

Traffic Flow Management System FADT File Format Specification for the Traffic Flow Management-Modernization (TFM-M) Program

CSC



Final, Release 5, Version 4.3

Contract Number: DTFAWA-04-C-00045
CDRL: E05

January 10, 2011

Prepared for:
U.S. Federal Aviation Administration

Prepared by:
CSC
North American Public Sector – Civil Group
15245 Shady Grove Road
Rockville, MD 20850



Traffic Flow Management System FADT File Format Specification for the Traffic Flow Management- Modernization (TFM-M) Program

Final, Release 5, Version 4.3

Contract Number: DTFAWA-04-C-00045
CDRL: E05

January 10, 2011

Prepared for:
U.S. Federal Aviation Administration

Prepared by:
CSC
North American Public Sector – Civil Group
15245 Shady Grove Road
Rockville, MD 20850

CSC/TFMM-10/1077
Release 5, Final, Version 4.3
January 10, 2011

FADT File Format Specification
APPROVAL SIGNATURE PAGE

APPROVAL SIGNATURES

PARTICIPANT	NAME	DATE

FADT File Format Specification

Date: January 10, 2011
 Feature Described: FADT File Format Specification
 Document Version: 4.3
 Remarks: Effective TFMS R5/FSM 9.0 (Spring 2011 Release)

Revision History		
Version	Date	Description of Change
1.0	06/21/2005	Initial Formal Document Effective ETMS / FSM 8.02 <ul style="list-style-type: none"> • Consolidates Prior Informal Documents and Emails
1.1	06/28/2005	<ul style="list-style-type: none"> • Removed Changes Deferred To 8.2 Release
2.0	08/25/2005	Initial Incorporation of ETMS / FSM 8.2 Changes <ul style="list-style-type: none"> • Airspace Flow Programs • Combine FA and Slot Lists Sub-Files
2.1	10/7/2005	<ul style="list-style-type: none"> • Modified Slot List Format To Show ERTA on GDP List and EENTRY on AFP List
2.2	12/14/2005	<ul style="list-style-type: none"> • Clarified Usage of START_TIME and END_TIME • Modified Usage of Cumulative Start and End Time for Ground Stops • Modified Format of Various Time/Date Fields • Clarified Applicability of Data Blocks • Modified Usage of DAS Block for Ground Stops and Programs With Delay Mode of GAAP • Clarified B6 Block Construction When Flights With a Null DCENTER Are Present
2.3	1/27/2006	<ul style="list-style-type: none"> • Modified FCA identification format from FCAddd to FCAccc • Clarified Usage of SH Field • Clarified Usage of RCTL Control Type • Added Header Line to *.edct Primary Sub-File and *.e2hub.1 Secondary Sub-File
2.4	3/7/2006	<ul style="list-style-type: none"> • Updated Sub-Files Section to Reflect ATS as Built • Added *.al.xxx.l Secondary Sub-File
3.0	05/02/2006	Initial Incorporation of ETMS / FSM 8.3 Changes <ul style="list-style-type: none"> • Reflect Version 11 ADL Changes • Adaptive Compression • Small Airport Support • GS Scope Reduction & GDP Time Reduction
3.1	09/12/2006	<ul style="list-style-type: none"> • Modified Usage Section to Include All GS Flights In a GS FADT • Clarified Handling of Unassigned Slots for Removed and Purged Flights • Clarified Usage Section • Corrected Miscellaneous Typos
3.2	12/28/2006	<ul style="list-style-type: none"> • Clarified Usage of Unassigned Slots Block To Resolve Issues in Transition from GAAP to DAS Delay Modes.
3.3	3/3/2008	<ul style="list-style-type: none"> • Corrected number of centers and airports that can be listed for various keywords (values updated to reflect ETMS as implemented limitations).

Revision History		
Version	Date	Description of Change
3.4	5/21/2008	<ul style="list-style-type: none"> • Clarified Which Flights Are Listed In The FADT • Clarified Usage of Event and Cumulative Time Keywords • Clarified Usage of PURGE • Clarified Usage of REMOVED
3.5	5/30/2008	Initial Incorporation of FSM 8.7 Changes <ul style="list-style-type: none"> • Modified rules for including exemption blocks to prevent COMP, BLKT, and GS events from modifying exemption criteria already in place for a GDP or AFP.
3.6	6/17/2008	Incorporation of Additional FSM 8.7 Changes and Corrections <ul style="list-style-type: none"> • Incorporated changes to support the Unassigned Slot Realignment / Compress Slots Feature • Corrected Usage of DAS Entry In Tables Section 2.7
4.0	03/10/2010	Initial Incorporation of R5 Changes <ul style="list-style-type: none"> • Unified Delay Program (UDP) • Added OVERRIDE_AFP Keyword • Added DELAY_MULTIPER • Added UBRG Control Type • Updated ETMS versus TFMS Terminology • Removed Previously Implemented ETMS Workarounds
4.1	05/24/2010	<ul style="list-style-type: none"> • General Corrections
4.2	09/01/2010	<ul style="list-style-type: none"> • Corrected formatting of “RESERVED_RATE”
4.3	01/10/2011	<ul style="list-style-type: none"> • General clarifications. • Corrections to various applicability tables.

Table of Contents

Table of Contents	3
Introduction.....	4
Changes.....	5
Terminology.....	5
References.....	7
1. FADT General Description.....	8
1.1. Contents	8
1.2. File Naming	8
1.3. Organization.....	8
1.4. General Formatting	9
1.5. Default Assumptions.....	9
1.6. Usage.....	10
1.6.1. Airport Element Based Events	10
1.6.2. FCA Element Based Events	11
2. FADT Data Blocks	12
2.1. Data Blocks Formatting Assumptions	12
2.2. Parameters Block	13
2.2.1. Parameters Block Details	13
2.2.2. Parameters Block Keyword Applicability	15
Airport Data Elements	16
FCA Data Elements	17
2.2.3. Parameters Block Samples.....	17
2.3. Unassigned Slots Block	19
2.3.1. Unassigned Slots Block Details	19
2.3.2. Unassigned Slots Block Samples	19
2.4. Include_Only Block	20
2.4.1. Include_Only Block Details.....	20
2.4.2. Include_Only Block Samples.....	20
2.5. Exemptions Block.....	21
2.5.1. Exemptions Block Details.....	21
2.5.2. Exemptions Block Samples	21
2.6. Non-Exemptions Block.....	22
2.6.1. Non-Exemptions Block Details	22
2.6.2. Non-Exemptions Block Samples	22

2.7.	DAS Block.....	23
2.7.1.	DAS Block Details.....	23
2.7.2.	DAS Block Sample	23
2.8.	Data Block Applicability	24
2.8.1.	Airport Data Elements	24
2.8.2.	FCA Data Elements	26
3.	FADT Slot Lists.....	28
3.1.	B6 and B8 Formatting (Complete).....	29
3.2.	B9 Formatting (Abbreviated).....	33
3.3.	B6 Construction (By Center)	34
3.4.	B8 and B9 Construction (By User).....	35
3.5.	Special Cases and Exceptions	36
3.5.1.	Removed Flights Special Handling.....	36
3.5.2.	Purged Flights Special Handling.....	36
3.5.3.	Compress Slots Special Handling	37
4.	Autosend Sub-Files	38
4.1.	Overview.....	38
4.2.	.as Primary Sub-File.....	39
4.2.1.	*.as.aa Secondary Sub-File	39
4.2.2.	*.as.hcs Secondary Sub-File	40
4.3.	*.edct Primary Sub-File	41
4.3.1.	*.eXXX.1 Secondary Sub-File.....	41
4.3.2.	*.e2hub.1 Secondary Sub-File	41
4.4.	*.al Primary Sub-File	44
4.4.1.	*.al.xxx Secondary Sub-File	45
4.4.2.	*.al.xxx.l Secondary Sub-File.....	45
4.5.	*.fa Primary Sub-File.....	47

Introduction

The FADT (see note below) is the data product produced by the Flight Schedule Monitor (FSM) that communicates the issuance of Traffic Flow Managements Initiatives (TMI) to various systems and users. The FADT is produced by FSM whenever a Ground Delay Program (GDP), Airspace Flow Program (AFP), Compression (COMP), Blanket (BLKT), or Ground Stop (GS) event is generated.

After being produced by FSM the FADT is transmitted to the Autosend (ATS) application. ATS then extracts specific information from the FADT and transmits the information needed by TFMS-Core, Traffic Managers, and NAS Customers to the appropriate destinations.

The purpose of this document is to describe the contents of the FADT file in detail.

- Part 1 - General Description: Provides an overview of the FADT.

-
- Part 2 – Data Blocks: Describes the data blocks provided in the FADT.
 - Part 3 – Slot Lists: Describes the slot lists provided in the FADT.
 - Part 4 – Sub Files: Describes the sub files create from the FADT by Autosend.

NOTE – FADT was originally an acronym for “Fuel Advisory Delay Table”, with Fuel Advisory being a reference to FA Delays. The term “Fuel Advisory Delay” (FA) is no longer in use and has been removed from the Airman’s Information Manual (AIM) and all FAA documents. The term FA has been replaced by “Delay Assignment” (DAS). Due to its well established nature the acronym FADT has become a de-facto term and is no longer used as an acronym.

Changes

In conjunction with the release of version R5 of the Traffic Flow Management System (TFMS) and Flight Schedule Monitor (FSM), the format of the FADT file is changing. These changes are primarily driven by the introduction of the Unified Delay Program capabilities. This document describes the new format that is effective upon the operational deployment of TFMS R5 in the spring of 2011. At that time, this document supersedes all prior versions.

The body of the document has been fully updated to reflect the new format. The following is a summary list of the specific FADT items that have changed:

- Incorporated support for the Unified Delay Program (UDP) concept.
- Miscellaneous corrections and clarifications made.

Terminology

The following common terminology is utilized throughout this document;

- “TFMS”
The Traffic Flow Management System in its entirety (TFMS-Core, TSD, FSM, NTML, etc)
- “TFMS-Core”
The central processing function of TFMS (ETMS Hub Equivalent)
- “NAS User”
An airline, cargo carrier, general aviation (GA) pilot, military, or anyone else who operates aircraft in the National Airspace System (NAS). A NAS User is not required to be a CDM Participant in order to submit substitutions.
- “CDM Participant”
A subset of NAS Users who participates in the CDM process by submitting schedule data and substitutions to TFMS.
- “FAA User”
A traffic manager or other member of the FAA that uses TFMS/FSM. This also includes other ATC service providers, such as Nav Canada, who make use of TFMS/FSM.
- “Authorized FAA User”
FAA Users who are authorized to perform specific restricted functions such as issuing a TMI. This also includes other ATC service providers, such as Nav Canada, who make use of TFMS/FSM.
- “Any User”

Any user of TFMS/FSM regardless of their affiliation (ATC service provider or NAS User).

