrews. Two phases of development are planned. The first phase will provide, via data link, a digital version of the ATIS to flightcrews. Voice recording will continue to be utilized in the preparation of the ATIS broadcast. The second phase will add automated voice generation for the ATIS broadcasts.
 - b. The digital ATIS workstation captures meteorological data via an interface with the local information display system. The weather and terminal information can be added to or modified. The message is then relayed to an appropriately equipped aircraft flightcrew via an airline network computer.
 - c. Appropriate portions of digital ATIS will be incorporated into the Advanced Automation System.
4. **DEFINITION OF PROBLEM.** Today's ATIS process is labor intensive in terms of data collection, controller voice-communications workload, and limited range and requires a cockpit crewmember to be off frequency and susceptible to human error.
5. **SYSTEM NEED.** The National Airspace System has needed a more efficient means of delivering ATIS information to the cockpit.

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A-X(AT/AF)-3

Initiated By: ATR-320

6. BENEFITS. The benefits of a digital text and automated voice ATIS system are that it (a) accurately presents a textual ATIS message to the pilot, (b) reduces the chance of being misunderstood, (c) reduces the voice-communications workload caused by pilots being distracted from other duties while obtaining ATIS, and (d) reduces workload when ATIS automated voice is introduced in phase II.

7. MINIMUM FUNCTIONAL REQUIREMENTS. The following are the minimum functional requirements for digital ATIS. They are identified in terms of system design, system capacity, data recording, and system utilities.

a. System Design (Phase I). Provides automatic delivery of a textual ATIS to aircraft flightcrews.

(1) Provide automation support in the compilation of pertinent environmental data and generation of ATIS messages for data link or voice dissemination (i.e., collection and presentation of data displayed on workstation to ATIS operator is in a format that is operationally suitable for delivery).

(2) Provide capability to edit and append additional information. To facilitate this, the capability to select predefined information shall also be provided.

(3) Provide capability for generation of separate arrival and departure ATIS messages or a combined ATIS.

(4) Provide a transaction status which is to be displayed confirming acknowledgments for transmitted messages.

(5) Provide the capability to configure ATIS as an active system (i.e., airport environmental data are to be presented to the ATIS operator for editing).

(6) Provide the ATIS tower data link systems with the appropriate processing and communications infrastructure that will allow dissemination of the text ATIS messages to requesting aircraft via air/ground data link.

b. System Design (Phase II). Provides automatic generation of a voice ATIS recording directly from the textual ATIS message, through voice synthesis or digitization techniques.

c. System Capacity.

(1) Provide sufficient computer memory to capture, store, and process a minimum of 80 daily arrival and 80 daily departure ATIS broadcasts.

(2) Provide off-line storage capability to archive a minimum of 15 days of ATIS historical data.

d. Data Recording.

(1) A computer record shall be maintained identifying the nature, content, clock time, and date of all digital ATIS transactions (i.e., the content of an ATIS messages, all ATIS communications with the airline network computer, and all airline network computer communications with the ATIS system).

(2) Automatic archiving capability shall be provided for maintaining the information identified above and other information that may be appropriate for facility record keeping. The capability for a forced ATIS archive shall also be provided.

(3) All archive data shall be maintained in true ASCII format and readily transferable from the archive storage medium to floppy disc in disc operating system (DOS) format.

e. System Utilities. User friendly utilities shall be provided for system-level troubleshooting, maintaining the site configuration of ATIS, and reducing selectable archive information.

8. AVAILABILITY. Digital ATIS shall have an availability of .95 or greater where 1.0 represents total time with no interruptions.

9. CONFIGURATION MANAGEMENT. A configuration management process shall be established that is consistent with the current edition of Order 1800.8, National Airspace System Configuration Management.

10. QUALIFYING CRITERIA. To qualify for digital ATIS service, the facility shall have a PDC system.

11. INITIAL CANDIDATE FACILITIES

Dallas-Ft. Worth (DFW)
 San Francisco (SFO)
 Atlanta-Hartsfield (ATL)
 Boston-Logan (BOS)
 LaGuardia (LGA)
 Denver-Stapleton (DEN)
 Washington National (DCA)
 Philadelphia (PHL)
 Detroit Metropolitan (DTW)
 Memphis (MEM)
 Salt Lake City (SLC)
 Seattle-Tacoma (SEA)
 Washington-Dulles (IAD)

Las Vegas-McCarran (LAS)
 Charlotte-Douglas (CLT)

Chicago-O'Hare (ORD)
 Los Angeles (LAX)
 Greater Pittsburgh (PIT)
 John F. Kennedy (JFK)
 Newark (EWR)
 St. Louis-Lambert (STL)
 Miami International (MIA)
 Minneapolis-St. Paul (MSP)
 Orlando-McCoy (MCO)
 Baltimore-Washington (BWI)
 Raleigh-Durham (RDU)
 Nashville (BNA)
 Houston

Intercontinental (IAH)
 Phoenix-Sky Harbor (PHX)
 Cleveland-Hopkins (CLE)

12. PROGRAM MANAGEMENT. Digital ATIS is being implemented as a rapid prototype system. To accommodate this special effort, program management is initially a joint responsibility of the Research and Development Service (ARD-1), Systems Maintenance Service (ASM-1), and Air Traffic Plans and Requirements Service (ATR-1).

for *William H. Pollard*
William H. Pollard
Associate Administrator
for Air Traffic