MILITARY COMMUNICATIONS-ELECTRONICS BOARD

MCEB

STANDARD SPECTRUM RESOURCE FORMAT (SSRF)

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Foreword

Purpose: This document defines standard data elements for automated exchange of radio-frequency (RF) spectrum-related data. Basic spectrum management transactions supported by this standard include:

1. RF equipment and antenna parameters
2. Spectrum supportability requests and associated host nation replies
3. Temporary and permanent frequency proposals and assignments
4. Frequency allotments
5. Joint Restricted Frequency Lists (JRFL)
6. Interference reports

Electronic Warfare and JCEOI transactions will be included in future releases.

Authority: This document is issued under the authority of DOD Directive 5100.35, Military Communications-Electronics Board (MCEB) with changes thereto.

Amendments and Review: This document will be reviewed by the Spectrum Operations Permanent Working Group (SOPWG) of the Frequency Panel (FP) and amendments will be issued by the Military Secretary, MCEB, when appropriate. All changes to this document will be coordinated to ensure this standard remains aligned with the National Telecommunications and Information Administration (NTIA) Office of Spectrum Managements Data Dictionary (OSMDD) and the North Atlantic Treaty Organization (NATO) Spectrum Management Allied Data Exchange Format - eXtensible Markup Language (SMADEF-XML) standards.

Releasability: Unlimited. This document is approved for public release.

FOR THE CHAIRMAN:

O'NEILL.THOMAS.EDWARD.IV.1094756835

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DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USN, cn=O'NEILL.THOMAS.EDWARD.IV.1094756835
Date: 2014.08.05 10:44:55 -04'00'

THOMAS O'NEILL
CAPT, USN
MCEB Military Secretary

Distribution:
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I. Concept of Operations

1. General

The ultimate goal of spectrum operations is to ensure unhindered military access to the electromagnetic spectrum. This data-exchange standard supports the business processes needed to achieve this goal, however formulating and implementing actual business processes are the responsibility of the associated Community of Interest (COI).

2. Purpose

Standard Spectrum Resource Format (SSRF)-compliant systems are able to exchange spectrum data with the National Telecommunications and Information Administration (NTIA), the North Atlantic Treaty Organization (NATO), and with Combined Communications-Electronics Board (CCEB) nations.

3. Introduction

SSRF is based on the NATO Spectrum Management Allied Data Exchange Format-eXtensible Markup Language (SMADEF-XML) data standard. NTIA's Office of Spectrum Management Data Dictionary (OSMDD) is expected to also be compatible with SSRF and SMADEF-XML.

4. Legacy Standards

Various DoD spectrum-related data exchange standards have been developed, including:

* **SFAF:** The Standard Frequency Action Format (SFAF) is a line-oriented text format used by DOD, and by U.S. allies and coalition partners who use SPECTRUM XXI. SFAF files can be converted to SSRF.
* **GMF Card:** The Government Master File (GMF) Card is a line-oriented text format used by NTIA for frequency assignment data.
* **14 point format:** 14 Point is a line-oriented text message format used to exchange frequency assignment data in Partnership for Peace (PFP) Nations and some NATO Nations.
* **SMADEF:** The original line-oriented non-XML format used by NATO for both frequency assignment and spectrum supportability data.
* **DD Form 1494:** form used for spectrum supportability by the U.S., both internally and with many allies. Also known as J/F 12.
* **Spectrum Certification System (SCS):** GUI and database used by DOD and NTIA to exchange spectrum supportability data.
* **Forms 33, 34, and 35:** Paper forms used by NTIA to collect, process, and distribute spectrum supportability data.
* **EL-CID Files:** Equipment Location - Certification Information Database (EL-CID) files are compressed archives of non-SSRF XML data and attachments used by NTIA and federal agencies to exchange spectrum supportability data.

The differences between these standards are significant and round trip translations are not possible without significant data loss or human intervention. This SSRF standard is intended to eliminate these issues.

5. Configuration Control

5.1 General

Changes to SSRF shall be coordinated with NTIA and with the NATO SMADEF working group. The Frequency Panel (FP) may recommend unilateral changes to SSRF.

The SOPWG is responsible for monitoring or conducting coordination required to ensure NTIA and NATO interoperability, in accordance with the SOPWG Terms of Reference.

5.2 Management of version numbers

The MCEB Secretary shall approve and promulgate FP approved major changes and re-issue the document. SSRF versions are identified by a three part number: MajorVersion.MinorVersion.Revision (e.g. 1.2.2)

Version Part	Rationale for Increment	Stable implementation
Major Version	1. Addition or major modification of a Volume 2. Addition of a group of elements 3. Removal of a group of elements 4. Major re-organization of a group of elements 5. A change in policy or procedures	Not less than two years
Minor Version	Additions, deletions or modifications, such as: * Changing an element or attribute from optional to mandatory, or from mandatory to optional * Changing the data type of an attribute * Changing or adding a validation rule	Between 1 and 2 years
Revision	1. Editorials (bug fixes, new text, remove text etc.) 2. Adding optional attributes to an element 3. Adding national elements 4. Changing the facets of a data type, such as pattern, range or size increase, new code in a code list, etc. (old codes should be declared obsolete in the text rather than deleted)	At least 6 months

5.3 Agreement date versus implementation date

Tools based on different versions of SSRF may not be interoperable. Each approved version of SSRF contains both the agreement date and an implementation date. The implementation date specifies a period of time, agreeable to all parties, sufficient to develop or purchase software tools to accommodate the new version of SSRF, before it is put into operational use. Data suppliers may support multiple versions of SSRF.

5.4 National Elements

The SSRF standard contains a set of USA national elements that are not used in the NATO SMADEF standard. These elements are denoted by “US” next to the element or field name. These elements will be removed from messages converted to SMADEF for transmission to NATO.

6. Edit Authority, Dataset Locking & Change Control

6.1 Edit Authority

Edit authority may be passed within an SSRF-compliant system, based on local business practices. Due to the nature of XML, edit authority is not enforceable when a dataset exits a system domain. Administrative controls are required to prevent inadvertent or unauthorized changes to datasets.

Example 1

An SSRF equipment certification record is created by a parametric data capture tool (e.g., Stepstone). The final record is referenced by a frequency assignment system (e.g., SXXIO). The frequency assignment system SHALL NOT change the original equipment certification record.

Example 2

A frequency proposal is sent from a proposal system (e.g., WIN-T, SPEED) to a frequency assignment system (e.g., SXXIO). During the internal frequency assignment process the receiving system MAY make changes to an internal copy of the proposal, but SHOULD NOT modify the original proposal message.

II. Core Data Elements

1. Introduction to Data Elements

Contents

Status of the document
General Information
Definitions
Serial numbers and Datasets
Data Values - Forbidden characters
Guide to data elements
Quick Guide to Regular Expressions

General Information

The STCCT-3 in March 2012 will have to decide which information from former Volume 1 and Volume 2 section 1 should be kept and in which format. These information elements will not impact the format described in this document.

Definitions

Domain

Simple type derived from an XML Schema atomic type, with facet restrictions; implemented in XSD as xs:simpleType with restrictions.

Enum

Format for a Data Item with a multiple occurrence of its data (generally from a code list); implemented in XSD as a xs:list.

CodeList

Simple type with a restriction and an enumeration.

Data Item

Atomic data entry, single-occurring within an element, complemented with metadata attributes as required. The Composite XML Source contains:
<ItemDef> (global definitions and user explanations for these data items which may be re-used in several complex elements);
<Item> (local definition of a data item within an element);
<ItemRef> (local use within an element of a globally defined Data Item).

Group

Group of data items re-used in several elements, or having a condition such as “both data items must be filled”. The Composite XML Source contains <GroupDef> (global definition of a Group) and >GroupRef< (local use within an element of a globally defined Group).

Type

Complex type composed of Data Items, Groups, and Elements. A Type may contain either a sequence of Datasets (only used for Body), or a sequence of Item, ItemRef, GroupRef, followed by Elements and XOR.

Element

Instance of a Type.

Dataset

Specialised version of an Element, used only as first level elements under the root element.

Serial numbers and Datasets

The following codes MUST be used as the third part of the Serial of each dataset:

Code	Type of dataset
AD	Administrative
AL	Allotment

AN	Antenna
AS	Assignment
CN	Contact
CP	Channel Plan
EX	External Reference
FD	Force Element Deployment
FE	Force Element
HD	Spectrum Supportability Reply (Host Nation Declaration)
IF	Interference Report
JA	Role
JR	JRFL
LO	Location
NT	Note
OR	Organisation
RX	Receiver
SA	Satellite
SR	Spectrum Supportability Request
TA	Table of Allocations
TR	RF System
TX	Transmitter

Data Values - Forbidden characters

* Data values MUST comply with the format specified for the data item. The item formats or patterns, as shown in this document, are enforced in the associated XML Schema. XML messages not well-formed (not compliant with the XML standard) or not valid (not compliant with the SMADEF-XML Schema definition and SMADEF-XML eXtensible Stylesheet Language Transformation (XSLT)) SHOULD be rejected by a SMADEF-XML "compliant" system.
* Mixed upper and lower-case are permitted in any data entry, and should be maintained in data repository implementations, except for specific data items which must always be exchanged in uppercase.
* The units mentioned in the data item definitions are the units in which data MUST be exchanged. Software tools shall allow the user to establish their own units in screen displays and output reports. For example, power is exchanged in dBW, which is in accordance with ITU procedures; however some organisations may choose to view and report power (at the user interface level) power in watts, kilowatts or megawatts.
* A character is an atomic unit of text as specified by ISO/IEC 10646:2000 (also known as Unicode). The document character set or base character set of XML is the Universal Character Set (UCS) defined by ISO/IEC 10646. It does not mean that all XML documents have to be encoded as Unicode, but it does mean that these documents can only contain characters defined by Unicode. Note that character sets and character encodings are different things - for example, the full Unicode repertoire can be encoded in more than one way, eg. UTF-8, UTF-16 and UTF-32. Any character encoding can be used in an XML document as long as it is properly declared and the characters it represents are a subset of the Unicode repertoire (It would be extremely unusual to find one that wasn't a subset). Inside SMADEF-XML, the valid characters are restricted to the ISO 8859-15 list (standard character encoding defined by International Organization for Standardization, also known as Latin-9).
* Because XML is a tag-based text format, some characters are reserved for the start and end delimiters of the tags and internal XML notations. Therefore, the following characters are not allowed as data entries, but can be "escaped", (i.e. replaced by an equivalent string of characters) as follows:

forbidden character	escape string
<	<
>	>
"	"
&	&

  It is the responsibility of the software generating the SMADEF-XML documents to ensure that these characters are correctly "escaped".

Guide to data elements

Each XML data element is presented in the following format:

1. Each data element starts on a new page with the element tag and full name.
2. A summary table contains information about each XML attribute, and if applicable about the element value.
   - For each item the table shows: its tag, its full name, its occurrence within the element (required or optional), and its format. See also the special considerations regarding classification.
   - If applicable, the element content. The element content has no tag.
   - After the items, at the bottom of the table, where applicable, additional rows may show:
     . Inherits From: in the cases where an element inherits from another element (XML Schema "extension")
     . Sub-Element of: lists the element(s) of which the element is a Sub-Element of.
     After each sub-element is indicated the possible numbers of occurrences:
     [0..1] means "between 0 and 1 occurrences" (i.e. OPTIONAL); [0..n] means "between 0 and n occurrences" (i.e. OPTIONAL and repeatable);
     [1..1] means "exactly 1 occurrence" (i.e. REQUIRED);
     [1..n] means "between 1 and n occurrences" (i.e. REQUIRED and repeatable).
     . Sub-elements: lists the sub-elements of the current element.

   The formats are coded as follows:
   - **Sx** is a character string of x characters maximum, **USx** is a Uppercase character string of x characters maximum (the attribute accepts only upper case characters).
   - **D** is a date value formatted in 10 characters as `YYYY-MM-DD (year-month-day)`. This format is compliant with the W3C Recommendation on XML Schema.
   - **DT** is a date / time value formatted in 20 to 24 characters as `YYYY-MM-DDThh:mm:ss[.ddd]Z` (year-month-day"T"hours:minutes:seconds.milliseconds"Z"), where the milliseconds part is optional. This format is compliant with the W3C Recommendation on XML Schema.
   - **Memo** is a free text value of unlimited length.
   - **UN(x)** is an unsigned (positive) integer number of maximum x digits
   - **SN(x)** is an integer number of maximum x digits (excluding minus sign)
   - **UN(x.y)** is a unsigned (positive) decimal number of maximum x digits (excluding decimal point as applicable) and with a maximum of y decimal digits.
   - **SN(x.y)** is a decimal number of maximum x digits (excluding minus sign and decimal point as applicable) and with a maximum of y decimal digits.
   - **double** is a number expressing either in floating point (e.g. 0.015) or scientific notation or using scientific notation (decimal number followed by an optional "E" for the power of 10, e.g. 1.5E-2 representing the same value 0.015).

   Where applicable, the types **UN** and **SN** may be followed by an additional range constraint in the form [a .. b] meaning that the value is restricted to be between a and b inclusive. They may also be followed by an additional unit in parenthesis. Example: Sensitivity value: SN(5.2) [-140.00 .. -30.00] *(dBm)*
3. The Description paragraph contains a brief description of the purpose of the element. If a diagram is associated to the element, a hyperlink to the diagram will be displayed at the end of this section.
4. The Input Requirement paragraph contains the rules for submission and any examples needed for clarification of the rules of submission. The conditions indicated in the summary table are explained in this paragraph.
   In some elements or attributes, the possible values are restricted to a set of values or a list of codes. In some cases, these lists come from official sources and cannot be changed (e.g. the list of countries comes from a STANAG); in other cases, the list of values has been predefined but new values can be inserted by the users as situation or techniques evolve. New values are requested through a separate business process.
   The Validation Rules are implemented either in the XML Schema (in this case they are labeled [XSD] at the start of the line) or in the eXtensible Stylesheet Language Transformation (XSLT) (indicated as [XSL] at the start of the line). The list of possible errors is given below.
5. The Example paragraph contains one or several examples of typical entry; where items are inter-related, the examples show in general this relationship.
6. If necessary, general and/or national Notes.

Validation Rules

[XSD ERR CODELIST]

The data item MUST contain one of the values from the specified code list. Any other value is not permitted.

[XSD ERR REGEX]

The data item format MUST comply to the specified regular expression.

[XSD ERR UNIQUE]

The value of the data item MUST be unique within the parent element, i.e. all other sibling items of the same name MAY NOT share the same value.

[XSD ERR RELATED]

The value of the data item MUST exactly match the value of the referenced data item within the same dataset (e.g. the Assignment/Link/StationConfig/StationID must match one of the Assignment/Station/StationID).

[XSD WRN RELATED]

The data item, or combination of data items, SHOULD refer to an existing dataset or data element in the data repository.

[XSL ERR DSTYPE]

The third part of the serial MUST equal (one of) the specified two-letter code(s).

[XSL ERR MINMAX]

The value of the current data item must be greater (or greater or equal, as indicated) than the value of the specified data item.

[XSL ERR CLS]

The classification level of all data items within the dataset MUST be lower or equal to the dataset overall classification.

Quick Guide to Regular Expressions

Character Classes

A "character class" matches only one out of several characters. To match an "a" or an "e", use [ae]. A character class matches only a single character. The order of the characters inside a character class does not matter. Use a hyphen inside a character class to specify a range of characters. [0-9] matches a single digit between 0 and 9.
You can use more than one range: [0-9a-fA-F] matches a single hexadecimal digit, case insensitively.
You can combine ranges and single characters. [0-9a-fxA-FX] matches a hexadecimal digit or the letter X.
Typing a caret after the opening square bracket will negate the character class. The result is that the character class will match any character that is not in the character class. q[^x] matches qu in question. It does not match Iraq since there is no character after the q for the negated character class to match.

Shorthand Character Classes

\d matches a single character that is a digit,
\w matches a "word character" (alphanumeric characters plus underscore),
\s matches a whitespace character (includes tabs and line breaks).
The above three shorthands also have negated versions. \D is the same as [^\d], \W is short for [^\w] and \S is the equivalent of [^\s]

Repetition

The question mark makes the preceding token in the regular expression optional. E.g.: colou?r matches colour or color.
The asterisk or star tells the engine to attempt to match the preceding token zero or more times.
The plus tells the engine to attempt to match the preceding token once or more.
<[A-Za-z][A-Za-z0-9]*> matches an HTML tag without any attributes. <[A-Za-z0-9]+> is easier to write but matches invalid tags such as <1>.
Use curly braces to specify a specific amount of repetition. Use \b[1-9][0-9]{3}\b to match a number between 1000 and 9999. \b[1-9][0-9]{2,4}\b matches a number between 100 and 99999.
Repeating Character Classes:

If you repeat a character class by using the ?, * or + operators, you will repeat the entire character class, and not just the character that it matched. The regex [0-9]+ can match 837 as well as 222.

Anchors

Anchors do not match any characters. They match a position. ^ matches at the start of the string, and $ matches at the end of the string. E.g. ^b matches only the first b in bob.
\b matches at a word boundary. A word boundary is a position between a character that can be matched by \w and a character that cannot be matched by \w.
\b also matches at the start and/or end of the string if the first and/or last characters in the string are word characters.
\B matches at every position where \b cannot match.

Alternation

Alternation is the regular expression equivalent of "or". cat|dog will match cat in About cats and dogs. If the regex is applied again, it will match dog. You can add as many alternatives as you want, e.g.: cat|dog|mouse|fish

Unicode Character Properties

Each Unicode character belongs to a certain category. You can match a single character belonging to a particular category with \p{} You can match a single character not belonging to a particular category with \P{} E.g. \P{M} matches a code point that is not a combining mark, while \p{M}* matches zero or more code points that are combining marks. To match a letter including any diacritics, use \p{L}\p{M}* This last regex will always match à, regardless of how it is encoded.
\p{L} : any kind of letter from any language.
\p{Ll} : a lowercase letter that has an uppercase variant.
\p{Lu} : an uppercase letter that has a lowercase variant.
\p{Lt} : a letter that appears at the start of a word when only the first letter of the word is capitalized.
\p{L&} : a letter that exists in lowercase and uppercase variants (combination of Ll, Lu and Lt).
\p{M} : a character intended to be combined with another character (e.g. accents, umlauts, enclosing boxes, etc.).
\p{Z} : any kind of whitespace or invisible separator.
\p{Zs} : a whitespace character that is invisible, but does take up space.
\p{Zl} : line separator character U+2028.
\p{Zp} : paragraph separator character U+2029.
\p{S} : math symbols, currency signs, dingbats, box-drawing characters, etc..
\p{Sm} : any mathematical symbol.
\p{Sc} : any currency sign.
\p{Sk} : a combining character (mark) as a full character on its own.
\p{So} : various symbols that are not math symbols, currency signs, or combining characters.
\p{N} : any kind of numeric character in any script.
\p{Nd} : a digit zero through nine in any script except ideographic scripts.
\p{Nl} : a number that looks like a letter, such as a Roman numeral.
\p{No} : a superscript or subscript digit, or a number that is not a digit 0..9 (excluding numbers from ideographic scripts).
\p{P} : any kind of punctuation character.
\p{Pd} : any kind of hyphen or dash.
\p{Ps} : any kind of opening bracket.
\p{Pe} : any kind of closing bracket.
\p{Pi} : any kind of opening quote.
\p{Pf} : any kind of closing quote.
\p{Pc} : a punctuation character such as an underscore that connects words.
\p{Po} : any kind of punctuation character that is not a dash, bracket, quote or connector.

Standard Metadata Attributes

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
availability ***(US)***	Data Availability	Opt	S30
cls	classification	Req	Code List CCL
extReferences	links to external references	Opt	List of UN6
legacyReleasability ***(US)***	Legacy Releasability	Opt	MEMO
quality ***(US)***	Data Quality	Opt	S255
recommendedValue ***(US)***	Recommended Value	Opt	MEMO
remarks	Links to Dataset Remarks	Opt	List of UN6

Description

These attributes apply to all data items, to all leaf elements wihout sub-elements (but with content), and to the Common element.

Input Requirement

* **cls** *(Attribute)*: Enter the classification of the current data item. This attribute is REQUIRED on each data item, even if the classification is `"U"`.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **remarks** *(Attribute)*: Enter the list of indices referring to an Remarks index applicable to the current data item.
* **extReferences** *(Attribute)*: Enter the list of indices referring to an ExtReferenceRef index applicable to the current data item.
* **legacyReleasability** *(Attribute)* ***(US)***: One or more special handling instructions in sentence format, not code format. For example, "Approved for public release; distribution is unlimited". Multiple special handling instructions are separated by "|" (i.e., ASCII character #124).
* **quality** *(Attribute)* ***(US)***: A quality indicator for the data in this XML element. For example, "Outlier" or "Non-CodeList".
* **recommendedValue** *(Attribute)* ***(US)***: The manually entered, automatically calculated or statistically derived probable correct value for data items with negative quality entries.
* **availability** *(Attribute)* ***(US)***: The issue with data availability, if any. For example, "Unknown", "Not Available" or "Not Applicable".

Example:

(Dummy classification for demonstration only). In this case, the power value is Unclassified, but the associated remark is Confidential releasable to three nations only.

```
<Transmitter cls="C">
  <Serial cls="U">USA::TX:2011-00001</Serial>
  <ExtReferenceRef cls="U" idx="1">USA::EX:12</ExtReferenceRef>
  <ExtReferenceRef cls="U" idx="2">FRA::EX:34</ExtReferenceRef>
  <Remarks cls="U" idx="1">This is a JTIDS Class 2H terminal</Remarks>
  <...Ten Other Remarks...>
  <Remarks cls="C" release="USA GBR CAN" idx="12">All modes are limited to 200W
  </Remarks>
  <Other_Transmitter_Elements/>
  <Power cls="U" extReferences="1 2" remarks="1 12">23</Power>
</Transmitter>
```

Address

Address

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Description	Address Title	Opt	S100
AddressGrp		**Req**	
Street	Street Address	Opt	S255
CityArea	City or Area	Opt	S50
StateCounty	State/County	Opt	S50
PostCode	Zip Code/Post Code	Opt	S15
Country	Country/Area	Req	Code List CAO
Sub-Element Of:	Contact, Organisation, Role		

Description

This element contains the address of a Contact, Organisation or Role.

Input Requirement

* **Description**: Enter the title for the address; for an Organisation, it can be the name of the specific Branch or office; for a Contact or a Role, it can be the job title associated to the address.
* **Address Information**: This group is REQUIRED.

  This group contains the name and full address of the location, organisation or individual.

  - **Street**: Enter the street address.
  - **CityArea**: Enter the city of the address or an operational area name.
  - **StateCounty**: Enter the state or other sub-national political area.
  - **PostCode**: Enter the zip code or postal code portion of the address.
  - **Country**: Enter the country or area code. Use a one to six alphabetic characters representing either an official country code, a regional body, a group of countries or a NATO Command.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Administration

Administration

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	Variance		

Description

This element contains the country for which this variance applies.

Input Requirement

Enter a country code.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Administrative

Administrative Message

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Action	Action	Req	S25 (Code List CDR)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	CodeList [0..n] Dataset [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Data element Administrative has several usages:

* It can be used to inform other data repositories that datasets have been deleted from a data repository;
* It can also be used to reject an incoming dataset which cannot be validated against the local repository, for example is it refers to unknown datasets.
* Automated local data repository changes are not permitted on US systems.

See Administrative Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "DR".

* **Action**: Indicate the action which triggered the transmission, or to be performed upon reception, of this dataset.

  Recommend values from **Code List CDR:**

Code	Meaning
Code List Change	The dataset adds, deletes, or modifies Codes or Code Lists
Data Invalid	An invalid dataset was received (other than Missing refs).
Data Not Supported	The referenced dataset is not supported by the system.
Data Recall	The referenced dataset is being recalled.
Data Rejected	The received dataset does not fulfill the requirement.
Data Deleted	The referenced datasets should be removed from the recipient local repository
Missing Refs	The referenced dataset has been rejected because of missing cross-references.
Data Retired	The dataset is no longer Active, but may be reactivated at a future date

Example

Rejecting an Assignment for which the recipient does not have the referenced Transmitter:

```
<Administrative cls="U">
  <Serial cls="U">DEU:NFA:DR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Action cls="U">Missing Refs</Action>
  <Dataset>
    <Serial cls="U">USA::AS:456</Serial>
    <MissingRef cls="U">USA::TX:123</MissingRef>
  </Dataset>
</Administrative>
```

Allocation

Allocation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
bandApps	Links to Band Applications	Opt	List of UN6
bandUsers	Links to Band Users	Opt	List of UN6
footnotes	Links to Footnotes	Opt	List of UN6
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
AllocatedService	Allocated Service	Req	S100 (Code List CSN)
Priority	Priority	Req	S10 (Code List CPS)
EffectiveDate	Effective Date	Opt	D
ExpirationDate	Expiration Date	Opt	D
AllocatedByFootnote	Allocated By Footnote	Opt	Code List CBO
Sub-Element Of:	FreqBand		
Sub-Elements:	ChannelPlanRef [0..n] StnClass [0..n] Variance [0..n]		

Description

This element contains the allocation of a specific frequency band to a specific radiocommunication service.

Input Requirement

* **footnotes** *(Attribute)*: Enter the list of footnote indices referring to a Footnote index applicable to the current frequency band.
* **bandApps** *(Attribute)*: Enter the list of Band Application indices referring to a BandApplication index applicable to the current frequency band.
* **bandUsers** *(Attribute)*: Enter the list of Band User indices referring to a BandUser index applicable to the current frequency band.
* **AllocatedService**: Enter a radiocommunication service recognized by an administration that is allocated to this frequency band (e.g., "Fixed Service").

  Recommend values from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

* **Priority**: Indicate if this service is a primary or secondary use of this band. ("Permitted" SHOULD only be used if the priority is unknown.)

  Recommend values from **Code List CPS:**

Code
Primary
Secondary
Permitted
Other

* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).

* **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.

* **AllocatedByFootnote**: Enter "Yes" if this service is allocated to this frequency band by footnote (i.e., the only indication this service is allowed in this band is a footnote). Additional restrictions might exist in the footnote(s).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

See FreqBand.

AllotFreq

Allotment Frequencies

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
PairedFreqMin	Paired Nominal or Minimum Frequency	Opt	UN(16,9)*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	Allotment		
Sub-Elements:	LocationRestriction [0..n]		

Description

This data element defines a frequency or range of frequencies belonging to the Allotment. In the case of an allotment for a duplex frequency range, the pairs of frequencies are derived from FreqMin, FreqMax, TuningStep and PairedFreqMin as follows:
(FreqMin + n * TuningStep, PairedFreqMin + n * TuningStep) with n varying from 0 until FreqMin + n * TuningStep = FreqMax.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **PairedFreqMin**: Enter the nominal frequency or minimum value of the frequency range, for the paired frequency or frequency range when the allotment is for a duplex system.

* **TuningStep**: Enter the tuning increment expressed in MHz (do not insert any unit).

Allotment

Allotment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Title	Title	Opt	S100
UsageType	Type of Usage	Opt	S25 (Code List CUT)
DateResponseRequired	Date Response Required	Opt	D
EffectiveDate	Effective Date	Req	D
ExpireReview		**Req**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Requirement	Description of Requirement	Opt	MEMO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AllotFreq [1..n] Emission [0..n] LocationRef [1..n] POCInformation [0..n] Project [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

An allotment is a group of frequencies given to a subordinate organisation for local management, for specific types of emissions, at a certain location, and for a specified period of time.
See Allotment Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`AL`".

* **Title**: Enter an identifying name for this Allotment or Assignment.
* **UsageType**: Enter the type of assignment request or approved assignment/allotment. In case of a rejected or cancelled assignment/allotment, use an associated Remarks to indicate the reason.

  Recommend values from **Code List CUT:**

Code
Request Temporary
Request Permanent
Approved Temporary
Approved Permanent
Cancelled/Rejected

* **DateResponseRequired**: Enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.
* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is REQUIRED.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Requirement**: Enter any amplifying information on the requirement.

Example

```
<Allotment cls="U">
  <Serial cls="U">USA::AL:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <EffectiveDate cls="U">2012-01-01</EffectiveDate>
  <LocationRef cls="U">DEU::LO:25</LocationRef>
  <AllotFreq>
    <FreqMin cls="U">30</FreqMin>
    <FreqMax cls="U">35</FreqMax>
    <TuningStep cls="U">0.050</TuningStep>
  </AllotFreq>
</Allotment>
```

AntEfficiency

Antenna Efficiency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
Efficiency	Efficiency	Req	UN(4,2)[0..100]*(%)*
Sub-Element Of:	AntMode		

Description

AntEfficiency describes the antenna efficiency at various frequencies within the frequency range of the antenna.

Input Requirement

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **Efficiency**: Enter the efficiency of the antenna within the frequency range which is being reported.

Example

```
<AntEfficiency>
  <FreqMin cls="U">225</FreqMin>
  <FreqMax cls="U">400</FreqMax>
  <Efficiency cls="U">60.4</Efficiency>
</AntEfficiency>
```

Notes

The efficiency should always be less than 100%. For example, the best case for a half-wave dipole is 96.8%.

AntFreqs

Antenna Frequencies

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
Bandwidth	Bandwidth	Opt	UN(16,9)*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Sub-Element Of:	AntMode		

Description

This element contains the antenna's designed tuning range, or the discrete operating frequency.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **Bandwidth**: As an alternative to FreqMin/FreqMax, enter the total operating bandwidth of the Antenna centered around FreqMin.

* **FreqUse**: Indicate if the frequency range is used for transmit, receive or both transmit and receive.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Examples

Both examples reflect the same operating range:

```
<AntFreqs>
  <FreqMin cls="U">30</FreqMin>
  <FreqMax cls="U">90</FreqMax>
</AntFreqs>
```

A bandwidth of 60 MHz is +/-30 MHz around FreqMin:

```
<AntFreqs>
  <FreqMin cls="U">60</FreqMin>
  <Bandwidth cls="U">60</Bandwidth>
</AntFreqs>
```

AntGain

Antenna Gain

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Calculated	Calculated Data Indicator	Opt	Code List CBO
Gain	Gain	Req	SN(5,2)
Freq	Frequency	Opt	UN(16,9)*(MHz)*
FrontToBackRatio	Front-to-back Ratio	Opt	UN(5,2)
Sub-Element Of:	AntMode		

Description

This element indicates the antenna gain, in decibels with reference to an isotropic source (dBi), in the direction of maximum radiation. It can also contain the gain measured 180 degrees from the direction of maximum main beam gain.

Input Requirement

This element is REQUIRED and repeatable. For a gain included in a range use two occurrences with no frequencies if the points where these gains occur are not known. Use several occurrences of Gain, including frequencies, to express the gain as a function of the frequency.

