



Flight Information Exchange Model

NAS Extension Data Dictionary

The Flight Information Exchange Model (FIXM) is a global standard for achieving interoperable exchanges of flight information. FIXM is based on a standardized (yet extensible and dynamic) set of data elements that increase interoperability and data exchange among automated systems. FIXM is part of a family of technology-independent, harmonized, and interoperable information exchange models and Extensible Markup Language (XML) schemas [alongside the Aeronautical Information Exchange Model (AIXM) and Weather Information Exchange Model (WXXM)]. FIXM is designed to support the information needs of global aviation stakeholders such as ATM, airlines, airport personnel, and air safety providers.

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This FIXM NAS Extension Data Dictionary (FIXM DD) provides a conceptual explanation of the flight data elements (FDEs) expected to be exchanged within the FAA's NAS using the FIXM standard. Currently, the FIXM DD includes a definition for each FDE, as well as alternate names that reflect various nomenclatures across systems and operational domains, relationships among FDEs, data types, value ranges (where applicable), business rules associated with the individual use of each FDE, and references to authoritative sources where more information can be found regarding the referenced FDE. The FIXM DD is complementary to the other FIXM artifacts such as the FIXM models and the FIXM schemas.

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Document History

Version	Version Type	Description	Entered By
0.90	Draft	<ul style="list-style-type: none"> Initial draft for internal review 	Booz Allen Hamilton
0.91	Draft	<ul style="list-style-type: none"> Draft for internal review 	Booz Allen Hamilton
0.92	Draft	<ul style="list-style-type: none"> Formatting; updates to notes 	Booz Allen Hamilton
1.00	Draft	<ul style="list-style-type: none"> Grammatical, minor updates to notes 	Booz Allen Hamilton
1.00	Final	<ul style="list-style-type: none"> Enhanced metadata definitions Grammatical; minor updates to notes Added Data Type Descriptions 	Booz Allen Hamilton
1.10	Final	<ul style="list-style-type: none"> Changed Classified Speed Indicator to Aircraft Speed that is represented by 3 types Added format information to Notes in Computer ID Added implementation notes to Coordination Fix 	Booz Allen Hamilton
2.0.0	Final	<ul style="list-style-type: none"> Updated data types and Element Metadata Added additional elements not applicable to FIXM Core v2.0.0 – Times, Speeds, etc. 	Booz Allen Hamilton

1 Element Metadata Definitions

Element-level metadata are used to capture the meaning of the data elements, to provide the context in which they appear and their associated business rules. The element-level metadata are:

1.1 Name

This metadata captures a unique, descriptive name for the data element. The naming convention used in this document attempts to fulfil the following goals:

1. The data element name should not contain acronyms – to the extent possible. The use of acronyms raises the risk of the names being used erroneously. Commonly used aviation domain terms are optimal for naming conventions; however, in some cases, the use of synonyms may be the most practical approach.
2. The name should express – as much as possible – the type of data it represents (e.g., time, speed, altitude).

The names should be constructed such that related data elements are adjacent in an alphabetized list. For example, “Earliest Runway Departure Time” was named “Runway Departure Time – Earliest”, to allow its record to be documented adjacent to other data elements associated with Runway Departure Time (i.e. "Runway Departure Time - Airspace User Estimated", and Runway Departure Time - Traffic Flow Management System Estimated", etc.

1.2 Definition

This metadata describes the data element in unambiguous and universal terms such that a reader, with a basic level of aviation domain knowledge, can have a clear understanding of what information the data element represents. If necessary, the description may point to references that provide further clarification. This description should avoid jargon or references to systems’ behaviour to the extent possible and should be clear and succinct.

1.3 Alternate Names

This metadata captures alternate terms (i.e., terms from other domains that are used synonymously), and any other information that would facilitate the discovery of semantically equivalent (or related) data elements.

1.4 Has Parts

This metadata lists any other (possibly more basic) data elements contained by the data element to which the metadata refers. Therefore, when the “Has Parts” metadata is populated, this data element will always be denoted as a “Container” data type. The data elements that listed in this data field must be unique data elements in the data dictionary as well.

1.5 Is Part Of

This metadata will be populated if the referenced data element is part of a “Container”. It specifies the name of the container data element to which the referenced data element belongs.

Note: The “Container” element will list the name of the referenced data element in its “Has Parts” field.

1.6 Range of Values

This metadata indicates the range of values the data element can take. This is accomplished by either providing upper and lower threshold values, or by explicitly enumerating all the possible values. In the case of an enumeration, this metadata also specifies if the data element can take only one or more of the enumerated values.

There are a few exceptions to how this metadata is used in the Data Dictionary:

1. In some cases, the list of all possible values for a data element is too long to be captured in this document. In those cases, the “Range of Values” metadata field will contain a reference to the document(s) that specify the valid list of values.
2. Some data elements can assume more than one value from a controlled vocabulary. In this case, Range of Values captures the controlled vocabulary, and the “Notes” section clarifies which combinations of values are acceptable.

Notation

The following notation conventions are used to describe the Range of Values:

1. Discrete enumeration. Predefined values are listed explicitly and exhaustively. They are separated by commas, and the whole collection is delimited by curly brackets. Example: {IFR, VFR}. In a software implementation, this type of discrete enumeration would be implemented as an enumeration.
2. Numeric range. This is a range of numbers defined implicitly by specifying the lower and upper limits, separated by a dash symbol ('-') and delimited by square brackets. Example: [0-99] specifies a range of 100 numeric values starting with 0 (inclusive of 0) and ending with 99 (inclusive of 99). Some numeric ranges are specified in bases other than 10, such as base 8 (octal) or 16 (hexadecimal). In these cases, an explanatory note is provided.
3. Alphabetic range. This is a range of alphabetic characters defined implicitly by specifying the first and last characters, separated by the dash symbol ('-') and delimited by square brackets. Example: [A-Z] specifies a range of letters (ordered alphabetically) starting with upper-case 'A' and ending with upper-case 'Z'. Please note, unless specified otherwise, all alphabetic characters are assumed to be upper case letters corresponding to the American Standard Code for Information Interchange (ASCII) characters in the range of 41hex to 5Ahex.

These notation conventions can be combined, in order to express more complex types of value ranges. For example:

1. [A-Z, 0-9] represents upper-case letters and numbers
2. {[A-Z], +, -, ,} represents upper-case letters, the '+' (plus) character, the '-' (minus) character, and the ',' (comma) character

The Range of Values, as defined above, can be accompanied by a modifier which further defines the range:

1. Multiplicity. The number of values each data element can have is specified in plain language, preceding or following the range definition. For example, if the data element can take only one value from a discrete enumeration (i.e., the enumeration has mutually exclusive values), then the range is specified as “{V1, V2, V3, V4}”. If multiple values are acceptable, the range is

specified as “one or more of the following values: {V1, V2, V3, V4}”. If there is an upper limit on how many values can be combined, that is specified also (“up to 3 of {V1, V2, V3, V4, V5}”).

2. Exclusion. In certain cases, some values in an implicit range are not valid. In those cases, the invalid values are specified after the range. For example: “[A-S] excluding {I, N, O}”.