- “Initial Program”

The initial issuance of an AFP or GDP to manage flights arriving at an airport or FCA. Slot allocation is based principally on arrival at the controlling element.

- “Revised Program”

The revision of an AFP or GDP that is already in place. This revision can be simply to change the rate, scope, or a modification in start / end times which extend or reduce the time frame of the program. Revisions replace existing slots with new slots during the time frame of the revision.

- “Compression”

The compression of an initial or revised AFP or GDP. A compression reallocates slots which are open due to flight cancellations or delays. Compressions do not create new slots, but simply reallocate existing slots.

- “Blanket”

The blanket adjustment of a GDP that is already in place. A blanket reduces or increases delay times, based on a user specified value, without consideration of the airport rate.

- “Ground Stop”

The issuance of a traffic stop. Ground Stops differ from an Initial or Revised GDP in that slot allocation is based on a specified earliest departure time (i.e. the Ground Stop Time).

- “Purge”

The cancellation of a TMI. The purge process removes from TFMS-Core all TMIs currently in place for a specific element.

- “Traffic Management Initiative” or “TMI”

These terms refer to the domain of all FSM events (Initial, Revision, Compression, Blanket, Ground Stop and Purge) whether they are for an airport (GDP) or FCA (AFP).

- “Ground Delay Program” or “GDP”

These terms refer to only to the domain of Airport Ground Delay Program events (Initial, Revision, Compression, Blanket, Ground Stop and Purge).

- “Airspace Flow Program” or “AFP”

These terms refer only to the domain of Airspace Flow Program events (Initial, Revision, Compression and Purge).

- Specific Program Type.

Any reference to a specific type of AFP or GDP event shall be spelled out by hyphenating the General and Specific TMI Type.

Text Specific to GDP Events	Text Specific to AFP Events	Text Applicable to both GDP and AFP Events
GDP-Initial	AFP-Initial	AFP/GDP-Initial
GDP-Revision	AFP-Revision	AFP/GDP-Revision
GDP-Compression	AFP-Compression	AFP/GDP-Compression
GDP-Blanket	n/a	n/a

Text Specific to GDP Events	Text Specific to AFP Events	Text Applicable to both GDP and AFP Events
GDP-Ground Stop	n/a	n/a
GDP-Purge	AFP-Purge	AFP/GDP-Purge

References

The following documents are useful in understanding the contents of this document.

- *Aggregate Demand List (ADL) and Broadcast File Format Specification - Version 12.4*
(http://flycdm.org/ad/CDM-GDP_specs.htm).
- *FSM ADL Parameters File Format Specification – Version 5.4.*
(http://flycdm.org/ad/CDM-GDP_specs.htm).

1. FADT General Description

1.1. Contents

A FADT file contains all data pertinent to implementing a TMI for a particular Control Element (i.e. an airport or FCA). A particular FADT includes both the data for implementation of the TMI within NAS automation and the various notification messages transmitted to NAS users. The data provided can include the following items. [NOTE: The data block name for each item is shown in square brackets.]

- The parameters defining the program [PARAMETERS] Section 2.2
- Any unassigned slots for the program [UNASSIGNED_SLOTS] Section 2.3
- The include only criteria for the program [INCLUDE_ONLY] Section 2.4
- The flight exemptions for the program [EXEMPTIONS] Section 2.5
- The flight non-exemptions for the program [NON_EXEMPTION] Section 2.6
- The DAS delays for pop-up flights [DAS] Section 2.7
- The B6 Slot List [B6 LIST REPORT] Section 3
- The B8 Slot List [B8 LIST REPORT] Section 3
- The B9 Slot List [B9 LIST REPORT] Section 3

1.2. File Naming

FSM uses a file naming convention that facilitates users who are trying to find particular files in a directory full of data files.

A file name consists of three parts separated by periods (.):

- the report type; four characters; for FADT files, type is “fadt”
- the element identifier for which the data was generated; six characters with trailing blanks filled with underscores (_);
- the report time; 8 digits; ddhmmss

All letters in a file name are lower case.

For example;

An FADT file generated for a BOS Airport GDP on February 6 at 15:35:33 Z would be named:

fadt.bos____.06153533zz

An FADT file generated for a CYYZ Airport GDP on March 12 at 17:36:42 Z would be named:

fadt.cyyz___.12173642zz

An FADT file generated for a FCA027 FCA AFP on July 27 at 18:36:24 Z would be named:

fadt.fca027.27183624zz

1.3. Organization

A FADT file consists of two main parts: the data blocks and the slot lists. The data block section consists of multiple blocks of data delimited by keywords. Each data block starts with a keyword “START_XXX” where “XXX” is the mnemonic indicating the data type. Each data block ends with a corresponding “END_XXX” keyword.

The use of the “START” and “END” keywords is designed to make its easier to keep backwards compatibility when new data is added to the file. When a software program encounters a “START” keyword, it should check to see if the keyword is one which the program recognizes. If not, the program should discard lines until it reaches the corresponding “END” keyword. Within each block applications should also check to see if each keyword is one that the program recognizes. If not, the program should discard that keyword and value.

1.4. General Formatting

The following field descriptions are utilized within this document:

- Fields which allow null values use the character ‘-’.
- Field syntax is given in an abbreviated shorthand using the following conventions:
 - L – represents one upper-case letter
 - d – represents one digit
 - c – represents one alphanumeric character (either letter or digit); by convention, only upper case letters are allowed
 - [] – means the characters within are optional; any characters not shown in brackets are required
 - Example: Ldd[cc] means an upper case letter followed by two required digits and zero, one, or two characters.

1.5. Default Assumptions

The TFMS-Core makes certain assumptions regarding which Centers are included in a program. TFMS-Core utilizes the default assumption that all Continental Unites States (CONUS) and Canadian Centers are included. These facilities therefore do not need to be listed in the NON_EXEMPT data block. Facilities considered by TFMS-Core to be default non-exempt facilities would only need to be listed as NON_EXEMPT if the user wished to include them and they are subject to some other more global EXEMPTION criteria, such as distance, that would make them exempt. This assumption applies to both departure centers for airport programs and both departure and arrival centers for AFP programs.

The following twenty CONUS Centers are by default considered Non-Exempt by TFMS-Core;

- ZAB Albuquerque Center
- ZAU Chicago Center
- ZBW Boston Center
- ZDC Washington Center
- ZDV Denver Center
- ZFW Fort Worth Center
- ZHU Houston Center
- ZID Indianapolis Center
- ZJX Jacksonville Center
- ZKC Kansas City Center
- ZLA Los Angeles Center
- ZLC Salt Lake City Center

-
- ZMA Miami Center
 - ZME Memphis Center
 - ZMP Minneapolis Center
 - ZNY New York Center
 - ZOA Oakland Center
 - ZOB Cleveland Center
 - ZSE Seattle Center
 - ZTL Atlanta Center

The following seven Canadian Centers are by default considered Non-Exempt by TFMS-Core;

- CZY Toronto Center
- CZU Montreal Center
- CZW Winnipeg Center
- CZM Monkton Center
- CZQ Gander Center
- CZE Edmonton Center
- CZV Vancouver Center

1.6. Usage

The section discusses the usage of the FADT, specifically indicating which flights are listed in a FADT for a particular event. All rules for listing of flights are based on the ADL update on which FSM modeled the TMI.

1.6.1. Airport Element Based Events

- For an Initial or Revision GDP
 - All included (controlled) flights are listed (including cancelled and active flights).
 - Completed flights are not listed.
 - Active flights may receive a new ASLOT and CTA but always retain their CTD.
 - Flights unchanged by a revision retain their prior CTL_TYPE and Control Times as listed in the model ADL.
- For a Compression
 - All included (controlled) flights are listed (including cancelled and active flights).
 - Completed flights are not listed.
 - Active flights may receive a new ASLOT and CTA but always retain their CTD.
 - Flights unchanged by the compression retain their CTL_TYPE and Control Times as listed in the model ADL.
- For a Blanket
 - All included (controlled) flights are listed (including cancelled and active flights).
 - Completed flights are not listed.

-
- Active flights are not modified in any way and retain their prior CTL_TYPE and Control Times.
 - For a Ground Stop
 - All flights with CTL_TYPE = GS are listed, including flights from the current GS and any flights remaining with CTL_TYPE = GS from any previous GS events.
 - Active and completed flights are not listed.
 - Flights unchanged by the GS retain their prior CTL_TYPE and Control Times as listed in the model ADL.

1.6.2. FCA Element Based Events

- For an Initial or Revision AFP
 - All included (controlled) flights whose control element matches the element for which this AFP is being issued are listed (including cancelled and active flights).
 - No exited flights are listed (the airport equivalent of completed).
 - Active flights may receive a new ASLOT and CTA but always retain their CTD.
 - Flights unchanged by a revision retain their prior CTL_TYPE and Control Times as listed in the model ADL.
- For a Compression
 - All included (controlled) flights whose control element matches the element for which this AFP is being issued are listed (including cancelled and active flights).
 - No exited flights are listed (the airport equivalent of completed).
 - Flights unchanged by the revision retain their CTL_TYPE and Control Times as listed in the model ADL.

2. FADT Data Blocks

These FADT data blocks provide general information about the characteristics of the TMI event defined by the file. The various blocks are used by TFMS-Core to determine to which flights DAS or GAAP/UDP delays should be applied. The FADT consists of several blocks of specifically formatted data. The supported blocks are;

- PARAMETERS (Defined in Section 2.2)
- UNASSIGNED_SLOTS (Defined in Section 2.3)
- INCLUDE_ONLY (Defined in Section 2.4)
- EXEMPTIONS (Defined in Section 2.5)
- NON_EXEMPTIONS (Defined in Section 2.6)
- DAS (Defined in Section 2.7)

The applicability of these various blocks, based on Element Type, TMI Type and Delay Mode, is described in section 2.8.