* **Calculated**: Enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Gain**: Enter the antenna gain (in dBi - dB with reference to an isotropic source) in the direction of maximum radiation. For a negative gain (earth and space stations only), enter a dash before the value of the gain.
* **Freq**: Enter the frequency at which the gain is expressed if known.
* **FrontToBackRatio**: Enter the front-to-back ratio of the main beam to the back lobe in dB.

Examples

A basic gain, regardless of the frequency:

```
<AntGain>
  <Gain cls="U">0</Gain>
</AntGain>
```

A complete entry:

```
<AntGain>
  <Gain cls="U">6.1</Gain>
  <Freq cls="U">230.525</Freq>
  <FrontToBackRatio cls="U">2</FrontToBackRatio>
</AntGain>
```

Notes

In order to be able to accommodate legacy data, a value of "-999.99" MAY be used in attribute gain as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets.

AntHardware

Antenna Hardware

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FeedType	Antenna Feed Type	Opt	S50 (Code List CAF)
LeadType	Antenna Lead Type	Opt	S25 (Code List CAL)
ConnectorType	Antenna Connector Type	Opt	S25 (Code List CCN)
FeedOrientation	Antenna Feed Orientation	Opt	S10
Sub-Element Of:	Antenna		

Description

This element contains the physical parameters related to the antenna feed and lead.

Input Requirement

* **FeedType**: Use one of the codes describing the element used to "illuminate" the reflector for an antenna unit.

  Recommend values from **Code List CAF (extract only):**

Code
Balun
Cassegrain
Eight Feed Horn Cluster
Feed Horn Cluster
Four Horn Cluster
Conical
Cutler
Dipole
Dipole Array
Rotating Dipole
...

* **LeadType**: Use one of the codes the device used for conducting or guiding the radio-frequency energy from the transmitter or receiver to the antenna (e.g., continuous waveguide).

  Recommend values from **Code List CAL (extract only):**

Code
Cable Air Dielectric
Cable Coaxial
Cable Flexible Coaxial
Cable Rigid Coaxial
Line Coplaner Strip
Line Ladder
Line Microstrip
Line Surface-Wave
Open Wire
Twin Lead
...

* **ConnectorType**: Enter the type of connector used to attach the antenna to the equipment or the antenna to the transmission media that attaches the equipment to the antenna.

  Recommend values from **Code List CCN (extract only):**

Code
MC
Micro-coaxial
Micro-miniature coaxial
MMX
Neill-Concelman Bayonet

Neill-Concelman Threaded
Sub-Miniature version A
Sub-Miniature version B
Sub-Miniature version C
Type N
...

* **FeedOrientation**: Enter the orientation of the feed when looking in the direction of the boresight. Examples of orientations are right, left, center, up, down, up-left, up-right, down-left, down-right.

Example

```
<AntHardware>
  <FeedType cls="U">Dipole</FeedType>
  <LeadType cls="U">Cable Coaxial</LeadType>
  <ConnectorType cls="U">Sub-Miniature version B</ConnectorType>
</AntHardware>
```

AntMode

Antenna Mode

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
ModeUse	Mode Use	Opt	Code List CAU
MotionType	Antenna Motion Type	Opt	S25 (Code List CAD)
SectBlanking	Sector Blanking	Opt	Code List CBO
Pol		**Opt**	
PolarisationType	Type of Polarisation	Req	S50 (Code List CPO)
PolarisationAngle	Polarisation Angle	Opt	UN(5,2) [0..360]*(deg)*
HorzScan		**Opt**	
HorzScanSpeed	Horizontal Scan Speed	Opt	UN(7,2)*(deg/s)*
HorzScanRate	Horizontal Scan Rate	Opt	UN(4)*(scans/min)*
HorzScanType	Horizontal Scan Type	Opt	S50 (Code List CAS)
HorzScanSector	Horizontal Scan Sector	Opt	UN(5,2) [0..360]*(deg)*
VertScan		**Opt**	
VertScanSpeed	Vertical Scan Speed	Opt	UN(7,2)*(deg/s)*
VertScanRate	Vertical Scan Rate	Opt	UN(4)*(scans/min)*
VertScanType	Vertical Scan Type	Opt	S50 (Code List CAS)
VertScanAngleMin	Vertical Scan Minimum Angle	Opt	SN(4,2) [-90..90]*(deg)*
VertScanAngleMax	Vertical Scan Maximum Angle	Opt	SN(4,2) [-90..90]*(deg)*
RotationDirection	Rotation Direction	Opt	Code List CRD
RotationRate		**Opt**	
RotationRateMin	Minimum or Nominal Rotation Rate	Req	UN(7,2)
RotationRateMax	Maximum Rotation Rate	Opt	UN(7,2)
Beamwidth		**Opt**	
HorzBwMin	Minimum or Nominal Horizontal Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
HorzBwMax	Maximum Horizontal Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
VertBwMin	Minimum or Nominal Vertical Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
VertBwMax	Maximum Vertical Beamwidth	Opt	UN(5,2) [0..360]*(deg)*
BeamType	Beam Type	Opt	S25 (Code List CBD)
MaxPower	Maximum Allowed Power	Opt	SN(10,7)*(dBW)*
PortIsolation	Port Isolation	Opt	SN(6,3)*(dB)*
ModeName ***(US)***	Mode Name	Opt	S40
Sub-Element Of:	Antenna		
Sub-Elements:	AntEfficiency [0..n] AntFreqs [0..n] AntGain [0..n] AntPattern [0..n] VSWR [0..n]		

Description

This element contains the technical characteristics of one antenna mode.
See AntMode Diagram

Input Requirement

* **Mode Information**: This group is REQUIRED.

- **ModeID**: Enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

- **Description**: Enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.

* **ModeUse**:

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **MotionType**:

Recommend values from **Code List CAD:**

Code	Meaning
Directional	The antenna radiates towards a fixed direction
Non-Dir Or Omni	Non-Directional Or Omnidirectional (the direction cannot be determined or the radiation is non directional)
Rotating	The antenna rotates at a fixed rate
Sector Scan H	Scanning horizontally through a limited sector
Sector Scan V	Scanning vertically through a limited sector
Steerable	Fixed direction but steerable in the reference plane
Tracking	Tracking that can observe a moving object

* **SectBlanking**: ("Yes" if sector blanking is possible and "No" if it is not possible)

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Pol**: This group is OPTIONAL.

- **PolarisationType**:

  Recommend values from **Code List CPO (extract only):**

Code
45-degrees
Left-hand circular
Right-hand circular
Dual
Elliptical
Elliptic left
Elliptic right
Horizontal linear
Horizontal and vertical
Linear
...

- **PolarisationAngle**: Enter the angle of the electric field vector measured counter-clockwise from the equatorial plane as referenced from the boresight or typical static positioning of the antenna.

* **HorzScan**: This group is OPTIONAL.

This group contains the method about how the antenna beam is steerable in the horizontal axis, the portion of a circle that can be scanned by the antenna, the horizontal scan rate and the number of horizontal scans per minute.

- **HorzScanSpeed**: Enter the number of degrees per second the antenna is capable of scanning. It is not necessarily the "Sector Scanned" figure times the degrees per second. If a significant portion of time is spent vertically scanning in between horizontal sweeps, the horizontal scan rate will be lower than if the antenna were horizontally scanning all the time.
- **HorzScanRate**: Enter the number of complete scans the antenna is capable of making each minute.
- **HorzScanType**: Enter the antenna horizontal scanning capability.

  Recommend values from **Code List CAS (extract only):**

Code
360 Degrees Rotating
Bi-Directional Sector
Conical
Electronic Scan (360 Degrees)
Electronic Scan (Sector)
Fixed
Fixed-3 Axis Stabilised
Helical
Horizontal
Lobing
...

- **HorzScanSector**: Enter the maximum horizontal sector the antenna can scan (enter 360 for a full rotation).

Example:<HorzScanSpeed cls="U">90</HorzScanSpeed> <HorzScanRate cls="U">15</HorzScanRate> <HorzScanType cls="U">Horizontal</HorzScanType>

* **Vertical Scan**: This group is OPTIONAL.

This group contains the method about how the antenna beam is steerable in the vertical axis, the minimum and maximum limits of the vertical sector scanned in degrees referenced to the horizon, the vertical scan speed and the number of vertical scans per minute.

- **VertScanSpeed**: Enter the number of degrees of vertical scan per second. If an antenna does a horizontal scan per second as part of a raster scan and drops down one degree after each sweep, it is scanning vertically at one degree per second. If the same antenna completed a scan in 30 seconds the vertical scan speed would be 2 degrees per minute.
- **VertScanRate**: Enter the number of complete vertical scans per minute. If the antenna does a horizontal scan per second as part of a raster scan and drops down one degree after each sweep, it is scanning vertically at one degree per second. If the same antenna completed a scan in 30 seconds the vertical scan rate would be 2 scans per minute.
- **VertScanType**: Enter the antenna vertical scanning capability.

  Recommend values from **Code List CAS (extract only):**

Code
360 Degrees Rotating
Bi-Directional Sector
Conical
Electronic Scan (360 Degrees)
Electronic Scan (Sector)
Fixed
Fixed-3 Axis Stabilised
Helical
Horizontal
Lobing
...

- **VertScanAngleMin**: Enter the minimum limit of the vertical arc scanned relative to the horizontal.
- **VertScanAngleMax**: Enter the maximum limit of the vertical arc scanned relative to the horizontal.

* **RotationDirection**:

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CRD:**

Code
Clockwise
Counter-Clockwise

* **RotationRate**: This group is OPTIONAL.

  - **RotationRateMin**: Enter the nominal or minimum antenna rotation rate in degrees per second.
  - **RotationRateMax**: Enter if applicable, the maximum antenna rotation rate in degrees per second.

    [XSL ERR MINMAX] If RotationRateMax is used, it MUST be greater than RotationRateMin.

* **Beamwidth**: This group is OPTIONAL.

  - **HorzBwMin**: Enter the minimum or nominal horizontal beamwidth.
  - **HorzBwMax**: Enter the maximum horizontal beamwidth for beamwidths which vary with the frequency.

    [XSL ERR MINMAX] If HorzBwMax is used, it MUST be greater than HorzBwMin.
  - **VertBwMin**: Enter the minimum or nominal vertical beamwidth.
  - **VertBwMax**: Enter the maximum vertical beamwidth for beamwidths which vary with the frequency.

    [XSL ERR MINMAX] If VertBwMax is used, it MUST be greater than VertBwMin.
  - **BeamType**: Enter one of the codes describing the shape or type of the antenna main beam .

    Recommend values from **Code List CBD:**

Code
Cardioid
Cosecant Squared
Elliptical
Fan
Hyperbolic
Omni
Pencil
Shaped Beam
Single Symmetrical Lobe
Other

* **MaxPower**: Enter the maximum level of input power in dBW.
* **PortIsolation**: Enter the power ratio between the signal injected into one port and the power returned by the other port in dB.
* **ModeName** ***(US)***: Enter a short name for the mode.

Example

```
<AntMode>
  <ModeID cls="U">SURVEILLANCE</ModeID>
  <MotionType cls="U">Rotating</MotionType>
  <PolarisationType cls="U">Vertical linear</PolarisationType>
  <RotationRateMin cls="U">30</RotationRateMin>
  <other_AntMode_elements/>
</AntMode>
```

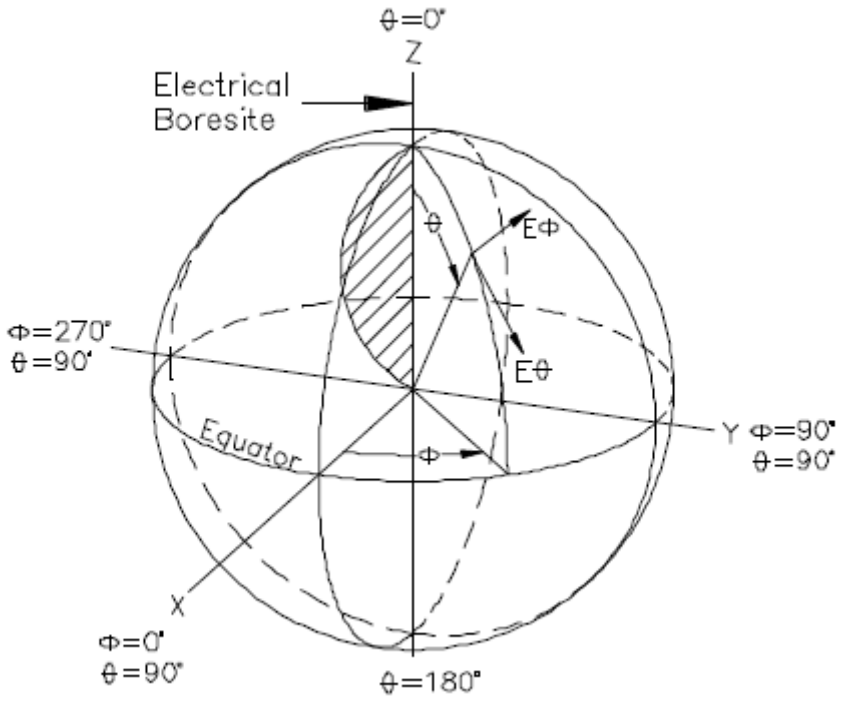
AntPattern

Antenna Pattern

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Radiation Pattern Type	Opt	S10 (Code List CAP)
Calculated	Calculated Data Indicator	Opt	Code List CBO
CutType	Pattern Cut Type	Opt	S10 (Code List CTP)
CutAngle	Pattern Cut Angle	Opt	UN(5,2) [0..180]*(deg)*
Sub-Element Of:	AntMode		
Sub-Elements:	AntPatternPoint [1..n]		

Description

Data element AntPattern contains an antenna pattern diagram on a specific plane. General pattern cuts can be defined by a spherical coordinate system with the electrical boresite of the antenna oriented in the direction of the Z-axis. At different values of phi (#), pattern cuts can be taken with theta (#) as the dependent variable. These will be great circle cuts through the main-beam peak. An additional measurement relating the mechanical and electrical boresite must be made to fully characterize the antenna. Also the orientation of the antenna to the spherical coordinate system must be defined. (example: top of the antenna oriented in the +x direction).



Input Requirement

This element is OPTIONAL and repeatable.

* **Type**: Enter the polarisation code for the antenna pattern.

  Recommend values from **Code List CAP:**

Code	Meaning	Extended
Azimuth	Pattern in the horizontal plane	Basic
Elevation	Pattern in the vertical plane	Basic

* **Calculated**: Enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code

Yes
No

* **CutType**: These codes indicate the type of the pattern cut. A Theta cut holds Phi constant while varying Theta. A Phi cut holds Theta constant while varying Phi, where Theta is the angle off the boresight and Phi is the rotation angle about the boresight.

  Recommend values from **Code List CTP:**

Code	Meaning
PHI	Rotation angle about the boresight
THETA	Angle off the boresight

* **CutAngle**: Enter the angle of the pattern cut. It is the value of Phi for a Theta cut and the value of Theta for a Phi cut.

Example

```
<AntPattern>
  <Type cls="U">Azimuth</Type>
  <Calculated cls="U">Yes</Calculated>
  <AntPatternPoint>
    <Dir cls="U">180</Dir>
    <Gain cls="U">40.1</Gain>
  </AntPatternPoint>
  <AntPatternPoint/>
</AntPattern>
```

AntPatternPoint

Antenna Pattern Point

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Dir	Antenna Radiation Pattern Direction	Req	UN(5,2) [0..360]*(deg)*
Gain	Antenna Radiation Pattern Gain	Req	SN(5,2)
Sub-Element Of:	AntPattern		

Description

Data element AntPatternPoint contains one point of the antenna radiation pattern, defined by a direction and gain.

Input Requirement

This element is REQUIRED and repeatable.

* **Dir**: Enter the direction in degrees in reference to the pointing angle of the antenna set to zero.
* **Gain**: Enter the amount of dB gain for the direction relative to the main beam gain.

Example

See example in element AntPattern.

Antenna

Antenna

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
AntType	Antenna Type	Req	S50 (Code List CAT)
PhArrayNumMainBeams	Number of Main Beams in the Phased Array	Opt	UN(3)
PhArrayNumElements	Number of elements in the Phased Array	Opt	UN(5)
Dimension		**Opt**	
Shape	Antenna Shape	Opt	S25 (Code List CRS)
Diameter	Antenna Diameter	Opt	UN(6,2)
HorzDimension	Horizontal Dimension	Opt	UN(6,2)
VertDimension	Vertical Dimension	Opt	UN(6,2)
Aperture		**Opt**	
ApertureDiameter	Aperture Diameter	Opt	UN(6,2)
HorzAperture	Horizontal Aperture	Opt	UN(6,2)
VertAperture	Vertical Aperture	Opt	UN(6,2)
Sidelobe		**Opt**	
HorzSidelobeSuppressed	Horizontal Sidelobe is Suppressed	Opt	Code List CBO
HorzSidelobeAz	Horizontal Sidelobe Azimuth	Opt	UN(5,2) [0..180]*(deg)*
HorzSidelobeAttenuation	Horizontal Sidelobe Attenuation	Opt	UN(5,2)
VertSidelobeSuppressed	Vertical Sidelobe is Suppressed	Opt	Code List CBO
VertSidelobeElev	Vertical Sidelobe Elevation	Opt	SN(5,2) [-180..180]*(deg)*
VertSidelobeAttenuation	Vertical Sidelobe Attenuation	Opt	UN(5,2)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AntHardware [0..n] AntMode [0..n] Nomenclature [0..n] POCInformation [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This dataset is the XML root for all parameters of an Antenna. It inherits attributes and sub-elements from element Common. It also contains various technical parameters of the antenna: the type of antenna pattern, the antenna use, and an indication at as to whether or not sector blanking is possible.
See Antenna Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**AN**".

* **Generic**: Enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AntType**: Enter the type of antenna.

  Recommend values from **Code List CAT (extract only):**

Code	Extended
Blade	Basic

Cassegrain	Basic
Collinear Array	Basic
Dipole	Basic
Dipole Array	Basic
Dipole Stacked	Basic
Discone	Basic
Helical	Basic
Horn	Basic
Log Periodic	Basic
...	...

* **PhArrayNumMainBeams**: Enter the number of main beams in the phased array antenna
* **PhArrayNumElements**: Enter the number of antenna elements in the phased array antenna
* **Dimension**: This group is OPTIONAL.
  - **Shape**: Enter a code used to describe the general shape of the antenna reflector.

    Recommend values from **Code List CRS (extract only):**

Code
Boxed Slot
Cavity
Clamshell
Cone
Corner
Curved Convergent
Cylindrical
Double Corner
Elliptical
Horn
...

  - **Diameter**: Enter the physical diameter of the antenna in metres (without unit).
  - **HorzDimension**: Enter the linear horizontal dimension of the antenna in metres (without unit).
  - **VertDimension**: Enter the linear vertical dimension of the antenna in metres (without unit).
* **Aperture**: This group is OPTIONAL.
  - **ApertureDiameter**: Enter the cross-section of an antenna's radiation pattern in the direction of highest gain in metres (without unit).
  - **HorzAperture**: Enter the horizontal cross-section of the antenna's radiation pattern in the direction of highest gain in metres (without unit).
  - **VertAperture**: Enter the vertical cross-section of the antenna's radiation pattern in the direction of highest gain in metres (without unit).
* **Sidelobe**: This group is OPTIONAL.

  This group of items describes the worst case sidelobe attenuation (these values will normally vary between modes, but typically only the worst case data is available).
  - **HorzSidelobeSuppressed**: The Horizontal Sidelobe indicates whether a portion of the radiation from an antenna outside of the main beam and usually of much less intensity has been suppressed or eliminated. The suppression or elimination of unwanted signals or interference takes place by means of shielding, filtering, grounding, component relocation, or sometimes redesign of the equipment in use. Enter Y (if the sidelobe is suppressed) or N (sidelobe not suppressed).

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

- **HorzSidelobeAz**: Enter the direction (in degrees) of the sidelobe in reference to the direction of maximum gain.
- **HorzSidelobeAttenuation**: Enter the amount of suppression in dB relative to the main beam gain of the antenna.
- **VertSidelobeSuppressed**: The Vertical Sidelobe indicates whether a portion of the radiation from an antenna outside of the main beam and usually of much less intensity has been suppressed or eliminated. The suppression or elimination of unwanted signals or interference takes place by means of shielding, filtering, grounding, component relocation, or sometimes redesign of the equipment in use. Enter Y (if the sidelobe is suppressed) or N (sidelobe not suppressed).

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

- **VertSidelobeElev**: The Vertical Sidelobe describes the first sidelobe in the vertical plane. Enter the clockwise angular difference (in degrees) between the centre line of the main beam gain and the sidelobe.
- **VertSidelobeAttenuation**: Enter the attenuation of the sidelobe in dB relative to the main beam gain.

Example

```
<Antenna cls="U">
  <Serial cls="U">TUR::AN:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <AntType cls="U">Billboard</AntType>
  <Nomenclature>
    <Name cls="U">XYZ</Name>
  </Nomenclature>
  <AntMode>
    <All_AntMode_elements/>
  </AntMode>
</Antenna>
```

AsgnAllotOwner *(US)*

Asgn Allot Owner

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Description	Description	Opt	S18
OwnerType	Owner Type	Req	S50 (Code List UOW)
Sub-Element Of:	Assignment		

Input Requirement

* **Description** : Enter the name of an individual or organization related to the frequency assignment.
* **OwnerType** : Indicate the relationship of an individual or organization to the frequency assignment.

  Recommend values from **Code List UOW (extract only):**

Code
Agency
Unified Command
Unified Command Service
Bureau
Major Command
Subcommand
Installation Frequency Manager
Operating Unit
Area AFC/DoD AFC/Other Organizations
Requestor
...

AsgnFreqBase

Assignment Frequency or Frequency Range

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9)*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Inherited by:	Freq, FreqOld		
Sub-Element Of:	Tuning		

Description

This data element indicates a single frequency or a range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **RefFreq**: Enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: Indicate the intended usage of the frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Example

```
<Freq>
  <FreqMin cls="U">225</FreqMin>
  <FreqMax cls="U">400</FreqMax>
</Freq>
```

Assets

Owned Equipment / Force Elements

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Equipment/FE Reference	Req	pattern (S29)
Authorised	Authorised Quantity	Opt	UN(9)
Available	Available Quantity	Opt	UN(9)
Sub-Element Of:	ForceElement		

Description

This data element indicates the authorised and available quantity of the equipment, RF systems, or other Force Elements used or owned by the Force Element.

Input Requirement

* **Serial**: Enter a reference to a Transmitter, Receiver, Antenna, RFSystem used by this ForceElement, or to a ForceElement carried by or belonging to this ForceElement.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN** or **TX** or **RX** or **TR** or **FE**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Authorised**: Enter the authorised quantity of the referenced equipment or system.

* **Available**: Enter the available quantity of the referenced equipment or system.

Example

```
<Assets>
  <Serial cls="U">USA:AF:FE:123</Serial>
  <Authorised cls="U">10</Authorised>
  <Available cls="U">5</Available>
</Assets>
```

Assigned

Assigned Frequency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Quality	Quality	Opt	UN(1)
Colour		**Opt**	
ColourWord	Colour Word	Opt	S20
ColourNum	Colour Number	Opt	UN(2)
ITURegistration		**Opt**	
ITURegStatus	ITU Registration Status	Opt	S50 (Code List CIR)
ITURegDate	ITU Registration Date	Opt	D
ITURegNum	ITU Registration Number	Opt	US10
NavAidsChannel	Navigation Aid Channel	Opt	pattern (S4)
NetNum	Net Number	Opt	pattern (S6)
ITURegComments ***(US)***	ITU Regulatory Comments	Opt	MEMO
Sub-Element Of:	Link		
Sub-Elements:	Freq [0..n] FreqOld [0..n]		

Description

This element contains the assigned frequency(ies), channel or net number; it can also contain the old frequency.

Input Requirement

* **Quality**: Enter an application-specific measure of the quality for the assigned frequency.
  FOR UHF AMS assignments performed at NATO HQ via the NUFAS application, this measure ranges from 0 (best quality) to 3 (high risk of interference), and a value 4 means the assigned has been forced whilst it lays outside of the UHF AMS resource.
* **Tactical Information**: This group is OPTIONAL.
  - **ColourWord**: Enter the Colour Word associated to the assigned frequency. A tactical colour word is a series of alpha characters that can be used to identify frequencies and nets. These words are usually listed in the Air Tasking Order (ATO) to prevent inadvertent disclosure of classified information.
  - **ColourNum**: Enter a Colour Number associated to the assigned frequency. These numbers are usually listed in the Air Tasking Order (ATO) to prevent inadvertent disclosure of classified information.
* **ITU Registration**: This group is OPTIONAL.
  - **ITURegStatus**: Enter the status of the assignment's registration with the ITU-R.

    Recommend values from **Code List CIR:**

Code	Meaning
Not requested-Security	Registration with ITU-R not requested for security reasons
Not required	Registration with ITU-R not required
Outside Rules	Not notified to ITU-R due to the rules laid down in the ITU regulations
Pending	Pending notification to ITU-R
Registered	Registered with ITU-R
Registered on Insistence	Registration with ITU-R on an insistence basis
Registered-Needs modification	Registered with ITU-R but needs to be modified
Required	Registration with ITU-R is required
Unfavourable	Notified to ITU-R but received unfavourable findings and therefore not registered in the International Frequency List (IFL)

- **ITURegDate**: Enter the ITU-R registration date.
- **ITURegNum**: Enter the ITU-R registration number.

* **NavAidsChannel**: For TACAN and DME assignments, enter the channel number of the allocated pair of radio frequencies assigned for use by Air / Ground / Air radionavigation facilities such as: TACAN, VORTAC, DME, MLS/DME, etc ... as follows:
  001 through 126 "X"
  001 through 126 "Y"
  018 through 056 "W"
  017 through 119 "Z"
  Leading zeros are required.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[0-1][0-9]{2}(X|Y|W|Z)"

* **NetNum**: Use this element in NATO assignments to these systems. Enter the net number in the format PXXXnn where 'P' is either A for HAVE QUICK II or B for SATURN, XXX is in the range 000 through 999, and nn is one of the following four modes:
  `00` - sub-band hopping mode (only for SATURN) `25` - full-band hopping mode (HAVE QUICK II and SATURN)
  `50` - SATURN mode `75` - SATURN mode

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[AB][0-9]{3}(00|25|50|75)"

* **ITURegComments** ***(US)***: Enter amplifying comments related to registering an assignment with the International Telecommunication Union (ITU) Radiocommunication Bureau (BR).

Example

```
<Assigned>
  <Freq>
    <FreqMin cls="U">265.575</FreqMin>
    <TAD cls="U">HE125</TAD>
  </Freq>
</Assigned>
```

Assignment

Assignment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Title	Title	Opt	S100
UsageType	Type of Usage	Opt	S25 (Code List CUT)
DateResponseRequired	Date Response Required	Opt	D
EffectiveDateTime	Effective Date/Time	Req	DT
ExpireReviewDT		**Req**	
ExpirationDateTime	Expiration Date/Time	Opt	DT
ReviewDate	Review Date	Opt	D
Period	Periodicity of Use	Opt	S50 (Code List CTI)
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)
Processing	Processing	Opt	S50 (Code List CPI)
Emergency	Emergency Indicator	Opt	Code List CBO
AssignmentAuthority	Assigning Authority	Opt	S50 (Code List CHN)
Requirement	Description of Requirement	Opt	MEMO
NumSystems	Number of Systems	Opt	UN(9)
AgencyActionNum ***(US)***	Agency Action Number	Opt	S12
AgencyComments ***(US)***	Agency Comments	Opt	MEMO
AgencySerialNum ***(US)***	Agency Serial Number	Opt	S12
AssignmentDate ***(US)***	Assignment Date	Opt	D
COCOMGroup ***(US)***	COCOM Group	Opt	S8
ControlRequestNum ***(US)***	Control Request Number	Opt	S15
CoordinationComments ***(US)***	Coordination Comments	Opt	MEMO
DataSource ***(US)***	Data Source	Opt	S60 (Code List UDA)
FCCFileNum ***(US)***	FCC File Number	Opt	S22
FMSCNum ***(US)***	FMSC Number	Opt	S14
FrequencyActionOfficer ***(US)***	Frequency Action Officer	Opt	S3
ListSerialNum ***(US)***	List Serial Number	Opt	S12
NATOPooledFrequencyCode ***(US)***	NATO Pooled Frequency Code	Opt	S25 (Code List UPF)
NATOPooledFrequencyNum ***(US)***	NATO Pooled Frequency Number	Opt	UN(4)
OriginalAssignmentDate ***(US)***	Original Assignment Date	Opt	D
RoutineAgendaItem ***(US)***	Routine Agenda Item	Opt	S50 (Code List URI)
SupplementaryDetails ***(US)***	Supplementary Details	Opt	MEMO
TypeOfService ***(US)***	Type Of Service	Opt	S50 (Code List UTY)
UsageCode ***(US)***	Usage Code	Opt	S150 (Code List UUC)
UsageFrequency ***(US)***	Usage Frequency	Opt	S50 (Code List UUF)
UsagePercentage ***(US)***	Usage Percentage	Opt	UN(3) [1..100]*(%)*
UserNetCode ***(US)***	User Net Code	Opt	S6
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AsgnAllotOwner [0..n] ***(US)*** CircuitRemarks [0..n] ***(US)*** Configuration [1..n] CoordinationData [0..n] ***(US)*** DocketNum [0..n] ***(US)***		

	HostDocketNum [0..n] ***(US)*** Link [1..n] OffTheShelfEquipment [0..n] ***(US)*** POCInformation [0..n] PreviousAuthorization [0..n] ***(US)*** Project [0..n] RecordNote [0..n] ***(US)*** RelatedRef [0..n] Station [1..n] StatusLog [0..n] ***(US)*** SysOfStation [0..n]

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a system of assignments. It inherits attributes and sub-elements from element Common.
See Assignment Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`AS`".

* **Title**: Enter an identifying name for this Allotment or Assignment.
* **UsageType**: Enter the type of assignment request or approved assignment/allotment. In case of a rejected or cancelled assignment/allotment, use an associated Remarks to indicate the reason.

  Recommend values from **Code List CUT:**

Code
Request Temporary
Request Permanent
Approved Temporary
Approved Permanent
Cancelled/Rejected

* **DateResponseRequired**: Enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.
* **EffectiveDateTime**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-ddThh:mm:ssZ (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue.
* **ExpireReviewDT**: This group is REQUIRED.

  - **ExpirationDateTime**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-ddThh:mm:ssZ` (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue. The Expiration date should be less than five years from the effective date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.

* **Period**: Indicate the general period on a daily basis when the frequency assignment's frequencies will be either guarded (monitored) or used for transmission.

  Recommend values from **Code List CTI:**

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time

Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once

* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:

  - A single number;
  - A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
  - A list of numbers and/or ranges, separated by commas ",";
  - An attribute with value "*" may be omitted.
  - **Seconds**: Enter the seconds of hour [0-59]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Minutes**: Enter the minutes of hour [0-59]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Hours**: Enter the hours of day [0-23] (UTC time)

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"
  - **DaysOfMonth**: Enter the day of month [1-31]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Months**: Enter the month of year [1-12]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"
  - **DaysOfWeek**: Enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"
  - **Years**: Enter the 4-digit year [1900..2100]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"
  - **Duration**: Enter the number of minutes for which an event will live.