Other considerations:

1. Free-form text. Unless otherwise specified, the default value range for the acceptable characters in free-form text is {[A-Z], [0-9], -, ?, :, (,), ., ,, ', =, /,+}.
2. Complex data elements. Certain data elements are complex in nature (they contain multiple data elements as components.)
3. In all cases, if the Range of Values is already captured within the description of the data type, this metadata will be left blank.

1.7 Business Rules

This metadata defines or constrains some aspect of the use of a particular data element. They have the following functions:

1. describes how data elements are used together in a functional or operational context
2. defines roles or functionality associated with data elements
3. describes rules for using the data elements in specific contexts

Business Rules will be defined by guidance documents and will outline when and how the referenced data element will be used. Multiple Business Rules should be in a bulleted list.

For example, specific Business Rules are:

- 1 In-Block Time - Scheduled: “The element is only present for flights which were created from the OAG; otherwise, it is null.”
- 2 Traffic Flow Management System Flight Status: “TFMS generates the flight status based on all available data sources and uses it to determine how to model a flight and how to treat a flight in a Traffic Management Initiative.”

2.1 Notes

This field captures any other pertinent information or knowledge regarding the referenced data element that does not fit in any of the other data fields. This section may include descriptions of enumerated values, descriptions of the operating environment, the individual data types comprised by a “Complex” data type, data type formatting, examples and other information in the reference documentation. Limited guidance-specific XML may be listed here for clarification purposes. Multiple Notes should be in a bulleted list.

2.2 References

This metadata lists specific sources which further define, explain, and/or provide additional information about the data element, its context and its role. Multiple References should be in a bulleted list.

2 Data Type

Each of the data elements captured in this Data Dictionary is of one of the data types below:

Data Types	Description of Changes
Aerodrome	<p>This data type identifies an Aerodrome and can be described as one of the following:</p> <p>Aerodrome Identifier: a predefined four (4) character string. Aerodrome codes are published in ICAO Document 7910.</p> <p>Aerodrome Description: an alphanumeric string of undefined length describing the Aerodrome or its commonly known name.</p> <p>Latitude/Longitude: a location expressed as a pair of latitude and longitude coordinates.</p> <p>Fix-radial-distance: a location defined by three values: a navigation aid identifier (typically a VOR), a magnetic heading, and a distance. The distance is expressed in nautical miles.</p>
Alpha Character	One upper-case alphabetic character in the range [A-Z].
Alpha String	String of upper-case alphabetic characters in the range [A-Z].
Alphanumeric Character	One character in the following range: {[A-Z], [0-9], -,?,:,(), ,, ,, ,, =, /,+ }
Alphanumeric String	String of characters in the following range: {[A-Z], [0-9], -,?,:,(), ,, ,, ,, =, /,+} NOTE: Throughout the Data Dictionary, the reader might encounter the concept of free-form text. This is simply an alphanumeric string containing unstructured words and sentences.
Altitude	<p>The altitude can be expressed in two ways:</p> <p>Flight Level (FL) is a standard nominal altitude of an aircraft, calculated from the International standard pressure datum of 1013.25 hPa (29.92 inches in Hg), the average sea-level pressure. Flight Level is expressed in metres or feet. It is not necessarily the same as the aircraft's true altitude, either above mean sea level or above ground level. Four alternative conventions are available for the expression of flight level data:</p> <ol style="list-style-type: none"> 1. "F" followed by three (3) decimal numeric characters: indicates a flight level number, e.g. Flight Level 330 is expressed as "F330"; 2. "S" followed by four (4) decimal numeric characters: indicates standard metric level in tens of meters, i.e. Standard Metric Level 11,300 meters (Flight Level 370) is expressed as "S1130"; 3. "A" followed by three (3) decimal numeric characters: indicates altitude in hundreds of feet, e.g. an altitude of 4,500 feet is expressed as "A045"; 4. "M" followed by four (4) decimal numeric characters: indicates altitude in tens of meters, e.g. an altitude of 8,400 meters is expressed as "M0840". <p>Altitude is the real altitude calculated by the aircraft, by measuring the air pressure and adjusting it for the local air pressure. Altitude is expressed in meters or feet.</p>

	Range of values: [0-130,000] when expressed in feet, [0-40,000] when expressed in meters.
Beacon Code & Mode	This data type describes the Secondary Surveillance Radar (SSR) mode and transponder code of the flight. This data type contains an enumerated list of SSR Mode: {A, C, S} and an octal range of Beacon Code: [0000 - 7777]. The enumeration "S" refers to selective interrogation for ADS-B and is associated with the aircraft address.
Boolean	This data type has one of two values (denoted true or false), intended to provide the truth value of a state represented by the data element (i.e., if the "Flight Plan Accepted" data element has the value true, it signifies that the flight plan was accepted.)
Complex	This data type is a combination of two or more data types (e.g. Estimated Departure Clearance Time or Cancellation), or can be one data type or another depending on the circumstance (e.g. Communications Capabilities). The "Complex" data type cannot be used in conjunction with the "Container" data type (see definition below). If the "Complex" data type is used, the "Notes" section shall be used to explain the individual data types that comprise the complex data type or in specific cases where one data type is used in place of another. The "Range of Values" metadata includes all appropriate enumerated values.
Container	This data type is used to signify a data element has a hierarchical structure containing one or more data elements. If a data element is of data type "Container", then at least one data element should be listed in "Has Parts". "Container" data types can be combined with other data types. For example, the data element "Expanded Route Point" is of data types "Container" and "Location".
Date Time	Represents a specific instance of time and date. The pattern for this data type is YYYY-MM-DDThh:mm:ss[.SSS][Z GMT-zzzz] where YYYY represents the year, MM the month, and DD the day, preceded by an optional leading negative (-) character to indicate a negative number. If the negative character is omitted, positive (+) is assumed. The T is the date/time separator, and hh, mm, and ss represent hours, minutes, and seconds respectively. Additional digits can be used to increase the precision of fractional seconds, if desired. For example, the format ss.ss..., with any number of digits after the decimal point is supported. Specifying fractions of a second is optional. This representation may be immediately followed by a "Z" to indicate Coordinated Universal Time (UTC) or to indicate the time zone. For example, the difference between the local time and UTC, immediately followed by a sign, + or -, followed by the difference from UTC represented as hh:mm (minutes is required). If the time zone is included, both hours and minutes must be present.
Direction	Indicates direction relative to either true north or magnetic north. Range of values is [0-360], expressed in degrees as a floating point number. All data elements that represent a heading, bearing, or ground track are of data type "Direction".
Enumeration	This data type represents one or multiple choices from a finite, predefined collection of choices (controlled vocabulary). NOTE: In this document, whenever the "Enumeration" data type is used, the controlled vocabulary is specified in the "Range of Values" field, whenever practicable. If the enumeration is too large to be included