2.1. Data Blocks Formatting Assumptions

The FADT data blocks are formatted similarly to the various blocks contained in the ADL, that is:

- Each block is framed by a “START” and “END” line.
- Within each block are one or more lines containing a keyword and value pair on each line.
- Lines within a data block are indented by at least one column.
- There is at least one space separating the value from the keyword.
- Each keyword-value pair is on a separate line, using multiple lines if a keyword requires several values.
- Each block is either optional or required.
- There are no blank lines within a data block.
- All blocks are listed prior to the beginning of the Slot Lists.
- There is no specified ordering to the blocks.
- Each block has only one instance in a specific FADT.
- Each block is separated from other blocks by at least a single blank line.

2.2. Parameters Block

Refer to section 2.8 for detailed applicability of the PARAMETERS block.

2.2.1. Parameters Block Details

The following keywords are available for use in the PARAMETERS block:

- **CTL_ELEM** – This is a required keyword which defines the element name for the TMI defined by the file. The element name can be an airport for GDPs or an FCA for AFPs. The value shall be in the format ccc[c] (for airports), ccccc (for FEAs), or FCacc (for FCAs).
- **REPORT_TIME** – This is a required keyword which defines the report time of the FADT. This is the same time used within the FADT file name and the names of other files associated with this program issuance. The value shall be in the format of ddhhmmss.
- **TYPE** – This is a required keyword which defines the type of TMI defined by that FADT. The valid TYPE values are determined based on whether this is a GDP or AFP;
 - **For GDPs**
 - GDP, GS, BLKT, or COMP
 - **For AFPs**
 - AFP or COMP
- **DELAY_MODE** – This is a required keyword which defines the delay assignment algorithm which should be used by the TFMS-Core for processing pop-up flights. The only valid values are DAS, GAAP, and UDP. If the keyword value is GAAP or UDP then an UNASSIGNED_SLOTS block is required to be included in the FADT.
- **EVENT_START_TIME** – This is a required keyword that defines the start time of the traffic management initiative contained in that FADT. The FADT can define a TMI in which the start time is earlier or later than the cumulative start time. For GDP-Ground Stops the EVENT_START_TIME is based on flight ETDs; for all other TMIs it is based on flight ETA (airport elements) or ENTRY (FCA elements). The value shall be in the format of yyyymmddhhmm.
- **EVENT_END_TIME** – This is a required keyword that defines the end time of the traffic management initiative contained in that FADT. The FADT can define a TMI in which the end time is earlier or later than the cumulative end time. For GDP-Ground Stops the EVENT_END_TIME is based on flight ETDs; for all other TMIs it is based on ETA (airport elements) or ENTRY (FCA elements). The value shall be in the format of yyyymmddhhmm.

NOTE Regarding Event Start/End Times – Actual inclusion rules are more complex than ETD, ETA or ENTRY as indicated here and are defined by the FSM algorithm specifications. The simplification here is simply intended to communicate that GS events are defined by the departure of a flight while all other TMIs are defined by the arrival of a flight. For AFPs arrival is entry into the FCA.
- **CUMULATIVE_START_TIME** – This is a required keyword that defines the absolute start time of the combined traffic management initiatives that have been issued for this element (e.g., airport or FCA). For example, if a GDP is issued and then later revised, the CUMULATIVE_START_TIME contains the earliest of the EVENT_START_TIMES issued for that GDP and revisions. If the “Purge Flight Prior to Revision” option is selected, that results in the CUMULATIVE_START_TIME being reset to the EVENT_START_TIME. The value shall be in the format of yyyymmddhhmm.

The cumulative start time is updated based on the following rules;

- AFP/GDP-Revisions
The cumulative start time is updated to the event start time if the new event start time is earlier than the prior cumulative start time. If the new event start time is later than the cumulative start time, the cumulative start time remains unchanged.
- AFP/GDP-Revisions **with** Purge Flights before Revision Start Time Selected
The cumulative start time is updated to the event start time, which results in a later cumulative start time.
- AFP/GDP-Compressions
Compression events never alter the cumulative start time even though the start of the compression may be later than the cumulative start time. The start of the compression is never earlier than the cumulative start time.
- GDP-Blankets
Blanket events never alter the cumulative start time even though the start of the blanket may be later than the cumulative start time. The start of the blanket is never earlier than the cumulative start time.
- GDP-Ground Stop **without** a concurrent GDP
The cumulative start time is always the same as the GS event start time.
- GDP-Ground Stop **with** a concurrent GDP
The cumulative start time is the cumulative start of the GDP and in no case is it altered by the GS event start time even though the start of the ground stop may be earlier or later than the cumulative start time.
- **CUMULATIVE_END_TIME** – This is a required keyword that defines the absolute end time of the combined traffic management initiatives that have been issued for this element (e.g., airport). For example, if a GDP is issued and then later revised, the CUMULATIVE_END_TIME contains the latest of the EVENT_END_TIMES issued for that GDP and revisions. If the “Purge Flight after Revision” option is selected, that results in the CUMULATIVE_END_TIME being reset to the EVENT_END_TIME. The value shall be in the format of yyymmddhhmm.

The cumulative end time is updated based on the following rules;

- AFP/GDP-Revisions
The cumulative end time is updated to the event end time if the new event end time is later than the prior cumulative end time. If the new event end time is earlier than the cumulative end time, the cumulative end time remains unchanged.
- AFP/GDP-Revisions **with** Purge Flights after Revision End Time Selected
The cumulative end time is updated to the event end time which results in an earlier cumulative end time.
- AFP/GDP-Compressions
Compression events never alter the cumulative end time even though the end of the compression may be earlier or later than the cumulative end time.
- GDP-Blankets
Blanket events never alter the cumulative end time even though the end of the blanket may be earlier or later than the cumulative end time.
- GDP-Ground Stop **without** a concurrent GDP

The cumulative end time is always the same as the GS event end time.

- GDP-Ground Stop **with** a concurrent GDP

The cumulative end time is the cumulative end of the GDP and in no case is it altered by the GS event end time even though the end of the ground stop may be earlier or later than the cumulative end time.

- **DELAY_LIMIT** – This is an optional keyword required when the DELAY_MODE is GAAP or UDP. It shall not be listed if the delay mode is DAS. The keyword defines the number of additional minutes of delay that can be added to Pop-Up flights during GAAP or UDP GDPs. The value shall be in the format of MMM.
- **DELAY_MULTIPLIER** – This is an optional keyword only required when the DELAY_MODE is GAAP or UDP. It shall not be listed if the delay mode is DAS. The keyword defines the delay multiplier which is applied to the average delay to get the target delay for GAAP and UDP based TMIs. The value shall be a number from 1.0 to 9.9 in the format of N.N, negative values are not allowed.
- **OVERRIDE_AFP** – This is a required keyword only for AFP-Initial and AFP-Revision. It shall not be listed for any other TMI type. The keyword defines whether this is an override AFP that assumes control of flights from other AFPs. The value shall be in the format of Y or N.

2.2.2. Parameters Block Keyword Applicability

The tables below define the applicability of the keywords within the Parameters block to specific TMI Types and Delay Modes. For a reference of when entire blocks are applicable refer to section 2.8.

- Required (Req) – This Keyword is always present for this combination of element, FADT type, and delay mode.
- Not Allowed (N/A) – This keyword is never present for this combination of element, FADT type, and delay mode.

Separate tables are provided for Airport data elements, and FCA data elements.

FADT Type	GDP			COMP			BLKT			GS		
Keyword / Delay Mode	DAS	GAAP	UDP	DAS	GAAP	UDP	DAS	GAAP	UDP	DAS	GAAP	UDP
CTL_ELEM	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
REPORT_TIME	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
TYPE	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
DELAY_MODE	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
EVENT_START_TIME	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
EVENT_END_TIME	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
CUMULATIVE_START_TIME	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
CUMULATIVE_START_TIME	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
DELAY_LIMIT	N/A	Req	Req	N/A	Req	Req	N/A	Req	Req	N/A	Req	Req
DELAY_MULTIPLIER	N/A	Req	Req	N/A	Req	Req	N/A	Req	Req	N/A	Req	Req
OVERRIDE_AFP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

FCA Data Elements

FADT Type	AFP			COMP		
	DAS	GAAP	UDP	DAS	GAAP	UDP
CTL_ELEM	Req	Req	Req	Req	Req	Req
REPORT_TIME	Req	Req	Req	Req	Req	Req
TYPE	Req	Req	Req	Req	Req	Req
DELAY_MODE	Req	Req	Req	Req	Req	Req
EVENT_START_TIME	Req	Req	Req	Req	Req	Req
EVENT_END_TIME	Req	Req	Req	Req	Req	Req
CUMULATIVE_START_TIME	Req	Req	Req	Req	Req	Req
CUMULATIVE_END_TIME	Req	Req	Req	Req	Req	Req
DELAY_LIMIT	N/A	Req	Req	N/A	Req	Req
DELAY_MULTIPLIER	N/A	Req	Req	N/A	Req	Req
OVERRIDE_AFP	Req	Req	Req	N/A	N/A	N/A

2.2.3. Parameters Block Samples

Sample PARAMETERS for GDP events:

```
START_PARAMETERS
CTL_ELEM EWR
TYPE GDP
REPORT_TIME 26121535
DELAY_MODE DAS
EVENT_START_TIME 200504261400
EVENT_END_TIME 200504261744
CUMULATIVE_START_TIME 200504261400
CUMULATIVE_END_TIME 200504261744
END_PARAMETERS
```

Sample PARAMETERS for GDP with a DELAY_MODE of GAAP:

```
START_PARAMETERS
CTL_ELEM TEB
TYPE GDP
REPORT_TIME 26121535
DELAY_MODE GAAP
EVENT_START_TIME 200504261400
EVENT_END_TIME 200504261744
CUMULATIVE_START_TIME 200504261400
CUMULATIVE_END_TIME 200504261744
DELAY_LIMIT 120
END_PARAMETERS
```

Sample PARAMETERS for COMPRESSION during a GAAP:

```
START_PARAMETERS
CTL_ELEM EWR
TYPE COMP
REPORT_TIME 26121535
DELAY_MODE GAAP
EVENT_START_TIME 04261400
EVENT_END_TIME 04261744
CUMULATIVE_START_TIME 200504261400
CUMULATIVE_END_TIME 200504261744
DELAY_LIMIT 120
END_PARAMETERS
```

Sample PARAMETERS for an AFP:

```
START_PARAMETERS
CTL_ELEM FCA027
TYPE AFP
REPORT_TIME 26121535
DELAY_MODE DAS
EVENT_START_TIME 200504261400
EVENT_END_TIME 200504261744
CUMULATIVE_START_TIME 200504261400
CUMULATIVE_END_TIME 200504261744
OVERRIDE_AFP N
END_PARAMETERS
```

2.3. Unassigned Slots Block

Refer to section 2.8 for detailed applicability of the UNASSIGNED_SLOTS block.