  Examples:possible values for the Hours item: 8one value: 08h00Z5,6,9multiple values: 05h00Z, 06h00Z, 09h00Z5-8range between 05h00Z and 08h00Z inclusive*/2stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc3-12/3stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007: <Minutes>*/10</Minutes> <Hours>9-17</Hours> <DaysofWeek>0-4</DaysofWeek> <Years>2007</Years> <Duration>2</Duration> On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri) <Minutes>5</Minutes> <Hours>*/3</Hours> <DaysofWeek>1-5</DaysofWeek> On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri) <Minutes>20,50</Minutes> <Months>1-5,7-12</Months> <DaysofWeek>1-5</DaysofWeek>

* **Processing**: Indicate if the frequency assignment is to be processed to national or international level for approval, or neither.

  Recommend values from **Code List CPI:**

Code	Meaning
International Approval	The dataset is outside national boundaries; however, it must be processed to national or international level authority for approval

Local Approval	The dataset is within national boundaries; however, it need not be processed to national level authority for approval
National Approval	The dataset is to be processed to national level authority for approval
Outside National Boundaries	The dataset is outside national boundaries and need not be processed to national level authority for approval

* **Emergency**: Enter "Yes" if the assignment may be used in a case of emergency.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AssignmentAuthority**: Indicate the user's acceptance of host-nation or NATO HQ frequency nominations.

Recommend values from **Code List CHN:**

Code	Meaning
Host nominations acceptable	Host Nation Nominations are acceptable.
NATO HQ-assigned	The frequency is preassigned by NATO headquarters (NHQC3S/SC3IB).
NUFAS-assigned	The frequency was assigned by the NATO UHF Frequency Assignment Software (NUFAS) at NHQC3S/SC3IB.
User-assigned	The frequency was preassigned by the user.

* **Requirement**: NATO: Enter any amplifying information on the requirement.
USA: Enter Agency remarks which, while pertinent to the frequency assignment, are not intended to be part of the application processed through the Interdepartment Radio Advisory Committee (IRAC). These remarks, therefore, will be excluded from the Government Master File (GMF).
* **NumSystems**: Enter the number of systems that are expected to use this frequency assignment.
* **AgencyActionNum** ***(US)***: Enter the An identifier used to track transactions.
* **AgencyComments** ***(US)***: Enter the Agency remarks in the applications processed through the Interdepartment Radio Advisory Committee (IRAC). These remarks will be included in the Government Master File (GMF).
* **AgencySerialNum** ***(US)***: Enter the externally-assigned unique identifier of a frequency assignment..
* **AssignmentDate** ***(US)***: Enter the date the assignment was most recently authorized.
* **COCOMGroup** ***(US)***: Enter the In the PACOM area, identifies a grouping of frequencies having a like or similar use. In the EUCOM area, identifies the function number(s) used by the Frequency Management Sub-Committee (FMSC) to specify the operational use of frequencies.
* **ControlRequestNum** ***(US)***: Enter the control/request identifier that allows subordinate organizations to track specific frequency applications.
* **CoordinationComments** ***(US)***: Enter the Comments related to the external coordination of a frequency assignment.
* **DataSource** ***(US)***: Indicate the source or organization from which the data record was received.

Recommend values from **Code List UDA:**

Code
FMSC/MRFL data from NATO
Industry Canada
Federal Communications Commission
Frequency Resource Record System
Government Master File
International Telecommunication Union
Radio Astronomy data from the National Research Council
Other

* **FCCFileNum** ***(US)***: Enter the file number assigned by the Federal Communications Commission (FCC), issued to non-government stations operating on government frequencies or government stations operating on non-government frequencies, which is unique to each FCC license.

* **FMSCNum** ***(US)***: Enter the assignment serial number as registered in the Frequency Management Sub-committee (FMSC) Master Radio Frequency List (MRFL).
* **FrequencyActionOfficer** ***(US)***: Enter the A MILDEP code identifying the person or group responsible for the frequency assignment.
* **ListSerialNum** ***(US)***: Enter the agency list serial number of a Government Master File (GMF) record representing a group or area assignment. It brings into use, by a particular station or stations, a frequency authorized under a group assignment or authorized for communications with nongovernment stations.
* **NATOPooledFrequencyCode** ***(US)***: Indicate the Type Special Assignment for the frequency assignment.

  Recommend values from **Code List UPF:**

Code
Air/ground/air
Air to air
Air/ground/air pool

* **NATOPooledFrequencyNum** ***(US)***: Enter the a Frequency Management Sub-committee (FMSC) assigned code number identifying the type and nationality of a frequency pool.
* **OriginalAssignmentDate** ***(US)***: Enter the date the frequency assignment was originally authorized.
* **RoutineAgendaItem** ***(US)***: Enter the Indicates the type of National Telecommunications and Information Administration (NTIA) Frequency Assignment Subcommittee (FAS) agenda on which the application will be processed. This value is computer-generated by NTIA for its internal processing of frequency assignment applications. It is an output data item only. Possible values include: R - Routine Application A - AAG Application M - MAG Application If this XML element does not exist, the application is a “Regular Application”.

  Recommend values from **Code List URI:**

Code
Routine Application
Regular Application
Aeronautical Assignment Group (AAG) Application
Marine Assignment Group (MAG) Application

* **SupplementaryDetails** ***(US)***: Enter the Additional amplifying information that would facilitate processing. This includes, but is not limited to, the following items: 1) doppler shift, if a significant factor in the particular system, 2) a general description of the assignment requirement (applies to experimental stations), 3) sounder justification, 4) coordination data, and 5) refer to National Telecommunications and Information Administration (NTIA) manual, Chapter 9, for further details.
* **TypeOfService** ***(US)***: Enter the Indicates the type of service/circuit involved.

  Recommend values from **Code List UTY (extract only):**

Code
Simplex
Duplex
Semiduplex
Simplex Net
One Directional Transmission
Broadcast
Simultaneous Broadcast
Radionavigation
Radiolocation
Reception Only
...

* **UsageCode** ***(US)***: Indicate the usage and category of circuits.

  Recommend values from **Code List UUC:**

Code
Wartime circuits required to be operated or to be ready for operation in Peacetime
Wartime circuits that have a limited capability in peacetime for exchanging traffic between the planned terminals

Required for wartime only
Required for occasional and temporary usage for training exercises or maneuver purposes
Required for the deployment phase of contingency operations
Required for the employment phase of contingency operations
Required for peacetime only

* **UsageFrequency** ***(US)***: Indicate the general amount of time when the frequency assignment's frequencies will be either guarded (monitored) or used for transmission.

  Recommend values from **Code List UUF:**

Code
Regular, not limited to workweek
Regular, workweek
Occasional, not limited to workweek
Occasional, workweek

* **UsagePercentage** ***(US)***: Enter the percentage of time the transmitter equipment is in use during the scheduled hours of operation.

* **UserNetCode** ***(US)***: Enter a unique code that identifies the specific user of the frequency, i.e., the command, activity, unit, project, etc.

Example

```
<Assignment cls="U">
  <Serial cls="U">NLD::AS:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <EffectiveDateTime cls="U">2011-12-28T00:00:00Z</EffectiveDateTime>
  <Function cls="U">AIR OPS</Function>
  <Configuration>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <TxRef>
      <Serial cls="U">NLD::TX:444</Serial>
    </TxRef>
  </Configuration>
  <Station>
    <StationID cls="U">STATION1</StationID>
    <LocSatRef cls="U">NLD::LO:111</LocSatRef>
    <ServiceVolumeLocRef cls="U">NLD::LO:222</ServiceVolumeLocRef>
    <ServiceVolumeHeight cls="U">10000</ServiceVolumeHeight>
  </Station>
  <Link>
    <LinkID cls="U">LINK1</LinkID>
    <StationConfig>
      <Type cls="U">Transmit-Receive</Type>
      <ConfigID cls="U">CONFIG1</ConfigID>
      <StationID cls="U">STATION1</StationID>
    </StationConfig>
    <Assigned>
      <Freq>
        <FreqMin cls="U">256.275</FreqMin>
      </Freq>
    </Assigned>
  </Link>
</Assignment>
```

AtWaypoint

At Waypoint

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
WaypointIdx	Waypoint Index	Req	UN(6)
DateTime	Date/Time	Req	DT
Speed	Speed at Waypoint	Opt	UN(7,2)*(km/h)*
Sub-Element Of:	FEDeployment		

Description

This element defines a point in time at which a Force Element is at a given waypoint along a route. A route is a geographical object described as a series of points, which have been recorded in a Location dataset. A Force Element will follow a route composed of all or a subset of the Points defined in the Location, and may reach each of these points in any order: the timestamp associated with the Waypoint will define the order of visit of the points.

Input Requirement

* **WaypointIdx**: Enter the sequential index of a Point within the referenced Location. Some points of the Location may be omitted, and are not necessarily visited in the order they are defined in the Location. For example a Location might have 10 Points; however, a Force Element may use a route passing successively by points 3, 1, 10, and 7.
* **DateTime**: Enter the date and time that the force element is at the selected waypoint.
* **Speed**: Enter the speed of the force element along a straight route or to the next waypoint. The speed MUST be entered in km/h (software tools may have an option to display the speed in nmi/h for ships and aircrafts, but the transmitted data is standardised in km/h).

Example

```
<AtWaypoint>
  <WaypointIdx cls="U">1</WaypointIdx>
  <DateTime cls="U">2012-01-01T15:00:00Z</DateTime>
</AtWaypoint>
```

BandApplication

Band Application

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S50
Sub-Element Of:	TOA		

Description

Enter the name of a recognized application (e.g., "Wind Profiler").

Input Requirement

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

BandUser

Band User

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S50
Sub-Element Of:	TOA		

Description

Enter the name of a recognized user class (e.g., "Government", "Military", or "Civil Support Team").

Input Requirement

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

Baseband

Baseband

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ModFreqMin	Minimum Modulating Frequency	Opt	UN(16,9)*(MHz)*
ModFreqMax	Maximum Modulating Frequency	Opt	UN(16,9)*(MHz)*
SignalType	Signal Type	Opt	S50 (Code List CMO)
Sub-Element Of:	RxMode, TxMode		

Description

This element defines the parameters of the modulating or received signal.

Input Requirement

* **ModFreqMin**: Enter the minimum modulating frequency measured:
  - for a transmitter, on the low side of the spectrum signature at the -3 dB point before the baseband signal begins the up-conversion process;
  - for a receiver, at the -3 dB point on the low frequency side of the receiver baseband, after detection but prior to de-multiplexing or demodulation.
* **ModFreqMax**: Enter the maximum modulating frequency:
  - for a transmitter, measured on the high side of the spectrum signature at the -3 dB point before the baseband signal begins the up-conversion process;
  - for a receiver, frequency that can be recovered and demodulated by the receiver. Typically, this frequency should have 3-dB attenuation relative to the least attenuated demodulated or multiplexed signal.
* **SignalType**: Enter the type of modulation.

  Recommend values from **Code List CMO (extract only):**

Code
AM Clear Voice
AM Secure Voice
ASK/OOK
Audio FSK
Binary Phase Shift Key
Code Division Multiplex
COFDM
CPFSK
Data
Differential PSK
...

Example

```
<Baseband>
  <ModFreqMin cls="U">0.0003</ModFreqMin>
  <ModFreqMax cls="U">0.0034</ModFreqMax>
  <SignalType cls="U">FM Clear Voice</SignalType>
</Baseband>
```

Blanking

Blanking

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
AzStart	Start Azimuth	Opt	UN(5,2) [0..360]*(deg)*
AzStop	Stop Azimuth	Opt	UN(5,2) [0..360]*(deg)*
ElevStart	Start Elevation	Opt	SN(4,2) [-90..90]*(deg)*
ElevStop	Stop Elevation	Opt	SN(4,2) [-90..90]*(deg)*
Sub-Element Of:	StationConfig		

Description

Data element Blanking contains the start and stop angles of a horizontal and/or vertical sector that is blanked.

Input Requirement

* **AzStart**: Enter the starting azimuth if an azimuth range is reported; otherwise, enter a single azimuth. This is considered the left limit of an azimuth range when an azimuth range is entered.
* **AzStop**: Enter the stopping azimuth. This is considered the right limit of an azimuth range.
* **ElevStart**: Enter the minimum elevation angle. This is the lower limit of an elevation range when a range is reported.
* **ElevStop**: Enter the maximum elevation specification. This is the upper limit of an elevation range.

Example

```
<Blanking>
  <AzStart cls="U">25</AzStart>
  <AzStop cls="U">35</AzStop>
</Blanking>
```

CaseNum

Case Number

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Country	Country/Body issuing the case number	Opt	Code List CAO
Type	Case Number Type	Opt	S20
Identifier	Case Number	Req	S20
Sub-Element Of:	Common		

Description

Data element CaseNum allows to store a case number associated to the dataset.

Input Requirement

* **Country**: Enter the nation or body who provided or assigned the case number.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Type**: Enter a text identifying the type of case number (national file, exercise name, etc).
* **Identifier**: Enter the case number.

Example

```
<CaseNum>
  <Country cls="U">NLD</Country>
  <Identifier cls="U">JWID 2002</Identifier>
</CaseNum>
```

Channel

Channel

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Name	Name	Opt	S50
User	User	Opt	S50
Sub-Element Of:	ChannelPlan		
Sub-Elements:	ChannelFreq [1..n]		

Description

This element gives the frequency, and optionally the name or number, of a channel within a channel plan.

Input Requirement

* **Name**: Enter the name of this channel (e.g., "Video carrier, Sound carrier, Nicam Sound carrier").
* **User**: Enter a specific user of this channel in the channel plan.

Example

See ChannelPlan.

ChannelFreq

Channel Frequency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	UN(16,9)*(MHz)*
Sub-Element Of:	Channel		

Description

This element contains one frequency in the channel plan.

Input Requirement

Enter the frequency of this channel.

ChannelPlan

Channel Plan

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Name	Name	Req	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Channel [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element describes a channel plan.
See ChannelPlan Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "CP".

* **Name**: Enter the name of this channel plan (e.g., "Plan for Wireless Microphones in the Band 162-174 MHz").

Example

```
<ChannelPlan cls="U">
  <Serial cls="U">NATO:CEPT:CP:123</Serial>
  <EntryDateTime cls="U">2012-01-01T00:00:00Z</EntryDateTime>
  <Name cls="U">Wireless Microphones 167-174 MHz</Name>
  <Channel>
    <ChannelFreq cls="U">162.1</ChannelFreq>
    <_etc_/>
  </Channel>
</ChannelPlan>
```

ChannelPlanRef

Channel Plan Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Allocation, TOA		

Description

This element refers to a ChannelPlan.

Input Requirement

Enter the serial of the referenced ChannelPlan.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**CP**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

CircuitRemarks *(US)*

Circuit Remarks

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Remark	Remark	Req	S40
Sub-Element Of:	Assignment		

Input Requirement

* **Remark**: Enter the Any additional data to be submitted by the applicant that cannot be accommodated in any of the other data items in the Government Master File (GMF).

ClsDerived *(US)*

ClsDerived

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Date	Derivative Classification Date	Req	D
Title	Derivative Classification Document Title	Req	S30
Org	Derivative Classification Publishing Organization	Req	S30
Sub-Element Of:	SecurityClass		

Description

This element contains ...

Input Requirement

This element ...

* **Date**: The date of the source document.
* **Title**: The title of the source document.
* **Org**: The publishing organization of the source document.

Example

```
<ClsDerived>
  <Date>1993-08-15</Date>
  <Title>B-1B SCG</Title>
  <Org>OC-ALC/LAB</Org>
</ClsDerived>
```

Code

Code

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Value	Code Value	Req	S50
Description	Entry Description	Opt	S255
Sub-Element Of:	CodeList		

Description

Data element Code contains the information necessary to create or modify a code entry in the given code list.

Input Requirement

* **Value**: Enter the unique code entry within the code list. This item MUST be used.
* **Description**: Enter the long text name of the code entry or a brief description of the entry to be created or modified.

Example

See element CodeList.

CodeList

Code List

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Action	Action Required	Req	S25 (Code List CAC)
CodeListCode	Code List 3-letter Code	Req	US3
EffectiveDate	Effective Date	Req	D
Description	New Code List Description	Opt	MEMO
Origin	Originating Country/Body	Opt	Code List CAO
Sub-Element Of:	Administrative		
Sub-Elements:	Code [0..n]		

Description

Data element CodeList contains the information necessary to create or delete a code entry in a given Code List.

Input Requirement

* **Action**: Indicate the intended type of modification to the given code list.

  Recommend values from **Code List CAC:**

Code
Add Code
Add List
Delete Code
Delete List

* **CodeListCode**: Enter the three-letter code of an existing Code List to be modified, or an unused three-letter code in the case of the creation of a new Code List.
* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **Description**: Enter the description of the intended contents of new code list, and the element(s) where it will be used.
* **Origin**: Enter the country or organisation which is using the modified or new code.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Example

```
<CodeList>
  <Action cls="U">Add Code</Action>
  <CodeListCode cls="U">CAS</CodeListCode>
  <EffectiveDate cls="U">2011-12-25</EffectiveDate>
  <Code>
    <Value cls="U">Jerking</Value>
    <Description cls="U">Moving wildly in all directions</Description>
```

```
  </Code>
</CodeList>
```

Notes

It is not advisable to delete an existing code.

Comment

Comment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	MEMO
Sub-Element Of:	CommentSource		

Description

This element contains the comment provided by the Host Nation or Administration regarding an equipment supportability.

Input Requirement

Enter the Host Nation or Administration comment.

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

Example

```
<Comment cls="U" idx="1">Assignments will be granted on case-by-case basis.</Comment>
```

Notes

In the USA, for NTIA and the Spectrum Planning Subcommittee (SPS), the first Comment is the signing statement in the corresponding Section 4 or 5 respectively of the Certification of Spectrum Support page.

CommentSource

Comment Source

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Source	Comment Source	Opt	S100
Author	Comment Author	Opt	S100
JobTitle	Author Job Title	Opt	S100
Date	Comment Date	Opt	D
Sub-Element Of:	SSReply		
Sub-Elements:	Comment [0..n]		

Description

This element is used to provide comments to a SSRequest. It can also be used to certify supportability; in this case, the authority approving the supportability will fill in the items in this element and may omit any Comment.

Input Requirement

* **Source**: Enter the name of the organisation or authority that is the source of the comment. For example, MCEB, SPS or NTIA.
* **Author**: Enter the title and name of the individual that is the source of the comment.
* **JobTitle**: Enter the title or position of the comment author.
* **Date**: Enter the date the comment was provided.

Notes

For the USA,

* the Date for a Source of "SPS" is also the date the SPS official signed the Certification of Spectrum Support. The date for a Source of "NTIA" is the date the NTIA Certifying Official signed the Certification of Spectrum Support.
* For NTIA and the Spectrum Planning Subcommittee (SPS), the first Comment is the signing statement in the corresponding Section 4 or 5 respectively of the Certification of Spectrum Support page.

Common

Common

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
cls	classification	Req	Code List CCL
extReferences	links to external references	Opt	List of UN6
legacyReleasability ***(US)***	Legacy Releasability	Opt	MEMO
quality ***(US)***	Data Quality	Opt	S255
recommendedValue ***(US)***	Recommended Value	Opt	MEMO
releasability	releasability markings	Opt	List of Code List CCY
remarks	Links to Dataset Remarks	Opt	List of UN6
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Initial		**Req**	
Serial	Dataset Identifier	Req	pattern (S29)
EntryDateTime	Entry Date/Time	Req	DT
EntryBy	Creator Role	Opt	pattern (S29)
Owner	Role which Owns the Dataset	Opt	pattern (S29)
LastChange		**Opt**	
LastChangeDateTime	Latest Modification Date/Time	Opt	DT
LastChangeBy	Last Modifier Role	Opt	pattern (S29)
State	Dataset Status	Opt	S10 (Code List CSU)
Inherited by:	Administrative, Allotment, Antenna, Assignment, ChannelPlan, Contact, ExternalReference, FEDeployment, ForceElement, IntfReport, JRFL, Location, Note, Organisation, RFSystem, Receiver, Role, SSReply, SSRequest, Satellite, TOA, Transmitter		
Sub-Elements:	CaseNum [0..n] ExtReferenceRef [0..n] Remarks [0..n] SecurityClass [0..1] ***(US)***		

Description

This is an abstract element used as a basis for all datasets.
See Common Diagram

Input Requirement

* **cls** *(Attribute)*: Enter the classification of the current data item. This attribute is REQUIRED on each data item, even if the classification is `"U"`.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

  [XSL ERR CLS] All elements at all levels below the dataset MUST have a classification lower or equal to the classification indicated here.

* **releasability** *(Attribute)*: Enter the list of country codes for which the current data item is releasable. **If this element is omitted, there is no restriction to the release of the data item**

* **remarks** *(Attribute)*: Enter the list of indices referring to an Remarks index applicable to the current data item.

* **extReferences** *(Attribute)*: Enter the list of indices referring to an ExtReferenceRef index applicable to the current data item.

* **legacyReleasability** *(Attribute)* ***(US)***: One or more special handling instructions in sentence format, not code format. For example, "Approved for public release; distribution is unlimited". Multiple special handling instructions are separated by "|" (i.e., ASCII character #124).
* **quality** *(Attribute)* ***(US)***: A quality indicator for the data in this XML element. For example, "Outlier" or "Non-CodeList".
* **recommendedValue** *(Attribute)* ***(US)***: The manually entered, automatically calculated or statistically derived probable correct value for data items with negative quality entries.
* **Initial Data**: This group is REQUIRED.

  This group of data items must be entered as soon as the dataset is created.

  - **Serial**: The attribute serial is composed of four parts separated by colons (":"). The maximum total length is 29 characters (5+1+4+1+2+1+15).

    . Part 1 is the Country and is always REQUIRED. It contains one to five alphabetic uppercase characters representing either the ITU country code or the NATO Command code identifying the originator or organisation responsible for maintaining the dataset, as listed in Code List CCY.

    . Part 2 is the orgCode and is OPTIONAL. It may contain one to four alphanumeric characters (no spaces nor special characters) representing a code for an Organisation within the country or command. It will normally indicate the organisation responsible for maintaining the dataset. Domain naming is left at the discretion of each country, but should be managed by a central authority in the country to allow deconfliction and uniqueness. It should enable the location in the data repository where this dataset information is stored.

    . Part 3 is the Dataset Type and MUST contain a two-character code from the table in the Introduction section identifying the type of dataset (LO for a Location, etc).

    . Part 4 is a Serial Identifier and is always REQUIRED. It contains one to fifteen alphanumeric characters (including spaces and special characters), whose meaning is left at the discretion of each domain manager.

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

  - **EntryDateTime**: Enter the date the dataset was **initially** entered into the data repository (e.g. FRRS for USA, SMIR for NATO).
  - **EntryBy**: Enter the serial of the Role which is creating the current dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
  - **Owner**: Enter the serial of the Role which is responsible for the accuracy of the data content.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
* **Last Modification**: This group is OPTIONAL.

  This group of data items indicates the last editor of the dataset.

  - **LastChangeDateTime**: Enter the date/time the dataset was last modified.
  - **LastChangeBy**: Enter the serial of the Role which last modified the current dataset.

    [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
* **State**: Enter the state of the dataset.

  Recommend values from **Code List CSU:**

Code
Active

Inactive

Example

Examples are available in inherited elements Transmitter, Receiver, Antenna, Assignment, etc.

ConfigEmission *(US)*

Configuration Emission

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EmsClass	Class Of Emission	Opt	pattern (S5)
NecessaryBwMax	Maximum Necessary Bandwidth	Opt	UN(16,9)*(MHz)*
NecessaryBwMin	Minimum Necessary Bandwidth	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	Configuration		

Description

This element and its sub-elements define the emission bandwidths and classification symbols that a Configuration uses, which may be a subset of the linked components' capabilities.

Input Requirement

* **EmsClass**: Enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information 9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered

- : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted a
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered.b - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **NecessaryBwMax**: Enter the maximum necessary bandwidth in the case of a range of values.

* **NecessaryBwMin**: Enter the necessary bandwidth which is defined as the value in MHz, for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. This is approximately at the -20 dB level on an emission curve. When specifiying a range of necessary bandwidths, enter the minimum necessary bandwidth.

ConfigFreq

Configuration Frequency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
InBand	In Band Indicator	Opt	Code List CBO
Priority	Priority	Opt	S10 (Code List CPS)
Sub-Element Of:	Configuration		

Description

This element indicates the set of frequencies that a configuration uses, which may be a subset of the frequencies that the linked components (Transmitter, Receiver, Antenna) are capable of.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **InBand**: Enter "Yes" if this frequency range is in compliance with the applicable Frequency Allocation Table. Enter “No” if any portion of the frequency range is not in compliance.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Priority**: Indicator if this spectrum use is Primary, Secondary or Permitted, as defined by the system use and the appropriate Administration's Frequency Allocation Table/guidance.

  Recommend values from **Code List CPS:**

Code
Primary
Secondary
Permitted
Other

Configuration

Configuration

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ConfigID	Configuration Identifier	Req	S100
Description	Mode Description	Opt	S100
Repeater	Repeater Indicator	Opt	Code List CBO
NumUsers	Number of Users	Opt	UN(9)
EIRP		**Opt**	
EIRPMin	Minimum or Nominal EIRP	Opt	SN(10,7)*(dBW)*
EIRPMax	Maximum EIRP	Opt	SN(10,7)*(dBW)*
OOBJustification	Out-Of-Band Justification	Opt	MEMO
PowerLimit ***(US)***	Power Limit	Opt	SN(10,7)*(dBW)*
PowerType ***(US)***	Power Type	Opt	S10 (Code List CPT)
SpectrumLink ***(US)***	Spectrum Link	Opt	Code List CBO
Sub-Element Of:	Assignment, RFSystem, SSReply, SSRequest		
Sub-Elements:	ConfigEmission [0..n] ***(US)*** ConfigFreq [0..n] Notation [0..n] RxRef [0..n] TxRef [0..n] Usage [0..n]		

Description

Data element Configuration identifies each operational configuration that is required in a SSRequest, granted by a Host Nation in a SSReply, or authorised in a frequency Assignment or Allotment dataset. It also identifies the functional use of the assigned frequency at a particular transmitting station. Finally, it may indicate if the receiver station is used primarily as a repeater. A direct coupling between the station's receiver and the station's transmitter allows the incoming signal to be retransmitted exactly as received.
See Configuration Diagram

Input Requirement

This element is OPTIONAL and repeatable under HostNationConstraints element. If omitted, the SSReply is assumed to agree with every Configuration in the corresponding SSRequest. In case some configurations in SSRequest are not acceptable, use Configuration in HostNationConstraints to describe the accepted configurations (if necessary, modifying the information from the SSRequest).

* **ConfigID**: Enter a short name for the configuration; this name should be a meaningful identification of the configuration, but it can also be automatically generated in some systems. The identifier MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Description**: Enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.

* **Repeater**: Enter `"Yes"` for each receiver location when a station in the fixed or mobile service is used primarily as a repeater.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NumUsers**: Enter the number of users supported by the configuration. This data may be used to analyse spectrum usage.

* **EIRP**: This group is OPTIONAL.

Group EIRP contains the Effective Isotropic Radiated Power (EIRP) radiated from the transmitter antenna. The EIRP is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss, expressed in dBW.

- **EIRPMin**: Enter the minimum or nominal EIRP radiated from the transmitter antenna.
- **EIRPMax**: Enter the maximum EIRP, in the case of a range of values; in the case of a SSReply, use the EIRPMax to specify the maximum authorised power in your Nation for the specified Configuration.

* **OOBJustification**: Enter the justification for out-of-band frequency use.
* **PowerLimit** ***(US)***: Enter the power limit of the transmissions in this configuration.
* **PowerType** ***(US)***: Enter the power type code for carrier, mean, or peak envelope power emitted. The power type code will depend on the type of emission of the transmitter equipment.