	explicitly, a reference is provided.
Flight Rules	An enumerated listing of an Aircraft's flight rules {I, V, Y, Z}, as defined in ICAO 4444 where: I - Instrument Flight Rules (IFR) V - Visual Flight Rules (VFR) Y - IFR first, followed by one or more subsequent change(s) of flight rules Z - VFR first, followed by one or more subsequent change(s) of flight rules
Float	Represents single-precision, 32-bit floating-point numbers.
Frequency	This data type describes the radio frequency, expressed as a float value, used for communications and navigation between aircraft-ground, ground-ground, or aircraft-aircraft. The range of values is [3-3000], expressed in megahertz (MHz).
Integer	One or a set of positive whole numbers {1, 2, 3,...}, negative whole numbers {-1, -2, -3, ...}, and zero {0}.
Location	This data type describes a geographic location. For the purposes of FIXM, the location can be defined in any of the following ways: Location Identifier: a predefined 2-5 character string. This string can be a fix name. Location identifiers are published in ICAO document 7910. Latitude/Longitude: defined by a pair of latitude and longitude coordinates. Fix-radial-distance: defined by three values: a navigation aid identifier (typically a VOR), a magnetic heading (expressed as a "Direction"), and a distance (expressed in nautical miles).
Numeric Character	One numeric character in the range [0-9].
Numeric String	String of numeric characters in the range [0-9].
Sector	Alphanumeric string identifying a sector. It is always associated with a "Unit" (defined below). The sector is represented by the last two (2) digits. Otherwise, it contains the sector name or operational position.
Speed	Represents an instantaneous rate of for an aircraft, expressed as a float, with a range of [0-2,200] when expressed in knots, [0-3.8] when expressed in Mach.
Time Duration	Represents duration of time. The pattern for duration is nYnMnDTnHnMnS, where nY represents the number of years, nM the number of months, nD the number of days, T the date/time separator, nH the number of hours, nM the number of minutes, and nS the number of seconds.
Unit	This data type contains the 4 character code from ICAO 7910 that identifies the unit, if one is available. If a code is not available, an alphanumeric string contains the unit name or alternate Unit identifier.
Vertical Rate	The value of an aircraft's vertical rate of change (climb if positive, descent if negative)

	expressed as a float, [(-30,000)-30,000] when expressed in ft/min., [(-15)-15] if expressed in m/s.
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3 Data Elements

3.1 Adapted Arrival Route Clearance Support Alphanumerics

Adapted Arrival Route Clearance Support Alphanumerics	
<i>Definition</i>	This field contains the route string adapted with an Adapted Arrival Route (AAR) to be provided to the controller at the time the auto-route is applied.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • AAR alphanumerics include the AAR Transition-fix. • These alphanumerics are preceded by the Field 10 element (in the filed route) that precedes the AAR Transition-fix in the merged route. • For alphanumerics not in field 10 format, the + delimiter will precede and follow the non-field 10 format elements.
<i>Notes</i>	<ul style="list-style-type: none"> • AARs are used to control the flow and separation of traffic arriving at designated airports. • Based on information about the flight and restrictions encoded in AAR adaptation data, an AAR may be applied automatically to the flight during the route conversion process. • Differs from the route string in that this data might not be in Field 10 route string format. • This is a structured string. • [ATM IPOPOP ICD] Transmitted in AH, FH, and HU messages as CMS 142e, 142f Preferential Route Alphanumerics (AAR) field 10 format, non-field 10 format.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOPOP) Interface Control Document, Rev A, September 30, 2008

3.2 Adapted Arrival Route Identifier

Adapted Arrival Route Identifier	
Definition	The five character identifier used to internally identify an adapted arrival route.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> Adapted Arrival Routes (AARs) are used to control the flow and separation of traffic arriving at designated airports. Based on information about the flight and restrictions encoded in AAR adaptation data, an AAR may be applied automatically to the flight during the route conversion process. This ID is defined in NAS adaptation. [ATM IPOP ICD] Transmitted in AH, FH, and HU messages as CMS 141c Adapted Route indicator (AAR).
Reference	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.3 Adapted Departure Arrival Route Clearance Support Alphanumerics

Adapted Departure Arrival Route Clearance Support Alphanumerics	
<i>Definition</i>	This field contains the route string adapted with an Adapted Departure Arrival Route (ADAR) to be provided to the controller at the time the auto-route is applied.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> For alphanumerics not in field 10 format, the "+" delimiter will precede and follow the non-field 10 format elements.
<i>Notes</i>	<ul style="list-style-type: none"> Adapted Departure Arrival Routes (ADARs) are used to control the flow and separation of traffic departing and arriving between specific pairs of designated airports. Based on information about the flight and restrictions encoded in ADAR adaptation data, an ADAR may be applied automatically to the flight during the route conversion process. Differs from the route string in that this data might not be in Field 10 route string format. This is a structured string. [ATM IPOP ICD] Transmitted in AH, FH, and HU messages as CMS 142a, 142b Preferential Route Alphanumerics (ADAR) field 10 format, non-field 10 format.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.4 Adapted Departure Arrival Route Identifier

Adapted Departure Arrival Route Identifier	
Definition	The five character identifier is used to internally identify an Adapted Departure Arrival Route (ADAR).
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> • ADARs are used to control the flow and separation of traffic departing and arriving between specific pairs of airports. • Based on information about the flight and restrictions encoded in ADAR adaptation data, an ADAR may be applied automatically to the flight during the route conversion process. • This ID is defined in NAS adaptation. • [ATM IPOP ICD] Transmitted in AH, FH, and HU messages as CMS 141a Adapted Route indicator (ADAR).
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.5 Adapted Departure Route Clearance Support Alphanumerics

Adapted Departure Route Clearance Support Alphanumerics	
<i>Definition</i>	This field contains the route string adapted with an Adapted Departure Route (ADR) to be provided to the controller at the time the auto-route is applied.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • ADR alphanumerics include the ADR Transition-fix. • These alphanumerics are followed by the Field 10 element (in the filed route) that follows the ADR Transition-fix in the merged route. • For alphanumerics not in field 10 format, the "+" delimiter will precede and follow the non-field 10 format elements.
<i>Notes</i>	<ul style="list-style-type: none"> • ADRs are used to control the flow and separation of traffic departing designated airports. • Based on information about the flight and restrictions encoded in ADR adaptation data, an ADR may be applied automatically to the flight during the route conversion process. • Differs from the route string in that this data might not be in Field 10 route string format. • This is a structured string. • [ATM IPOPOP ICD] Transmitted in AH, FH, and HU messages as CMS 142c, 142d Preferential Route Alphanumerics (ADR) field 10 format, non-field 10 format.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.6 Adapted Departure Route Identifier

Adapted Departure Route Identifier	
<i>Definition</i>	The identifier used to internally identify the Adapted Departure Route (ADR).
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> Adapted Departure Routes (ADRs) are used to control the flow and separation of traffic departing designated airports. Based on information about the flight and restrictions encoded in ADR adaptation data, an ADR may be applied automatically to the flight during the route conversion process. The identifier is defined in NAS adaptation. [ATM IPOP ICD] Transmitted in AH, FH, and HU messages as CMS 141b Adapted Route indicator (ADR).
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.7 Airborne Equipment Qualifier