2.3.1. Unassigned Slots Block Details

The UNASSIGNED_SLOTS block is present for AFP/GDP-Initial, AFP/GDP-Revision, and AFP/GDP-Compression events whether the DELAY_MODE is GAAP or UDP. Ground Stop and Blanket events never include this block as these TMIs do not have the capability to alter unassigned slots nor transition a program between delay modes.

The block contains a list of unassigned slots that have not yet been allocated to flights. Each line within the block may contain up to 50 unassigned slots. If a DELAY_MODE of GAAP or UDP is used and there are no unassigned slots, the block is still required but shall contain the value NONE. The formatting of this block is identical to the unassigned slots block contained in the ADL.

2.3.2. Unassigned Slots Block Samples

A sample UNASSIGNED_SLOTS block for a GDP follows:

```
START_UNASSIGNED_SLOTS
 EWR.191232A EWR.191233A EWR.191234A EWR.191235A EWR.191236A EWR.191237A
 EWR.191240A EWR.191241A EWR.191242A EWR.191243A EWR.191244A EWR.191245A
 EWR.191248A EWR.191249A EWR.191250A EWR.191251A EWR.191252A EWR.191253A
END_UNASSIGNED_SLOTS
```

A sample UNASSIGNED_SLOTS block for an AFP follows:

```
START_UNASSIGNED_SLOTS
 FCA027.191233A FCA027.191234A FCA027.191235A FCA027.191236A FCA027.191237A
 FCA027.191241A FCA027.191242A FCA027.191243A FCA027.191442A FCA027.191245A
 FCA027.191249A FCA027.191250A FCA027.191251A FCA027.191252A FCA027.191253A
END_UNASSIGNED_SLOTS
```

A sample empty UNASSIGNED_SLOTS block:

```
START_UNASSIGNED_SLOTS
 NONE
END_UNASSIGNED_SLOTS
```

2.4. Include_Only Block

Refer to section 2.8 for detailed applicability of the INCLUDE_ONLY block.

2.4.1. Include_Only Block Details

The Include_Only block defines exclusions (flights that receive no control time) from DAS delay processing. The Include_Only block is only applicable to GDPs for an airport and may not be utilized for AFPs. Exclusions take precedence over all exemptions or non-exemptions criteria. For example, if the DAS delays are for “props only”, TFMS-Core only assigns DAS delays to props regardless of what is specified in the Exemptions or Non-Exemptions blocks. The Include_Only block provides for the following keywords:

- **AIRLINE** - Any NAS User defined as a major carrier in the airline definitions file may be used. Any airline that is a subcarrier to that major is also included. Only one airline may be specified.
- **ARRIVAL_FIX** - Any arrival fix defined in TFMS-Core may be used. A maximum of four fixes may be specified. **Note** – Although this specification allows for four fixes, FSM enforces an operational restriction of one fix.
- **TYPE** - Valid types are “JET” or “PROP”. If “PROP” is specified, TFMS-Core includes both piston and turbo props. Only one type may be specified.

The Include_Only block is used when the GDP issued applies to a subset of flight such as only props, only jets, only flights arriving over specific fixes, or only flights of a specific major carrier. When Include_Only constraints are used FSM applies the AAR only to the included flights and not to other flights which may be arriving within the same timeframe.

2.4.2. Include_Only Block Samples

A sample INCLUDE_ONLY block:

```
START_INCLUDE_ONLY  
TYPE PROP  
ARRIVAL_FIX SADDE  
AIRLINE AAL  
END_INCLUDE_ONLY
```

2.5. Exemptions Block

Refer to section 2.8 for detailed applicability of the EXEMPTIONS block.

2.5.1. Exemptions Block Details

The Exemptions block defines exemptions (flights that receive control times but no additional delay) from DAS delay processing. The Exemptions Only block provides for the following keywords:

- **AIRPORT_ORIG** - Specifies any valid TFMS-Core airports from which originating (departing) flights are exempt from DAS delays. An airport exemption has precedence over a center or distance exemption. A maximum of 24 airports may be specified.
- **AIRPORT_DEST** - Specifies any valid TFMS-Core airports to which destination (arrival) flights are exempt from DAS delays. An airport exemption has precedence over a center or distance exemption. This keyword may only be used for AFPs. A maximum of 24 airports may be specified. **Note** – Not currently implemented by FSM.
- **CENTER_ORIG** - Specifies complete centers from within which originating (departing) flights are exempt from DAS delays. A center exemption has precedence over a distance exemption, but not over an airport exemption. A maximum of 36 centers may be specified.
- **DISTANCE** - Specifies an integer distance, in nautical miles, beyond which departing flights are exempt from DAS delays. Only one distance may be specified. The distance keyword may only be used when the CTL_ELEM is an airport.

2.5.2. Exemptions Block Samples

A sample EXEMPTIONS block:

```
START_EXEMPTIONS
DISTANCE 1000
AIRPORT_ORIG BOS
CENTER_ORIG ZNY
END_EXEMPTIONS
```

2.6. Non-Exemptions Block

Refer to section 2.8 for detailed applicability of the NON_EXEMPTIONS block.

2.6.1. Non-Exemptions Block Details

The Non-Exemptions block defines exceptions to exemptions (flights that would be exempt based on the exemptions block but that the FSM user has specifically specified should not be exempt). The Non-Exemptions block provides for the following keywords;

- **AIRPORT_ORIG** – Specifies any valid TFMS-Core airports from which originating (departing) flights are specifically not exempt from DAS delays. An airport non-exemption has precedence over a center or distance exemption. A maximum of 16 airports may be specified.
- **AIRPORT_DEST** – Specifies any valid TFMS-Core airports to which destination (arrival) flights are specifically not exempt from DAS delays. An airport non-exemption has precedence over a center or distance exemption. This keyword may only be used for AFPs. A maximum of 16 airports may be specified.
- **CENTER_ORIG** – Specifies any complete centers within which departing flights are exempt from DAS delays. A center non-exemption has precedence over a distance exemption, but not over an airport exemption. A maximum of 16 centers may be specified.
- **AIRPORT_IF_DISTANCE** – Any valid TFMS-Core airport may be used. A “departure airport only if within distance” non-exemption shall have precedence over a center exemption, but not over a distance exemption. A maximum of 16 airports may be specified. This keyword may only be used when the CTL_ELEM is an airport.

2.6.2. Non-Exemptions Block Samples

A sample NON_EXEMPTIONS block:

```
START_NON_EXEMPTIONS
CENTER_ORIG ZNY
AIRPORT_IF_DISTANCE BOS
END_NON_EXEMPTIONS
```

2.7. DAS Block

Refer to section 2.8 for detailed applicability of the DAS block.

2.7.1. DAS Block Details

The DAS block provides the average number of delay minutes for each 15 minute time period of the TMI. If a DELAY_MODE of GAAP or UDP is specified, then the DAS delay values are capped at the delay limit specified for the TMI. Values for DAS-based TMIs are not capped.

Instead of this block providing specific predefined keywords, the keyword is the date and time of the time bin to which that DAS delay applies. The time range of the DAS block covers the time range from the later of the CUMULATIVE_START_TIME and ADL Data Time quarter hour to the CUMULATIVE_END_TIME. As an example, if a GDP with a cumulative start time of 1200 and cumulative end time of 2059 was revised at 1312, the DAS block would start with the 1300 bin and end with the 2045 bin. The DAS block is only included when the PARAMETERS block specifies a DELAY_MODE of DAS, GAAP, or UDP and the TYPE is not GS.

- **Date / Time** – Specifies the start of the 15 minute time bin that the DAS delay value should be applied to. In all cases the time bins are in chronological order and indicate 15 minute increments. Format ddhhmm
- **Delay** – Specifies the number of minutes of DAS delay for that time bin. Format mmm

2.7.2. DAS Block Sample

A sample DAS block:

```
START_DAS
232200 000
232215 000
232230 025
232245 025
232300 045
232315 073
232330 150
232345 121
240000 105
230015 090
230030 064
230045 040
230100 000
END_DAS
```

2.8. Data Block Applicability

The tables below define which types of FADT data blocks are required dependent on the element type, FADT type, and delay mode.

- Required (Req) - This block is always present for this combination of element, FADT type, and delay mode.
- Not Allowed (N/A) - This block is never present for this combination of element, FADT type, and delay mode.

These rules are based on the following general logic;

- If an UASSIGNED_SLOTS or DAS block is required, then exemption criteria is required.
- If no UASSIGNED_SLOTS or DAS block is required, then exemption criteria is not allowed.

2.8.1. Airport Data Elements

When the delay mode is DAS, the following applicability applies;

	Delay Mode - DAS			
Data Block / FADT Type	GDP⁽¹⁾	COMP	BLKT	GS⁽²⁾
PARAMETERS	Required	Required	Required	Required
DAS	Required	Required	Required	Not Allowed
UNASSIGNED_SLOTS	Not Allowed	Not Allowed	Not Allowed	Not Allowed
INCLUDE_ONLY and/or EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Not Allowed

When the delay mode is GAAP, the following applicability applies;

	Delay Mode – GAAP			
Data Block / FADT Type	GDP⁽¹⁾	COMP	BLKT	GS⁽²⁾
PARAMETERS	Required	Required	Required	Required
DAS	Required	Required	Required	Not Allowed
UNASSIGNED_SLOTS	Required	Required	Required	Not Allowed
INCLUDE_ONLY and/or EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Not Allowed

When the delay mode is UDP, the following applicability applies;

Data Block / FADT Type	Delay Mode – UDP			
	GDP⁽¹⁾	COMP	BLKT	GS⁽²⁾
PARAMETERS	Required	Required	Required	Required
DAS	Required	Required	Required	Not Allowed
UNASSIGNED_SLOTS	Required	Required	Required	Not Allowed
INCLUDE_ONLY and/or EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Required ⁽³⁾⁽⁴⁾	Not Allowed

1. All GDPs (initial and revision) utilize a “GDP” FADT.
2. All Ground Stops utilize a “GS” FADT regardless whether a GDP is in place already or not.
3. The exemption parameters for this program type are the exemption criteria of the parent GDP, not the exemption criteria of the modifying compression or blanket.
4. Which specific exemption block or blocks are actually listed is determined by the specific program options utilized. At least one of the listed data blocks will be present.