  Recommend values from **Code List CPT:**

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.
Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

* **SpectrumLink** ***(US)***: Indicate whether the transmitter(s) communicate or interact with the receiver(s) in this Configuration, i.e. indicates a link versus a box.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Configuration>
  <ConfigID cls="U">Base Config</ConfigID>
  <Repeater cls="U">Yes</Repeater>
</Configuration>
```

Contact

Contact

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
TitleRank	Title or Rank	Opt	S10
FirstName	First Name	Opt	S30
LastName	Last Name	Opt	S30
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] EMail [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a Contact (individual using the system or being referenced in the system).
See Contact Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`CN`".

* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **TitleRank**: Enter the contact title or rank e.g. Ms, Col, etc.
* **FirstName**: Enter the first name of the contact individual.
* **LastName**: Enter the last name of the contact individual.

Example

```
<Contact cls="U">
  <Serial cls="U">USA:AF:CN:123</Serial>
  <EntryDateTime cls="U">2004-05-20T00:00:00Z</EntryDateTime>
  <FirstName cls="U">John</FirstName>
  <LastName cls="U">Doe</LastName>
  <TelephoneFax>
    <Number cls="U">(123)456.789</Number>
  </TelephoneFax>
</Contact>
```

ContactRef

Contact Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Role		

Description

This element references a Contact.

Input Requirement

Enter the serial of the referenced Contact.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**CN**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

CoordinationData *(US)*

Coordination Data

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
CoordIndicator	Coordination Indicator	Req	S50 (Code List UCJ)
HostComments	Host Comments	Opt	MEMO
Sub-Element Of:	Assignment		

Input Requirement

* **CoordIndicator**: Indicate the coordinating entity.

  Recommend values from **Code List UCJ:**

Code
Canada
Mexico
Nato
Host Nation
NTIA Fas Members
FAA
DoD Joint Chiefs of Staff
Other

* **HostComments**: Enter the Comments from the coordinating entity.

Country

Applicable Country/Area

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	TOA		

Description

This element indicates the country or area for which this Table of Allocations is in force.

Input Requirement

Enter the country or area code.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Curve

Curve

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Type	Curve Type	Req	S25 (Code List CCT)
Calculated	Calculated Data Indicator	Opt	Code List CBO
FreqFactor	Curve Frequency Factor	Req	UN(3,1)
FreqConst	Curve Frequency Constant	Req	SN(16,9)*(MHz)*
Bw	Curve Measurement Bandwidth	Opt	UN(16,9)*(MHz)*
FreqMin	Lowest Frequency of the Curve	Opt	UN(16,9)*(MHz)*
FreqMax	Highest Frequency	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	Receiver, Transmitter		
Sub-Elements:	CurvePoint [1..n]		

Description

Data element Curve defines the type of curve. It contains an indication as to whether the values were measured or calculated, the numeric factor to be applied to the carrier frequency to find the abscissa of the curve, a frequency to be added to the carrier frequency to obtain the origin of the curve, and the measurement bandwidth.
The absolute frequency of the point on the curve will be indicated by:
Freq = Freqcarrier * X + Freqconst + Freqoffset
where:

* Freqcarrier = assigned or tuned frequency for which the curve will apply
* X = value of freqFactor
* Freqconst = value of freqConst
* Freqoffset = value of offset in each CurvePoint

Input Requirement

All curves for all modes are stored at the Transmitter or Receiver level, and are referenced by the mode to which the curve applies. If a curve is entered and not referenced by any mode, it is NOT assumed to apply to all modes and therefore it is not used.

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Type**: Enter a code defining the type of curve.

  Recommend values from **Code List CCT:**

Code	Meaning
Filter	External filter between TxRx and Antenna
Selectivity-IF1	Receiver 1st intermediate frequency selectivity
Selectivity-IF2	Receiver 2nd intermediate frequency selectivity
Selectivity-IF3	Receiver 3rd intermediate frequency selectivity
Selectivity-IF4	Receiver 4th intermediate frequency selectivity
Selectivity-IF5	Receiver 5th intermediate frequency selectivity
Selectivity-Overall	Overall Selectivity
Selectivity-RF	Receiver radio-frequency selectivity
Tx RF Spectrum	Transmitter RF spectrum

* **Calculated**: Enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **FreqFactor**: Enter a positive numeric multiplier of the carrier frequency. For example, enter 0 to define a curve around the IF, or 1 to define a curve around the carrier frequency.
* **FreqConst**: Enter a frequency offset (positive or negative) in MHz (without unit).
* **Bw**: Enter the bandwidth of measurement of the curve values, in MHz (without unit).
* **FreqMin**: Enter the lowest value of the curve frequency range.
* **FreqMax**: Enter the highest value of the curve frequency range.

Example

```
<Curve idx="1">
  <Type cls="U">Tx RF Spectrum</Type>
  <Calculated cls="U">No</Calculated>
  <FreqFactor cls="U">1</FreqFactor>
  <FreqConst cls="U">0</FreqConst>
  <Bw cls="U">0.001</Bw>
  <CurvePoint>
    <Offset cls="U">0.025</Offset>
    <Level cls="U">-3</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">0.05</Offset>
    <Level cls="U">-20</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">0.1</Offset>
    <Level cls="U">-40</Level>
  </CurvePoint>
  <CurvePoint>
    <Offset cls="U">1</Offset>
    <Level cls="U">-60</Level>
  </CurvePoint>
</Curve>
```

CurvePoint

Curve point

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Offset	Point Frequency Offset	Req	SN(16,9)*(MHz)*
Level	Level	Req	SN(4,1)
Sub-Element Of:	Curve		

Description

Data element CurvePoint contains the relative frequency to add to the curve origin to obtain the absolute frequency point on the curve, and the value in dB (relative to the carrier for a TX characteristic, or relative to sensitivity for a RX characteristic).

Input Requirement

This data element must be repeated for each couple (X, Y) of a curve.

* **Offset**: Enter a frequency difference in MHz (without unit). Refer to data element Curve for instructions of use. If the curve being defined is symmetric, then enter only positive offsets; if the curve is not symmetric (such as a SSB or vestigial sideband modulation spectrum) then enter the full curve including negative offsets. When defining the transmitter RF spectrum and the receiver RF and IF selectivity curves, enter as a minimum the points corresponding to the -3, -20, -40 and -60 dB values.
* **Level**: Enter a value in dB in the range -150 to +150. Refer to data element Curve for instructions of use.

Example

See example under Curve.

DCSTrunk

DCS Trunk Identifier

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S6
Sub-Element Of:	Link		

Input Requirement

Enter the Defense Communications System (DCS) trunk identifier assigned by the Defense Information Systems Agency (DISA).

Dataset

Dataset

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Serial	Req	pattern (S29)
RetireDate	Retire Date	Opt	D
Reason	Reason	Opt	MEMO
Sub-Element Of:	Administrative		
Sub-Elements:	MissingRef [0..n]		

Description

Data element Dataset is used within an Administrative transaction to specify the identifier of the datasets on which the action must apply.

Input Requirement

* **Serial**: Enter the serial of the referenced dataset.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **RetireDate**: Enter the date this dataset goes out of force.

* **Reason**: Enter the reason linked to the Action performed on this dataset.

Deployment

Deployment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type	Req	S50 (Code List CIN)
Status	Status	Opt	S10 (Code List CSU)
Sub-Element Of:	RFSystem, Receiver, Transmitter		
Sub-Elements:	Installation [0..n]		

Description

This element provides the general type of equipment deployment. For the detailed data, the appropriate force element and platforms elements should be referenced. Data element Deployment identifies the general category of how the equipment is deployed. For example an equipment may be deployed on an airborne platform, a ship or fixed land installation.

Input Requirement

* **Type**: Enter the general deployment category for the equipment.

  Recommend values from **Code List CIN (extract only):**

Code
Air
Amphibious
Deep Space
Handheld
Land
Land Fixed
Land Mobile
Manpack
Missile
Non Synchronous Orbit
...

* **Status**: Enter the status of the Deployment.

  Recommend values from **Code List CSU:**

Code
Active
Inactive

Example

```
<Deployment>
  <Type cls="U">Air</Type>
</Deployment>
```

DetailedFunction

Detailed Function Identifier

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S6
Sub-Element Of:	Link		

Input Requirement

Enter the detailed function of the frequency assignment.

DiagramEndpoint

Diagram End Point

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Name	Name	Req	S100
IconType	IconType	Opt	S25 (Code List CIC)
IconPosLeft	IconPosLeft	Opt	UN(6)
IconPosTop	IconPosTop	Opt	UN(6)
PointToMultiPoint	PointToMultiPoint	Opt	Code List CBO
Sub-Element Of:	SSRequest		
Sub-Elements:	EndpointLocation [0..n]		

Description

This data element defines an instance of an icon on the diagram.

Input Requirement

* **Name**: Enter the name of the diagram endpoint.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **IconType**: Enter the type of icon for the diagram endpoint.

  Recommend values from **Code List CIC (extract only):**

Code	Meaning
Airborne	
Earth	
Fixed	
Land	
Land Mobile	
METAIDS Ground	
METAIDS Radar	
METAIDS Radiosonde	
Mobile Earth-Air	
Mobile Earth-Land	
...	...

* **IconPosLeft**: Enter the X coordinate of the icon in twips.

* **IconPosTop**: Enter the Y coordinate of the icon in twips.

* **PointToMultiPoint**: Enter "Yes" if the diagram endpoint participates in point-to-multipoint links. Enter "No" if it participates in point-to-point links.
Note for the USA: Required when operating between 932 and 935 MHz or 941 and 944 MHz.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

DiagramLine

Diagram Line

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
TxEndpointName	Tx Endpoint Name	Req	S100
RxEndpointName	Rx Endpoint Name	Req	S100
ConfigID	Configuration ID	Opt	S100
Sub-Element Of:	SSRequest		

Description

This data element defines a line between two endpoints on the diagram.

Input Requirement

* **TxEndpointName**: Enter the assigned name at the originating (transmitting) endpoint of a line on the diagram. There must be a corresponding DiagramEndpoint element with this name. Note there may be more than one line with the same originating and terminating endpoints if those lines reference different Configurations.

  [XSD ERR RELATED] This item MUST refer to an existing DiagramEndpoint within the dataset.

* **RxEndpointName**: Enter the assigned name at the terminating (receiving) endpoint of a line on the diagram. There must be a corresponding DiagramEndpoint element with this name. Note there may be more than one line with the same originating and terminating endpoints if those lines reference different Configurations.

  [XSD ERR RELATED] This item MUST refer to an existing DiagramEndpoint within the dataset.

* **ConfigID**: Enter a reference to a Configuration associated with this line on the diagram.

  [XSD ERR RELATED] This item MUST refer to an existing Configuration within the dataset.

DocketNum *(US)*

Docket Number

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
DocketNum	Docket Number	Req	S12
Sub-Element Of:	Assignment		

Input Requirement

* **DocketNum**: Enter the reference number assigned by the Interdepartment Radio Advisory Committee (IRAC) to frequency applications submitted to the Frequency Assignment Subcommittee (FAS).

Downgrade *(US)*

Downgrade

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Downcls	Downgrading Classification	Req	Code List CCL
Date	Downgrading Date	Req	D
DowngradeInfo	Downgrading Information	Opt	S200
Sub-Element Of:	SecurityClass		

Description

This element contains ...

Input Requirement

This data element ...

* **Downcls**: The classification level of the dataset after downgrading.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Date**: The date of the downgrading.
* **DowngradeInfo**: Additional downgrading information, if any.

Example

```
<Downgrade>
  <DownCls>C</DownCls>
  <Date>1999-11-05</Date>
</Downgrade>
```

EMail

EMail

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Preferred	Preferred Address	Opt	Code List CBO
Type	System or Network	Opt	S20
MaxCls	System Maximum Classification	Opt	Code List CCL
Address	Email Address	Req	S255
Sub-Element Of:	Contact, Organisation, Role		

Description

This data element contains the email address of the Contact or Role.

Input Requirement

* **Preferred**: Enter a code `"Yes"` for the preferred address(es) and a code `"No"` for the others. Automated tools SHOULD send all mails to this Contact to all its preferred addresses.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Type**: Enter the type of network hosting the e-mail address.
* **MaxCls**: Enter the highest classification that can be used for the email address.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Address**: Enter the e-mail address for the Contact or Role.

Example

```
<EMail>
  <Preferred cls="U">Yes</Preferred>
  <Type cls="U">Internet</Type>
  <MaxCls cls="U">U</MaxCls>
  <Address>john.doe@abc.com</Address>
</EMail>
```

EarthStation

Earth Station

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Name	Station Name	Opt	S50
Type	Station Type	Opt	S10 (Code List CEA)
LocationRef	Location Reference	Opt	pattern (S29)
Sub-Element Of:	Satellite		

Description

This element holds the name and type of an earth station used in a satellite network.

Input Requirement

* **Name**: Enter the name of an associated earth station.
* **Type**: Indicate if this is a specific or typical earth station.

  Recommend values from **Code List CEA:**

Code
Specific
Typical

* **LocationRef**: Enter the serial of the referenced Location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<EarthStation>
  <Name cls="U">Kessler</Name>
  <Type cls="U">Specific</Type>
</EarthStation>
```

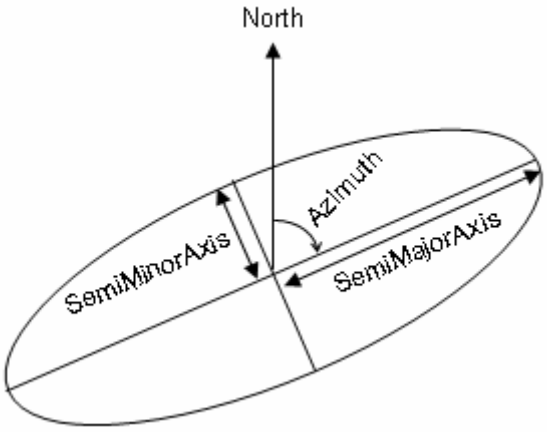
Ellipse

Ellipse

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
SemiMajorAxis	Semi Major Axis	Req	UN(9,4)*(km)*
SemiMinorAxis	Semi Minor Axis	Req	UN(9,4)*(km)*
Azimuth	Azimuth of the Major Axis	Req	UN(5,2) [0..360]*(deg)*
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		

Description

This type of Location is an ellipse on the horizontal plane, defined by its semi-major and semi-minor axis, and by the orientation (azimuth) of the semi-major axis.



Input Requirement

* **idx** *(Attribute)*: Enter the sequence index of the current ellipse within the GeoShape, starting at 1.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: Enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Coord**: This group is REQUIRED.

  - **Lon**: Enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a

decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: **`dddmmss.hhH`** (where ".hh" is optional and H = E or W).

[XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

- **Lat**: Enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: **`ddmmss.hhH`** (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{6}(.[0-9]{1,2})?(N|S))|X"

* **SemiMajorAxis**: Enter the length of the semi-major axis of the ellipse.

  [XSL ERR MINMAX] SemiMajorAxis it MUST be greater than or equal to SemiMinorAxis.

* **SemiMinorAxis**: Enter the length of the semi-minor axis of the ellipse.

* **Azimuth**: Enter the angle of the semi-major axis in the horizontal plane, measured from true North.

* **Altitude AGL**: This group is OPTIONAL.

  - **AltitudeMin**: Enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).
  - **AltitudeMax**: Enter the maximum height of the point above the terrain, in case of a ranged altitude value.

Emission

Authorised Emission

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EmsClass	Class Of Emission	Opt	pattern (S5)
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9)*(MHz)*
Power	Maximum Power	Opt	SN(10,7)*(dBW)*
Sub-Element Of:	Allotment		

Description

This data element defines the limits of the authorized bandwidth and power within this allotment.

Input Requirement

* **EmsClass**: Enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information 9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered - : Unknown (to be used only by legacy data)

Third Symbol - Type of Information to be Transmitted a
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered.b - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **NecessaryBw**: Enter the necessary bandwidth which is defined as the value in MHz, for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. This is approximately at the -20 dB level on an emission curve.

* **Power**: Enter the maximum authorized power in dBW, for the given class of emission.

EmsClass

Class Of Emission

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
explainInformationTypeX ***(US)***	Explain Information Type X	Opt	MEMO
explainModulationTypeX ***(US)***	Explain Modulation Type X	Opt	MEMO
explainNatureOfSignalX ***(US)***	Explain Nature Of Signal X	Opt	MEMO
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
	Element Content	Req	pattern (S5)
Sub-Element Of:	RxMode, TxMode		

Description

This data element identifies the emission classification symbols that define the baseband modulating characteristics of the emission designator. The emission classification consists of the three required symbols and the two optional symbols shown in the table below.

Input Requirement

Enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier **Amplitude Modulated** A - Double sideband H - Single sideband, full carrier R - Single sideband, reduced or variable level carrier J - Single sideband, suppressed carrier B - Independent sidebands C - Vestigial sidebands **Angle-Modulated** F - Frequency modulation G - Phase modulation **Amplitude and Angle-Modulated** D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse P - Sequence of unmodulated pulses K - Modulated in amplitude L - Modulated in width/duration M - Modulated in position phase Q - Carrier is angle-modulated during the period of the pulse V - Combination of the foregoing or is produced by other means **Combination** W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse **Other** X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier
0 - No modulating signal 1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex) 2 - A single channel containing quantised or digital information, using a modulating subcarrier 3 - A single channel containing analogue information 7 - Two or more channels containing quantised or digital information 8 - Two or more channels containing analogue information

9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information X - Cases not otherwise covered - : Unknown (to be used only by legacy data)
Third Symbol - Type of Information to be Transmitted a
N - No information transmitted A - Telegraphy - for aural reception B - Telegraphy - for automatic reception C - Facsimile D - Data transmission, telemetry, telecommand E - Telephony (including sound broadcasting) F - Television (video) W - Combination of the above X - Cases not otherwise covered.b - : Unknown (to be used only by legacy data)
a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc. b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.
Fourth Symbol - Designates the Details of Signal(s)
A - Two-condition code with elements of differing numbers and/or durations B - Two-condition code with elements of the same number and duration without error correction C - Two-condition code with elements of the same number and duration with error correction D - Four-condition code in which each condition represents a signal element of one or more bits E - Multi-condition code in which each condition represents a signal element of one or more bits F - Multi-condition code in which each condition or combination of conditions represents a character G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **explainInformationTypeX** *(Attribute)* ***(US)***: Enter a reference to a Remark that describes the Type of Information. This is required only when the 3rd symbol of the EmsClass is an "X" (Other).
* **explainModulationTypeX** *(Attribute)* ***(US)***: Enter a reference to a Remark that describes the Type of Modulation. This is required only when the 1st symbol of the EmsClass is an "X" (Other).
* **explainNatureOfSignalX** *(Attribute)* ***(US)***: Enter a reference to a Remark that describes the Nature of Signal. This is required only when the 2nd symbol of the EmsClass is an "X" (Other).

Examples

Within an equipment mode:

```
<EmsClass>J3E</EmsClass>
<EmsClass>P0NAN</EmsClass>
```

Within an interference Report:

```
<SourceEmsClass>A3E</SourceEmsClass>
```

EndpointLocation

Endpoint Location

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
AntennaHeight	Antenna Height	Opt	SN(7,2)*(m)*
Excluded	Excluded	Opt	Code List CBO
LocSatRef	Location or Satellite Reference	Opt	pattern (S29)
MinPointAngle	Minimum Pointing Angle	Opt	UN(5,2) [0..180]*(deg)*
SiteElevation	Site Elevation	Opt	SN(7,2)*(m)*
Sub-Element Of:	DiagramEndpoint		

Description

This data element defines locations where the diagram endpoint is allowed or forbidden from use.

Input Requirement

* **AntennaHeight**: Enter the antenna height at this repeater or base station. This information is only required for trunked land mobile systems.
* **Excluded**: Indicate whether the referenced Location is included or excluded at this diagram endpoint.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocSatRef**: Enter a reference to a geographic location or satellite associated with this diagram endpoint. Note for the USA: When coordinating with NTIA, a location is required for base stations and repeaters of trunking systems and satellite ground stations, and satellite orbital characteristics are required for space systems.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`LO` or `SA`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
* **MinPointAngle**: Enter the minimum vertical pointing angle for satellite ground station antennas.
* **SiteElevation**: Enter the site elevation of each base station and repeater in a trunking system.

ExtReferenceRef

External Reference Identifier

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Common		

Description

This element refers to an external reference defined in a dataset ExternalReference.

Input Requirement

Enter the identifier of an existing external reference (defined in an ExternalReference).

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**EX**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

Example

(see also a more complete example in the standard metadata attributes)

```
<ExtReferenceRef idx="1" cls="U">USA::EX:12</ExtReferenceRef>
```

ExternalReference

External Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type of Reference	Opt	S50 (Code List CRE)
Date	Date of Reference	Opt	D
Identifier	Reference Identifier	Opt	S50
AlternateIdentifier	Alternate Identifier	Opt	S50
Title	Full Title	Opt	S255
Author	Author of the Reference	Opt	S255
Organisation	Organisation that published the Reference	Opt	S50
DocumentCls	Document Classification	Opt	Code List CCL
ResourceLocator	Attached File Name or URL	Opt	S255
IsAttached *(US)*	Is Attached	Req	Code List CBO
IsClassified *(US)*	Is Classified	Opt	Code List CBO
ReferencedStage *(US)*	Referenced Stage	Opt	Code List CSG
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		

Description

This element inherits attributes and sub-elements from element Common.

Data element ExternalReference contains bibliographic or any other references applicable to the dataset except those placed in Derivative Classification Authority (Data element ClsDerived). It may be used to indicate the file name for an external reference (e.g. a line diagram as a graphic file). It may also contain the Uniform Resource Identifier to a network resource containing the external reference. The references may be message date-time-groups (DTG), E-mails, documents, or letter references.
This element SHOULD be used to store identifiers when importing datasets coming from Multilateral Interoperability Programme (MIP) / Joint C3 Information Exchange Data Model (JC3IEDM) applications, using type="MIPI".

Input Requirement

This element is OPTIONAL and repeatable under Body.
Whenever possible, use occurrences of sub-elements ContactRef or OrganisationRef to indicate the person who authored the document or the message, and the name of the organisation which published the document. If the Contact and/or Organisation does not exist, use Author and/or organisation textual data items.

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**EX**".

* **Type**:

  Recommend values from **Code List CRE (extract only):**

Code	Meaning
CF299	C/F 299 Number
Contact Report	Contact Report: A brief report of a telephone call or a site visit
Contract	Contract Reference
Data Retrofit	Database Retrofit
Document	Document in any format not otherwise covered
ECSA	Equipment Characteristics / Space Archive
Email	Electronic Mail: any email not covered in one of the other specific categories, or any electronic media/transfer.
Eng Report	Engineering Report
EWIR	Electronic Warfare Integrated Reprogramming
FCC	Federal Communications Commission Filing: A document registered with the FCC.
...	...

* **Date**: Enter the date of the reference if applicable, formatted as yyyy-mm-dd
* **Identifier**: Enter the number of the document if it has one.

* **AlternateIdentifier**: Enter any alternate identifier for the document as needed.
* **Title**: Enter the full title of the document.
* **Author**: Enter the name and quality of the author of the reference, if it cannot be covered by a ContactRef
* **Organisation**: Enter the name of the Organisation that published the Reference, if it cannot be covered by a OrganisationRef
* **DocumentCls**: Enter the classification level of the Reference.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **ResourceLocator**: Enter either the file name (including the extension) of the reference document when it is attached to the dataset, or an URL (Uniform Resource Locator) to find the document.
* **IsAttached** ***(US)***: Indicate if the document, file or other "external" information is stored in attachment to this message.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **IsClassified** ***(US)***: Indicate if the referenced information contains any classified data.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **ReferencedStage** ***(US)***: Enter the spectrum certification stage associated with this information.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

Example

```
<ExternalReference cls="U">
  <Serial cls="U">USA:AF:EX:123</Serial>
  <Type cls="U">Document</Type>
  <Title cls="U">plan 5027</Title>
  <Organisation cls="U">PACOM</Organisation>
  <Date cls="U">2000-04-27</Date>
  <Attachment cls="U">USA-AF-EX-123.PDF</Attachment>
</ExternalReference>
```

Notes

* When this dataset is exported from the data repository the attachment file MAY automatically be exported with this dataset.
* When attaching a file, user SHOULD follow current national / NATO information security policies.
* The constitution of the package SHOULD follow the guidance given in [TBD] CONOPS paragraph 6.7.

FEDeployment

Force Element Deployment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FERef	Force Element Serial	Req	pattern (S29)
Type	Deployment Type	Req	S25 (Code List CFD)
Num	Number of deployed Force Elements	Opt	UN(6)
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)
LocationRef	Location Reference	Opt	pattern (S29)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	AtWaypoint [0..n] Project [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Data element FEDeployment describes the deployment of a force element to a location. Each deployment has a period of time for which the deployment is valid described by the start and end date/time.
See FEDeployment Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**FD**".

* **FERef**: Enter the dataset identifier of the ForceElement being deployed.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**FE**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Type**: Enter the type of deployment.

  Recommend values from **Code List CFD:**

Code	Meaning
Location-Home	Home location of the force element
Location-Current	Physical location of the force element
Location-Planned	Planned location of the force element
Operating Area-Current	Operating area of the force element (typically a polygon / AOR)
Operating Area-Planned	Planned operating area
Route-Current	Current route
Route-Planned	Planned route
Other	Other

* **Num**: Enter the quantity of Force Element referenced in FERef.

* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:

  - A single number;

- A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
- A list of numbers and/or ranges, separated by commas ",";
- An attribute with value "*" may be omitted.
- **Seconds**: Enter the seconds of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
- **Minutes**: Enter the minutes of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
- **Hours**: Enter the hours of day [0-23] (UTC time)

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"
- **DaysOfMonth**: Enter the day of month [1-31]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"
- **Months**: Enter the month of year [1-12]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"
- **DaysOfWeek**: Enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"
- **Years**: Enter the 4-digit year [1900..2100]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"
- **Duration**: Enter the number of minutes for which an event will live.

Examples:possible values for the Hours item: 8one value: 08h00Z5,6,9multiple values: 05h00Z, 06h00Z, 09h00Z5-8range between 05h00Z and 08h00Z inclusive*/2stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc3-12/3stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007: <Minutes>*/10</Minutes> <Hours>9-17</Hours> <DaysofWeek>0-4</DaysofWeek> <Years>2007</Years> <Duration>2</Duration> On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri) <Minutes>5</Minutes> <Hours>*/3</Hours> <DaysofWeek>1-5</DaysofWeek> On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri) <Minutes>20,50</Minutes> <Months>1-5,7-12</Months> <DaysofWeek>1-5</DaysofWeek>

* **LocationRef**: Enter the serial of the referenced Location.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<FEDeployment cls="U">
  <Serial cls="U">NLD::FD:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <FERef cls="U">NLD::FE:222</FERef>
  <Type cls="U">Location-Current</Type>
  <Months cls="U">1-2</Months>
  <Years cls="U">2012</Years>
  <LocationRef cls="U">NLD::LO:333</LocationRef>
```

```
</FEDeployment>
```

Footnote

Footnote

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Identifier	Name	Req	S255
Text	Footnote Text	Req	MEMO
Sub-Element Of:	TOA		

Description

This element contains the text and identifier of a footnote.

Input Requirement

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Identifier**: Enter an identifier for this footnote recognized by an administration (e.g., "S5.59").

* **Text**: Enter the textual specification of the footnote.

ForceElement

Force Element

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ReviewDate	Review Date	Opt	D
Type	Type	Req	S25 (Code List CFE)
UIC	Unit Identification Code	Opt	S20
OwningCountry	Owning Country/Body	Opt	Code List CAO
OwningOrganisation	Owning Organisation	Opt	pattern (S29)
Role	Role	Opt	S50 (Code List CSR)
Platform	Platform Type	Opt	S50 (Code List CET)
MissionCode	Mission Code	Opt	S50 (Code List CMC)
CmdLevel	Command Level	Opt	S50 (Code List CLC)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Assets [0..n] Identifier [1..n] POCInformation [0..n] StockNum [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element Common.

The ForceElement dataset is used to describe any Unit or Platform that has the ability to transmit or receive information.
See ForceElement Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**FE**".

* **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Type**: Indicate if the Force Element is a Unit or a Platform.

  Recommend values from **Code List CFE:**

Code
Specific Platform
Platform Class
Specific Weapon
Weapon Class
Unit

* **UIC**: Enter an organisational identifier that may be used to uniquely identify an organisation in operational planning systems and other non-spectrum information systems.
* **OwningCountry**: Enter the owning country or body of the ForceElement.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria

NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **OwningOrganisation**: Enter a reference to the organisation that owns the ForceElement.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "OR".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Role**: Enter the code used to document the main role of the Force Element. This role may be used to derive what equipment (i.e., weapons systems, signal, platforms, etc.) the Force Element is authorised. Also referred to as the Table of Organisation and Equipment (TOE).

  Recommend values from **Code List CSR (extract only):**

Code
AG/Band
Air Defense
Airborne Division
Airmobile
Armor
Army
Army Material Command
Aviation
Brigade Combat Team/IDIV
Censorship
...

* **Platform**: Enter the type of platform.

  Recommend values from **Code List CET (extract only):**

Code
Aircraft
Air Drop
Helicopter
V/STOL
Air Launched Missile
Armored Land Vehicle
Non-Tactical Land Vehicle
Tactical Land Vehicle
Surface Launched Missile
Water Launched Missile
...

* **MissionCode**: Enter the mission code representing the primary mission of the Force Element (e.g. Training, Finance, etc).

  Recommend values from **Code List CMC (extract only):**

Code
Admin and Special Services
Armor/Antitank
Artillery /Air and Space Defense
Aviation Support
Aviation/Anti-Aircraft
Chemical/Ordnance
Civil Affairs
Civil Air Patrol
Combat Support
Communications
...

* **CmdLevel**: Enter the organisational level of the force element according to stratum, echelon or point at which authority or control is maintained.

  Recommend values from **Code List CLC (extract only):**

Code
Academy
Accounts Control Section
Activity
Admission
Agency
Air Facility
Air Patrol
Air Station
Annex
Area
...

Example

```
<ForceElement>
  <Serial cls="U">USA:NA:FE:123</Serial>
  <Type cls="U">PLatform</Type>
  <OwningCountry cls="U">USA</OwningCountry>
  <Identifier>
    <Level cls="U">Primary</Level>
    <Name cls="U">USS Nimitz</Name>
  </Identifier>
  <Assets_etc/>
</ForceElement>
```

Freq

Assignment Frequency or Frequency Range

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9)*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
TAD	Tactical Air Designator	Opt	US5
LegacyNum	Legacy Number	Opt	S20
Inherits from:	AsgnFreqBase		
Sub-Element Of:	Assigned		
Sub-Elements:	NarrowBandPlanning [0..n] ***(US)*** PairedFreq [0..n] ***(US)***		

Description

This element inherits attributes and sub-elements from element AsgnFreqBase.

This data element indicates a single assigned frequency or an assigned range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **RefFreq**: Enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: Indicate the intended usage of the frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **TAD**: Enter the TAD associated to the assigned frequency. A Tactical Air Designator is a series of alphanumeric characters that can be used to identify air/ground/air or air/air frequency channels to prevent inadvertent disclosure of classified information.

* **LegacyNum**: Enter any legacy reference number associated to the assigned frequency (provided mainly for SFAF to SMADEF-XML correspondence since several SFAF records may be grouped in a single SMADEF-XML Assignment).

Example

```
<Freq>
  <FreqMin cls="U">351.125</FreqMin>
  <LegacyNum cls="U">USAF11012345</LegacyNum>
</Freq>
```

FreqBand

Frequency Band

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
footnotes	Links to Footnotes	Opt	List of UN6
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
FreqMin	Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Req	UN(16,9)*(MHz)*
UseIndicator	Use Indicator	Opt	S40
BandNotes	Band Notes/Remarks	Opt	MEMO
Sub-Element Of:	TOA		
Sub-Elements:	Allocation [0..n]		

Description

This element contains the allocation of a specific frequency band to radiocommunication services. It may also provide additional information such as the specification of the rights and responsibilities of a user.

Input Requirement

* **footnotes** *(Attribute)*: Enter the list of footnote indices referring to a Footnote index applicable to the current frequency band.
* **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
* **FreqMax**: Enter the maximum value of the frequencies in the range.
* **UseIndicator**: Indicate the permitted uses of this band (e.g., "Government", "Non-government", etc).
* **BandNotes**: Enter the Administration remarks on this band.

Example

```
<FreqBand>
  <FreqMin cls="U">960</FreqMin>
  <FreqMax cls="U">1164</FreqMax>
  <Allocation>
    <AllocatedService cls="U">Aeronautical Mobile Service</AllocatedService>
    <Priority cls="U">Primary</Priority>
  </Allocation>
</FreqBand>
```

FreqConversion

Frequency Conversion

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
StageNum	Conversion Stage Number	Opt	UN(1) [1..5]
OscillatorTuning	Oscillator Tuning	Opt	Code List CLO
LOFreqMin	Minimum or Nominal LO Frequency	Opt	UN(16,9)*(MHz)*
LOFreqMax	Maximum LO Frequency	Opt	UN(16,9)*(MHz)*
IFMin	Nominal/Minimum Intermediate Frequency	Opt	UN(16,9)*(MHz)*
IFMax	Maximum Intermediate Frequency	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	RxMode		

Description

Data element FreqConversion contains the characteristics of a frequency conversion stage: intermediate frequency (IF) and local oscillator (LO) parameters.

Input Requirement

* **StageNum**: Enter the position of the IF stage being described.
* **OscillatorTuning**: Enter the relationship between the local oscillator frequency and the RF centre frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CLO:**

Code
LO above or below RF
LO above RF
LO below RF

* **LOFreqMin**: Enter the nominal LO frequency or minimum value of the LO frequency range.
* **LOFreqMax**: Enter the maximum value of the LO frequencies.
* **IFMin**: Enter the nominal intermediate frequency or minimum value of the intermediate frequency range.
* **IFMax**: Enter the maximum value of the intermediate frequencies.

Example