Airborne Equipment Qualifier	
Definition	A non-repeating value assigned to the aircraft, based on its navigational equipment, whether or not it has a transponder, and if it has a transponder, whether the transponder supports Mode C.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Enumeration
Range of Values	One or more of the following values: {A, B, C, D, E, F, G, I, J, K, L, M, N, P, Q, R, T, U, W, X, Y}
Business Rules	
Notes	<ul style="list-style-type: none"> • The meaning of the enumerated values are: <ul style="list-style-type: none"> ○ NO DME: <ul style="list-style-type: none"> ▪ X - No transponder ▪ T - Transponder with no Mode C ▪ U - Transponder with Mode C ○ DME: <ul style="list-style-type: none"> ▪ D - No transponder ▪ B - Transponder with no Mode C ▪ A - Transponder with Mode C ○ TACAN ONLY: <ul style="list-style-type: none"> ▪ M - No transponder ▪ N - Transponder with no Mode C ▪ P - Transponder with Mode C • AREA NAVIGATION (RNAV): <ul style="list-style-type: none"> ○ Y - LORAN, VOR/ ○ DME, or INS with no transponder ○ C - LORAN, VOR/DME, or INS, transponder with no Mode C ○ I - LORAN, VOR/DME, or INS transponder with Mode C • ADVANCED RNAV WITH TRANSPONDER AND MODE C: <ul style="list-style-type: none"> ○ E - Flight Management System (FMS) with DME/DME and IRU position updating

	<ul style="list-style-type: none"> ○ F - FMS with DME/DME position updating ○ G - Global Navigation Satellite System (GNSS), including GPS or Wide Area Augmentation System (WAAS), with en route and terminal capability. ○ R - Required Navigational Performance (RNP). The aircraft meets the RNP type prescribed for the route segments, routes and/or area concerned. ● REDUCED VERTICAL SEPARATION MINIMUM (RVSM): <ul style="list-style-type: none"> ○ J - E with RVSM ○ K - F with RVSM ○ L - G with RVSM ○ Q - R with RVSM ○ W - RVSM ● [ATM IPOP ICD] Transmitted in FH, AH, DH, HU, NP and NU messages as CMS 03e.
<p><i>Reference</i></p>	<ul style="list-style-type: none"> ● FAA Order JO 7110.65U, Air Traffic Control, dated February 9, 2012 ● National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.8 Arrival Slot - NAS

Arrival Slot - NAS	
Definition	A time slot at an airport that identifies a point in time when an aircraft is constrained to arrive at the airport.
Alternate Names	ASLOT
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> • This element has been created to address the specific naming convention used in the United States: <ul style="list-style-type: none"> ◦ NAS format is: 11,12, or 14 characters: aaa(a).ddddddL or FCA: ccc.ddddddd, where the airport or FCA name is followed by a period, slot date and time (DDHHMM) and an alpha character. • In the United States, when an arrival delay at an airport is implemented, TFMS allocates the airport capacity into arrival slots that are spaced out to achieve the desired acceptance rate to handle the traffic demand. TFMS then assigns a flight to the slot and updates the flight with the flight specific delay information. • Arrival Slots not assigned to flights and, therefore, available for use are called Unassigned Slots.
Reference	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.9 Assigned Altitude

Assigned Altitude	
Definition	The cruise altitude assigned to the active flight.
Alternate Names	Flight Level
Has Parts	
Is Part Of	
Data Type(s)	Complex
Range of Values	[0-130000] expressed in feet
Business Rules	
Notes	<ul style="list-style-type: none"> • This Complex data type is comprised of a block of altitudes. • [ATM IPOP ICD] Transmitted in AH, FH, HU, NP, NU and TH messages as CMS 08[a b c d e f g h] Assigned Altitude. • [ATM IPOP ICD] May be represented as any one of the following: <ul style="list-style-type: none"> ○ Altitude or flight level ○ VFR-on-top ○ VFR-on-top with altitude ○ Block of altitudes or flight levels ○ Aircraft operating above a specified altitude ○ Altitude/fix/altitude ○ VFR flight ○ VFR flight with altitude
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.10 ATC Intended Route

ATC Intended Route	
<i>Definition</i>	The current cleared flight plan route with any unacknowledged auto routes (preferential routes, transition fixes and A-line fixes) already applied.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • The ATC Intended Route includes to-be-applied AARs (Adapted Arrival Routes) the current Centre is not notified. • Up to 1000 character length string consisting of any letter or digit, plus '/', '+', '*', ':', '' representing preferential routes, transition fixes and A-line fixes. • This is a structured string. • [ATM IPOPOP ICD] Transmitted in AH, FH and HU messages as CMS 10c ATC Intended Route. • [ATM IPOPOP ICD] Fixes in the route are represented using a fix name, latitude/longitude, or fix radial distance.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.11 Classified Speed Indicator

Classified Speed Indicator	
Definition	The speed requested to be flown (for a proposed plan) or assigned by ATC (for an active flight).
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Complex
Range of Values	[0001-3700] if expressed in knots; [000-500] if expressed in MACH; SC if speed classified
Business Rules	
Notes	<ul style="list-style-type: none"> • This Complex data type is comprised of a Speed and Alpha String. • [IMPLEMENTATION_NOTES] NAS_EXTENSION: This data element replaces FIXM Core data element Cruising Speed (FIXM_version - 1.0). • [ATM IPOP ICD] Transmitted in AH, FH, HU, NP, NU, and TH messages as CMS 05 [a c d] Aircraft Speed.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.12 Coast Indicator

Coast Indicator	
<i>Definition</i>	An indicator the aircraft was unexpectedly not detected by radar (after a period of tracking).
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Boolean
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in TH message as CMS 153a Coast Indicator.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.13 Computer ID

Computer ID	
Definition	A unique identification assigned by ERAM to each flight plan.
Alternate Names	NAS CID, ECID, ERAM CID
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	[A-Z] excluding {I, O}, [0-9]
Business Rules	
Notes	<ul style="list-style-type: none"> • CID is used by controllers as a quick reference to enter commands for a flight. • [ATM IPOP ICD] Transmitted in AC, AH, AK, BA, CL, DH, ET, FH, HB, HC, HD, HE, HF, HH, HO, HP, HT, HU, HV, HX, ID, IE, IH, IM, IO, LH, NI, NL, NP, NU, OH, PH, PT, RE, RH, TH and UI messages as CMS 02d ERAM Computer Identification (ECID) or NAS CID. • A three character code in one of the following formats: two digits plus one letter (ddL), one digit plus one letter plus one digit (dLd), or one digit plus two letters (dLL).
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.14 Converted Route Fix Time

Converted Route Fix Time	
<i>Definition</i>	Provides the set of fixes, with the calculated time of arrival at each fix, which describe the aircraft's converted route of flight.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Complex
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • The Fix and calculated time of arrival at the fix. • Fix is a Location. • Calculated arrival time is a date time. • [ATM IPOP ICD] Transmitted in HX, IE and IM messages as CMS 68c Fix/Time. • [ATM IPOP ICD] Fixes are represented using a fix name, latitude/longitude, or fix radial distance.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.15 Coordination Fix

Coordination Fix	
Definition	The fix to be used in conjunction with the Coordination Time so processing for this flight (and its trajectory) can be synchronized for the next sector/facility. It "coordinates" the flight plan with the aircraft position.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Location
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> • [ATM IPOP ICD] Transmitted in AH, FH, HP, and HU messages as CMS 06a Coordination Fix. • [ATM IPOP ICD] For a flight, the coordination point is the starting point to begin processing the flight plan route from one of the following points: <ol style="list-style-type: none"> 1. the departure airport 2. the airfile fix or 3. the reference fix for an active flight
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.16 Coordination Time