2.8.2. FCA Data Elements

When the delay mode is DAS, the following applicability applies;

	Delay Mode - DAS	
Data Block / FADT Type	AFP⁽¹⁾	COMP
PARAMETERS	Required	Required
DAS	Required	Required
UNASSIGNED_SLOTS	Not Allowed	Not Allowed
EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽³⁾	Required ⁽²⁾⁽³⁾

When the delay mode is GAAP, the following applicability applies;

	Delay Mode – GAAP	
Data Block / FADT Type	AFP⁽¹⁾	COMP
PARAMETERS	Required	Required
DAS	Required	Required
UNASSIGNED_SLOTS	Required	Required
EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽³⁾	Required ⁽²⁾⁽³⁾

When the delay mode is UDP, the following applicability applies;

	Delay Mode - UDP	
Data Block / FADT Type	AFP⁽¹⁾	COMP
PARAMETERS	Required	Required
DAS	Required	Required
UNASSIGNED_SLOTS	Required	Required
EXEMPTIONS and/or NON_EXEMPTIONS	Required ⁽³⁾	Required ⁽²⁾⁽³⁾

1. All AFPs (initial and revision) utilize an “AFP” FADT.
2. The exemption parameters for this program type are the exemption criteria of the parent AFP, not the exemption criteria of the modifying compression.

3. Which specific exemption block or blocks are actually listed is determined by the specific program options utilized. At least one of the listed data blocks will be present.

3. FADT Slot Lists

The FADT Slot Lists provide flight specific delay information. The Slot Lists are provided in three separate sections labeled B6, B8, and B9. The B6 blocks are constructed for use by TFMS-Core and FAA facilities, and thus are organized by departure Center. The B8 and B9 blocks are constructed for transmission to NAS Users, and thus are organized by carrier. B8 and B9 blocks differ slightly in format as the B8 is intended for transmission via CDMnet and the B9 via ARINC TTY.

Since B9 Slot Lists are transmitted as IATA Type B messages, the formatting of these Slot Lists is altered due to the restrictions that apply to this message type.

- A maximum of 68 characters per line
- Only upper case alphanumeric characters
- Only the “/”, “-“, and “.” punctuations

For each type of slot list formatting and construction information is provided.

- Construction - Defines which flights are included in the slot list;
 - By Center
 - By User
- Formatting – Defines what information is provided for each flight;
 - Complete
 - Abbreviated

The various types of Slots Lists make use of the construction and format in the following combinations;

List Type	Format Type	Construction Type
B6	Complete	By Center
B8	Complete	By User
B9	Abbreviated	By User

3.1. B6 and B8 Formatting (Complete)

A sample B6 slot list for an Airport Control Element has the following format:

DEP	CNTR	ZDC	ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	SH	ERTA	IGTD
ABC1234	LGA.	260400A	DCA	LGA	260300	260400	GDP	-	-	-	260200	260245		
ABC5678	LGA.	260500A	IAD	LGA	260400	260500	GDP	-	-	-	260300	260145		
ABC3601	LGA.	260323A	BWI	LGA	260206	260323	GDP	Y	-	-	260319	260150		
ABC3522	LGA.	260311A	RIC	LGA	260215	260311	GDP	-	-	-	260311	260145		
ABC3994	LGA.	260353A	IAD	LGA	260246	260353	GDP	-	Y	-	260355	260235		

A sample B8 slot list for an FCA Control Element has the following format:

AIRLINE	AAL	ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	SH	EENTRY	IGTD
ABC1234	FCA027.	260400A	DCA	LGA	260300	260400	AFP	-	-	-	260200	260245	
ABC5678	FCA027.	260500A	IAD	LGA	260400	260500	AFP	-	-	-	260300	260145	
ABC3601	FCA027.	260323A	BWI	LGA	260206	260323	AFP	Y	-	-	260319	260150	
ABC3522	FCA027.	260311A	RIC	LGA	260215	260311	AFP	-	-	-	260311	260145	
ABC3994	FCA027.	260353A	IAD	LGA	260246	260353	AFP	-	Y	-	260355	260235	

Line 1: Identifies the recipient for this slot list. In the first example this is a center (ZDC), thus this is a B6 Slot List. In the second example this is a NAS User (AAL), thus this is a B8 Slot List.

Line 2: Column labels for data beginning on line 3. Each label is always at the same position with data on subsequent data lines beginning at the same position as its label.

- ACID at position 1
- ASLOT at position 9
- DEP at position 24
- ARR at position 29
- CTD at position 34
- CTA at position 41
- TYPE at position 48
- EX at position 53
- CX at position 56
- SH at position 59
- ERTA at position 62 - For GDPs only
- EENTRY at position 62 - For AFPs only
- IGTD at position 69

Lines 3 – n: A line for each controlled flight. For each flight, the slot list provides:

- ACID: Aircraft ID (AKA. flight identifier, call sign) [ADL Field ETMSID / CDM Field 02] – Lc[cccc]

The flight identifier under which the flight operates. No leading zeros are shown in the flight number.

- ASLOT: Assigned Arrival Slot [ADL Field ASLOT / CDM Field A2] ccc[c].ddddddL for GDP Slots / FCACcc.dddddL for AFP Slots

When a TMI is issued, each controlled flight is assigned an arrival slot. The format is a concatenation of control element name, slot date and time, and a one-letter suffix. The airport name can be three or four characters. Slots for AFPs can be easily identified since the first three characters are always FCA. The slot date and time is six digits: two each for day, hour, and minute. Day, hour, or minute are zero padded if necessary (e.g., 06). The suffix letter is used to ensure that slot name is unique.

- DEP: Origin Airport (AKA. Departure airport) [ADL Field ORIG / CDM Field 26] – ccc[c]
- ARR: Arrival Airport (AKA. Destination airport) [ADL Field DEST / CDM Field 27] – ccc[c]
- CTD: Controlled Time of Departure [ADL Field CTD / CGTD in TFMS-Core] – dddddd

The time the flight should take off (e.g., 260300). The format is a concatenation of day-hour-minute.

- CTA: Controlled Time of Arrival [ADL Field CTA / CGTA in TFMS-Core] – dddddd

The time the flight should arrive (e.g., 260300). The format is a concatenation of day-hour-minute

- TYPE: Control Type [ADL Field CTL_TYPE] – LL[LL]

The source of the current control times for this flight (e.g. GDP). The possible sources along with an indication of what program type they are applicable to:

- ABRG – control times were assigned when the flight was utilized to create a bridge for Adaptive Compression performed automatically by the TFMS-Core (AFP and GDP)
- ADPT – control time assigned when the flight was adaptively compressed by the TFMS-Core adaptive compression process (AFP and GDP)
- AFP – control times were assigned as part of an AFP-Initial or AFP-Revision (AFP)
- BLKT – control times were assigned as part of a GDP Blanket (+/-) (GDP)
- COMP – control times were assigned as part of a AFP-Compression or GDP-Compression (AFP and GDP)
- DAS – control time which resulted from the assignment of the average delay to a pop-up flight which did not receive an unassigned slot in an AFP or GDP. For DAS based programs this is used for the initial delay assignments to all pop-up flights. For GAAP and UDP based program, this control type is used only if no unassigned slot is available for the pop-up. This control type is not used for re-controlled flights. (AFP and GDP)
- ECR – control time assigned by a slot credit substitution message submitted by an Authorized FAA user (AFP and GDP)
- GAAP – control times are the result of a GAAP or UDP based AFP or GDP if a pop-up or a re-control flight is allocated to an unassigned slot. This occurs for all pop-up flights in a GAAP or UDP based program when an unassigned slot is available for the flight. However, only some classes of re-controlled flights in a GAAP or UDP are assigned to unassigned slots. (e.g., those that occur after dropping out of an AFP). (AFP and GDP)
- GDP – control times were assigned as part of an GDP-Initial or GDP-Revision (GDP)

- GS – control times were assigned as part of a GDP-Ground Stop (GDP)
- RCTL – control time which resulted from the assignment of the average delay to a flight that was at some point controlled by a GDP or AFP, which was then purged or the flight dropped out and was re-controlled in another AFP. For DAS programs this is used for the initial delay assignments to all re-controlled flights. For GAAP and UDP, this control type is used only if no unassigned slot is available for the re-controlled flight or the class of re-controlled flight is never assigned to unassigned slots. As opposed to other pop-ups, RCTL flights retain full substitution rights (AFP)
- SBRG – control times were assigned when creating a bridge for an SCS or ECR request (AFP and GDP)
- SCS – control times assigned by a slot credit substitution message submitted by a NAS User (AFP and GDP)
- SUB – control times assigned by a conventional user substitution message (AFP and GDP)
- UBRG – control times were assigned when creating a bridge for pop-up flight assignment during UDP. Performed automatically by the TFMS-Core (AFP and GDP)
- UPD – control time or UX cancel status from an TFMS “EDCT UPDATE” command made by an Authorized FAA user (AFP and GDP)
- EX: Exempt Flag [ADL Field CTL_EXMPT] – c
Indicates whether the flight was categorized as “exempt” (for example, due to departure time status or departure center) when the GDP-Initial, GDP-Revision, AFP-Initial, or AFP-Revision was computed.
- CX: Cancel Flag [ADL Fields UX, FX, RZ, RS, TO, DV, and RM] - c
Indicates whether the flight is currently cancelled. A flight’s CX flag is true if any TFMS Cancel Field (UX, FX, RZ, RS, TO, DV, or RM) is true. Format is “Y” if true, “-“ if false
- SH: Slot Hold Flag [ADL Field SL_HOLD, CDM Field A6] – c
If a flight is controlled and cancelled (i.e., has a CTD, CTA, and ASLOT), the SL_HOLD flag indicates whether the slot associated with this flight is being held, or would be held, by the NAS User for the next full compression. The FSM compression algorithm does not automatically fill slots that are held. If a flight is not controlled the slot hold has no effect, although users may set the slot hold in anticipation of a flight becoming controlled. A slot hold may only be set for flights that are cancelled. The SL_HOLD flag does NOT prevent a slot from being compressed by Adaptive Compression. Format is “Y” if true, “-“ if false.
- ERTA (GDP Slot List Only): Earliest Runway Time of Arrival (ADL Field ERTA, CDM Field T7) – dddddd
The earliest arrival time that the airline would like to have assigned to this flight in a ground delay program. If the airline has sent this field in a CDM FC or FM message, then the most recent such time is contained in this field. Otherwise, the value is null.
- EENTRY (AFP Slot List Only): Earliest Element Entry Time (ADL Field EENTRY) – dddddd
The earliest possible entry time into the FEA or FCA, as calculated by TFMS-Core. This field is used to ensure that a flight is not assigned a slot for an FEA/FCA that it cannot use. Since the CDM Participants do not send earliest entry times for an FEA/FCA, TFMS-Core computes this value by first determining the earliest ETA (EETA), then applying any delta to the ENTRY time.
- IGTD: Initial Gate Time of Departure (ADL FIELD IGTD, CDM Field A1) – dddddd

Used to save the initial gate departure time of the flight. Used for flight data matching.