```
<FreqConversion>
  <StageNum cls="U">3</StageNum>
  <OscillatorTuning cls="U">LO below RF</OscillatorTuning>
  <LOFreqMin cls="U">20</LOFreqMin>
  <IFMin cls="U">21.4</IFMin>
  <IFMax cls="U">70</IFMax>
</FreqConversion>
```

FreqOld

Previous Frequency or Frequency Range

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
RefFreq	reference Frequency	Opt	UN(16,9)*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Inherits from:	AsgnFreqBase		
Sub-Element Of:	Assigned		

Description

This element inherits attributes and sub-elements from element AsgnFreqBase.

This data element indicates a previously assigned single frequency or range of frequencies.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **RefFreq**: Enter the reference frequency of a suppressed or reduced carrier sideband. This item only applies to a single frequency and should not be used with a range.

* **FreqUse**: Indicate the intended usage of the frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

HostDocketNum *(US)*

Host Docket Number

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
HostDocketNum	Host Docket Number	Req	S35
Sub-Element Of:	Assignment		

Input Requirement

* **HostDocketNum**: Enter the docket number assigned by the host (soil) country to the frequency authorization.

HostNation

Host Nation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	SSRequest		

Description

This element indicates the host nations from which supportability is requested. If a SSRequest received by NATO has no HostNation entry, it will be assumed that this SSRequest is for all NATO Nations plus AUS and NZL (in accordance with the FMSC agreement).

Input Requirement

Enter the country code of the desired host nation. Use a one to six alphabetic characters representing either an official country code, a group of countries or a NATO Command.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Identifier

Identifier/Nomenclature

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Level	Level	Opt	S25 (Code List CNU)
Name	Name or Nomenclature	Req	S100
Sub-Element Of:	ForceElement, Satellite		

Description

This element gives the nomenclature or name of a force element or satellite; it is also used to give the pennant number of a ship (force element).

Input Requirement

* **Level**: Enter the level of the name, identifier or nomenclature (primary, nickname, etc).

  Recommend values from **Code List CNU:**

Code
Primary
Alternate
Nickname
Pennant Number

* **Name**: Enter the name, identifier or nomenclature of the Force Element or Satellite.

Installation

Installation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S40
Sub-Element Of:	Deployment		

Description

Data element Installation identifies the specific platforms on which an equipment is installed, whether it is mounted at a fixed site atop a mountain, in a shelter, in a vehicle, aboard a helicopter, etc.

Input Requirement

Enter the platform(s) upon which the system is mounted. All military vehicles should be identified by their proper nomenclature. If the system is portable and not mounted in a vehicle, the user should be identified (see example 2).

Example

```
<Installation cls="U">C-130 aircraft</Installation>
<Installation cls="U">carried by military police</Installation>
```

IntfReport

Interference Report

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
HelpRequired	Help Required	Opt	Code List CBO
IntfPeriod	Interference Period	Opt	S50 (Code List CTI)
IntfStartDateTime	Interference Start Date/Time	Req	DT
IntfStopDateTime	Interference Stop Date/Time	Opt	DT
IntfDescr	Interference Description	Opt	MEMO
AffectedEquipment	Victim Equipment Description	Opt	S100
SourceFieldStrength	Field Strength	Opt	UN(6,1)
SourceLon	Longitude of the Source	Opt	pattern (S11)
SourceLat	Latitude of the Source	Opt	pattern (S10)
SourceAz	Source Azimuth	Opt	UN(5,2) [0..360]*(deg)*
SourceLocDescr	Location Description of the Source	Opt	S255
SourceFreqMin	Minimum/Nominal Source Frequency	Opt	UN(16,9)*(MHz)*
SourceFreqMax	Maximum Source Frequency	Opt	UN(16,9)*(MHz)*
SourceEmsClass	Emission Class of the interference source	Opt	pattern (S5)
SourceEmsBw	Emission Bandwidth of the interference source	Opt	UN(16,9)*(MHz)*
VictimAsgnRef	Victim Assignment Serial	Opt	pattern (S29)
VictimSystem	Victim System	Opt	S100
VictimCountry	Country/Area of the Victim	Opt	Code List CAO
VictimLon	Longitude of the Victim	Opt	pattern (S11)
VictimLat	Latitude of the Victim	Opt	pattern (S10)
VictimLocDescr	Location Description of the Victim	Opt	S255
VictimFreqMin	Minimum/Nominal Victim Frequency	Req	UN(16,9)*(MHz)*
VictimFreqMax	Maximum Victim Frequency	Opt	UN(16,9)*(MHz)*
SatelliteName	Victim Satellite Name	Opt	S50
SatelliteChannel	Victim Satellite Channel	Opt	S50
SatelliteUplinkFreq	Victim Satellite Uplink Freq	Opt	UN(16,9)*(MHz)*
PerformanceEffects	Effects On Performance	Opt	MEMO
Evaluation	Evaluation	Opt	S25 (Code List CJ1)
Solution	Description of the Solution	Opt	MEMO
AffectedCSA ***(US)***	Affected CSA	Opt	S20 (Code List UAG)
Characteristics ***(US)***	Characteristics	Opt	S50 (Code List UCH)
GPSAffected ***(US)***	GPS Affected	Opt	Code List CBO
LocalEventID ***(US)***	Local Event ID	Opt	S20
NetCircuitsAffected ***(US)***	Net Circuits Affected	Opt	MEMO
NetsAffected ***(US)***	Nets Affected	Opt	MEMO
SATCOMPriority ***(US)***	SATCOM Priority	Opt	S50 (Code List UPR)
SatelliteAffected ***(US)***	Satellite Affected	Opt	Code List CBO
SatelliteDownlinkPolarisation ***(US)***	Satellite Downlink Polarisation	Opt	S50 (Code List CPO)
SatelliteHemisphere ***(US)***	Satellite Hemisphere	Opt	S50 (Code List CCO)
SatelliteLongitude ***(US)***	Satellite Longitude	Opt	pattern (S11)
SatelliteTransponderID ***(US)***	Satellite Transponder ID	Opt	S50
SatelliteUplinkPolarisation ***(US)***	Satellite Uplink Polarisation	Opt	S50 (Code List CPO)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	POCInformation [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This dataset contains information on a source and victim of an interference incident.
See IntfReport Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`IF`".

* **HelpRequired**: Indicate if the user needs technical assistance from another organisation to solve the interference. If not used, consider as "No".

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **IntfPeriod**: Enter how often the interference is experienced.

  Recommend values from **Code List CTI:**

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once

* **IntfStartDateTime**: Enter the date/time the interference was first perceived.
* **IntfStopDateTime**: Enter the date/time the interference ceased.
* **IntfDescr**: Describe the interference. Provide as much information as possible. State what actions you have taken so far to resolve the interference.
* **AffectedEquipment**: Nomenclature or description of equipment experiencing the interference.
* **SourceFieldStrength**: Enter the electromagnetic field strength measured in dB(microVolts/Metre).
* **SourceLon**: Enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the source of the interference. If the seconds are not known, use 00. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: `dddmmss.hhH` (where ".hh" is optional and H = E or W).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

* **SourceLat**: Enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the source of the interference. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: `ddmmss.hhH` (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{6}(.[0-9]{1,2})?(N|S))|X"

* **SourceAz**: If the source of the interference is not known but its Azimuth from the victim has been measured, indicate the measured azimuth.
* **SourceLocDescr**: When the exact coordinates of the source of the interference are not known, describe its approximate position.
* **SourceFreqMin**: Enter the nominal frequency of the interference, in MHz, or the minimum frequency in case of a range.
* **SourceFreqMax**: Enter the maximum frequency of the interference, in MHz, in case of a range.
* **SourceEmsClass**: Enter a three to five characters code, derived from the table below, representing the emission classification. If an "X" is used in any of the symbols, Remarks SHOULD be used to explain the nature of the signal.

First Symbol - Designates Type of Modulation of the Main Carrier
Unmodulated N - Emission of unmodulated carrier

Amplitude Modulated
A - Double sideband
H - Single sideband, full carrier
R - Single sideband, reduced or variable level carrier
J - Single sideband, suppressed carrier
B - Independent sidebands
C - Vestigial sidebands
Angle-Modulated
F - Frequency modulation
G - Phase modulation
Amplitude and Angle-Modulated
D - Main carrier is amplitude-modulated and angle-modulated simultaneously or in a preestablished sequence Pulse
P - Sequence of unmodulated pulses
K - Modulated in amplitude
L - Modulated in width/duration
M - Modulated in position phase
Q - Carrier is angle-modulated during the period of the pulse
V - Combination of the foregoing or is produced by other means
Combination
W - Cases not covered above in which an emission consists of the main carrier being modulated, either simultaneously or in a preestablished sequence, in a combination of two or more of the following modes: amplitude, angle, pulse
Other
X - Cases not otherwise covered
- : Unknown (to be used only by legacy data)

Second Symbol - Designates the Nature of Signal(s) Modulating the Main Carrier

0 - No modulating signal
1 - A single channel containing quantised or digital information, not using a modulating subcarrier. (Excludes time-division multiplex)
2 - A single channel containing quantised or digital information, using a modulating subcarrier
3 - A single channel containing analogue information
7 - Two or more channels containing quantised or digital information
8 - Two or more channels containing analogue information
9 - Composite system with one or more channels containing quantised or digital information, together with one or more channels containing analogue information
X - Cases not otherwise covered
- : Unknown (to be used only by legacy data)

Third Symbol - Type of Information to be Transmitted a

N - No information transmitted
A - Telegraphy - for aural reception
B - Telegraphy - for automatic reception
C - Facsimile
D - Data transmission, telemetry, telecommand
E - Telephony (including sound broadcasting)
F - Television (video)
W - Combination of the above
X - Cases not otherwise covered.b
- : Unknown (to be used only by legacy data)

a In this context, the word "information" does not include information of a constant, unvarying, nature such as that provided by standard frequency emissions, continuous wave, pulse radars, etc.
b A full explanation for the selection of the letter X shall be provided in Information unless the application is for a non-directional beacon in the bands 190-435 and 510-535 kHz.

Fourth Symbol - Designates the Details of Signal(s)

A - Two-condition code with elements of differing numbers and/or durations
B - Two-condition code with elements of the same number and duration without error correction
C - Two-condition code with elements of the same number and duration with error correction
D - Four-condition code in which each condition represents a signal element of one or more bits
E - Multi-condition code in which each condition represents a signal element of one or more bits
F - Multi-condition code in which each condition or combination of conditions represents a character

G - Sound of broadcasting quality (monophonic) H - Sound of broadcasting quality (stereophonic or quadraphonic) J - Sound of commercial quality (excluding categories defined for symbol K and L below) K - Sound of commercial quality with the use of frequency inversion or band splitting L - Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal M - Monochrome N - Color W - Combination of the above X - Cases not otherwise covered
Fifth Symbol - Designates the Nature of Multiplexing
N - None C - Code-division multiplex (includes bandwidth expansion techniques) F - Frequency-division multiplex T - Time-division multiplex W - Combination of frequency-division multiplex and time-division multiplex X - Other types of multiplexing

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(A|B|C|D|F|G|H|J|K|L|M|N|P|Q|R|V|W|X|-)(0|1|2|3|7|8|9|X|-)(A|B|C|D|E|F|N|W|X|-)(A|B|C|D|E|F|G|H|J|K|L|M|N|W|X)?(C|F|N|T|W|X)?"

* **SourceEmsBw**: Enter the calculated or measured bandwidth of the interference source.

* **VictimAsgnRef**: Enter the serial number of the assignment victim of the interference.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **VictimSystem**: Enter the nomenclature or other identifier of equipment experiencing the interference.

* **VictimCountry**: Enter the country or area where the victim of the interference is located.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **VictimLon**: Enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the victim of the interference. If the seconds are not known, use 00. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: **dddmmss.hhH** (where ".hh" is optional and H = E or W).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

* **VictimLat**: Enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the victim of the interference. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: **ddmmss.hhH** (where ".hh" is optional and H = N or S).

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{6}(.[0-9]{1,2})?(N|S))|X"

* **VictimLocDescr**: When the exact coordinates of the victim of the interference are not known, describe its approximate position.

* **VictimFreqMin**: Enter the nominal or lower frequency used by the victim of the interference in MHz.

* **VictimFreqMax**: In case of an assignment over a frequency range, enter the upper frequency of the range in MHz.
* **SatelliteName**: Enter the name of the satellite experiencing the interference.
* **SatelliteChannel**: Enter the identifier of satellite channel experiencing the interference.
* **SatelliteUplinkFreq**: Enter the satellite uplink frequency experiencing the interference, in MHz.
* **PerformanceEffects**: Indicate the effect the interference has on normal operations.
* **Evaluation**: Enter your best guess as to the cause of the interference.

  Recommend values from **Code List CJ1:**

Code
Environmental
Interference
Intrusion
Jamming
Meaconing

* **Solution**: Indicate what was done to resolve the interference.
* **AffectedCSA** ***(US)***: Enter the responsible Combatant Commander for the geographic area where the interference occurred and/or the victim's organization.

  Recommend values from **Code List UAG (extract only):**

Code
AFRICOM
CENTCOM
EUCOM
JFCOM
NORTHCOM
PACOM
SOCOM
SOUTHCOM
STRATCOM
TRANSCOM
...

* **Characteristics** ***(US)***: Describe the interference characteristics.

  Recommend values from **Code List UCH (extract only):**

Code
NOISE
PULSED
VOICE ENGLISH
VOICE FOREIGN
OTHERS NEARBY AFFECTED
OTHERS FAR AWAY AFFECTED
INTERFERENCE FOLLOWS WHEN I CHANGE
GARBLED
FRAME LOSS
STEADY RECEIVE INDICATION (SRI)
...

* **GPSAffected** ***(US)***: Indicate if the interference affects GPS reception.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocalEventID** ***(US)***: Enter the local event ID

* **NetCircuitsAffected** ***(US)***: Enter the network circuits affected by the interference.
* **NetsAffected** ***(US)***: Enter the networks affected by the interference.
* **SATCOMPriority** ***(US)***: Enter the satellite communication priority.

  Recommend values from **Code List UPR:**

Code
Priority 1 Strategic Order
Priority 2 Tasked Plan Execution
Priority 3 Essential Operational Support
Priority 4 Training
Priority 5 VIP Support
Priority 6 RDT&E and General
Priority 7 Miscellaneous

* **SatelliteAffected** ***(US)***: Indicate if the interference affects satellite reception.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **SatelliteDownlinkPolarisation** ***(US)***: Enter the polarisation of the satellite downlink signal.

  Recommend values from **Code List CPO (extract only):**

Code
45-degrees
Left-hand circular
Right-hand circular
Dual
Elliptical
Elliptic left
Elliptic right
Horizontal linear
Horizontal and vertical
Linear
...

* **SatelliteHemisphere** ***(US)***: Enter the satellite hemisphere.

  Recommend values from **Code List CCO (extract only):**

Code
Global
Eastern Hemisphere
Western Hemisphere
Northern Hemisphere
Southern Hemisphere
North-eastern Earth Quarter
North-western Earth Quarter
South-eastern Earth Quarter
South-western Earth Quarter
Narrow Beam
...

* **SatelliteLongitude** ***(US)***: Enter the satellite longitude.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"
* **SatelliteTransponderID** ***(US)***: Enter the satellite transponder ID
* **SatelliteUplinkPolarisation** ***(US)***: Enter the polarisation of the satellite uplink signal.

  Recommend values from **Code List CPO (extract only):**

Code

45-degrees
Left-hand circular
Right-hand circular
Dual
Elliptical
Elliptic left
Elliptic right
Horizontal linear
Horizontal and vertical
Linear
...

JRFL

Joint restricted Frequency List

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EffectiveDateTime	Effective Date/Time	Opt	DT
ExpireReviewDT		**Req**	
ExpirationDateTime	Expiration Date/Time	Opt	DT
ReviewDate	Review Date	Opt	D
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	JRFLEntry [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a JRFL. It inherits attributes and sub-elements from element Common.
See JRFL Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`JR`".

* **EffectiveDateTime**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-ddThh:mm:ssZ (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue.
* **ExpireReviewDT**: This group is REQUIRED.
  - **ExpirationDateTime**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-ddThh:mm:ssZ` (year-month-day, "T" for time, hour:minute:seconds Zulu). To indicate a real effective time, use values 00:00:01Z to 24:00:00Z. The value 00:00:00Z is reserved to indicate that time is not an issue. The Expiration date should be less than five years from the effective date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:
  - A single number;
  - A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
  - A list of numbers and/or ranges, separated by commas ",";
  - An attribute with value "*" may be omitted.
  - **Seconds**: Enter the seconds of hour [0-59]

[XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Minutes**: Enter the minutes of hour [0-59]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"

- **Hours**: Enter the hours of day [0-23] (UTC time)

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfMonth**: Enter the day of month [1-31]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"

- **Months**: Enter the month of year [1-12]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"

- **DaysOfWeek**: Enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"

- **Years**: Enter the 4-digit year [1900..2100]

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"

- **Duration**: Enter the number of minutes for which an event will live.

Examples:possible values for the Hours item: 8one value: 08h00Z5,6,9multiple values: 05h00Z, 06h00Z, 09h00Z5-8range between 05h00Z and 08h00Z inclusive*/2stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc3-12/3stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007: <Minutes>*/10</Minutes> <Hours>9-17</Hours> <DaysofWeek>0-4</DaysofWeek> <Years>2007</Years> <Duration>2</Duration> On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri) <Minutes>5</Minutes> <Hours>*/3</Hours> <DaysofWeek>1-5</DaysofWeek> On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri) <Minutes>20,50</Minutes> <Months>1-5,7-12</Months> <DaysofWeek>1-5</DaysofWeek>

Example

```
<JRFL cls="U">
  <Serial cls="U">NLD::JR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <JRFLEntry>
    <ProtectionCode cls="U">Protected</ProtectionCode>
    <Justification cls="U">distress frequency</Justification>
    <FreqMin cls="U">243</FreqMin>
    <Bandwidth cls="U">0.1</Bandwidth>
  </JRFLEntry>
</JRFL>
```

JRFLEntry

JRFL Entry

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ProtectionCode	Protection Code	Req	Code List CPC
Priority	Priority	Opt	US2
Justification	Justification	Req	S255
ApprovalLevel	Approval Level	Opt	S10 (Code List CTS)
TimeFrame		**Opt**	
Seconds	Seconds	Opt	pattern (S40)
Minutes	Minutes	Opt	pattern (S40)
Hours	Hours	Opt	pattern (S40)
DaysOfMonth	Days Of Month	Opt	pattern (S40)
Months	Months	Opt	pattern (S40)
DaysOfWeek	Days Of Week	Opt	pattern (S40)
Years	Years	Opt	pattern (S40)
Duration	Duration	Opt	UN(4)
AsgnAllotRef	Assignent or Allotment Serial	Opt	pattern (S29)
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
Bandwidth	Bandwidth	Opt	UN(16,9)*(MHz)*
FreqUse	Frequency Use	Opt	Code List CAU
Sub-Element Of:	JRFL		
Sub-Elements:	JRFLEntryLocation [0..n] POCInformation [0..n] Project [0..n]		

Description

This data element defines the protection and priority codes for those nets (frequencies) that are listed in the Joint Restricted Frequency List (JRFL). A JRFL entry may either refer to an existing Assignment/Allotment (in this case, use the sub-element AsgnAllotRef) or to an arbitrary set of frequencies (in this case describe the frequency/range, its user, location and duration). In the case of an arbitrary set of frequencies, if multiple organisations are listed they will all use the same set of frequencies; if it is not the case, split the JRFL entry into several entries.

Input Requirement

* **ProtectionCode**: Indicate the type of entry.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CPC:**

Code	Meaning
Guarded	Frequencies with interest to the Intelligence sections.
Protected	Frequencies that have importance to the operation, but may be jammed because of geographic or time separation.
Taboo	Safety of life, stop buzzer, etc. If priorities are used, Taboo should always be A1.

* **Priority**: Enter the assigned priority code consisting of a letter followed by a number in the range A1 through Z9, with A1 being the highest priority (all Taboo nets should be assigned an A1 priority code). This code is set at the local command level.

* **Justification**: Enter a description of the justification of why the JRFL entry is required, to support the spectrum manager.

* **ApprovalLevel**: Enter the approval status of the JRFL entry.

  Recommend values from **Code List CTS:**

Code
Approved
For Review

Pending

* **Time Frame**: This group is OPTIONAL.

  This group defines a schedule of operation for time-related datasets. Each item (except duration) may contain:

  - A single number;
  - A range (start and stop, separated with an hyphen "-"); optionally, a range may be followed by a step (oblique stroke "/" followed by a number); the full range may be represented by the asterisk "*";
  - A list of numbers and/or ranges, separated by commas ",";
  - An attribute with value "*" may be omitted.
  - **Seconds**: Enter the seconds of hour [0-59]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Minutes**: Enter the minutes of hour [0-59]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(*/\d+))(,([1-5]?\d(-[1-5]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Hours**: Enter the hours of day [0-23] (UTC time)

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]?\d(-[12]?\d(/\d+)?)?)|(*/\d+))(,([12]?\d(-[12]?\d(/\d+)?)?)|(,*/\d+))*"
  - **DaysOfMonth**: Enter the day of month [1-31]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([123]?\d(-[123]?\d(/\d+)?)?)|(*/\d+))(,([123]?\d(-[123]?\d(/\d+)?)?)|(,*/\d+))*"
  - **Months**: Enter the month of year [1-12]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "((1?\d(-1?\d(/\d+)?)?)|(*/\d+))(,(1?\d(-1?\d(/\d+)?)?)|(,*/\d+))*"
  - **DaysOfWeek**: Enter the weekday [0-7 where 0 and 7 are for Sunday, 1 for Monday, etc]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([0-7](-[0-7](/\d+)?)?)|(*/\d+))(,([0-7](-[0-7](/\d+)?)?)|(,*/\d+))*"
  - **Years**: Enter the 4-digit year [1900..2100]

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "(([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(*/\d+))(,([12]\d{3}(-[12]\d{3}(/\d+)?)?)|(,*/\d+))*"
  - **Duration**: Enter the number of minutes for which an event will live.

  Examples:possible values for the Hours item: 8one value: 08h00Z5,6,9multiple values: 05h00Z, 06h00Z, 09h00Z5-8range between 05h00Z and 08h00Z inclusive*/2stepped, every other hour. 00h00Z (midnight), 02h00Z, 04h00Z, etc3-12/3stepped range, every third hour: 03h00Z, 06h00Z, 09h00Z, and 12h00Z Transmission for 2 minutes every 10 minutes from 9am to 5pm every weekday for 2007: <Minutes>*/10</Minutes> <Hours>9-17</Hours> <DaysofWeek>0-4</DaysofWeek> <Years>2007</Years> <Duration>2</Duration> On the 5-minute mark, every third hour, only on days of the work week (Mon-Fri) <Minutes>5</Minutes> <Hours>*/3</Hours> <DaysofWeek>1-5</DaysofWeek> On the 20 and 50-minute marks every hour, every month except June, only on days of the work week (Mon-Fri) <Minutes>20,50</Minutes> <Months>1-5,7-12</Months> <DaysofWeek>1-5</DaysofWeek>

* **AsgnAllotRef**: Enter the Serial reference of the Assignment or Allotment to be protected.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS** or **AL**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.

- **FreqMax**: Enter the maximum value of the frequencies in the range.

* **Bandwidth**: Enter the width of the range (or band) of restricted frequency(s) in MHz (without unit).

* **FreqUse**: Indicate the intended usage of the frequency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

Example

See example under JRFL

JRFLEntryLocation

JRFL Entry Location

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Location Reference	Req	pattern (S29)
AntFeedpointHeight	Antenna Feedpoint Height	Opt	SN(7,2)*(m)*
Sub-Element Of:	JRFLEntry		

Description

This data element defines the location where the use of a specific frequency or frequency range(s) is restricted in use.

Input Requirement

* **Serial**: Enter the serial of the referenced Location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **AntFeedpointHeight**: Enter the antenna feed point height above the terrain, in metres. In the case where the antenna is mounted pointing vertically to a reflector on the same structure, enter the height of the reflector above ground. If the Station is a flying object, this data represents the maximum altitude of the object above ground.

Link

Link

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
LinkID	Link Identifier	Req	S100
IntermediateFunction *(US)*	Intermediate Function	Opt	S150 (Code List UFN)
MajorFunction *(US)*	Major Function	Opt	S150 (Code List UFN)
LinkName *(US)*	Link Name	Opt	S24
Sub-Element Of:	Assignment		
Sub-Elements:	Assigned [0..n] DCSTrunk [0..n] *(US)* DetailedFunction [0..n] *(US)* StationConfig [1..n] Tuning [0..n]		

Description

Data element Link identifies each link in a system of assignments. This is the top element of each Link. The exact definition of a link is very flexible and depends on the degree of accuracy needed for the assignment. A link can be very generic (one or several base stations serving an area or a volume with non-defined mobiles) to very accurate (such as one link for each radio-relay hop).
See Link Diagram

Input Requirement

* **LinkID**: Enter the name or identifier of the link; this identifier should be a meaningful identification of the link, but it can also be automatically generated in some systems. The identifier MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **IntermediateFunction** ***(US)***: Enter the intermediate function of the frequency assignment.

  Recommend values from **Code List UFN (extract only):**

Code
UNKNOWN
A2C2S (Army Airborne Command & Control System)
ACS (Aerial Common Sensor)
ADMINISTRATIVE
AEGIS
A-EPLRS
AERO CLUB
AFATDS
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)
AFSATCOM
...

* **MajorFunction** ***(US)***: Enter the major (or primary) function of the frequency assignment.

  Recommend values from **Code List UFN (extract only):**

Code
UNKNOWN
A2C2S (Army Airborne Command & Control System)
ACS (Aerial Common Sensor)
ADMINISTRATIVE
AEGIS
A-EPLRS
AERO CLUB
AFATDS
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)

AFSATCOM

...

* **LinkName** ***(US)***: Enter the name of the link.

Example

```
<Link>
  <LinkID cls="U">LINK1</LinkID>
  <StationConfig>
    <Type cls="U">Transmit-Receive</Type>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <StationID cls="U">STATION1</StationID>
  </StationConfig>
  <Assigned>
    <Freq>
      <FreqMin cls="U">256.275</FreqMin>
    </Freq>
  </Assigned>
</Link>
```

Location

Location

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Location Name	Req	S100
AddressGrp		**Opt**	
Street	Street Address	Opt	S255
CityArea	City or Area	Opt	S50
StateCounty	State/County	Opt	S50
PostCode	Zip Code/Post Code	Opt	S15
Country	Country/Area	Req	Code List CAO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Ellipse [0..n] LocationRef [0..n] POCInformation [0..n] Point [0..n] Polygon [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element contains the parameters of a Location used to describe a geographical location, polygonal or ellipse area, or a set of those. It inherits attributes and sub-elements from element Common.
To be meaningful, a Location SHOULD contain at least one of the sub-elements Point, Polygon, Ellipse or LocationRef.
See Location Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`LO`".

* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: Enter the name of the location.
* **Address Information**: This group is OPTIONAL.

  This group contains the name and full address of the location, organisation or individual.
  - **Street**: Enter the street address.
  - **CityArea**: Enter the city of the address or an operational area name.
  - **StateCounty**: Enter the state or other sub-national political area.
  - **PostCode**: Enter the zip code or postal code portion of the address.

- **Country**: Enter the country or area code. Use a one to six alphabetic characters representing either an official country code, a regional body, a group of countries or a NATO Command.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

Examples

A simple fixed location:

```
<Location cls="U">
  <Serial cls="U">BEL::LO:111</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">Brussels National Airpt</Name>
  <Country cls="U">BEL</Country>
  <Point idx="1">
    <Lon cls="U">0050000E</Lon>
    <Lat cls="U">503600N</Lat>
    <TerrainElevation cls="U">50</TerrainElevation>
  </Point>
</Location>
```

A triangle

```
<Location cls="U">
  <Serial cls="U">BEL::LO:222</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">Melsbroek Approach</Name>
  <Country cls="U">BEL</Country>
  <Polygon idx="1">
    <PolygonPoint sequence="1">
      <Lon cls="U">0050000E</Lon>
      <Lat cls="U">503600N</Lat>
    </PolygonPoint>
    <PolygonPoint sequence="2">
      <Lon cls="U">0053000E</Lon>
      <Lat cls="U">503600N</Lat>
    </PolygonPoint>
    <PolygonPoint sequence="3">
      <Lon cls="U">0053000E</Lon>
      <Lat cls="U">504000N</Lat>
    </PolygonPoint>
  </Polygon>
</Location>
```

A composite area with a hole (doughnut):

```
<Location cls="U">
  <Serial cls="U">BEL::LO:333</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Name cls="U">BEL AF Training North</Name>
  <Country cls="U">BEL</Country>
  <Ellipse idx="1">
```

```
    <Excluded cls="U">Yes</Excluded>
    <Lon cls="U">0050000E</Lon>
    <Lat cls="U">503600N</Lat>
    <SemiMajorAxis cls="U">10</SemiMajorAxis>
    <SemiMinorAxis cls="U">10</SemiMinorAxis>
    <Azimuth cls="U">0</Azimuth>
  </Ellipse>
  <LocationRef cls="U">BEL::LO:222</LocationRef>
</Location>
```

LocationRef

Location Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Allotment, Location		

Description

This element references a Location dataset.

Input Requirement

Enter the serial of the referenced Location.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

LocationRestriction

Location Restriction

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	AllotFreq		

Description

This element indicates a Location where the Allotment usage is forbidden.

Input Requirement

Enter the serial of a Location. This Location should be included in, or at least should intersect, the overall Allotment LocationRef.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Manufacturer

Manufacturer

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Country	Country/Area	Opt	Code List CAO
Name	Manufacturer Name	Req	S100
Sub-Element Of:	Nomenclature		

Description

Data element Manufacturer contains the manufacturer name of the equipment listed in the corresponding data entry in data element Nomenclature. Additionally the country in which the equipment is manufactured may be included.

Input Requirement

* **Country**: Enter the country or area in which the Manufacturer has its Headquarters.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Name**: Enter the name of the company that manufactured the equipment. The manufacturer's name should be obtained from data plates on equipment whenever possible. This entry is optional when government nomenclature is entered in element Nomenclature. Use the phrase `"Intentionally not disclosed"` when the manufacturer is known but intentionally not listed (for the issue of internal security of the manufacturer); in this case a Remarks MAY be used to quantify the information to a level compatible with the dataset intended classification.

Example