Coordination Time	
Definition	The time to be used in conjunction with the Coordination Fix so processing for this flight (and its trajectory) can be synchronized for the next sector/facility. It "coordinates" the flight plan with the aircraft position.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Date Time
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> • [IMPLEMENTATION_NOTES] NAS_EXTENSION: This data element is closely associated with FIXM Core data elements: Off Block Time-Estimated (FIXM v2.0.0), and Runway Departure Time - Actual (FIXM v2.0.0). • For two values of the Coordination Time Type, the Coordination Time is the same value as an element in FIXM Core: <ul style="list-style-type: none"> ○ P = FIXM Core data element Off Block Time-Estimated (FIXM v2.0.0) ○ D = FIXM Core data element Runway Departure Time - Actual (FIXM version 2.0.0) • When the value of the Coordination Time Type is "E", then Coordination Time does not have a direct correspondence to an element in Core. • [ATM IPOP ICD] Transmitted in AH, DH, FH, HP, and HU messages as CMS 07b or d Coordination Time Element.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.17 Coordination Time Type

Coordination Time Type	
<i>Definition</i>	The indicator for the type of "Coordination Time".
<i>Alternate Names</i>	Type of Time Action Indicator Element
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{P, D, E}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • The valid values are: <ul style="list-style-type: none"> ○ P = Proposed flight plan preparing for departure ○ D = Flight has departed from the departure airport ○ E = Active flight plan, aircraft is flying • [ATM IPOP ICD] Transmitted in AH, DH, FH, HP, and HU messages as CMS 07a Type of Time Action Indicator Element.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.18 Delay Time to Absorb

Delay Time to Absorb	
Definition	Indicates the amount of time that needs to be absorbed during the flight. It is corrective action for meeting the goal of Estimated Departure Clearance Time (EDCT), when flight is already active and needs to arrive at the destination later than originally planned.
Alternate Names	Arrival Delay, Provide Delay Time
Has Parts	
Is Part Of	
Data Type(s)	Time Duration
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> The Estimated Departure Clearance Time (EDCT) entered for the flight to delay arrival time at an airport is used by automation to determine and assign the Delay Time to Absorb. [ATM IPOP ICD] Transmitted in AH, DH, FH, HP and HU messages as CMS 07e Coordination Time. In CMS, the field is called Provide Delay Time.
Reference	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.19 En Route Clearance Heading

En Route Clearance Heading	
<i>Definition</i>	Contains the En Route Controller Clearance heading, as entered by the controller in the fourth line of the Full Data Block.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Direction
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in HV message as CMS 155a FDB Fourth Line Heading.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.20 En Route Clearance Speed

En Route Clearance Speed	
<i>Definition</i>	This data element contains the En Route Controller Clearance speed, as entered by the controller in the fourth line of the Full Data Block.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Speed
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> The method of measurement is Indicated Airspeed (IAS), usually in knots or mach. [ATM IPOP ICD] Transmitted in HF message as CMS 155b FDB Fourth Line Speed.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.21 En Route Clearance Text

En Route Clearance Text	
<i>Definition</i>	This data element contains free-form text entered by the En Route Controller, to be associated with the Clearance in the fourth line of the Full Data Block.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> Valid input includes up arrow, down arrow, and overcast symbol.
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in HF message as CMS 155c Free Form Text.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.22 Estimated Departure Clearance Time or Cancellation

Estimated Departure Clearance Time or Cancellation	
<i>Definition</i>	The assigned flight departure time for a proposed flight plan inbound to a controlled airport with a ground delay in effect or a cancellation indicator.
<i>Alternate Names</i>	EDCT
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Complex
<i>Range of Values</i>	If enumeration, {C}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> Made up of the Departure time (Date Time) or Cancel indicator (Enumeration {C}). [ATM IPOP ICD] Transmitted in ET and ID messages as CMS 92a Expect Departure Clearance Time. An EDCT value of "C" indicates the EDCT has been cancelled.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.23 Fixed Airspace Volume Number Containing First Adapted Arrival Route Fix

Fixed Airspace Volume Number Containing First Adapted Arrival Route Fix	
<i>Definition</i>	Contains the uncombined Fixed Airspace Volume (FAV) number containing the first Adapted Arrival Route (AAR) fix.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Numeric String
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] The FAV containing the first AAR fix may be repeated up to four times.
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in AH, FH and HU message as CMS 143b Uncombined FAV Containing the First AAR Fix.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.24 Flight Plan Identifier

Flight Plan Identifier	
<i>Definition</i>	The flight plan identifier is used to uniquely name a flight plan within the scope of its flight.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Alphanumeric String
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • This element could be used to identify a handle or key for the flight object in some system - for example, a legacy system that uses some identifier for the flight object other than GUFID. The usage of this element will be determined at the regional level, and it may be the case this element is not exchanged globally. <ul style="list-style-type: none"> ○ This could be an identifier generated by an ANSP. In the United States, this will be the ERAM GUFID - an identifier unique for the flight in the NAS. ○ This could be an identifier generated and used by the aircraft operator.
<i>Reference</i>	<ul style="list-style-type: none"> • FIXM Development Team collaboration

3.25 Flight Plan Route

Flight Plan Route	
Definition	This element is the filed route. It only includes acknowledged auto routes. Once the flight is active, this element shows the currently cleared route the airplane will fly from the departure airport to the arrival airport.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	
Business Rules	<ul style="list-style-type: none"> The field must contain a minimum of two elements containing the departure element followed by the destination element.
Notes	<ul style="list-style-type: none"> [IMPLEMENTATION_NOTES] REPLACES: This data element replaces FIXM Core data element Route. [ATM IPOP ICD] Transmitted in AH, FH, and HU messages as CMS 10a Flight Plan Route. [ATM IPOP ICD] The field is an optionally repeating fix-route-fix sequence, where the first element of the route field is the first fix element, and the second element of the route field is the first route element. Periods (.) delimit elements in the flight plan route, and a fix or route element may be null (..). When a fix element is followed by a null route element followed by a fix element (fix..fix), the sequence is called a direct route segment. When a route element is followed by a null fix element followed by a route element (route..route), the junction fix is implied. Special tailoring symbol may be included (./.), as well as, special second elements such as .., .VFR., .DVFR., special indicators for military routes with re-entry, and special optional control suffixes on fixes. Special suffixes can include Auto Route Inhibit and Delay Data for a fix.
Reference	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.26 Ground Speed

Ground Speed	
Definition	The rate of travel of an aircraft relative to earth fixed coordinates.
Alternate Names	GPS Reported Speed, Assigned Indicated Speed
Has Parts	
Is Part Of	
Data Type(s)	Speed
Range of Values	[000-999]
Business Rules	
Notes	<ul style="list-style-type: none"> • This is the velocity reported by ground based radar tracking. It is also the velocity reported by the Global Positioning System. • Ground speed can be determined by the vector sum of the aircraft's true airspeed minus the current wind speed and direction. • [ATM IPOP ICD] Transmitted in AH, FH, HU, NP, NU, and TH messages as CMS 05b Ground Speed. [IMPLEMENTATION_NOTES] NAS_EXTENSION: This data element extends FIXM Core data element - 275, name - Ground Speed (FIXM_version - 1.0). • [ATM IPOP ICD] The ground speed value is 000, if unknown.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.27 Handoff Event Category