3.2. B9 Formatting (Abbreviated)

A sample slot list for an Airport Control Element has the following format:

AIRLINE	ABC									
ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	IGTD	
ABC1234	LGA.260400A	DCA	LGA	260300	260400	GDP	-	-	260245	
ABC5678	LGA.260500A	IAD	LGA	260400	260500	GDP	-	-	260145	
ABC3601	LGA.260323A	BWI	LGA	260206	260323	GDP	Y	-	260150	
ABC3522	LGA.260311A	RIC	LGA	260215	260311	GDP	-	-	260145	
ABC3994	LGA.260353A	IAD	LGA	260246	260353	GDP	-	Y	260235	

A sample slot list for an FCA Control Element has the following format:

AIRLINE	ABC									
ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	IGTD	
ABC1234	FCA027.260400A	DCA	LGA	260300	260400	AFP	-	-	260245	
ABC5678	FCA027.260500A	IAD	LGA	260400	260500	AFP	-	-	260145	
ABC3601	FCA027.260323A	BWI	LGA	260206	260323	AFP	Y	-	260150	
ABC3522	FCA027.260311A	RIC	LGA	260215	260311	AFP	-	-	260145	
ABC3994	FCA027.260353A	IAD	LGA	260246	260353	AFP	-	Y	260235	

Line 1: Identifies the recipient for this slot list.

Line 2: Column labels for data beginning on line 3. Each label is always at the same position with data on subsequent data lines beginning at the same position as its label.

- ACID at position 1
- ASLOT at position 9
- DEP at position 24
- ARR at position 29
- CTD at position 34
- CTA at position 41
- TYPE at position 48
- EX at position 53
- CX at position 56
- IGTD at position 59

Lines 3 – n: A line for each controlled flight. For each flight, the slot list provides all fields provided in the B6 and B8 formats except that the SH and ERTA/EENTRY fields are omitted in order to limit the length of each line in order to remain within IATA Type B message specifications.

3.3. B6 Construction (By Center)

B6 blocks are constructed for use by TFMS-Core and FAA facilities and thus are organized by Departure Center. The flights listed in B6 Blocks are determined based on the following rules;

- The B6 section begins with the label starting at column position 9;

B6 LIST REPORT

- Each B6 block begins with the label starting at column position 5, with the center code starting at column position 15;

DEP CNTR ZAU

- Various blocks are created;
 - A center block for each unique departure center which has a flight included in the program. This is based on the departure centers listed in the ADL, which may include actual centers and TFMS-Core pseudo centers.
 - A pseudo center block of “ZZZ”.
- Flight are allocated to blocks as follows;
 - Flights with a departure center are listed in the appropriate center block. Thus, each center block lists all included flights departing from airports within that specific departure center (as contained in the ADL).
 - Flights with a null departure center are listed in the “ZZZ” block. Thus, the ZZZ block lists all included flight for which the departure center (as contained in the ADL) is unknown.
- Each block listed has at least one flight (empty blocks are omitted).
- Each flight is only listed one time in the B6 section.
- Flights within each block are sorted by CTD.

3.4. B8 and B9 Construction (By User)

B8 and B9 blocks are constructed for transmission to NAS Users, and thus are organized by carrier. The flights listed in the B8 and B9 Blocks are determined based on the following rules;

- The B8 section begins with a label starting at column position 9;

B8 LIST REPORT

- Each B8 block begins with a label starting at column position 6, with the airline code starting at column position 15;

AIRLINE AAL

- Each Non-GA / Non-Military, based on the ADL USR field, NAS User with flights included in the program receives a single slot list.
- A flight whose parent name is not “Other”, based on the ADL MAJOR Field, that is not the same as its AC, is also placed in its parent carrier block. The net result of this is;
 - A NAS User who is a MAJOR receives a slot list that contains their flights (based on AC) and any other flights in the GDP that have that carrier’s MAJOR code.
 - A carrier who is not a MAJOR receives a slot list that contains only its own flights (based on AC).
- Any flight specified as GA, based on the ADL USR field, is included in a pseudo NAS User block of “.GA”
- Any flight specified as Military, based on the ADL USR field, is not included in any B8 blocks.
- These rules may result in a given flight being listed in multiple B8 and B9 sections.
- Flights within each block are sorted by CTD.

A specific example of this would be the following:

- Carrier ABC is a major and has sub-carriers of XYZ and ZYX for whom it has substitution responsibilities.
- Carrier DEF is a major and has a sub-carrier of XYZ for whom it has substitutions responsibilities.
- Carrier XYZ is a sub-carrier of two major carriers (ABC and DEF) at the same airport.
- If a GDP is run at that airport, slot lists are issued as follows:
 - Airline ABC’s (major) slot list contains all ABC flights and any XYZ or ZYX flights for which it is listed as the major.
 - Airline DEF’s (major) slot list contains all DEF flights and any XYZ flights for which it is listed as the MAJOR.
 - Airline XYZ’s slot list contains all XYZ flights.
 - Airline ZYX’s slot list contains all ZYX flights.

3.5. Special Cases and Exceptions

This section defines several special cases in which the formatting of the FADT differs from normal to handle certain special cases. Currently these special cases are handled;

- Removed Flight Handling Section 3.5.1
- Purge Flight Handling Section 3.5.2
- Compress Slots Handling Section 3.5.3

3.5.1. Removed Flights Special Handling

The FADT includes special provisions for the handling of removed flights. If a TMI includes a removed flight which holds a slot, specific logic is applied in order to include that flight in the FADT so that the slot can be reclaimed. RM Cancelled flights, if previously controlled (i.e. hold a slot), are always included in the FADT if their CTA is any time \geq to the Cumulative Start Time of the TMI.

For the purposes of the FADT, removed flights are the result of FSM managing slots being held by flights removed (remove cancelled) from the operational database via the EDCT REMOVE command. Removed flights are distinct from normal cancellations in that the flight's operator does not retain any specific ownership or prioritization for a slot held by a remove cancelled flight and a removed flight is considered non demand (if already removed it is not given a slot).

When listed, the following rules apply;

- The ASLOT field contains the value "REMOVED" instead of a specific ASLOT
- These flights are only listed in the B6 section of the FADT in the pseudo center block of "ZZZ" and are not listed in any other B6 block or any B8 or B9 block.
- All other values are as listed as in the model ADL (i.e. no values are changed)
- For GAAP and UDP programs, the slot previously held by the flight is put back into the unassigned slots block, even if the removed flight is after the end time of the TMI (this insures that slots assigned or substituted into the stack of the program are returned to the unassigned slots list)
- A flight that is both Removed and Purged is considered Purged for the purposes of FADT construction (since the flight is PURGED there is no need to return any slot it holds to the unassigned slots list).
- If not controlled, the flight is NOT listed in the FADT (i.e. only flights holding a slot are listed)

A removed flight appears in the B6 section as follows;

DEP	CNTR	ZZZ	DEP	ARR	CTD	CTA	TYPE	EX	CX	SH	ERTA	IGTD
ACID	ASLOT		DCA	LGA	260300	260400	AFP	-	Y	-	260200	260245
ABC1234	REMOVED											

3.5.2. Purged Flights Special Handling

The FADT includes special provisions for the handling of purged flights. If a TMI includes a previously controlled flight that should no longer be controlled due to a GDP, AFP, or GS revision then specific logic is applied in order to include that flight in the FADT so that any controls can be purged from the flight.

For the purposes of the FADT, a purged flight can result via two mechanisms (as opposed to the purge of an entire TMI via the EDCT PURGE command which does not utilize the FADT);

- If the program (GDP or AFP) is revised utilizing either the “Purge Before” or “Purge After” option, this results in a reduction of the cumulative time period (either start or end time) of the program. This change in time scope requires purging controls from flights that no longer qualify to be included in the program and the “PURGED” indicator is utilized to communicate this to TFMS-Core.
- If a standalone GS (one without a concurrent GDP) is revised to reduce the geographic scope, controls need to be purged from flights that no longer qualify to be included in the GS and the “PURGED” indicator is utilized to communicate this to TFMS-Core. This is only applicable to standalone GS events.

When listed, the following rules apply;

- The ASLOT field contains the value “PURGED” instead of a specific ASLOT
- These flights are only listed in the B6 section of the FADT in the pseudo center block of “ZZZ” and are not listed in any other B6 block or any B8 or B9 block.
- All other values are as listed as in the model ADL (i.e. no values are changed)
- For GAAP Programs, the slot previously held by the flight is NOT put back into the unassigned slots block (this is since with the revision of the cumulative start and/or end time the flight would not receive a slot)

A purged flight appears in the B6 section as follows;

DEP	CNTR	ZZZ	DEP	ARR	CTD	CTA	TYPE	EX	CX	SH	ERTA	IGTD
ABC1234	PURGED		DCA	LGA	260300	260400	AFP	-	Y	-	260200	260245

The special handling applies to special conditions when FSM needs to command TFMS-Core to purge controls from specific flights; it is not applicable to the purge of entire TMI via the EDCT PURGE command.

3.5.3. Compress Slots Special Handling

The FADT includes special provisions which allow for transmitting a new set of unassigned slot to TFMS-Core without affecting any actual flights. A FADT used for this purpose has the following differences from a standard compression FADT;

- All Data Blocks follow established construction and usage rules applicable to a Compression.
- The B6 Section includes only a single slot list which includes a single “-“ and does not list any flights.
- The B8 and B9 sections are omitted in their entirety.

The B6 section appears as follows;

B6 LIST REPORT												
DEP	CNTR	ZZZ	DEP	ARR	CTD	CTA	TYPE	EX	CX	SH	ERTA	IGTD
-												

4. Autosend Sub-Files

This section describes the various files that are created by Autosend from each FADT; these are referred to as Sub-Files. After the FADT file is created by FSM, the file is passed to Autosend for transmission. Autosend processes the FADT file by creating various Sub-Files, which are then transmitted to appropriate destinations. This section of this document describes the various Sub-Files that are created, their transmission destinations, and ultimate usage.