```
<Manufacturer>
  <Country cls="U">USA</Country>
  <Name cls="U">MOTOROLA Corporation</Name>
</Manufacturer>
```

MissingRef

Missing Reference Identifier

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Dataset		

Description

This element allows the recipient of a message to signal the sender that a dataset referenced in the message was not known by the recipient.

Input Requirement

Enter the serial of any missing dataset.

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

NarrowBandPlanning *(US)*

Narrow Band Planning

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ChangeDate	Change Date	Opt	D
NBFreq	Narrow Band Frequency	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	Freq		

Input Requirement

* **ChangeDate**: Enter the date this record is expected to be updated to comply with narrow band transition plans.
* **NBFreq**: Enter the transition frequency to comply with narrow band transition plans.

Nomenclature

Nomenclature

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type	Opt	S25 (Code List CTO)
Level	Level	Opt	S25 (Code List CNU)
Name	Name	Req	S100
Sub-Element Of:	Antenna, RFSystem, Receiver, SSRequest, Transmitter		
Sub-Elements:	Manufacturer [0..n]		

Description

Data element Nomenclature identifies either the standard military nomenclature or the commercial model number of an antenna, equipment or system. Each antenna, equipment or system may have several types of nomenclature, e.g. both a military nomenclature and a commercial model number.

Input Requirement

If available, the system nomenclature is preferred rather than the component nomenclature; however, either is acceptable.

* **Type**: Enter the type of nomenclature (commercial, military, etc).

  Recommend values from **Code List CTO:**

Code
Civilian/Commercial
Generic
Government
Military
Other

* **Level**: Enter the level of nomenclature (primary, nickname, etc).

  Recommend values from **Code List CNU:**

Code
Primary
Alternate
Nickname
Pennant Number

* **Name**: Enter the nomenclature subject to the following:
  - For a government equipment nomenclature, enter the standard military or government nomenclature.
  - If only a commercial model number is available, enter the complete model number and indicate the manufacturer of the equipment in data element Manufacturer.
  - If the nomenclature includes a modification, insert MOD and a number, if applicable, immediately following the nomenclature. For the word MARK, insert MK as the first part of the nomenclature e.g. "MK 53 MOD 1".
  - If the equipment does not have an assigned government nomenclature or commercial model number, enter a general description in this item (mandatory item), and enter the manufacturer name with a brief description of the equipment in a data element Remarks.
  - If the equipment is being submitted to ITU the maximum number of characters is 20.

Examples

A governmental nomenclature:

```
<Nomenclature>
  <Type cls="U">Government</Type>
  <Level cls="U">Primary</Level>
  <Name cls="U">AN/GRC-103(V)4</Name>
</Nomenclature>
```

A commercial handheld model number. A partial nomenclature such as "H23" is incomplete since it applies to a series of handheld units:

```
<Nomenclature>
  <Type cls="U">Civilian/Commercial</Type>
  <Level cls="U">Alternate</Level>
  <Name cls="U">H23FFN1130E</Name>
  <Manufacturer>
    <Name cls="U">MOTOROLA CORPORATION</Name>
  </Manufacturer>
</Nomenclature>
```

Notation

Notation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Code	Notation Code	Req	US20
Type	Type of Notation	Req	S25 (Code List CEN)
Sub-Element Of:	Configuration		

Description

This element contains the electronic identification for a pulsed or non-pulsed electromagnetic emission. It includes but is not limited to Communications Emitter Notation (CENOT) and Electronic Intelligence Notation (ELNOT). It is not nomenclature specific, but based on the emission signature. Therefore, equipment's that have the same or near same emission signature may have the same Notation.

Input Requirement

* **Code**: Enter an alphanumeric combination that is used to identify a particular emission.
* **Type**: Enter the type of Notation.

  Recommend values from **Code List CEN:**

Code
CENOT
DIA Equipment Number
ELNOT
Interim identifier
SPOT
Other

Note *(US)*

Note

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Administration	Administration	Opt	Code List CAO
Description	Description	Opt	MEMO
EffectiveDate	EffectiveDate	Opt	D
ExpirationDate	Expiration Date	Opt	D
Name	Name	Opt	MEMO
Source	Source	Opt	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		

Description

This element inherits attributes and sub-elements from element Common.

This dataset is the XML root for all parameters of a Note.

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**NT**".

* **Administration**: Enter the nation or regulatory body that administers this note.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **Description**: Enter a description of the note.
* **EffectiveDate**: Enter the date this note comes in force.
* **ExpirationDate**: Enter the date this note goes out of force.
* **Name**: Enter the externally-assigned name of the note.
* **Source**: Enter the source or creator of the note.

OffTheShelfEquipment *(US)*

Off The Shelf Equipment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Use	Use	Req	S6
Sub-Element Of:	Assignment		

Input Requirement

* **Use**: Indicate a specialized type of system/equipment used in the frequency assignment, as defined by the following choices: LMS, VOR1A, VOR1B, VOR2A, VOR2B, ILSLOC, or ILSGS.

Organisation

Organisation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Organisation Name	Opt	S100
AlternateName	Alternate Name	Opt	S100
Type	Organisation Type	Opt	S25 (Code List CTO)
UIC *(US)*	Unit Identification Code	Opt	S20
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] EMail [0..n] RelatedOrganisation [0..n] RoleRef [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This dataset is the XML root for all parameters of an Organisation (service, agency, manufacturer, etc).
See Organisation Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`OR`".

* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: Enter the full name of the organisation in the native language of the nation to whom belong the organisation. If this full name has also translations in other languages, use item AlternateName to add the translated name.
* **AlternateName**: Enter an alternate name or nickname for the organisation.
* **Type**: Enter the type of organisation. If `"Other"` is used, a justification SHOULD be inserted using a remark.

  Recommend values from **Code List CTO:**

Code
Civilian/Commercial
Generic
Government
Military
Other

* **UIC *(US)***: Enter an organisational identifier that may be used to uniquely identify an organisation in operational planning systems and other non-spectrum information systems.

Example

```
<Organisation cls="U">
  <Serial cls="U">DEU:AF:OR:123</Serial>
  <EntryDateTime cls="U">2011-12-12T00:00:00Z</EntryDateTime>
  <Name cls="U">LUFTWAFFE</Name>
  <Address>
    <CityArea cls="U">Berlin</CityArea>
    <Country cls="U">DEU</Country>
  </Address>
</Organisation>
```

POCInformation

Point Of Contact

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	POC Type	Req	S25 (Code List CCI)
Serial	Serial of Referenced dataset	Opt	pattern (S29)
Description	POC Description	Opt	MEMO
Sub-Element Of:	Allotment, Antenna, Assignment, ForceElement, IntfReport, JRFLEntry, Location, RFSystem, Receiver, SSRequest, Station, Transmitter		

Description

Data element POC contains a reference to a Contact, Organisation or Role dataset.

Input Requirement

* **Type**: Enter the function of the referenced Contact or Organisation within the current dataset.

  Recommend values from **Code List CCI:**

Code
Submitter
Reviewer
Program Manager
Project Engineer
Point of Contact
User
Supplier
Spectrum Manager
Other

* **Serial**: Enter the dataset identifier of the Contact, Organisation, or Role.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`CN` or `OR` or `JA`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Description**: Free text Contact information for legacy applications. When building new records, enter the contact information in the structured Contact or Organisation dataset.

PairedFreq *(US)*

Paired Frequency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Freq	Frequency	Req	UN(16,9)*(MHz)*
AssignmentRef	Assignment Reference	Opt	pattern (S29)
PairedASN	Paired Agency Serial Number	Opt	US12
PairedType	Paired Type	Opt	S20 (Code List UPU)
Sub-Element Of:	Freq		

Input Requirement

* **Freq**: Enter the paired frequency for the repeater, duplex link or frequency diversity capability.
* **AssignmentRef**: Enter a reference to an Assignment that is paired with this AsgnAllot in a repeater, duplex link or frequency diversity capability.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"
* **PairedASN**: Enter the agency serial number of the assignment that is paired with this Assignment in a repeater, duplex link or frequency diversity capability.
* **PairedType**: Indicate if the paired frequency is a transmitting repeater frequency, a receiving repeater frequency, a duplex pairing, frequency diversity or space diversity.

  Recommend values from **Code List UPU:**

Code
Repeater Out
Repeater In
Duplex Pairing
Frequency Diversity
Space Diversity

Point

Point

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
TerrainElevation	Terrain Elevation	Opt	SN(7,2)*(m)*
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		

Description

Data element Point contains the coordinates (WGS 84) of point(s) that represent a fixed site.
It contains also the terrain elevation, in metres above mean sea level (MSL) of this point. If the antenna installed at this point is located on a structure such as a tower or a building, the site elevation is specified as the ground elevation at the base of the structure.

Input Requirement

* **idx** *(Attribute)*: Enter the sequence index of the current Point within the Location, starting at 1.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: Enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Coord**: This group is REQUIRED.

  - **Lon**: Enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: `dddmmss.hhH` (where ".hh" is optional and H = E or W).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

  - **Lat**: Enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: `ddmmss.hhH` (where ".hh" is optional and H = N or S).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{6}(.[0-9]{1,2})?(N|S))|X"

* **TerrainElevation**: Altitude is required for fixed stations except for applications for radio frequencies below 30 MHz or for terrestrial stations operating at 30 MHz and above if for experimental and mobile stations. Enter the site (terrain) elevation (at the base of the transmitting antenna structure) in metres above MSL. This information is not required for the ITU notification of a typical earth station.

* **Altitude AGL**: This group is OPTIONAL.

- **AltitudeMin**: Enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).
- **AltitudeMax**: Enter the maximum height of the point above the terrain, in case of a ranged altitude value.

Example

```
<Point idx="1">
  <Lon cls="U">0792823.5W</Lon>
  <Lat cls="U">394217.12N</Lat>
</Point>
```

Notes

In order to be able to accommodate legacy data, a value of "X" MAY be used in attributes lon and lat as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets. Datasets containing this value SHOULD NOT be exchanged internationally.

Polygon

Polygon

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Excluded	Shape is Excluded	Opt	Code List CBO
Altitude		**Opt**	
AltitudeMin	Minimum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
AltitudeMax	Maximum Altitude Above Ground Level	Opt	SN(7,2)*(m)*
Sub-Element Of:	Location		
Sub-Elements:	PolygonPoint [3..n]		

Description

A polygon is a closed geometric shape on the surface of the Earth, defined by at least three points, used to describe an operational area or an excluded area.

Input Requirement

* **idx** *(Attribute)*: Enter the sequence index of the current ellipse within the Location, starting at 1.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Excluded**: Enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Altitude AGL**: This group is OPTIONAL.

  - **AltitudeMin**: Enter the minimum or nominal height of the point above the terrain (also known as "above ground level" AGL).
  - **AltitudeMax**: Enter the maximum height of the point above the terrain, in case of a ranged altitude value.

PolygonPoint

Polygon Point

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
sequence	Sequence index	Req	UN(6)
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
Coord		**Req**	
Lon	Longitude	Req	pattern (S11)
Lat	Latitude	Req	pattern (S10)
Sub-Element Of:	Polygon		

Input Requirement

Data element PolyPoint contains the coordinates (WGS 84) of point(s) that represent a vertex of the polygon. Polygon points are described in a clockwise direction. If the last point is different from the first point, it is assumed that they are connected to complete the boundary of the polygon.

* **sequence** *(Attribute)*: Enter the sequence index of the point describing the current polygon, starting at 1.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **Coord**: This group is REQUIRED.

  - **Lon**: Enter the geographical longitude (degrees, minutes, seconds, and hemisphere E or W) of the Point or center of the Ellipse. If the seconds are not known, use 00, except in the case of navigation aid systems, geostationary satellites, and microwave facilities where seconds are required. Use leading zeros as appropriate for degrees, minutes, or seconds. Degrees longitude require three digits. Seconds may have a decimal point followed by up to two decimals. Enter E or W immediately following the seconds. The format is: `dddmmss.hhH` (where ".hh" is optional and H = E or W).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

  - **Lat**: Enter the geographical latitude (degrees, minutes, seconds and hemisphere N or S) of the Point or center of the Ellipse. Same remarks for seconds and leading zeros. Enter N or S immediately following the seconds. The format is: `ddmmss.hhH` (where ".hh" is optional and H = N or S).

    [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{6}(.[0-9]{1,2})?(N|S))|X"

Power

Power

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
PowerMin	Minimum or Nominal Power	Opt	SN(10,7)*(dBW)*
PowerMax	Maximum Power	Opt	SN(10,7)*(dBW)*
PowerType	Power Type	Opt	S10 (Code List CPT)
Calculated	Calculated Data Indicator	Opt	Code List CBO
Sub-Element Of:	TxMode		

Description

Data element Power identifies the transmitter power.

Input Requirement

Enter (1) carrier power (pZ) for A3E sound broadcasting in the broadcasting service, (2) mean power (pY) for other amplitude modulated emissions using unkeyed full carrier, and for all frequency modulated emissions, and (3) peak envelope power (pX) for all emission designators other than those referred to in (1) and (2) above, including C3F television (video only).

* **PowerMin**: Enter the nominal transmitter power, or the minimum power in case of a range of values.
* **PowerMax**: Enter the maximum transmitter power in the case of a range of values.

  [XSL ERR MINMAX] If PowerMax is used, it MUST be greater than PowerMin.
* **PowerType**: Enter the power type code for carrier, mean, or peak envelope power emitted. The power type code will depend on the type of emission of the transmitter equipment.

  Recommend values from **Code List CPT:**

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.
Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

* **Calculated**: Enter "Yes" if the power value(s) have been calculated, or "No" if they have been measured.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<Power>
  <PowerMin cls="U">-3</PowerMin>
  <PowerMax cls="U">31.8</PowerMax>
  <PowerType cls="U">PEP</PowerType>
  <Calculated cls="U">No</Calculated>
</Power>
```

Notes

* The value must always be transmitted in dBW. Some software tools may translate the value in watts for display only; in this case it is recommended to precede the value with the unit designator as follows:
  W - If power is less than 1000 watts
  K - If power is at least 1 kW but less than 1000 kW
  M - If power is at least 1 MW but less than 1000 MW
  G - If power is 1 GW or greater

* In order to be able to accommodate legacy data, a value of "-9999.99" MAY be used in attribute minPower as a gap filler, but only for legacy data which do not contain this information. The real value SHOULD always be used for new datasets and during the review of old datasets.

PreviousAuthorization *(US)*

Previous Authorization

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
DocketNum	Docket Number	Req	S8
Date	Date	Opt	D
AgencySerialNum	Agency Serial Number	Opt	S12
Sub-Element Of:	Assignment		

Description

The AgencySerialNum refers to the frequency assignment's previous Government Master File (GMF) authorization agency serial number.

Input Requirement

* **DocketNum**: Enter the frequency assignment's previous Government Master File (GMF) authorization docket number.
* **Date** : Enter the frequency assignment's previous Government Master File (GMF) authorization date.
* **AgencySerialNum**: Enter the externally-assigned unique identifier of a frequency assignment..

Project

Project

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Project Type	Opt	S10 (Code List CPJ)
Name	Project Name	Req	S30
Description	Description	Opt	MEMO
Sub-Element Of:	Allotment, Assignment, FEDeployment, JRFLEntry, SSRequest		

Description

Data element Project provides the Project, OPLAN, COMPLAN or Exercise name, or any other project name associated to the dataset.

Input Requirement

* **Type**: Enter the type of project.

  Recommend values from **Code List CPJ:**

Code
COMPLAN
Exercise
Mission
Operation
OPLAN
Other

* **Name**: Enter the name of the project.
* **Description**: Enter any additional amplifying information about the project.

Example

```
<Project>
  <Type cls="U">Exercise</Type>
  <Name cls="U">JWID 2002</Name>
  <Description cls="U">This is a good project.</Description>
</Project>
```

Pulse

Pulse

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
PulseCycle		**Opt**	
PRRMin	Minimum or Nominal Pulse Repetition Rate	Opt	UN(9,3)
PRRMax	Maximum Pulse Repetition Rate	Opt	UN(9,3)
PDMin	Minimum or Nominal Pulse Duration	Opt	UN(12,6)*(us)*
PDMax	Maximum Pulse Duration	Opt	UN(12,6)*(us)*
PulseAvgCycle		**Opt**	
DutyCycleMin	Minimum/Nominal Duty Cycle Ratio	Opt	UN(4,2)[0..100]*(%)*
DutyCycleMax	Maximum Duty Cycle Ratio	Opt	UN(4,2)[0..100]*(%)*
AvgPowerMin	Minimum/Nominal Average Power	Opt	SN(10,7)*(dBW)*
AvgPowerMax	Maximum Average Power	Opt	SN(10,7)*(dBW)*
PulseComp		**Opt**	
CompRatio	Pulse Compression Ratio	Opt	UN(8,4)
CompMethod	Pulse Compression Method	Opt	S40
PulseForm		**Opt**	
RiseTime	Rise Time	Opt	UN(12,6)*(us)*
FallTime	Fall Time	Opt	UN(12,6)*(us)*
JustifyShortRiseTime	Justification for Short Rise Time	Opt	MEMO
RadarProcessingGainMax	Maximum Radar Processing Gain	Opt	SN(6,3)*(dB)*
NumSubpulses	Number of Subpulses	Opt	UN(10)
Sub-Element Of:	TxMode		

Description

Data element Pulse contains the pulse characteristics for all equipment using a pulsed emission. It includes the parameters of the pulse time cycle the pulse shape.

Input Requirement

* **PulseCycle**: This group is OPTIONAL.

  This group contains the pulse characteristics for all equipment using a pulsed emission.

  - **PRRMin**: Enter the numeric value for the pulse repetition rate (PRR) of the equipment. PRR will be indicated in pulses per second (PPS). For equipment having a capability for continuously variable PRR over a wide range(s), insert the minimum value in this attribute and the maximum value in maxPRR.
  - **PRRMax**: Enter for equipment having a capability for continuously variable PRR over a wide range, the maximum value in PPS.

    [XSL ERR MINMAX] If PRRMax is used, it MUST be greater than PRRMin.
  - **PDMin**: Enter a numeric value indicating the characteristic pulse duration of the equipment at the half-power (-3 dB) points. Pulse duration (PD) will be indicated in microseconds. Fractions may be shown to the nearest tenth by using a decimal. For equipment having a capability for continuously variable PDs over a wide range, insert the minimum value in this attribute and the maximum value in maxPD.
  - **PDMax**: Enter for equipment having a capability for continuously variable PD over a wide range, the maximum value in microseconds.

    [XSL ERR MINMAX] If PDMax is used, it MUST be greater than PDMin.

* **Pulse Average Cycle**: This group is OPTIONAL.

  This group contains information about the pulse form factor.

  - **DutyCycleMin**: Enter as a percentage, the minimum or nominal ratio of the pulse duration to the pulse period.

- **DutyCycleMax**: Enter as a percentage, the maximum ratio of the pulse duration to the pulse period.

  [XSL ERR MINMAX] If DutyCycleMax is used, it MUST be greater than DutyCycleMin.

- **AvgPowerMin**: Enter in dBW, the minimum or nominal average power.
- **AvgPowerMax**: Enter in dBW, the maximum average power.

  [XSL ERR MINMAX] If AvgPowerMax is used, it MUST be greater than AvgPowerMin.

* **Pulse Compression**: This group is OPTIONAL.

  This group contains the ratio of the uncompressed pulse width to the compressed pulse width, where the compressed pulse width in (microseconds) is 1/frequency displacement (in MHz).

  - **CompRatio**: Enter the ratio of the uncompressed pulse width to the compressed pulse width measured at the 50% amplitude (-3 dB) points.
  - **CompMethod**: Enter the method employed to reduce the period of the pulse.

* **Pulse Form Factor**: This group is OPTIONAL.

  This group contains the rise time (period for the pulse leading edge to rise from 10% to 90% of the voltage envelope) and fall time (period for the pulse trailing edge to fall from 90% to 10% of the voltage envelope) of a pulse.

  - **RiseTime**: Enter the pulse rise time in microseconds.
  - **FallTime**: Enter the pulse fall time in microseconds.
  - **JustifyShortRiseTime**: Enter an operational justification for short pulse rise time. This is required if the transmitter is a pulsed Group B, C, or radar, and either
    1) it uses FM modulation and the Rise Time or Fall Time is less than 0.1 microseconds, or
    2) it uses Non-FM modulation and the Rise Time or Fall Time is less than 0.01 microseconds.

* **RadarProcessingGainMax**: Enter the maximum ratio of the post-processing signal-to-noise ratio to the received signal-to-noise ratio. This only applies when the Radar Type is "FM Pulse".
* **NumSubpulses**: Enter the total number of subpulses (chips) contained in a radar's coded pulse. This only applies when the Radar Type is "FM Pulse" or "Coded Pulse".

Example

```
<Pulse>
  <PRRMin cls="U">300</PRRMin>
  <PDMin cls="U">12</PDMin>
  <DutyCycleMax cls="U">50</DutyCycleMax>
  <AvgPowerMin cls="U">20</AvgPowerMin>
</Pulse>
```

RFSystem

RF System

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FieldedStatus	Fielded Status	Opt	Code List CSG
Emergency	Emergency Indicator	Opt	Code List CBO
InitialCost *(US)*	Initial Cost	Opt	S70
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Configuration [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] RelatedSystem [0..n] StockNum [0..n] *(US)*		

Description

This element inherits attributes and sub-elements from element Common.

This dataset describes the association of one or several Transmitters, Receivers and Antennas as they are assembled to form a system on a platform; it can also include the specific modes which are allowed or technically possible in this assembly.
See RFSystem Diagram
See Configuration Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TR**".

* **FieldedStatus**: Enter the current stage of the RFSystem.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **Emergency**: Enter "Yes" if the system may be used in a case of emergency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **InitialCost** ***(US)***: The estimated initial cost, in US dollars, of the system/equipment.

Example

```
<RFSystem cls="U">
  <Serial cls="U">USA::TR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Deployment>
    <Type cls="U">Land Mobile</Type>
  </Deployment>
  <Configuration>
    <ConfigID cls="U">CONFIG1</ConfigID>
    <TxRef>
      <Serial cls="U">USA::TX:1111</Serial>
      <TxAntModeRef>
        <Serial cls="U">USA::AN:2222</Serial>
```

```
      </TxAntModeRef>
    </TxRef>
    <RxRef>
      <Serial cls="U">USA::RX:3333</Serial>
    </RxRef>
  </Configuration>
</RFSystem>
```

RFSystemRef

RF System Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Satellite		

Description

This element contains a reference to a RF System used on the satllite.

Input Requirement

Enter the dataset identifier of a RFSystem.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**TR**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Receiver

Receiver

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
Duplex		**Opt**	
DuplexSep	Duplex Separation	Req	UN(16,9)*(MHz)*
DuplexSepType	Duplex Separation Type	Opt	S10 (Code List CDS)
PreselectionType	Preselection Type	Opt	S60
ConductedEmissions ***(US)***	Conducted Emissions	Opt	SN(5,2) [-165..-30]*(dBm)*
FCCAcceptanceNum ***(US)***	FCC Acceptance Number	Opt	S50
TSPR ***(US)***	TSPR	Opt	S10
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Curve [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] RxMode [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This data element is the root element (dataset) containing the receiver characteristics.
See Receiver Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`RX`".

* **Generic**: Enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Duplex Frequency Separation**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) offset frequency separation between the transmit and the receive radio frequencies for an equipment capable of operating in the duplex mode.

  - **DuplexSep**: Enter the minimum or exact duplex frequency separation as a number in MHz (without unit).
  - **DuplexSepType**: Indicate if the frequency separation must be exactly, or at the minimum, the amount specified.

    Recommend values from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

* **PreselectionType**: Enter the type of preselection used in the receiver frontend.
* **ConductedEmissions *(US)***: Enter the power level of undesired signals generated in the receiver and conducted by way of the connection to the receiver.
* **FCCAcceptanceNum *(US)***: Enter the Federal Communication Commission (FCC) ID of FCC authorized equipment.

* **TSPR** ***(US)***: Enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.

Example

```
<Receiver cls="U">
  <Serial cls="U">NLD::RX:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <Nomenclature>
    <Name cls="U">AN/PRC-113</Name>
  </Nomenclature>
  <RxMode>
    <ModeID cls="U">HIGH POWER VOICE</ModeID>
  </RxMode>
</Receiver>
```

RecordNote *(US)*

Record Note

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
NoteRef	Note Reference	Req	pattern (S29)
Comments	Comments	Opt	MEMO
Sub-Element Of:	Assignment		

Input Requirement

* **NoteRef**: Enter a reference to the Note dataset that describes the note identified in NoteCode.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Comments**: Enter the Amplifying conditional comments for the note as agreed to by the Interdepartment Radio Advisory Committee (IRAC) Frequency Assignment Subcommittee (FAS).

RelatedOrganisation

Related Organisation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type	Opt	S25 (Code List CFT)
Relation	Relationship	Req	Code List CFR
Serial	Organisation Serial	Req	pattern (S29)
Sub-Element Of:	Organisation		

Description

Data element RelatedOrganisation identifies an Organisation linked to the current Organisation, the type of relation (reporting, budget, etc) and the relation (parent, child, sibling).

Input Requirement

* **Type**: Enter the type of relationship.

  Recommend values from **Code List CFT:**

Code
Budget
Plan ORBAT
Reference ORBAT
Related
Reporting

* **Relation**: Enter the relationship between the two organisations.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFR:**

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element
Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

* **Serial**: Enter the unique reference of the Organisation associated with the current Organisation.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "OR".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<RelatedOrganisation>
  <Type cls="U">Reporting</Type>
  <Relation cls="U">Child</Relation>
  <Serial cls="U">USA:AR:OR:05008827</Serial>
</RelatedOrganisation>
```

RelatedRef

Related Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Assignment		

Description

This element contains the serial of a referenced Assignment, Allotment, SSReply, ForceElement or FEDeployment.

Input Requirement

It MAY be used to link several assignments which are related to each other, or to refer to the Supportability documentation on which the assignment is based. It MAY also be used to indicate that the assignment concerns a specific force element, or a deployed force element. It SHOULD be used when an assignment is produced out of an allotment.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AS** or **AL** or **HD** or **FE** or **FD**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RelatedSupportability

Related Supportability

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type	Req	S10 (Code List CDD)
SSRequestRef	SSRequest Serial	Opt	pattern (S29)
J12Number *(US)*	J/F 12 Number	Opt	S15
Sub-Element Of:	SSRequest		

Description

This element refers to a SSRequest with which the current dataset has a dependency.

Input Requirement

* **Type**: Enter the type of dependency between the current dataset and the referred application.

  Recommend values from **Code List CDD:**

Code	Meaning
Dependant	Dependant Dataset (e.g. in AsgnAllot or SSRequest, one system cannot operate without the other)
Related	Related Dataset (e.g. in AsgnAllot or SSRequest, each system may still operate without the related system)
Superseded	Superseded Dataset

* **SSRequestRef**: Enter a Serial reference to a superseded or related SSRequest application.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **J12Number** ***(US)***: Enter the US Military Communications-Electronics Board (MCEB) identifier of a superseded or related application.

Example

```
<RelatedSupportability>
  <Type cls="U">Related</Type>
  <SSRequestRef cls="U">USA:NTIA:SR:123</SSRequestRef>
</RelatedSupportability>
```

RelatedSystem

Related System

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Relation	Relation Type	Req	Code List CFR
Serial	Related System Serial	Req	pattern (S29)
Sub-Element Of:	RFSystem		

Description

Data element RelatedSystem identifies a System linked to the current System, and the relation (parent, child, sibling).

Input Requirement

* **Relation**: Enter the relationship between the two systems.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFR:**

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element
Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

* **Serial**: Enter the reference of the System associated with the current System

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**TR**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

Example

```
<RelatedSystem>
  <Relation cls="U">HasChild</Relation>
  <Serial cls="U">USA:AR:TR:05008827</Serial>
</RelatedSystem>
```

Remarks

Remarks

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
idx	Index	Req	UN(6)
Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	MEMO
Sub-Element Of:	Common		

Description

Enter any additional data pertinent to the level where this element appears that cannot be adequately represented in an established data element. In certain situations, technical data must be included in free text in order to clearly explain a technical or operational consideration; in these instances, the data must also be entered in the data element(s) specifically established for it.

Input Requirement

Do not use forbidden characters, or escape them, as explained in the Introduction.

* **idx** *(Attribute)*: Enter a unique index, starting at 1, for each entry within the parent dataset; this index is used to refer to this element from the data items for which this element applies. Once an idx is entered for an occurrence, it SHOULD NOT be modified during the lifetime of the dataset; e.g. an element with idx=2 will keep idx=2 even if the first occurrence (idx=1) is later on deleted from the dataset, so that the data elements in the dataset referring to idx=2 do not lose their connection.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

Example

(see also a more complete example in the standard metadata attributes)

```
<Remarks cls="C" idx="1">This is a JTIDS Class 2H terminal</Remarks>
```

Role

Role (Job Account)

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EffectiveDate	Effective Date	Opt	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
Name	Role Name	Req	S50
Country	Country	Opt	Code List CCY
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Address [0..n] ContactRef [0..n] EMail [0..n] TelephoneFax [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a Role (position or role representing an organisational user of the system; also known as Job Account in the USA).
See Role Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`JA`".

* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **Name**: Enter the name or function of the Role. The name SHOULD be unique within the agency.
* **Country**: Enter the country to which belongs the Role.
  IMPORTANT NOTE: The Country is Optional in order to accommodate legacy data; however it SHOULD be filled in. The release of datasets to Roles is based upon matching nationalities; therefore a Role without a Country will not be able to receive datasets having a releasability caveat.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCY (extract only):**

Code	Meaning
AFG	Afghanistan
ALB	Albania
DZA	Algeria
AND	Andorra
AGO	Angola
ATG	Antigua and Barbuda
ARG	Argentine Republic
ARM	Armenia
AUS	Australia
AUT	Austria

...	...

Example

```
<Role cls="U">
  <Serial cls="U">USA::JA:123</Serial>
  <EntryDateTime cls="U">2011-12-12T00:00:00Z</EntryDateTime>
  <Name cls="U">EUCOM FMFO</Name>
  <Country cls="U">USA</Country>
  <ContactRef cls="U">USA:EU:CN:1</ContactRef>
</Role>
```

RoleRef

Role Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	pattern (S29)
Sub-Element Of:	Organisation		

Description

This element contains the serial of a referenced Role.

Input Requirement

Enter the unique reference of the Role.

[XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**JA**".

[XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RxAntModeRef

Receiver Antenna

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Antenna Identifier	Req	pattern (S29)
ModeID	Antenna Mode Identifier	Opt	S20
CouplingLoss	Coupling Loss	Opt	SN(6,3)*(dB)*
Inherited by:	TxAntModeRef		
Sub-Element Of:	RxRef		

Description

Data element RxAntModeRef contains references to the Antenna and its AntMode, used to construct a Receiver Configuration.

Input Requirement

* **Serial**: Enter the reference to an Antenna in this configuration. This antenna is associated with the receiver specified in the Serial field of the parent RxRef element.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ModeID**: Enter the unique name of an AntMode of the Antenna specified in the corresponding Serial field. This antenna mode is grouped with the receiver modes specified in RxModeRef.

  [XSL WRN RELATED] This item, with item Serial SHOULD refer to an existing Antenna/AntMode in the data repository.

* **CouplingLoss**: Indicate the loss (in dB) that occurs when energy is transferred between the transmitter/receiver and the antenna.

Example