Handoff Event Category	
<i>Definition</i>	Characterizes a handoff in terms of its status.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{ I, A, R, T, U, F }
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • [ATM IPOP ICD] Transmitted in OH message as CMS 336a Handoff Event Indicator. • The meaning of the enumerated value is: I for Initiation, A for Acceptance, R for Retraction, T for Take Control, U for Update, F for Failure.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.28 Hold Data Action

Hold Data Action	
<i>Definition</i>	Specifies whether the hold is being applied or removed.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{APPLY, REMOVE}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in HH and HO messages as CMS 21e Hold Data Action.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.29 Hold Data Expect Further Clearance Time

Hold Data Expect Further Clearance Time	
<i>Definition</i>	The time the flight can expect further clearance at the specified hold fix.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in HH and HO messages as CMS 21d Hold Data Time.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.30 Hold Data Fix

Hold Data Fix	
<i>Definition</i>	The location for the flight to Hold along the filed route of flight.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Location
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in HH and HO messages as CMS 21a Hold Data Fix.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.31 In-Block Time - Scheduled

In-Block Time - Scheduled	
<i>Definition</i>	Scheduled gate time of arrival for a flight, as provided by the OAG (Official Airline Guide).
<i>Alternate Names</i>	Scheduled Gate Time of Arrival, SGTA
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> The element is only present for flights which were created from the OAG; otherwise, it is null.
<i>Notes</i>	<ul style="list-style-type: none"> This element is TFMS specific, indicating the flight was created from the OAG.
<i>Reference</i>	<ul style="list-style-type: none"> CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008

3.32 Interim Altitude Information

Interim Altitude Information	
<i>Definition</i>	The altitude an aircraft is cleared to maintain different from that in the flight plan.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Complex
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • The aircraft will (climb or descend to and) maintain the new altitude for a short period of time and, subsequently, be re-cleared to the altitude in the flight plan, or a new altitude, or a new interim altitude. • An interim value of "D" indicates the interim altitude has been deleted. • Consists of an altitude (of Type Altitude) or an indicator to delete ((Enumeration {D})). • [ATM IPOP ICD] Transmitted in HE, LH, NP, and NU messages as CMS 76ab Interim Altitude. [ATM IPOP ICD] Leading zeros are required.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.33 Local Intended Route

Local Intended Route	
Definition	The flight plan route that is coordinated to penetrated facilities. It consists of the filed route (CMS field 10a) merged with any expected-to-be-applied-by-the-controlling-center ADRs, ADARs or AARs applied.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Alphanumeric String
Range of Values	
Business Rules	
Notes	<ul style="list-style-type: none"> • Limit length to 1000 character alphanumeric string with the addition of the asterisk (*) character representing the route. • [ATM IPOP ICD] Transmitted in AH, FH and HU messages as CMS 10b Local Intended Route.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.34 Off-Block Time - Scheduled

Off-Block Time - Scheduled	
<i>Definition</i>	Scheduled gate time of departure for a flight, as provided by the OAG (Official Airline Guide).
<i>Alternate Names</i>	Scheduled Gate Time of Departure, SGTD
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> The element is only present for flights which were created from the OAG; otherwise, it is null.
<i>Notes</i>	<ul style="list-style-type: none"> This element is TFMS specific, indicating the flight was created from the OAG.
<i>Reference</i>	<ul style="list-style-type: none"> CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008

3.35 Performance-Based Navigation Accuracy

Performance-Based Navigation Accuracy	
Definition	This is the flight's navigation accuracy value for the phase of flight, specified in the Performance-Based Navigation Phase.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Float
Range of Values	[0.01-99.99]
Business Rules	
Notes	<ul style="list-style-type: none"> • [ATM IPOP ICD] Transmitted in FH, AH, and HU messages as CMS 925[a b c d e f g h i j k l] RNV entries and RNP entries. • [ATM IPOP ICD] If the accuracy measurement includes on board navigation performance monitoring and alerting, the measurement measures RNP; if not, the measurement measures RNAV.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.36 Performance-Based Navigation Category

Performance-Based Navigation Category	
Definition	This is an enumeration indicating whether the accuracy measure in Performance-Based Navigation Accuracy is measuring RNAV or RNP.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Enumeration
Range of Values	{RNP, RNV}
Business Rules	
Notes	<ul style="list-style-type: none"> • Valid values are: <ul style="list-style-type: none"> ○ RNV - Area Navigation ○ RNP - Required Navigation Performance • [ATM IPOP ICD] Transmitted in FH, AH, and HU messages as CMS 925[a b c d e f g h i j k l] RNV entries and RNP entries. • [ATM IPOP ICD] If the accuracy measurement includes on board navigation performance monitoring and alerting, the measurement is called RNP; if not, the measurement is categorized as RNAV.
Reference	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.37 Performance-Based Navigation Phase

Performance-Based Navigation Phase	
<i>Definition</i>	The phase of flight for which navigation performance is being recorded.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{D, A, E, G, L, S}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • The meaning of the enumerated values is: <ul style="list-style-type: none"> ○ D - Departure ○ A - Arrival ○ E – En route- Enroute ○ G - Oceanic ○ L - Spare1 ○ S - Spare2 • [ATM IPOP ICD] Transmitted in FH, AH, and HU messages as CMS 925[a b c d e f g h i j k l] RNV entries and RNP entries.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.38 Progress Report Fix

Progress Report Fix	
<i>Definition</i>	The position part, of a progress report message, which is used to update the position of an active flight plan or release it from a prior hold status.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Location
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • [ATM IPOP ICD] Transmitted in PH message as CMS 18a Progress Report Fix. • [ATM IPOP ICD] Fixes in the route are represented using a fix name, latitude/longitude, or fix radial distance.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.39 Progress Report Time

Progress Report Time	
<i>Definition</i>	The time component, of a progress report message, which is used to update the position of an active flight plan or release it from a prior hold status.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in PH message as CMS 18d Progress Report Time.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.40 Requested Altitude

Requested Altitude	
<i>Definition</i>	The cruise altitude filed or requested for the proposed flight.
<i>Alternate Names</i>	Flight Level
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Complex
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • This complex data type is comprised of one or a block of Altitudes and Flight Rules. • [IMPLEMENTATION_NOTES] NAS_EXTENSION: This data element extends FIXM Core data element Cruising Level (FIXM_version - 1.0). • [ATM IPOP ICD] Transmitted in AH and FH messages as CMS 09[a b c d e f g] Requested Altitude. • [ATM IPOP ICD] May be represented as any one of the following: <ul style="list-style-type: none"> ○ altitude or flight level ○ vfr-on-top ○ vfr-on-top with altitude ○ aircraft operating above a specified altitude ○ block of altitudes or flight levels ○ vfr flight ○ vfr flight with altitude
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.41 Runway Arrival Time - Airspace User Estimated

Runway Arrival Time - Airspace User Estimated	
<i>Definition</i>	The estimated time of runway arrival, as provided by the Airspace User.
<i>Alternate Names</i>	Flight Operator Estimated Runway Time of Arrival, LRTA
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • Provided by airspace users via CDM messages.
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012 • CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008