4.1. Overview

After receiving each FADT file from FSM, Autosend breaks down the FADT in two different layers. Primary Sub-Files are generated for display purposes and to facilitate generation of various Secondary Sub-Files. The Secondary Sub-Files are created from the Primary Sub-Files and are utilized for transmission to various destinations based on established rules.

Sub-File names are created from the FADT file name by replacing the “fadt” keyword with “auto” and adding a suffix. Each Sub-File is distinguished by a unique suffix. For example, Sub-Files for the FADT file “fadt.bos___.06153533zz” are named “auto.bos___.06153533zz.as”, “auto.bos___.06153533zz.as.aa”, etc. The Sub-Files are referred to in this document as “*” followed by the suffix, where the “*” is replaced by the fixed portion of the file name.

The following table provides a mapping of Primary Sub-Files and which Secondary Sub-Files are created from each.

Primary Sub-File	Secondary Sub-Files	Usage
*.as	*.as.aa	Transmitted To Effected Centers As A GENR Message
	*.as.hcs	Transmitted To Host Computer Systems Via IFCN.FE
*.edct	*.eXXX.1 (where XXX = Center)	Transmitted To Affected Centers Via Router Using Address Group Files
	*.e2hub.1	Transmitted To EDCT Via IFCN.FE
*.al	*.al.XXX (where XXX = Airline)	Transmitted To NAS Users Via ARINC
	*.al.XXX.1 (where XXX = Airline)	Transmitted To NAS Users Via CDMnet
*.fa	No Secondary Files	Used For Autosend Client Display

4.2. *.as Primary Sub-File*

The *.as Primary Sub-File* is utilized as the source file to create messages which are used to distribute DAS Delays (formerly FA delays) to NAS automation systems. This file is also commonly referred to as the FA file. The *.as* file is not itself transmitted but is used to later create the *.as.aa* and *.as.hcs* Secondary Sub-Files.

The *.as* file is constructed from the Delay Table contained in the DAS Block. When creating the file Autosend searches for the NADIN address for each center in the file;

/etms/ats/data/address_files/center_address

The NADIN address is obtained (e.g: ZTL → KZTLZQZX) and is used later after the *.as* file is broken down to other sub-files.

A sample *.as* file (e.g: *auto.atl____.281448zz.as*) has the following format:

```
#1# DAS_ADDRESSES
DAS ATL
1500/1514 000 1515/1529 000 1530/1544 000 1545/1559 000
1600/1614 000 1615/1629 000 1630/1644 001 1645/1659 006
1700/1714 011 1715/1729 020 1730/1744 022 1745/1759 018
1800/1814 012 1815/1829 007 1830/1844 006 1845/1859 017
1900/1914 029 1915/1929 039 1930/1944 044 1945/1959 047

+1+ ZTL KZTLZQZX
DCC0131991
DAS ATL 1500/1514 000 1515/1529 000 1530/1544 000 1545/1559 000

+2+ ZTL KZTLZQZX
DCC0131992
DAS ATL 1600/1614 000 1615/1629 000 1630/1644 001 1645/1659 006

+3+ ZTL KZTLZQZX
DCC0131993
DAS ATL 1700/1714 011 1715/1729 020 1730/1744 022 1745/1759 018

+4+ ZTL KZTLZQZX
DCC0131994
DAS ATL 1800/1814 012 1815/1829 007 1830/1844 006 1845/1859 017

+5+ ZTL KZTLZQZX
DCC0131995
DAS ATL 1900/1914 029 1915/1929 039 1930/1944 044 1945/1959 047
.
.
.
(continues until all appropriate lines for each center and hour are listed)
```

4.2.1. *.as.aa Secondary Sub-File*

The *.as.aa Secondary Sub-File* is transmitted as a GENR message to communicate DAS Delays (formerly FA delays) to TFM Specialists. The *.as.aa* file is constructed from the *.aa Primary Sub-File* and contains information from the Delay Table contained in the DAS Block. When creating the file Autosend searches for the TFMS address for each facility in the file;

/etms/ats/data/address_files/center_address

A sample *.as.aa file (e.g: *auto.atl____.281448zz.as.aa*) has the following format:

```
DAS ATL
1500/1514 000 1515/1529 000 1530/1544 000 1545/1559 000
1600/1614 000 1615/1629 000 1630/1644 001 1645/1659 006
1700/1714 011 1715/1729 020 1730/1744 022 1745/1759 018
1800/1814 012 1815/1829 007 1830/1844 006 1845/1859 017
1900/1914 029 1915/1929 039 1930/1944 044 1945/1959 047
06/02/15 20:17 ATCSCC.lxdev02 POSITION12 703-123-4567
```

4.2.2. *.as.hcs Secondary Sub-File

The *.as.hcs Secondary Sub-File is transmitted as an FMH message to communicate DAS Delays (formerly FA Delays) to each centers Host Computer System (HCS). The *.as.hcs file is constructed from the *.aa Primary Sub-File and contains information from the Delay Table contained in the DAS Block. Additionally Autosend adds the NADIN Center address and hard coded DCC line with sequence number. When creating the file Autosend searches for the TFMS address for each facility in the file;

/etms/ats/data/address_files/center_address

A sample *.as.hcs file (e.g: *auto.atl____.281448zz.as.hcs*) has the following format:

```
KZTLZQZX
DCC0131991
DAS ATL 1500/1514 000 1515/1529 000 1530/1544 000 1545/1559 000

KZTLZQZX
DCC0131992
DAS ATL 1600/1614 000 1615/1629 000 1630/1644 001 1645/1659 006

KZTLZQZX
DCC0131993
DAS ATL 1700/1714 011 1715/1729 020 1730/1744 022 1745/1759 018

KZTLZQZX
DCC0131994
DAS ATL 1800/1814 012 1815/1829 007 1830/1844 006 1845/1859 017

KZTLZQZX
DCC0131995
DAS ATL 1900/1914 029 1915/1929 039 1930/1944 044 1945/1959 047
```

4.3. *.edct Primary Sub-File

The *.edct Primary Sub-File is utilized as the source file to create messages which are used to distribute flight specific delays (slot lists) to FAA facilities and NAS automation systems. The *.edct file is not itself transmitted but is used to later create the *.eXXX.1 and *.e2hub.1 Secondary Sub-Files.

The .edct file is constructed from the B6 section of the FADT.

A sample *.edct file (e.g: *auto.atl____.281448zz.edct*) has the following format:

```
FADT ATL 200601171713 200601172115 GDP

      DEP CNTR  CZU
ACID  ASLOT          DEP  ARR  CTD   CTA   TYPE EX  CX  SH  ERTA  IGTD
ABC1234 FCA027.260400A BOS  LGA  260300 260400 GDP  -  -  -  260200 260245
ABC5678 FCA027.260500A IAD  LGA  260400 260500 GDP  -  -  -  260300 260145
ABC3601 FCA027.260323A BWI  LGA  260206 260323 GDP  Y  -  -  260319 260150
ABC3522 FCA027.260311A RIC  LGA  260215 260311 GDP  -  -  -  260311 260145
ABC3994 FCA027.260353A IAD  LGA  260246 260353 GDP  -  Y  -  260355 260235

      DEP CNTR  CZY
ACID  ASLOT          DEP  ARR  CTD   CTA   TYPE EX  CX  SH  ERTA  IGTD
ABC1234 FCA027.260400A DCA  LGA  260300 260400 GDP  -  -  -  260200 260245
ABC5678 FCA027.260500A IAD  LGA  260400 260500 GDP  -  -  -  260300 260145
.
.
.
(Continues with one block for each center, copied from FADT B6)
```

4.3.1. *.eXXX.1 Secondary Sub-File

The *.eXXX.1 Secondary Sub-File is transmitted as a GENR message to communicate Slot Lists to personnel at FAA facilities. One .eXXX.1 file is created per Center, and the files are commonly referred to as EDCT Files. The file is constructed from the *.edct Primary Sub-File and contains information from the B6 section of the FADT.

A sample *.eXXX.1 file (e.g: *auto.atl____.281448zz.eczu.1*) has the following format:

```
EDCT ATL

      DEP CNTR  CZU
ACID  ASLOT          DEP  ARR  CTD   CTA   TYPE EX  CX  SH  ERTA  IGTD
ABC1234 FCA027.260400A BOS  LGA  260300 260400 GDP  -  -  -  260200 260245
ABC5678 FCA027.260500A IAD  LGA  260400 260500 GDP  -  -  -  260300 260145
ABC3601 FCA027.260323A BWI  LGA  260206 260323 GDP  Y  -  -  260319 260150
ABC3522 FCA027.260311A RIC  LGA  260215 260311 GDP  -  -  -  260311 260145
ABC3994 FCA027.260353A IAD  LGA  260246 260353 GDP  -  Y  -  260355 260235
06/02/15 20:17 ATCSCC.lxdev02 POSITION12 703-123-4567
```

4.3.2. *.e2hub.1 Secondary Sub-File

The *.e2hub.1 Secondary Sub-File is transmitted to TFMS-Core to allow for program implementation. The file contains only the parts of the FADT needed by the EDCT process and is the only file transmitted

to the EDCT process, and therefore contains all the data needed by the EDCT process. The *.e2hub1 files is transmitted to the TFMS-Core EDCT process via IFCN.FE.

The *.e2hub.1 file contains the following sections of the FADT file, copied verbatim from the FADT file. The B6 report must be the last section in the file.

- The PARAMETERS block (required)
- The UNASSIGNED_SLOTS block (optional)
- The INCLUDE_ONLY block (optional)
- The EXEMPTIONS block (optional)
- The NON_EXEMPTIONS block (optional)
- The DAS block (optional)
- The B6 report

The format of each section is exactly as described for the FADT file. For readability, each section is separated by a blank line.