```
<RxAntModeRef>
  <Serial cls="U">USA:NTIA:AN:123</Serial>
  <ModeID cls="U">TRACKING</ModeID>
</RxAntModeRef>
```

RxMode

Receiver Mode

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
curves	Links to Curves	Opt	List of UN6
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
RxType	Receiver Type	Opt	S50 (Code List CRT)
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9)*(MHz)*
Tunability		**Opt**	
Tunability	Tunability	Opt	S25 (Code List CTU)
TuningMethod	Tuning Method	Opt	S50 (Code List CTN)
Intermodulation		**Opt**	
IntermodPct	Intermodulation Value	Opt	UN(4,2)[0..100]*(%)*
IntermodEffect	Intermodulation Effect	Opt	MEMO
Sensitivity		**Opt**	
SensitivityLevel	Sensitivity Level	Opt	SN(6,3)*(dBm)*
NoiseFigure	Noise Figure	Opt	SN(6,3)*(dB)*
NoiseTemp	Noise Temperature	Opt	UN(7,1)
SensitivityCriteriaType	Type of Sensitivity Criteria	Opt	S50 (Code List CSE)
SensitivityCriteriaLevel	Sensitivity Criteria	Opt	SN(16,15)
SensitivityCriteriaText	Sensitivity Criteria	Opt	S50
PostDetection		**Opt**	
PostDetectionFreqMin	Minimum Post Detection Frequency	Opt	UN(16,9)*(MHz)*
PostDetectionFreqMax	Maximum Post Detection Frequency	Opt	UN(16,9)*(MHz)*
ProcessingGain	Processing Gain	Opt	SN(6,3)*(dB)*
SpuriousRejection	Rejection of Spurious Emissions	Opt	SN(6,3)*(dB)*
ImageRejection	Rejection on Image Frequency	Opt	SN(6,3)*(dB)*
IntermodRejection	Rejection of Intermodulation	Opt	SN(6,3)*(dB)*
AdjacentChannelSelectivity	Adjacent Channel Selectivity	Opt	SN(6,3)*(dB)*
FreqTolerance		**Opt**	
FreqTolerance	Frequency Tolerance	Req	UN(18,6)
FreqToleranceUnit	Frequency Tolerance Unit	Req	Code List CFO
ModeName ***(US)***	Mode Name	Opt	S40
Sub-Element Of:	Receiver		
Sub-Elements:	Baseband [0..n] EmsClass [0..n] FreqConversion [0..n] RxModulation [0..n] RxSignalTuning [0..n] SpreadSpectrum [0..1]		

Description

This element and its sub-elements define all the technical parameters for a mode of operation of the Receiver. A mode can be defined as a set of parameters or settings for a radio or radar, allowing the equipment to perform a given function (e.g. voice, data, seek, tracking, etc).
See RxMode Diagram

Input Requirement

* **curves** *(Attribute)*: Enter the list of indices referring to a Curve index applicable to the current data item.

* **Mode Information**: This group is REQUIRED.

  - **ModeID**: Enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

    [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

  - **Description**: Enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.

* **RxType**: Enter the type of receiver. If there is no suitable entry in the code list, use `+Other` and indicate the type in a Remarks.

  Recommend values from **Code List CRT (extract only):**

Code
Coherent
Crystal
Direct View Optics
Double Conversion Superheterodyne
Homodyne
Imaging Detector
Non-Coherent
Non-Imaging Detector
Quad Conversion Superheterodyne
Super Regenerative
...

* **NecessaryBw**: Enter the necessary bandwidth which is defined as the value in MHz, for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. This is approximately at the -20 dB level on an emission curve.

* **Tunability**: This group is OPTIONAL.

  - **Tunability**: Enter the tuning capability.

    Recommend values from **Code List CTU:**

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous +Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed +Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode

  - **TuningMethod**: Enter the device or process used to tune the equipment through the RF spectrum.

    Recommend values from **Code List CTN (extract only):**

Code
Cavity
Cavity Mechanically Tuned
Cavity Resonant
Cavity Tunable
Continuous

Continuous VCO
Crystal Controlled
Crystal Fixed
Crystal Interchangeable
Crystal SAW
...

* **Intermodulation**: This group is OPTIONAL.

  This group describes the distortion that is the result of two or more signals mixing together that are not harmonic frequencies. These signals mix to create additional non-harmonic frequencies that are undesirable.

  - **IntermodPct**: Enter the percentage of the total signal either transmitted or received affected by the distortion products.
  - **IntermodEffect**: Enter the effect on circuit operation caused by the level of intermodulation distortion.

* **Sensitivity**: This group is OPTIONAL.

  This group describes the minimum RF signal power present at the input terminals that ensures acceptable detection and demodulation of the desired signal, and the criteria used to determine this minimum level. It may also contain a measure of the internal receiver noise present in the receiver output. It is the ratio of the input signal to noise ratio to the output-signal-to-noise ratio at the standard temperature of 290 Kelvin. It may also contain the minimum receiver noise temperature.

  - **SensitivityLevel**: Enter the minimum RF signal power level in dBm as it relates to one of the four criteria PWOP, SINAD, S/N or S+N/N indicated in item SensitivityCriteriaType.
    Note, for MDS and MTR criteria, the RF signal power level is zero and this item may be left blank in those instances.
  - **NoiseFigure**: Enter the ratio of the output noise power to the portion of noise power attributable to thermal noise in the input termination at 290 Kelvin. Noise Figure is related to Noise Temperature by the following formula:
    NoiseFigure [dB] = 10 * log10((NoiseTemp [K] / 290) + 1).
  - **NoiseTemp**: At a pair of terminals, the temperature of a passive system having an available noise power per unit bandwidth at a specified frequency equal to that of the actual terminals of a network. Noise Figure is related to Noise Temperature by the following formula:
    NoiseFigure [dB] = 10 * log10((NoiseTemp [K] / 290) + 1).
  - **SensitivityCriteriaType**: Enter the criteria used to determine the minimum RF signal power present at the input terminals that ensures acceptable detection and demodulation of the desired signal.

    Recommend values from **Code List CSE:**

Code	Meaning
Pulse Width Opposition	Pulse Width Opposition; value is in dB
Bit Error Rate	Bit Error Rate; value is a number in scientific notation
Minimum Discernable Signal	Minimum Discernable Signal
Minimum Target Recognition	Minimum Target Recognition
SINAD	Signal-Plus-Noise-Plus-Distortion to Noise-Plus-Distortion; value is in dB
S/N	Signal-to-Noise ratio; value is in dB
(S+N)/N	(Signal plus-Noise)-to-Noise ratio; value is in dB

  - **SensitivityCriteriaLevel**: Enter the value of the criteria; the meaning and unit of this value depends on the type selected above.
  - **SensitivityCriteriaText**: Enter the value of the criteria when it cannot be expressed as a number.

  Example:<SensitivityLevel>-92</SensitivityLevel> <NoiseFigure>9</NoiseFigure> <NoiseTemp>850</NoiseTemp> <SensitivityCriterionType>SINAD</SensitivityCriterionType> <SensitivityCriterion>10 dB at 30 kHz BW</SensitivityCriterion>

* **Post-Detection Frequency Range**: This group is OPTIONAL.

This group identifies the minimum and maximum Post Detection Frequencies

- **PostDetectionFreqMin**: Enter the minimum post detection frequency in MHz.
- **PostDetectionFreqMax**: Enter the maximum post detection frequency in MHz.

* **ProcessingGain**: Enter the ratio in dB of the post-processing signal-to-noise ratio to the received signal-to-noise ratio.
* **SpuriousRejection**: Spurious receiver responses arise when strong undesired signals and the receiver local oscillator (LO) combine in the mixer to produce a frequency on or near the intermediate frequency. The rejection is the ratio in dB of a particular out-of-band frequency (outside the -60 dB IF bandwidth) signal level required to produce a specified output to the desired signal level required to produce the same output. It should always be a positive number.
* **ImageRejection**: Enter the ratio in dB of the image frequency signal level required to produce a specified output to the desired signal level required to produce the same output. This applies to superheterodyne receivers. For example, if a receiver had a sensitivity of -100 dBm and could receive an image signal with a maximum power of -20 dBm without causing the standard response, then the receive image rejection would be 80 dB. It should always be a positive number.
* **IntermodRejection**: Enter The rejection in dB of spurious emissions involving the mixing of two or more signals. Spurious emissions are emissions on a frequency or frequencies that are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information.
* **AdjacentChannelSelectivity**: Enter the ratio in dB between the wanted signal and the maximum level of an unwanted signal in the adjacent channel which still allows correct reception of the wanted signal.
* **Frequency Tolerance**: This group is OPTIONAL.

  The maximum drift from an equipment's center frequency after normal warm-up time has been allowed.

  - **FreqTolerance**: Enter the drift in Hz or in ppm using the formula: Frequency tolerance (ppm) = Maximum drift (Hz) / Center frequency (MHz). Enter the units (Hz or ppm) in FreqToleranceUnit.
  - **FreqToleranceUnit**: Enter the units in which the Frequency Tolerance is expressed.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFO:**

Code	Meaning
Hz	Hertz
ppm	parts per million

* **ModeName *(US)***: Enter a short name for the mode.

RxModeRef

Receiver Mode Identifier

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S20
Sub-Element Of:	RxRef		

Description

This element references a RxMode of the receiver used in this configuration. This mode is from the receiver specified in the Serial field of the parent RxRef element.

Input Requirement

Enter the unique identifier of a RxMode.

[XSL WRN RELATED] This item, with item Serial in parent element SHOULD refer to an existing Receiver/RxMode in the data repository.

RxModulation

Receiver Modulation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
DigitalModType	Digital Modulaton Type	Opt	S50 (Code List CMO)
MaxBitRate	Maximum Bit Rate	Opt	UN(10,3)
DigitalFormat		**Opt**	
NumStates	Number of Digital States	Opt	UN(5)
LineCoding	Line Coding	Opt	S50 (Code List CDF)
CodeRate	Pseudorandom Code Rate	Opt	UN(10,3)
CodePeriod	Pseudorandom Code Repetition Period	Opt	UN(12,6)*(us)*
Inherited by:	TxModulation		
Sub-Element Of:	RxMode		

Description

This data element contains the detailed characteristics of the modulation on the receiver side.

Input Requirement

* **DigitalModType**: Enter the type of digital modulaton.

  Recommend values from **Code List CMO (extract only):**

Code
AM Clear Voice
AM Secure Voice
ASK/OOK
Audio FSK
Binary Phase Shift Key
Code Division Multiplex
COFDM
CPFSK
Data
Differential PSK
...

* **MaxBitRate**: Enter the maximum bit rate in kilobits per second applicable to digital communications systems. For spread spectrum transmissions enter the bit rate after error-correction coding. Do not enter the spectrum-spreading clock or chip rate.

* **DigitalFormat**: This group is OPTIONAL.

  This group contains information about data coding.

  - **NumStates**: Enter the number of states, e.g., 4 for 4-ary Phase Shift-Keying, 64 for 64 level Quadrature AM.
  - **LineCoding**: Indicate the format used to represent binary digit sequencing when digital modulation is used.

    Recommend values from **Code List CDF (extract only):**

Code
Bi-Phase-Level
Bi-Phase-Mark
Bi-Phase-Space
Differential Bi-Phase-Level
Differential Bi-Phase-Mark
Differential Bi-Phase-Space
NRZ
NRZ-Mark
NRZ-Space
Return to Zero

...

- **CodeRate**: Enter the pseudorandom code rate in kilobits per second (kbps).
- **CodePeriod**: Enter the length of time of the pseudorandom code repetition period in microseconds.

Example

```
<RxModulation>
  <DigitalModType cls="U">ASK/OOK</DigitalModType>
  <MaxBitRate cls="U">27000000</MaxBitRate>
</RxModulation>
```

RxRef

Receiver Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Receiver Serial	Req	pattern (S29)
Sub-Element Of:	Configuration		
Sub-Elements:	RxAntModeRef [0..n] RxModeRef [0..n]		

Description

This element contains the reference of a Receiver, and optionnally some of its RxModes and the associated Antennas and AntMode.

Input Requirement

* **Serial**: Enter the identifier of the related Receiver used in this configuration. The same receiver can be referenced in different RxRef elements in order to properly group receiver modes with antenna modes.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`RX`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

RxSignalTuning

Receiver Signal Tuning

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9)*(MHz)*
NumPresetChannels	Number of Preset Channels	Opt	UN(8)
Sub-Element Of:	RxMode		

Description

Data element RxSignalTuning indicates the tuning capabilities, the specific frequency or range of frequencies within which the equipment may tune, and the tuning increments of the equipment.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **TuningStep**: Enter the tuning increment expressed in MHz (do not insert any unit).
* **NumPresetChannels**: Enter the number of preset channels available.

SSReply

Spectrum Supportability Reply

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
SSRequestRef	SSRequest Serial	Opt	pattern (S29)
ReplyingCountry	Replying Country	Req	Code List CAO
SupportabilityCode	Supportability Code	Req	S50 (Code List CCD)
DateReceivedByCountry	Date Request Received By Country	Opt	D
EffectiveDate	Effective Date	Req	D
ExpireReview		**Opt**	
ExpirationDate	Expiration Date	Opt	D
ReviewDate	Review Date	Opt	D
ApprovalSPSNum *(US)*	Approval SPS Number	Opt	S11
ERPNumber *(US)*	ERP Number	Opt	S50
FASNumber *(US)*	FAS Number	Opt	S50
IRACNumber *(US)*	IRAC Number	Opt	S50
ReplyingAuthority *(US)*	Replying Authority	Opt	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	CommentSource [0..n] Configuration [0..n] StageLocation [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a Host Nation Declaration of Spectrum Supportability. It inherits attributes and sub-elements from element Common.
See SSReply Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "HD".

* **SSRequestRef**: Enter the dataset identifier of the SSRequest being replied to.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "SR".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ReplyingCountry**: Enter the code of the country providing the reply.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

* **SupportabilityCode**: Enter the overall result of the national analysis.

- If replying "Supported with Restrictions", use Comments for general restrictions only. Specific restrictions on authorised/excluded location should be expressed using the LocationRef. Specific restrictions on tuning ranges and power limits should be expressed using the Configuration.
- If replying "Supported with Recommendations", use Comments to express these recommendations.

Recommend values from **Code List CCD:**

Code
Draft
Pending
Not Supported
Supported
Supported with Recommendations
Supported with Restrictions
Request Frequency Assignment
Temporary Assignment Only

* **DateReceivedByCountry**: Enter the date the request was received by the Host Nation Administration.
* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpireReview**: This group is OPTIONAL.
  - **ExpirationDate**: Enter the date at which the dataset will expire, formatted as `yyyy-mm-dd` (year-month-day). The Expiration date should be less than five years from current date.
  - **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **ApprovalSPSNum** ***(US)***: Enter the Certification of Spectrum Support Spectrum Planning Subcommittee (SPS) document identifier assigned by NTIA. This is not the same as the application SPS number.
* **ERPNumber** ***(US)***: Enter the Emergency Readiness Plan (ERP) Number. Certification applications are assigned an ERP Number by the Emergency Planning Subcommittee (EPS) of the Interdepartment Radio Advisory Committee (IRAC) if the system involves national security and emergency preparedness (NSEP).
* **FASNumber** ***(US)***: Enter the Interdepartment Radio Advisory Committee (IRAC) Frequency Assignment Subcommittee (FAS) identifier assigned by NTIA.
* **IRACNumber** ***(US)***: Enter the Interdepartment Radio Advisory Committee (IRAC) document number of the NTIA Certification of Spectrum Support document. This number is assigned by NTIA.
* **ReplyingAuthority** ***(US)***: Enter the name of the organization providing the reply.

Example

```
<SSReply cls="U">
  <Serial cls="U">FRA::HD:123</Serial>
  <EntryDateTime cls="U">2012-02-25T00:00:00Z</EntryDateTime>
  <SSRequestRef cls="U">USA::SR:123</SSRequestRef>
  <ReplyingCountry cls="U">FRA</ReplyingCountry>
  <SupportabilityCode cls="U">Supported with Restrictions</SupportabilityCode>
  <EffectiveDate cls="U">2012-02-25</EffectiveDate>
  <CommentSource>
    <Source cls="U">CAA</Source>
    <Comment idx="1" cls="U">IAW frequency clearance agreement FR MoD/FR CAA.</
Comment>
  </CommentSource>
</SSReply>
```

SSRequest

Spectrum Supportability Request

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Title	Application Title	Req	S100
CurrentStage	Current Stage	Opt	Code List CSG
Requirement	Requirement Description	Opt	MEMO
Emergency	Emergency Indicator	Opt	Code List CBO
NumUnits		**Opt**	
NumMobileUnits	Number of Mobile Units	Opt	UN(9)
NumAreaUnits	Number of Units in Area	Opt	UN(9)
NumCositedUnits	Number of Cosited Units	Opt	UN(9)
ApplicationDate	Application Date	Opt	D
DateResponseRequired	Date Response Required	Opt	D
ReplacementInfo	Replacement Info	Opt	MEMO
ApplicationSPSNumber *(US)*	Application SPS Number	Opt	S11
CoordinationNum *(US)*	Coordination Number	Opt	S15
InfoTransferRequirement *(US)*	Info Transfer Requirement	Opt	MEMO
InitialCost *(US)*	Initial Cost	Opt	S70
InitialCostDesc *(US)*	Initial Cost Description	Opt	MEMO
ITUWaiver *(US)*	ITU Waiver	Opt	Code List CBO
NTIACoordinationRequired *(US)*	NTIA Coordination Required	Opt	Code List CBO
NTIASpaceData *(US)*	NTIA Space Data	Opt	MEMO
OperInvIntent *(US)*	Operational Inventory Intent	Opt	Code List CBO
OriginatingAgency *(US)*	Originating Agency	Opt	S80
RequestType *(US)*	Request Type	Opt	S50
RelatedAnalysisAndTestData *(US)*	Related Analysis And Test Data	Opt	MEMO
SysRelationEssential *(US)*	System Relationship And Essentiality	Opt	MEMO
TSPR *(US)*	TSPR	Opt	S10
WartimeUse *(US)*	Wartime Use	Opt	Code List CBO
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Configuration [0..n] DiagramEndpoint [0..n] DiagramLine [0..n] HostNation [0..n] Nomenclature [0..n] POCInformation [0..n] Project [0..n] RelatedSupportability [0..n] Stage [0..4] StatusLog [0..n] *(US)* Time [0..n] Trunking [0..1] *(US)*		

Description

This element inherits attributes and sub-elements from element Common.

This dataset contains all parameters describing the system and its usage, for which Spectrum Supportability is being requested.
See SSRequest Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "`SR`".

* **Title**: Enter the title of the Spectrum Supportability application. Each application title should be unique.
* **CurrentStage**: Enter the current stage of the system.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **Requirement**: Enter a description of the types and forms of information to be transmitted or received. The requirement should describe:
  - The general purpose of the system (e.g. in the PATRIOT system: this is an anti-missile, anti-aircraft system to protect fixed facilities);
  - Each significant capability of the system (e.g. in the PATRIOT system: search, acquisition and tracking radar, TT&C, C2 links, etc);
  - Any related supportability documents should be listed in the ExtReferenceRef element.
* **Emergency**: Enter "Yes" if the system or equipment for which the supportability is requested may be used in a case of emergency.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NumUnits**: This group is OPTIONAL.
  - **NumMobileUnits**: Enter the number of mobile units. These units do not necessarily operate simultaneously in the same electromagnetic environment.
  - **NumAreaUnits**: Enter the maximum number of units (equipment) that will be operating simultaneously in the same area of operation. An area is generally defined as a country. Enter the number of land mobile stations, ship stations, and transportable stations associated with the current Assignment or SSRequest dataset. Within an Assignment (but not under SSRequest), the number entered shall represent either the exact number of stations or a range of numbers as follows:

Number of Stations	Enter
1-10	10
11-30	30
31-100	100
101-300	300
301-1000	1000
1001-3000	3000
3001-10000	10000
Above 10000	Nearest 10000

    If the exact number is to be recorded, and it is 10, 30, 100, 300, 1000, 3000, or a multiple of 10000, add one to the number to distinguish it from a figure that represents a range of numbers.
  - **NumCositedUnits**: Enter the maximum number of units (equipment) that will be operating simultaneously in the same cosite environment. A cosite situation occurs when several antennas are within the near field of each other.
* **ApplicationDate**: Enter the date on which the application will be submitted to the appropriate spectrum management office.
* **DateResponseRequired**: Enter the date by which the frequency assignment or Spectrum Supportability Reply is required by the user in order to complete necessary advanced operation coordination.
* **ReplacementInfo**: Enter the name of the systems that are likely to be replaced by this system. This item SHOULD NOT be used if there is no replaced system or if the replaced systems are not known: do not enter text such as "NONE" or "N/A".

* **ApplicationSPSNumber** ***(US)***: Enter the application Spectrum Planning Subcommittee (SPS) document identifier assigned by NTIA. This is not the same as the Certification of Spectrum Support SPS number.
* **CoordinationNum** ***(US)***: Enter the US Military Communications-Electronics Board (MCEB) identifier assigned to the equipment or system. (e.g., "J/F 12/12345")
* **InfoTransferRequirement** ***(US)***: Enter the required character rates, data rates, and circuit quality/reliability of the system.
* **InitialCost** ***(US)***: The estimated initial cost, in US dollars, of the system/equipment.
* **InitialCostDesc** ***(US)***: Enter the explanation of how the estimated initial cost for the system was calculated.
* **ITUWaiver** ***(US)***: Indicate if this is a satellite system that is exempt from submitting notification to the Radiocommunication Bureau.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NTIACoordinationRequired** ***(US)***: Indicate if this application requires coordination with the National Authority for approval. For US records, the National Authority is NTIA and this should be Yes, unless the record does not require coordination with NTIA for approval.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **NTIASpaceData** ***(US)***: Enter the Space and terrestrial information as defined by section 10.8 of the NTIA Manual and not captured in other more specific data fields.
* **OperInvIntent** ***(US)***: Indicate if the system is intended for the DoD operational inventory.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **OriginatingAgency** ***(US)***: Enter the code designating the agency that originated the application.
* **RequestType** ***(US)***: Enter the request type. Possible values may include, but are not limited to, DoD Certification, NTIA Certification, and Foreign Coordination.
* **RelatedAnalysisAndTestData** ***(US)***: Describe electromagnetic compatibility studies, testing or analyses relevant to this system, including documents currently in progress. Use the ExtReference attribute of this element as appropriate.
* **SysRelationEssential** ***(US)***: Enter a statement of the relationship between the proposed system and the function or operation it is intended to support.
* **TSPR** ***(US)***: Enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.
* **WartimeUse** ***(US)***: Indicate if the system is used in a wartime environment.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<SSRequest cls="U">
  <Serial cls="U">USA::SR:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Title cls="U">MIDS LVT</Title>
```

```
  <Configuration>
    <ConfigID cls="U">LOW VOLUME</ConfigID>
    <TxRef>
      <Serial cls="U">USA::TX:555</Serial>
    </TxRef>
  </Configuration>
</SSRequest>
```

Satellite

Satellite

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ReviewDate	Review Date	Opt	D
CallSign	Call Sign	Opt	S20
OrbitType	Orbit Type	Opt	S25 (Code List CSP)
LaunchStatus	Launch Status	Opt	S25 (Code List CLS)
LaunchLocRef	Launch Location	Opt	pattern (S29)
LaunchDate	Launch Date	Opt	D
GeoNominalLon	Geostationary Nominal Longitude	Opt	pattern (S11)
GeoAltitude	Geostationary Altitude	Opt	UN(9,4)*(km)*
NonGeoPeriod	Non-Geostationary Period	Opt	UN(10,4)*(min)*
NonGeoNumSatellites	Number of Non-Geostationary Satellites	Opt	UN(4)
NonGeoApogee	Non-Geostationary Apogee	Opt	UN(9,4)*(km)*
NonGeoPerigee	Non-Geostationary Perigee	Opt	UN(9,4)*(km)*
NonGeoInclination	Non-Geostationary Inclination	Opt	SN(4,2) [-90..90]*(deg)*
InternationalDesignator	International Designator	Opt	S20
ObjectNum	Object Number	Opt	S20
Administration	Notifying Administration	Opt	S100
NetworkName	Network Name	Opt	S50
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	EarthStation [0..n] Identifier [0..n] RFSystemRef [0..n] ServiceArea [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

Dataset Satellite contains station information related to the space service.
See Satellite Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**SA**".

* **ReviewDate**: Enter the date by which the dataset is to be reviewed, formatted as yyyy-mm-dd (year-month-day). The Review date should be less than five years from the effective date. In Spectrum Supportability datasets, this date indicate when the organisation responsible for re-initiating host coordination plans to resubmit a Spectrum Supportability request to the host nation for continued use of the equipment.
* **CallSign**: Enter the call sign assigned to the transmitting station. It can be an internationally allocated call sign or the tactical call sign assigned by the operational authority when the Station is used within a Net. For navigational aids, enter the NAVAIDS identifier.
* **OrbitType**: Indicate the type of orbit.

  Recommend values from **Code List CSP (extract only):**

Code
Deep Eccentric
Deep Space
GEO Drift
GEO Inclined
GEO Inclined Drift
GEO Near-Synchronous
GEO Stationary
GEO Synchronous

GEO Transfer
Heliocentric
...

* **LaunchStatus**: Indicate the status of the satellite.

  Recommend values from **Code List CLS (extract only):**

Code
Cancelled
Decayed
Firm Future
Ground Spare
Inoperative
Launched
Operational
Orbital Spare
Orbital Test
Partially Operational
...

* **LaunchLocRef**: Enter a reference to a Location that identifies the satellite's launch location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "LO".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **LaunchDate**: Enter the date of the satellite's launch.

* **GeoNominalLon**: Enter the longitude of the geostationary satellite in the following format: dddmmss[.hh]H where H represents "E" for East or "W" for West.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{7}(.[0-9]{1,2})?(E|W))|X"

* **GeoAltitude**: Enter the altitude of the geostationary satellite, in km, relative to Mean Sea Level (MSL).

* **NonGeoPeriod**: Enter the time required for the non-geostationary satellite to make one complete orbit around the earth.

* **NonGeoNumSatellites**: Enter the number of non-geostationary satellites in a system having similar orbital characteristics.

* **NonGeoApogee**: Enter the apogee of the non-geostationary satellite in km, i.e. the maximum altitude relative to Mean Sea Level (MSL).

* **NonGeoPerigee**: Enter the perigee of the non-geostationary satellite in km, i.e. the minimum altitude relative to Mean Sea Level (MSL).

* **NonGeoInclination**: Enter the angle determined by the plane containing the orbit of the non-geostationary satellite and the equatorial plane of the earth.

* **InternationalDesignator**: Enter the externally-assigned International Designator for the satellite.

* **ObjectNum**: Enter the ITU-assigned space object identification number.

* **Administration**: Enter the country and/or administration which notified the satellite.

* **NetworkName**: Enter the name of the network to which the satellite belongs.

Example

```
<Satellite cls="U">
  <Serial cls="U">GBR::SA:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <OrbitType cls="U">GEO Stationary</OrbitType>
  <LaunchStatus cls="U">Operational</LaunchStatus>
  <GeoNominalLon cls="U">0053000E</GeoNominalLon>
  <NetworkName cls="U">SKYNET 4</NetworkName>
```

```
</Satellite>
```

SchemaRoot

SchemaRoot

Sub-Elements:	Administrative [0..n] Allotment [0..n] Antenna [0..n] Assignment [0..n] ChannelPlan [0..n] Contact [0..n] ExternalReference [0..n] FEDeployment [0..n] ForceElement [0..n] IntfReport [0..n] JRFL [0..n] Location [0..n] Note [0..n] ***(US)*** Organisation [0..n] RFSystem [0..n] Receiver [0..n] Role [0..n] SSReply [0..n] SSRequest [0..n] Satellite [0..n] TOA [0..n] Transmitter [0..n]

Description

Data element SMADEF is the root element for any SMADEF-XML message. It contains attributes defining the namespace used. Any SMADEF-XML message may contain any number of datasets.

Input Requirement

Example

```
<SMADEF>
  <Datasets_here/>
</SMADEF>
```

SecurityClass *(US)*

Dataset Security Classification

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ClsAuthority	Original Classification Authority	Opt	S30
SourceClsDate	Source Classification Date	Opt	D
ClsOrg	Original Classification Authority Organization	Opt	S30
ClsReason	Reason for Classification	Opt	S15
DeclsType	Declassification Instructions	Opt	S10
DeclsDate	Declassification Date	Opt	D
DeclsEvent	Declassification Event	Opt	S200
Sub-Element Of:	Common		
Sub-Elements:	ClsDerived [0..n] Downgrade [0..3]		

Description

Data element SecurityClass ...

Input Requirement

This element ...

* **ClsAuthority**: The identity, by name and position, or by personal identifier, of the original classification authority.
* **SourceClsDate**: The date this classified dataset was prepared, i.e., the Original Classification Date.
* **ClsOrg**: The organization of the original classification authority.
* **ClsReason**: The reason(s) for the classification. This field contains one or more letters, separated by spaces, from the following list. (a) military plans, weapons systems, or operations; (b) foreign government information; (c) intelligence activities (including covert action), intelligence sources or methods, or cryptology; (d) foreign relations or foreign activities of the United States, including confidential sources; (e) scientific, technological, or economic matters relating to the national security; (f) United States Government programs for safeguarding nuclear materials or facilities; (g) vulnerabilities or capabilities of systems, installations, infrastructures, projects, plans, or protection services relating to the national security; or (h) the development, production, or use of weapons of mass destruction.
* **DeclsType**: The declassification instructions of the dataset. Refer to the appropriate classification authority(s) for more information about this field.
* **DeclsDate**: The declassification date for DEDATE and DE25Xn-based declassification instructions.
* **DeclsEvent**: The declassification event, when necessary based on the declassification instructions.

ServiceArea

Service Area

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	Code List CAO
Sub-Element Of:	Satellite		

Description

This element contains the geographic area serviced by the satellite.

Input Requirement

Enter a geographic area code.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAO (extract only):**

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
...	...