3.42 Runway Arrival Time - Earliest

Runway Arrival Time - Earliest	
<i>Definition</i>	The earliest acceptable arrival time provided by the Airspace user for a flight.
<i>Alternate Names</i>	Earliest Runway Time of Arrival, ERTA
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • Provided by airspace users via CDM messages. • The field may be null.
<i>Notes</i>	<ul style="list-style-type: none"> • In U.S. CDM, if the user has sent this field in a CDM FC or FM message, then the most recent such time is contained in this field. A user can limit how much earlier TFMS will move a flight by sending an Earliest Runway Time of Arrival (ERTA). This ensures a flight will not get assigned a CTA in a Ground Delay Program earlier than desired by the user.
<i>Reference</i>	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.43 Runway Arrival Time - Preferred

Runway Arrival Time - Preferred	
<i>Definition</i>	A runway arrival time which, when considered in aggregate with other flights for that Airspace User, indicates the preferred arrival sequence.
<i>Alternate Names</i>	Preferred Runway Arrival Time
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • A Preferred Time is not the same as a Slot. • A Slot is a time allocated by ATC in certain air traffic management situations, while a Preferred Time indicates the Airspace User's desire. • A Slot may align with a Preferred Time, or it may differ. • A Slot has a higher operational priority for achievement than a Preferred Time. • A Preferred Time also supports activities which may be proposing or revising a Slot, and is an indication in situations where a Slot has not been, or is not normally, allocated. • Note that, although most major airports employ Slot allocation practices, it is not a mandatory practice for all airports.
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> • K. Howard, CDM Message Formats, Version 2.2, Volpe NTSC (USDOT RITA) Memorandum, 3 November 2005.

3.44 Runway Arrival Time - Slot Credit Substitution Earliest Acceptable

Runway Arrival Time - Slot Credit Substitution Earliest Acceptable	
Definition	The earliest time at which the Airspace user will accept a slot in a Traffic Management Initiative (TMI) [Ground Delay Program (GDP)/ Airspace Flow Program (AFP)] in return for a yielded slot.
Alternate Names	Slot Credit Substitution Earliest Acceptable Runway Time of Arrival
Has Parts	
Is Part Of	
Data Type(s)	Date Time
Range of Values	
Business Rules	<ul style="list-style-type: none"> • Provided by airspace users via Slot Credit Substitution CDM message.
Notes	
Reference	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.45 Runway Arrival Time - Slot Credit Substitution Latest Acceptable

Runway Arrival Time - Slot Credit Substitution Latest Acceptable	
Definition	The latest time at which the Airspace user will accept a slot in a Traffic Management Initiative (TMI) [Ground Delay Program (GDP)/Airspace Flow Program (AFP)], in return for a yielded slot.
Alternate Names	Slot Credit Substitution Latest Acceptable Runway Time of Arrival
Has Parts	
Is Part Of	
Data Type(s)	Date Time
Range of Values	
Business Rules	<ul style="list-style-type: none"> • Provided by airspace users via Slot Credit Substitution CDM message.
Notes	
Reference	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.46 Runway Arrival Time - Traffic Flow Management System Estimated

Runway Arrival Time - Traffic Flow Management System Estimated	
<i>Definition</i>	The estimated runway arrival time considering all data sources, as determined by Traffic Flow Management System (TFMS).
<i>Alternate Names</i>	Estimated Time of Arrival, ETA
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> • CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008 • CSC 'Aircraft Situation Display to Industry: Functional Description and Interface Control Document for the XML Version', Ver. 1.8, April 15, 2011

3.47 Runway Departure Time - Airspace User Estimated

Runway Departure Time - Airspace User Estimated	
<i>Definition</i>	The estimated time of runway departure, as provided by the Airspace User.
<i>Alternate Names</i>	Flight Operator Estimated Runway Time of Departure, LRTD
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • Provided by airspace users via CDM messages.
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> • VNTSC 'CDM message Formats' ver 2.2, March 31, 2005 • CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008

3.48 Runway Departure Time - Earliest

Runway Departure Time - Earliest	
<i>Definition</i>	Earliest acceptable runway departure time (wheels-off time) an Airspace user provides for a flight.
<i>Alternate Names</i>	Earliest Runway Time of Departure, ERTD
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	<ul style="list-style-type: none"> • Provided by airspace users via CDM messages. • The field may be null.
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.49 Runway Departure Time - Traffic Flow Management System Estimated

Runway Departure Time - Traffic Flow Management System Estimated	
<i>Definition</i>	The estimated runway departure time considering all data sources, as determined by Traffic Flow Management System (TFMS).
<i>Alternate Names</i>	Estimated Time of Departure, ETD
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008

3.50 Slot Hold Status

Slot Hold Status	
Definition	If a flight is controlled and cancelled [e.g., has a Controlled Time of Departure (CTD), Controlled Time of Arrival (CTA), and Arrival Slot (ASLOT)], the slot hold status indicates whether the slot associated with this flight is being held, or would be held, by the Airspace User for the next full compression.
Alternate Names	SL_HOLD
Has Parts	
Is Part Of	
Data Type(s)	Enumeration
Range of Values	{H, R}
Business Rules	<ul style="list-style-type: none"> • Provided by airspace users via CDM messages (FM, FX messages). • Only applies for a flights controlled as part of a Ground Delay Program (GDP).
Notes	<ul style="list-style-type: none"> • Values: <ul style="list-style-type: none"> ○ H - Hold ○ R - Release
Reference	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

3.51 Special Aircraft Indicator

Special Aircraft Indicator	
<i>Definition</i>	When present, the value is "H" indicating the flight is a heavy jet (flying IFR). The value can be filed or amended.
<i>Alternate Names</i>	SAI
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{H}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in AH, DH, FH, HU, NP and NU messages as CMS 03a Special Aircraft Indicator.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.52 Target Altitude

Target Altitude	
<i>Definition</i>	The Mode C target altitude, corrected for barometric pressure.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Altitude
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in TH message as CMS 172ab.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.53 Target Position

Target Position	
<i>Definition</i>	Aircraft target position, as reported by one raw radar return.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Location
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • [ATM IPOP ICD] Transmitted in TH message as CMS 171a Target Position. • Target Position is expressed as a latitude/longitude.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.54 Target Position Time

Target Position Time	
<i>Definition</i>	The time associated with the raw radar return.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Date Time
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> [ATM IPOP ICD] Transmitted in TH message as CMS 173a Time of Target Data.
<i>Reference</i>	<ul style="list-style-type: none"> National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.55 Track Speed Components

Track Speed Components	
<i>Definition</i>	Speed of the radar surveillance track along the X and Y components.
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Complex
<i>Range of Values</i>	
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • Consists of speed along the X-axis (of type Speed) and speed along the Y-axis (of type Speed). • [ATM IPOP ICD] Transmitted in TH message as CMS 23e Track Velocity.
<i>Reference</i>	<ul style="list-style-type: none"> • National Airspace System (NAS)-IR-82422412-01, En Route Automation Modernization (ERAM)/Air Traffic Management (ATM) Intermediate Point of Presence (IPOP) Interface Control Document, Rev A, September 30, 2008