A sample *.e2hub.1 file (e.g: *auto.atl____.281448zz.e2hub.1*) has the following format:

```
FADT ATL 200601171713 200601172115 GDP

START_PARAMETERS
CTL_ELEM LGA
TYPE GDP
REPORT_TIME 26121535
DELAY_MODE GAAP EVENT_START_TIME 200504261400
EVENT_END_TIME 200504261744
CUMULATIVE_START_TIME 200504261400
CUMULATIVE_END_TIME 200504261744
END_PARAMETERS

START_UNASSIGNED_SLOTS
NONE
END_UNASSIGNED_SLOTS

START_INCLUDE_ONLY
TYPE PROP
ARRIVAL_FIX SADDE
AIRLINE AAL
END_INCLUDE_ONLY

START_EXEMPTIONS
DISTANCE 1000
AIRPORT_DEST BOS
CENTER_DST ZNY
END_EXEMPTIONS

START_NON_EXEMPTIONS
AIRPORT_ORIG BOS
CENTER_ORIG ZNY
AIRPORT_IF_DISTANCE BOS
END_NON_EXEMPTIONS

START_DAS
```

```
232200 0
232215 0
232230 0
232245 25
232300 45
232315 73
232330 150
232345 121
240000 105
END_DAS
```

```
      DEP CNTR  CZU
ACID   ASLOT           DEP ARR  CTD   CTA   TYPE EX CX SH EENTRY IGTD
ABC1234 FCA027.260400A BOS  LGA  260300 260400 GDP  - - - 260200 260245
ABC5678 FCA027.260500A IAD  LGA  260400 260500 GDP  - - - 260300 260145
ABC3601 FCA027.260323A BWI  LGA  260206 260323 GDP  Y - - 260319 260150
ABC3994 FCA027.260353A IAD  LGA  260246 260353 GDP  - Y - 260355 260235
```

```
      DEP CNTR  CZY
ACID   ASLOT           DEP ARR  CTD   CTA   TYPE EX CX SH EENTRY IGTD
ABC1234 FCA027.260400A DCA  LGA  260300 260400 GDP  - - - 260200 260245
ABC5678 FCA027.260500A IAD  LGA  260400 260500 GDP  - - - 260300 260145
```

```
.
.
.
```

(continues with one block for each center, from B6 section)

4.4. *.al Primary Sub-File

The *.al Primary Sub-File is utilized as the source file to create messages which are used to distribute flight specific delays (slot lists) to NAS Users. The *.al file is not itself transmitted but is used to later create the *.al.xxx Secondary Sub-Files.

The slot list banner is varied based on program type. For GDP/AFP-Initial, GDP/AFP-Revision and GDP-Blanket the banner used is;

```
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
```

For GDP-Ground Stop the banner used is;

```
ATCSCC GROUND STOPPED FLIGHTS
```

The *.al file is constructed from the B8 and B9 sections of the FADT.

A sample *.al file (e.g: *auto.atl____.281448zz.al*) has the following format:

```
=1= AAL AIRLINE_ADDRESSES
FOR ATL DESTINATION AIRPORT
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
ACID    ASLOT          DEP  ARR  CTD   CTA    TYPE EX  CX  SH  ERTA  IGTD
AAL1380 ATL.281557B      DFW  ATL  281433 281557 GDP  Y  -  -  281557 281423
LOF5663 ATL.281648B      STL  ATL  281532 281648 GDP  Y  -  -  281655 281520
AAL1714 ATL.281736B      MIA  ATL  281604 281736 GDP  Y  -  -  281742 281549
AAL1868 ATL.281731B      DFW  ATL  281607 281731 GDP  Y  -  -  281731 281552
CHQ5280 ATL.281850B      STL  ATL  281732 281850 GDP  Y  -  -  281900 281720
AAL1750 ATL.281916A      DFW  ATL  281736 281916 GDP  Y  -  -  281918 281720
AAL439  ATL.281941A      ORD  ATL  281800 281941 GDP  Y  -  -  281938 281745
```

```
=1= USA AIRLINE_ADDRESSES
FOR ATL DESTINATION AIRPORT
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
ACID    ASLOT          DEP  ARR  CTD   CTA    TYPE EX  CX  SH  ERTA  IGTD
LOF3501 ATL.281706B      PIT  ATL  281542 281706 GDP  Y  -  -  281707 281530
USA345  ATL.281743B      PHL  ATL  281559 281743 GDP  Y  -  -  281743 281535
JIA2209 ATL.281854A      CLT  ATL  281812 281854 GDP  -  -  -  281854 281750
```

```
.
.
.
```

(continues with one block for each airline, from B8 section)

```
-1- AAL AIRLINE_ADDRESSES
FOR ATL DESTINATION AIRPORT
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
ACID    ASLOT          DEP  ARR  CTD   CTA    TYPE EX  CX  IGTD
AAL1380 ATL.281557B      DFW  ATL  281433 281557 GDP  Y  -  281423
LOF5663 ATL.281648B      STL  ATL  281532 281648 GDP  Y  -  281520
AAL1714 ATL.281736B      MIA  ATL  281604 281736 GDP  Y  -  281549
AAL1868 ATL.281731B      DFW  ATL  281607 281731 GDP  Y  -  281552
CHQ5280 ATL.281850B      STL  ATL  281732 281850 GDP  Y  -  281720
AAL1750 ATL.281916A      DFW  ATL  281736 281916 GDP  Y  -  281720
AAL439  ATL.281941A      ORD  ATL  281800 281941 GDP  Y  -  281745
```

```
-1- USA AIRLINE_ADDRESSES
FOR ATL DESTINATION AIRPORT
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
```

ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	IGTD
LOF3501	ATL.281706B	PIT	ATL	281542	281706	GDP	Y	-	281530
USA345	ATL.281743B	PHL	ATL	281559	281743	GDP	Y	-	281535
JIA2209	ATL.281854A	CLT	ATL	281812	281854	GDP	-	-	281750
.									
.									
.									

(continues with one block for each airline, from B9 section)

4.4.1. *.al.xxx Secondary Sub-File

The *.al.xxx Secondary Sub-Files are transmitted as ARINC messages to communicate Slot Lists to NAS Users. One *.al.xxx file is created per NAS User affected by the program. The file is constructed from the *.al Primary Sub-File and contains information from the B9 section of the FADT. These files are broken down to one per airline from the *.al file. They are sent to all the affected airlines via IFCNFE by using the airline mapping file at;

/etms/ats/data/address_files/airline_mapping

The slot list banner is varied based on program type. For GDP/AFP-Initial, GDP/AFP-Revision and GDP-Blanket the banner used is;

ATCSCC EDCT FLOW CONTROL DEPARTURE TIME

For GDP-Ground Stop the banner used is;

ATCSCC GROUND STOPPED FLIGHTS

A sample *.al.xxx file (e.g: *auto.atl___.281448zz.al.aal*) has the following format:

FOR ATL DESTINATION AIRPORT									
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME									
ACID	ASLOT	DEP	ARR	CTD	CTA	TYPE	EX	CX	IGTD
AAL1380	ATL.281557B	DFW	ATL	281433	281557	GDP	Y	-	281423
AAL1145	ATL.281636B	ORD	ATL	281519	281636	GDP	Y	-	281504
LOF5663	ATL.281648B	STL	ATL	281532	281648	GDP	Y	-	281520
AAL1714	ATL.281736B	MIA	ATL	281604	281736	GDP	Y	-	281549
AAL1868	ATL.281731B	DFW	ATL	281607	281731	GDP	Y	-	281552
CHQ5280	ATL.281850B	STL	ATL	281732	281850	GDP	Y	-	281720
AAL1750	ATL.281916A	DFW	ATL	281736	281916	GDP	Y	-	281720
AAL439	ATL.281941A	ORD	ATL	281800	281941	GDP	Y	-	281745
AAL1882	ATL.281954A	MIA	ATL	281819	281954	GDP	Y	-	281800

4.4.2. *.al.xxx.l Secondary Sub-File

The *.al.xxx Secondary Sub-Files are transmitted as CDMnet messages to communicate Slot Lists to NAS Users. One *.al.xxx.l file is created per NAS User affected by the program. The file is constructed from the *.al Primary Sub-File and contains information from the B8 section of the FADT. These files are broken down to one per airline from the *.al file. They are sent to all the affected airlines via IFCNFE by using the airline mapping file at;

/etms/ats/data/address_files/airline_mapping

The slot list banner is varied based on program type. For GDP/AFP-Initial, GDP/AFP-Revision and GDP-Blanket the banner used is;

ATCSCC EDCT FLOW CONTROL DEPARTURE TIME

For GDP-Ground Stop the banner used is;

ATCSCC GROUND STOPPED FLIGHTS

A sample *.al.xxx file (e.g: *auto.atl____.281448zz.al.aal.l*) has the following format:

```
FOR ATL DESTINATION AIRPORT
ATCSCC EDCT FLOW CONTROL DEPARTURE TIME
ACID      ASLOT          DEP ARR  CTD   CTA    TYPE EX  CX  SH  ERTA  IGTD
AAL1380  ATL.281557B          DFW ATL  281433 281557 GDP  Y  -  -  281557 281423
AAL1145  ATL.281636B          ORD ATL  281519 281636 GDP  Y  -  -  281636 281504
LOF5663  ATL.281648B          STL ATL  281532 281648 GDP  Y  -  -  281655 281520
AAL1714  ATL.281736B          MIA ATL  281604 281736 GDP  Y  -  -  281742 281549
AAL1868  ATL.281731B          DFW ATL  281607 281731 GDP  Y  -  -  281731 281552
CHQ5280  ATL.281850B          STL ATL  281732 281850 GDP  Y  -  -  281900 281720
AAL1750  ATL.281916A          DFW ATL  281736 281916 GDP  Y  -  -  281918 281720
AAL439   ATL.281941A          ORD ATL  281800 281941 GDP  Y  -  -  281938 281745
AAL1882  ATL.281954A          MIA ATL  281819 281954 GDP  Y  -  -  281949 281800
```

4.5. *.fa Primary Sub-File

The *.fa is generated from the FADT and is used for the Autosend user display.

A sample *.fa file (e.g: *auto.atl____.281448zz.fa*) has the following format:

```
1500/1514 000 1515/1529 000 1530/1544 000 1545/1559 000
1600/1614 000 1615/1629 000 1630/1644 001 1645/1659 006
1700/1714 011 1715/1729 020 1730/1744 022 1745/1759 018
1800/1814 012 1815/1829 007 1830/1844 006 1845/1859 017
1900/1914 029 1915/1929 039 1930/1944 044 1945/1959 047
```

EXEMPT ARTCCS:

```
    CZE CZM CZQ CZU CZV CZW CZY ZAB ZAU ZBW
    ZDC ZDV ZFW ZHU ZID ZJX ZKC ZLA ZLC ZMA
    ZME ZMP ZNY ZOA ZOB ZSE
```

EXEMPT AIRPORTS:

```
    NONE
```

EXEMPT DISTANCES:

```
    NONE
```