3.56 Traffic Flow Management System Flight Plan Remarks

Traffic Flow Management System Flight Plan Remarks	
Definition	NAS Flight Plan Field 11 remarks processed by TFMS and used for TFM purposes.
Alternate Names	
Has Parts	
Is Part Of	
Data Type(s)	Enumeration
Range of Values	{NRP, LFG, III, ATV, SWP, DVT, ADC, FCA, WXR}
Business Rules	
Notes	<ul style="list-style-type: none"> • This data element is in addition to the Core element "Remarks". • Description of indicators used are: <ul style="list-style-type: none"> ○ NRP: National Route Program flight - Flight plan has been processed with the keyword 'NRP' or its aliases in field 11. This indicates the flight is participating in the National Route Program. ○ LFG: Lifeguard or MEDEVAC flight - Flight plan has been processed with the keyword 'LIFEGUARD' or its aliases in field 11. ○ III: Flight is capable of utilizing CAT3 landing minimums - Flight plan has been processed with the keyword 'CATIII' or its aliases in field 11. ○ ATV: Altitude Reservation - Flight plan has been processed with the keyword 'ALTRV' or its aliases in field 11. ○ SWP: Swapping - Flight plan has been processed with the keyword 'SWAP' or its aliases in field 11. ○ DVT: Diversion Recovery flight - Flight plan has been processed with the keyword 'DVRSN' or its aliases in field 11. ○ ADC: Advise Customs - Flight plan has been processed with the keyword 'ADCUS' or its aliases in field 11. ○ FCA: Flow Constrained Area - Flight plan has been processed with the keyword 'FCA' or its aliases in field 11. ○ WXR: Severe weather reroute - Flight plan has been processed with the keyword 'WXRTE' or its aliases in field 11.
Reference	<ul style="list-style-type: none"> • CSC, Traffic Flow Management System-to-Airline Operation Centre Network (TFMS-to-AOCNET) Interface Control Document (ICD) for the Traffic Flow Management-Modernization (TFM-M) Program, Final, Release 9, November 19, 2012

	<ul style="list-style-type: none">• CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008• Amendment No. 1 to the Procedures For Air Navigation Services - Air Traffic Management (PANS-ATM ICAO 4444)• Procedures for Air Navigation Services - Air Traffic Management (PANS-ATM ICAO 4444), 2007
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3.57 Traffic Flow Management System Flight Status

Traffic Flow Management System Flight Status	
<i>Definition</i>	Indicates the current status of the flight, as determined by Traffic Flow Management System (TFMS).
<i>Alternate Names</i>	
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{Scheduled, Controlled, Filed, Active, Ascending, Cruising, Descending, Completed, Cancelled, Decontrolled, Unknown, None, Error, Other}
<i>Business Rules</i>	<ul style="list-style-type: none"> TFMS generates the flight status based on all available data sources and uses it to determine how to model a flight and how to treat a flight in a Traffic Management Initiative.
<i>Notes</i>	
<i>Reference</i>	<ul style="list-style-type: none"> CSC 'Traffic Flow Management Modernization FDB to FTM Data Message Definitions', Feb 12, 2008 CSC 'Aircraft Situation Display to Industry: Functional Description and Interface Control slot Document for the XML Version', Ver. 1.8, April 15, 2011

3.58 Wake Turbulence Category - NAS

Wake Turbulence Category - NAS	
<i>Definition</i>	NAS classification of the aircraft wake turbulence, based on wingspan and Maximum Takeoff Weight (MTOW).
<i>Alternate Names</i>	Wake Turbulence
<i>Has Parts</i>	
<i>Is Part Of</i>	
<i>Data Type(s)</i>	Enumeration
<i>Range of Values</i>	{A, B, C, D, E, F}
<i>Business Rules</i>	
<i>Notes</i>	<ul style="list-style-type: none"> • AIRCRAFT WAKE CATEGORIES. For the purposes of Wake Turbulence Separation Minima, aircraft are categorized as Category A through Category F. Each aircraft is assigned a category based on wingspan and maximum takeoff weight (MTOW). <ul style="list-style-type: none"> ○ Category A - Aircraft capable of MTOW of 300,000 pounds or more and a wingspan greater than 245 feet. ○ Category B - Aircraft capable of MTOW of 300,000 pounds or more and a wingspan greater than 175 feet and less than or equal to 245 feet. ○ Category C – Aircraft capable of a MTOW of 300,000 pounds or more and a wingspan greater than 125 feet and less than or equal to 175 feet. ○ Category D – Aircraft capable of a MTOW of less than 300,000 pounds and a wingspan greater than 125 feet and less than or equal to 175 feet, or aircraft with a wingspan greater than 90 feet and less than or equal to 125 feet. ○ Category E – Aircraft capable of a MTOW greater than 41,000 pounds with a wingspan greater than 65 feet and less than or equal to 90 feet. ○ Category F – Aircraft capable of a MTOW of less than 41,000 pounds and a wingspan less than or equal to 125 feet, or aircraft capable of a MTOW less than 15,500 pounds regardless of wingspan, or a powered sailplane.
<i>Reference</i>	<ul style="list-style-type: none"> • FAA Notice N JO 7110.608, November 1, 2012

Appendix A: Acronym List

Acronym	Definitions
AAR	Adapted Arrival Route
ADAR	Adapted Departure Arrival Route
ADC	Advise Customs
ADR	Adapted Departure Route
AFP	Airspace Flow Program
ALTRV	Altitude Reservation
ANSP	Air Navigation Service Provider
AOCNET	Airline Operations Centre Network
ASLOT	Arrival Slot
ATC	Air Traffic Control
ATM	Air Traffic Management
ATV	Altitude Reservation
CDM	Collaborative Decision Making
CID	Computer Identification
CMS	Common Message Set
CTA	Controlled Time of Arrival
CTD	Control Time of Departure
DOT	Department of Transportation
DVFR	Defense Visual Flight Rules
DVT	Diversion Recovery Flight
ECID	En Route Automation Modernization Computer Identification
EDCT	Estimated Departure Clearance Time
ERAM	En Route Automation Modernization
ERAM CID	En Route Automation Modernization Computer Identification
ERTA	Earliest Runway Time of Arrival
ERTD	Earliest Runway Time of Departure
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure

FAV	Fixed Airspace Volume
FCA	Flow Constrained Area
FDB	Flight Plan Data Bank
FIXM	Flight Information Exchange Model
FTM	Flight Training Manual
GDP	Ground Delay Program
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GUFID	Globally Unique Flight Identifier
IAS	Indicated Airspeed
ICD	Interface Control Document
ID	Identification
IFR	Instrument Flight Rules
IPOP	Intermediate Point of Presence
LFG	Lifeguard
LRTA	Latest Runway Time of Arrival
LRTD	Latest Runway Time of Departure
mbar	Millibar
MTOW	Maximum Takeoff Weight
NAS	National Airspace System
NRP	National Route Program
NTSC	National Transportation Systems Centre
OAG	Official Airline Guide
PANS	Procedures for Air Navigation Services
RITA	Research and Innovation Technology Administration
RNAV	Area Navigation
RNP	Required Navigation Performance
SAI	Special Aircraft Indicator
SGTA	Scheduled Gate Time of Arrival
SGTD	Scheduled Gate Time of Departure
SWP	Swap
TFMS	Traffic Flow Management System

TMI	Traffic Management Initiative
U.S.	United States
VFR	Visual Flight Rules
WAAS	Wide Area Augmentation System
WXR	Weather Reroute