SpreadSpectrum

Spread Spectrum

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Spread Spectrum Type	Opt	S50 (Code List CSS)
FreqRangeGrp		**Opt**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
MaxGain	Spread Spectrum Processing Gain	Opt	SN(6,3)*(dB)*
PulseFreqDev	Pulse Frequency Deviation	Opt	UN(16,9)*(MHz)*
InfoDataRate	Information Data Rate	Opt	UN(10,3)
ChipRate	Direct Sequence Chip Rate	Opt	UN(16,9)*(MChip/s)*
CodeRate	Code Rate	Opt	UN(10,3)
PulseChirpRate	Chirp Rate	Opt	UN(9,6)
PulseChirpFreqShift	Chirp Frequency Shift	Opt	UN(16,9)*(MHz)*
PulseChirpDurationMin	Minimum Chirp Duration	Opt	UN(12,6)*(us)*
TimeHop		**Opt**	
TimeHopNumSlots	Number of Time Hop Slots	Opt	UN(5)
TimeHopPulsesPerDwell	Number of Pulses Per Dwell	Opt	UN(12)
Hopset		**Opt**	
HopRate	Hopping Rate	Opt	UN(9,3)*(hop/s)*
HopDwell	Hop Dwell Time	Opt	UN(12,6)*(us)*
NumFreqsPerHopset	Number of Frequencies in the Hopset	Opt	UN(4)
NumHopsets	Number of Hopsets	Opt	UN(4)
FreqBlocking	Hopset Frequency Blocking Indicator	Opt	Code List CBO
Sub-Element Of:	RxMode, TxMode		

Description

Data element SpreadSpectrum contains characteristics of systems using spread spectrum techniques.

Input Requirement

* **Type**: Enter the type of spread spectrum system being used.

  Recommend values from **Code List CSS (extract only):**

Code
Automatic Channel Selection
Chirp
Direct sequence
Direct sequence + Frequency hopped
Direct sequence + Time hopped
Diversity
Free Channel Search
Frequency + Time hopped
Frequency hopped
Time hopped
...

* **Frequency Range**: This group is OPTIONAL.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **MaxGain**: Enter the processing gain in dB.

* **PulseFreqDev**: Enter, for FM pulse radars, the total frequency shift during the pulse width, in MHz without unit symbol.
* **InfoDataRate**: Enter the information data rate in bits per second.
* **ChipRate**: Enter the maximum generator rate used to encode/decode a Direct Sequence spread spectrum signal, in Mchips/sec.
* **CodeRate**: Enter the post encryption number of symbols/bit for a digital data stream. This does not refer to modulation symbols in a format such as quadrature amplitude modulation (QAM).
* **PulseChirpRate**: Enter for linear frequency modulation, the constant rate at which the radio frequency of a pulse is increased throughout the width of the pulse.
* **PulseChirpFreqShift**: Enter the difference between the starting and stopping frequency of a chirped pulse signal.
* **PulseChirpDurationMin**: Enter the duration (pulsewidth) of the chirp signal in microseconds.
* **TimeHop**: This group is OPTIONAL.

  This group is used for time hopped systems. It contains the number of slots, the number of pulses transmitted during the dwell time, and the time slot allocated for the hopping interval in a spread spectrum (time) signal.

  - **TimeHopNumSlots**: Enter the number of time slots.
  - **TimeHopPulsesPerDwell**: Enter the number of pulses transmitted during each dwell.
* **Hopset**: This group is OPTIONAL.

  This group contains information about a frequency hopping mode of an equipment.

  - **HopRate**: Enter the rate at which the frequency hopping system hops from one frequency to another frequency.
  - **HopDwell**: Enter the length of time the frequency hopping system dwells on a frequency.
  - **NumFreqsPerHopset**: Enter the number of frequencies contained in a hop set.
  - **NumHopsets**: Enter the number of frequency hopsets employed when a system uses frequency hopping spread spectrum modulation techniques, including hybrid direct sequence and frequency hopping.
  - **FreqBlocking**: Indicate if the frequency hopping system is capable of blocking certain frequencies.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Example

```
<SpreadSpectrum>
  <Type cls="U">Direct sequence</Type>
  <MaxGain cls="U">30</MaxGain>
  <PulseFreqDev cls="U">0.1</PulseFreqDev>
  <InfoDataRate cls="U">5000</InfoDataRate>
  <CodeRate cls="U">64</CodeRate>
</SpreadSpectrum>
```

Stage

Stage

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Stage	Req	Code List CSG
StartDate	Start Date	Opt	D
TargetDate	Target Date	Opt	D
DateApprovalRequired	Desired Approval Date	Opt	D
TerminationDate	Termination Date	Opt	D
NumEquip	Number of Equipment	Opt	UN(9)
GeoDescription *(US)*	Geographic Description	Opt	MEMO
Sub-Element Of:	SSRequest		
Sub-Elements:	StageLocation [0..n]		

Description

Data element Stage contains information about the life-cycle management of the system.

Input Requirement

* **Type**: Enter the stage.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSG:**

Code
Conceptual
Developmental
Experimental
Operational

* **StartDate**: Enter the date upon which work will commence on this stage.
* **TargetDate**: Enter the date by which a usable version of the system is expected to be available for testing or deployment.
* **DateApprovalRequired**: Enter the date by which the approval of the application is desired
* **TerminationDate**: Enter the date this stage is expected to terminate. For a stage 2 application the date entered is the date when the system is expected to enter stage 3. The date may be an estimate.
* **NumEquip**: Enter the total number of units to be built, procured or used during this stage.
* **GeoDescription** ***(US)***: Enter a textual description of the geographic locations where this equipment will be used during this stage.

Example

```
<Stage>
  <Type cls="U">Experimental</Type>
  <StartDate cls="U">2004-01-01</StartDate>
  <TargetDate cls="U">2005-01-01</TargetDate>
  <DateApprovalRequired cls="U">2003-01-01</DateApprovalRequired>
  <TerminationDate cls="U">2009-01-01</TerminationDate>
  <NumEquip cls="U">2000</NumEquip>
</Stage>
```

StageLocation

Stage Location Restriction

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
LocSatRef	Location or Satellite Reference	Req	pattern (S29)
Excluded	Shape is Excluded	Opt	Code List CBO
Sub-Element Of:	SSReply, Stage		

Input Requirement

This data element defines locations where the equipment or system is allowed or forbidden from use.

* **LocSatRef**: Enter the serial of a Location or satellite.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**LO** or **SA**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **Excluded**: Enter "Yes" to indicate that the shape is to be excluded from the set. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the shape is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

Station

Station

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
StationID	Station Identifier	Req	S100
CallSign	Call Sign	Opt	S20
CositeSep	Cosite Separation	Opt	UN(16,9)*(MHz)*
CositeSepDescription	Cosite Separation Description	Opt	MEMO
NumUnits		**Opt**	
NumMobileUnits	Number of Mobile Units	Opt	UN(9)
NumAreaUnits	Number of Units in Area	Opt	UN(9)
NumCositedUnits	Number of Cosited Units	Opt	UN(9)
TSDF	Time Slot Duty Factor	Opt	pattern (S6)
UserCode	User Code	Opt	S6
AntStructureHeight ***(US)***	Antenna Structure Height	Opt	UN(3)
StationName ***(US)***	Station Name	Opt	S100
StationControl ***(US)***	Station Control	Opt	S18
Sub-Element Of:	Assignment		
Sub-Elements:	POCInformation [0..n] StationLoc [1..n] ***(US)***		

Description

Data element Station defines the station, or one of the stations, within the current Assignment dataset. A station is one or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment necessary at one location for carrying on a radiocommunication, radiolocation, or other spectrum dependent functions. It may indicate the international call sign assigned to the transmitting station. It also identifies the Location of the Station, and the service volume of an air/ground/air assignment defined as a circle (point location with radius), an ellipse or a polygon, plus a height. For navigational aids, this data item is used for the NAVAIDS identifier instead of a call sign.

Input Requirement

* **StationID**: Enter the nickname for the station; this name should be a meaningful identification of the station, but it can also be automatically generated in some systems. The station identifier may be reflective of the location, such as "ANNAPOLIS 20" which could mean within 20 kilometres of some point in Annapolis, MD. In other instances the identifier could be organisationally related. The identifier MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

  [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.

* **CallSign**: Enter the call sign assigned to the transmitting station. It can be an internationally allocated call sign or the tactical call sign assigned by the operational authority when the Station is used within a Net. For navigational aids, enter the NAVAIDS identifier.

* **CositeSep**: This item identifies the minimum required frequency separation between the equipment for which the assignment is being made and any other equipment operating at the same location. Enter:

  - For a fixed frequency assignment, the required frequency separation in MHz (without unit), between this equipment and other equipment operated at one location. If the frequency separation is unknown use the NATO recommended frequency separation requirements are listed below.
    0.5 (MHz) for a transmitter power below 24.8 dBW (300 watts);
    2 (MHz) for a transmitter power above 24.8 dBW (300 watts);
    2.0 through 9.9 (MHz) for exceptionally high transmitter powers or difficult cosite constraints.
  - For a HAVE QUICK II or SATURN frequency hopping assignments, one of the following values:
    0 - Instantaneous separation may be as small as 25 kHz;
    4 - Minimum separation is 4 MHz;
    8 - Minimum separation is 8 MHz;
    12 - Minimum separation is 12 MHz

* **CositeSepDescription**: Enter the minimum frequency separation between a number of transmitters or between a transmitter and a receiver in radio relay frequency requests.
* **NumUnits**: This group is OPTIONAL.
  - **NumMobileUnits**: Enter the number of mobile units. These units do not necessarily operate simultaneously in the same electromagnetic environment.
  - **NumAreaUnits**: Enter the maximum number of units (equipment) that will be operating simultaneously in the same area of operation. An area is generally defined as a country. Enter the number of land mobile stations, ship stations, and transportable stations associated with the current Assignment or SSRequest dataset. Within an Assignment (but not under SSRequest), the number entered shall represent either the exact number of stations or a range of numbers as follows:

Number of Stations	Enter
1-10	10
11-30	30
31-100	100
101-300	300
301-1000	1000
1001-3000	3000
3001-10000	10000
Above 10000	Nearest 10000

    If the exact number is to be recorded, and it is 10, 30, 100, 300, 1000, 3000, or a multiple of 10000, add one to the number to distinguish it from a figure that represents a range of numbers.
  - **NumCositedUnits**: Enter the maximum number of units (equipment) that will be operating simultaneously in the same cosite environment. A cosite situation occurs when several antennas are within the near field of each other.
* **TSDF**: this item contains the time slot duty factor assigned to stations of a time division multiple access (TDMA) system. It is applicable in particular to the MIDS/JTIDS systems as explained in the notes below. For NATO MIDS/JTIDS assignments, enter in value the time slot duty factor expressed as NNN/nn where NNN is the maximum percentage of time that may be used by MIDS/JTIDS users in an operational area (a circle with a 100 nautical mile (183.2 km) radius) and nn is the maximum percentage of time that any individual user may be using MIDS/JTIDS. Optionally, use a Remark to add any amplifying information.
  Notes:
  1. A JTIDS time slot is a 0.0078125 microsecond time interval during which MIDS/JTIDS messages may be transmitted or received.
  2. The 40/20 notation specifies that the total MIDS/JTIDS community will not be assigned more than 40% TSDF, with no more than 20% TSDF assigned to a single user. Note that 100% TSDF corresponds to a maximum pulse transmission rate of 396,288 pulses per 12 second period (an average of 33,024 pulses per second). The total number of pulses allowed per 12 second period is 158,515 for 40% TSDF and 79,257 for 20% TSDF. Using all 1536 time slots in each 12 second period, with 258 pulses per time slot with no contention or multinet overlap conditions results in a TSDF of 100%.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "([0-9]{1,2}|100)/[0-9]{1,2}"
* **UserCode**: Enter a code (nationally determined) identifying the user of the station.
* **AntStructureHeight** ***(US)***: Enter the overall height, in meters, of the antenna support structure above ground level.
* **StationName** ***(US)***: Enter a short descriptive name for the station. This must be unique within the dataset.
* **StationControl** ***(US)***: Enter the operating unit that controls, either electrically or administratively, the station when it is different from the user of the assignment.

Example

```
<Station>
  <Name cls="U">Base Station</Name>
  <CallSign cls="U">WUH55</CallSign>
  <sub-elements/>
</Station>
```

StationConfig

Station Configuration

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Station Type	Req	Code List CAU
ConfigID	Configuration Reference	Req	S100
StationID	Station Reference	Req	S100
EIRP		**Opt**	
EIRPMin	Minimum or Nominal EIRP	Opt	SN(10,7)*(dBW)*
EIRPMax	Maximum EIRP	Opt	SN(10,7)*(dBW)*
AntFeedpointHeight	Antenna Feedpoint Height	Opt	SN(7,2)*(m)*
FeedlineLength	Feedline length	Opt	SN(7,2)*(m)*
FeedlineLoss	Feedline total loss	Opt	SN(6,3)*(dB)*
EarthCoverage	Satellite Earth Coverage	Opt	S50 (Code List CCO)
PointingAzMin	Pointing Minimum/Nominal Azimuth	Opt	UN(5,2) [0..360]*(deg)*
PointingAzMax	Pointing Maximum Azimuth	Opt	UN(5,2) [0..360]*(deg)*
PointingElevMin	Pointing Minimum/Nominal Elevation	Opt	SN(4,2) [-90..90]*(deg)*
PointingElevMax	Pointing Maximum Elevation	Opt	SN(4,2) [-90..90]*(deg)*
CoordinationNum ***(US)***	Coordination Number	Opt	S15
Sub-Element Of:	Link		
Sub-Elements:	Blanking [0..n]		

Description

Data element StationConfig describes one couple (station, configuration) used for transmitting and/or receiving in the current Link. It may also contain additional antenna pointing/blanking parameters.

Input Requirement

* **Type**: Indicate if the StationConfig is acting as a transmitter, receiver or transceiver.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CAU:**

Code
Transmit Only
Receive Only
Transmit-Receive

* **ConfigID**: Enter the Name of one of the configurations defined under element Configuration for the current Assignment dataset.

  [XSD ERR RELATED] This item MUST refer to an existing Configuration within the dataset.

* **StationID**: Enter the Name of one of the stations defined under element Station for the current Assignment dataset.

  [XSD ERR RELATED] This item MUST refer to an existing Station within the dataset.

* **EIRP**: This group is OPTIONAL.

  Group EIRP contains the Effective Isotropic Radiated Power (EIRP) radiated from the transmitter antenna. The EIRP is the sum of the power supplied to the antenna and the gain of the antenna, less the line loss, expressed in dBW.

  - **EIRPMin**: Enter the minimum or nominal EIRP radiated from the transmitter antenna.
  - **EIRPMax**: Enter the maximum EIRP, in the case of a range of values; in the case of a SSReply, use the EIRPMax to specify the maximum authorised power in your Nation for the specified Configuration.

* **AntFeedpointHeight**: Enter the antenna feed point height above the terrain, in metres. In the case where the antenna is mounted pointing vertically to a reflector on the same structure, enter the height of the reflector above ground. If the Station is a flying object, this data represents the maximum altitude of the object above ground.

* **FeedlineLength**: Enter the length of the antenna feed line in metres.
* **FeedlineLoss**: Enter the total loss in dB of the antenna feed line.
* **EarthCoverage**: Indicate the area of earth coverage.

  Recommend values from **Code List CCO (extract only):**

Code
Global
Eastern Hemisphere
Western Hemisphere
Northern Hemisphere
Southern Hemisphere
North-eastern Earth Quarter
North-western Earth Quarter
South-eastern Earth Quarter
South-western Earth Quarter
Narrow Beam
...

* **PointingAzMin**: Enter the starting azimuth if an azimuth range is reported; otherwise, enter a single azimuth. This is considered the left limit of an azimuth range when an azimuth range is entered.
* **PointingAzMax**: Enter the stopping azimuth. This is considered the right limit of an azimuth range.
* **PointingElevMin**: Enter the minimum elevation angle. This is the lower limit of an elevation range when a range is reported.
* **PointingElevMax**: Enter the maximum elevation specification. This is the upper limit of an elevation range.
* **CoordinationNum** ***(US)***: Enter the US Military Communications-Electronics Board (MCEB) identifier assigned to the equipment or system. (e.g., "J/F 12/12345")

Example

```
<StationConfig>
  <Type cls="U">Transmit-Receive</Type>
  <ConfigID cls="U">CONFIG 1</ConfigID>
  <StationID cls="U">STATION 1</StationID>
</StationConfig>
```

StationLoc *(US)*

Station Location

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
LocationExcluded	Excluded Location Indicator	Opt	Code List CBO
LocSatRef	Location or Satellite Reference	Opt	pattern (S29)
LocationRadius	Location Radius	Opt	UN(9,4)*(km)*
ServiceVolumeLocRef	Service Volume Identifier	Opt	pattern (S29)
ServiceVolumeRadius	Service Volume Radius	Opt	UN(9,4)*(km)*
ServiceVolumeHeight	Service Volume Height	Opt	SN(7,2)*(m)*
Sub-Element Of:	Station		

Input Requirement

* **LocationExcluded**: Enter "Yes" to indicate that the LocSatRef is to be excluded from the possible location set for the current station. If omitted, a "No" SHOULD be assumed by processing applications, meaning that the location is included by default.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **LocSatRef**: Enter the serial of a Location or Satellite dataset. When this location is complex (other than a single point), that means that the assignment is for a mobile inside the definition location.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`LO` or `SA`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **LocationRadius**: Enter the radius (in km) associated with the Location to produce a circle.
  Note that the Radius information only applies to points, and should be ignored in the case of polygons and ellipses.

* **ServiceVolumeLocRef**: Enter the unique reference of an existing Location dataset.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`LO`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ServiceVolumeRadius**: Enter the radius (in km) associated with the ServiceVolumeLocRef (referencing a Location) to produce a circle.
  Note that the Radius information only applies to points, and should be ignored in the case of polygons and ellipses.

* **ServiceVolumeHeight**: Enter the flight altitude in meters of all aeronautical navigational aids and air traffic control assignments for radio frequencies above 30 MHz and for low-frequency beacons. The altitude is always referenced to the mean sea level (MSL).

StatusLog *(US)*

Status Log

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
DateTime	DateTime	Req	DT
State	State	Req	S50 (Code List UST)
AgencyCode	Agency Code	Opt	S80
Comment	Comment	Opt	S255
POCRef	Point Of Contact Reference	Opt	pattern (S29)
Sub-Element Of:	Assignment, SSRequest		

Input Requirement

* **DateTime**: Enter the date and UTC time of this status log entry.
* **State**: Enter the state of the record or action performed at the time of this status log entry.

  Recommend values from **Code List UST (extract only):**

Code
ACCEPTED BY
ACTIVATED BY
ADMIN MOD BY
APPROVED BY
ASSIGNED BY
AUTHORISED BY
COMMENT BY
COMPLIANCE
COORDINATION (from, to list)
DELETED BY
...

* **AgencyCode**: Indicate the agency responsible for this status log entry.
* **Comment**: Enter the description of the status log entry. In the case of COMMENT BY, the comment entered by the entrant.
* **POCRef**: Enter the reference to a Contact, Organisation, or Role responsible for this status log entry or the recipient of the action.

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

StnClass

Class of Station

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	S5 (Code List USC)
Sub-Element Of:	Allocation		

Description

This element contains the station class associated with the frequency usage.

Input Requirement

Allowable Station Class values are defined by the appropriate Administration.

[XSD ERR CODELIST] This data item MUST use one of the codes from **Code List USC (extract only):**

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion.
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon.
ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service in-tended for the benefit of aircraft.
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon).
ALG	Glide Path (Slope) Sta-tion: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft.
ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.
...	...

StockNum *(US)*

Stock Number

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
StockNum	Stock Number	Req	S50
Type	Stock Number Type	Opt	S25 (Code List UNS)
Sub-Element Of:	ForceElement, RFSystem		

Description

Data element StockNum provides the equipment stock number and indicates the type of stock number.

Input Requirement

* **StockNum**: The stock number of the system/equipment.
* **Type**: Indicates the type of stock number.

  Recommend values from **Code List UNS:**

Code
Agency Tracking ID
Commercial P/N
Drawing Number
Line Item Number
National Stock Number
NATO Stock Number

Example

```
<StockNum>
  <Number>0967-01-234-6799</Number>
  <Type>N</Type>
</StockNum>
```

SubCarrierFreq

Sub-Carrier Frequency

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	UN(16,9)*(MHz)*
Sub-Element Of:	TxMode		

Description

Data element SubcarrierFreq contains a frequency for the subcarrier. A subcarrier is a secondary channel that resides within the main channel (a carrier within a carrier). A type of multiplexing, the subcarrier is a modulated carrier signal at a lower frequency that is combined with the main carrier signal operating at a higher frequency.

Input Requirement

Enter (using multiple occurrences of this element as necessary) the list of subcarriers, in MHz.

Example

```
<SubcarrierFreq cls="U">2.0</SubcarrierFreq>
```

SubCarrierTone

Sub-Carrier Tone

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
	Element Content	Req	UN(16,9)*(MHz)*
Sub-Element Of:	TxMode		

Description

Data element SubcarrierTone contains the sidetone frequency used to modulate the subcarrier.

Input Requirement

Enter (using multiple occurrences of this element as necessary) the list of sidetones, in MHz.

Example

```
<SubcarrierTone cls="U">0.1</SubcarrierTone>
```

SysOfStation

System Of Stations

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
SysName	System Name	Opt	S30
NumStations	Number of Stations	Opt	UN(9)
Sub-Element Of:	Assignment		

Description

Data element SysOfStation defines the name of the system that this assignment belongs and whether or not the assignment provides assets to or uses another assignment resources. It also describes linkages to or from other datasets.

Input Requirement

* **SysName**: Enter the name of the system to which the frequency assignment belongs. A system is considered two or more equipment having a common property, usually geographic, administrative, functional, or operational in nature.
* **NumStations**: Enter the number of transportable, land-mobile, and portable-type stations associated with the frequency assignment. A station is one or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment necessary at one location for carrying on a radio communication service.

Example

```
<SysOfStation>
  <SysName cls="U">BALTIMORE LMR SYSTEM</SysName>
</SysOfStation>
```

TOA

Table Of Allocations

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Administration	Administration	Req	S50
EffectiveDate	Effective Date	Opt	D
ExpirationDate	Expiration Date	Opt	D
Title	Title	Opt	S100
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	BandApplication [0..n] BandUser [0..n] ChannelPlanRef [0..n] Country [0..n] Footnote [0..n] FreqBand [1..n]		

Description

This element inherits attributes and sub-elements from element Common.

This element is the XML root for all parameters of a Table of Allocations. It inherits attributes and sub-elements from element Common.
See TOA Diagram
See Allocation Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TA**".

* **Administration**: Enter the nation or regulatory body that administers this Table of Allocations.
* **EffectiveDate**: This data element indicates the date/time by which the dataset is to be operational or effective, formatted as yyyy-mm-dd (year-month-day).
* **ExpirationDate**: Enter the date at which the dataset will expire, formatted as **yyyy-mm-dd** (year-month-day). The Expiration date should be less than five years from current date.
* **Title**: Enter an identifying name for this Table of Allocations.

Example

```
<TOA cls="U">
  <Serial cls="U">USA:NTIA:TA:1</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Administration cls="U">NTIA</Administration>
  <FreqBand>
    <FreqMin cls="U">230</FreqMin>
    <FreqMax cls="U">400</FreqMax>
    <Allocation>
      <AllocatedService cls="U">Mobile Service</AllocatedService>
      <Priority cls="U">Primary</Priority>
    </Allocation>
  </FreqBand>
</TOA>
```

TelephoneFax

Telephone or Telefax Number

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Preferred	Preferred Number	Opt	Code List CBO
Type	System or Network	Opt	S20
Fax	Telefax Indicator	Opt	Code List CBO
MaxCls	System Maximum Classification	Opt	Code List CCL
Number	Tel or Fax Number	Req	S50
Sub-Element Of:	Contact, Organisation, Role		

Description

Data element TelephoneFax reflects the telephone and/or telefax number(s) of the Contact, Organisation or Role.

Input Requirement

* **Preferred**: Enter a code `"Yes"` for the preferred number(s) and a code `"No"` for the others.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Type**: Enter the name of the network on which this number can be dialled (e.g. DSN, IVSN, CORMORANT). Use `"PUBLIC"` for normal public telephone or GSM.

* **Fax**: Enter "Yes" if the number is for a telefax. If this item is empty, it SHOULD be considered as "No".

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **MaxCls**: Enter the highest classification that can be used on the network.
  Note for the USA: The letter "R" MUST NOT be used in USA created datasets.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CCL:**

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

* **Number**: Enter the area code, telephone/telefax number (including the extension if necessary) of individual or contact organisation.

Example

```
<TelephoneFax>
  <Type cls="U">TEL-Civil</Type>
  <Number cls="U">(202)281-3824x1234</Number>
</TelephoneFax>
```

Time

Usage / Time Information

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Period	Period	Opt	S50 (Code List CTI)
UsageDescription	Usage Description	Opt	MEMO
Sub-Element Of:	SSRequest		

Description

This element indicates when the equipment or system will be used.

Input Requirement

* **Period**: Indicate the period of usage.

  Recommend values from **Code List CTI:**

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once

* **UsageDescription** : Enter a description of the total amount of time a system/equipment is expected to be in operation.

Transmitter

Transmitter

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Generic	Generic indicator	Req	Code List CBO
Duplex		**Opt**	
DuplexSep	Duplex Separation	Req	UN(16,9)*(MHz)*
DuplexSepType	Duplex Separation Type	Opt	S10 (Code List CDS)
Output		**Opt**	
OutputDeviceType	Output Device Type	Opt	S50 (Code List COT)
OutputDevice	Output Device Name	Opt	S40
Filter	Filter Type Description	Opt	MEMO
FCCAcceptanceNum *(US)*	FCC Acceptance Number	Opt	S50
TSPR *(US)*	TSPR	Opt	S10
Inherits from:	Common		
Sub-Element Of:	SchemaRoot		
Sub-Elements:	Curve [0..n] Deployment [0..n] Nomenclature [0..n] POCInformation [0..n] TxMode [0..n]		

Description

This element inherits attributes and sub-elements from element Common.

This data element is the root element (dataset) containing the transmitter characteristics.
See Transmitter Diagram

Input Requirement

[XSL ERR DSTYPE] Part 3 of the Serial reference (dataset type) MUST be "**TX**".

* **Generic**: Enter "Yes" to indicate that the dataset describes typical parameters of a waveform or standard signal, or a generic antenna model, rather than a specific equipment model.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **Duplex Frequency Separation**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) offset frequency separation between the transmit and the receive radio frequencies for an equipment capable of operating in the duplex mode.

  - **DuplexSep**: Enter the minimum or exact duplex frequency separation as a number in MHz (without unit).
  - **DuplexSepType**: Indicate if the frequency separation must be exactly, or at the minimum, the amount specified.

    Recommend values from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

* **Output Device**: This group is OPTIONAL.

  This group contains the final RF power output device type and name.

  - **OutputDeviceType**: Enter the type of the device. Select an entry from the list.

    Recommend values from **Code List COT (extract only):**

Code
Amplitron
Backward Wave Oscillator
Carcinatron
Cross Field Amplifier
Diode
FET
FET Push-Pull
Fixed Magnetron
Gallium Arsinide FET
Gunn Diode
...

- **OutputDevice**: Enter the name of the output device. The specific device designation should be provided, for example, `VARIAN VTS5751A1`.

* **Filter**: Enter a brief description of the type of the output filter.

* **FCCAcceptanceNum** ***(US)***: Enter the Federal Communication Commission (FCC) ID of FCC authorized equipment.

* **TSPR** ***(US)***: Enter the telecommunications service priority applicable to a spectrum-dependent radiocommunications system intended to be used in direct support of a national emergency declared under Section 706 of the Communications Act of 1934, as amended.

Example

```
<Transmitter cls="U">
  <Serial cls="U">NLD::TX:123</Serial>
  <EntryDateTime cls="U">2011-12-25T00:00:00Z</EntryDateTime>
  <Generic cls="U">No</Generic>
  <Nomenclature>
    <Name cls="U">AN/PRC-113</Name>
  </Nomenclature>
  <TxMode>
    <ModeID cls="U">HIGH POWER VOICE</ModeID>
    <OccBw cls="U">0.025</OccBw>
    <EmsClass cls="U">F3E</EmsClass>
    <Power>
      <PowerMax cls="U">10</PowerMax>
    </Power>
  </TxMode>
</Transmitter>
```

Trunking *(US)*

Trunking

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
AdditionalChannelsRationale	AdditionalChannelsRationale	Opt	MEMO
Dispatcher	Dispatcher	Opt	S1
DispatcherExplanation	Dispatcher Explanation	Opt	MEMO
EstimatedExpansionCost	Estimated Expansion Cost	Opt	S70
ExpansionTargetDate	Expansion Target Date	Opt	D
FreqMax	Frequency Maximum	Opt	UN(16,9)*(MHz)*
NSEPUse	NSEP Use	Opt	MEMO
NumFreqsRequired	Number of Frequencies Required	Opt	UN(10)
NumRepeaters	Number of Repeaters	Opt	UN(7)
NumUsers	Number of Users	Opt	UN(10)
PreviousSPSDocketNum	Previous SPS Docket Number	Opt	S12
RequestForExpansion	Request For Expansion	Opt	Code List CBO
SeparateSystemJustification	Separate System Justification	Opt	MEMO
FreqMin	Frequency Minimum	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	SSRequest		
Sub-Elements:	TrunkingAssignment [0..n]		

Input Requirement

* **AdditionalChannelsRationale**: Enter a rationale for the additional channels (e.g., channel loading, queuing times, or new users).
* **Dispatcher**: Enter the Indicates if a Dispatcher accesses base stations or repeaters in the trunked land mobile system.
* **DispatcherExplanation**: If Dispatcher is Yes, explain how the dispatcher accesses the base station or repeater.
* **EstimatedExpansionCost**: Enter the estimated cost of the expansion.
* **ExpansionTargetDate**: Enter the date this expansion will be activated (i.e., the date the system will require the additional radio frequencies).
* **FreqMax**: Enter the upper frequency of band.
* **NSEPUse**: Enter the U.S. National Security and Emergency Preparedness (NSEP) function. A statement as to whether the proposed system, if it becomes operational, will support a NSEP function and require review under the Telecommunications Service Priority for Radiocommunications (TSP-R) System.
* **NumFreqsRequired**: Enter the Number of frequencies required.
* **NumRepeaters**: Enter the number of repeaters in the trunked land mobile system.
* **NumUsers**: Enter the total number of users of the trunked land mobile system.
* **PreviousSPSDocketNum**: Enter the IRAC Spectrum Planning Subcommittee (SPS) docket number of the NTIA Certification of Spectrum Support for the existing trunked system.
* **RequestForExpansion**: Indicate if this application is a request for expansion.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **SeparateSystemJustification**: Enter the For trunked land mobile systems that are within 30 km of an existing or planned trunked land mobile system authorized by NTIA, provides the information required under subparagraph 8.2.48a of the NTIA Manual ("Procedures and Principles for the Assignment and Coordination of Frequencies, Land Mobile Radio Communications").
* **FreqMin**: Enter the lower frequency of band.

TrunkingAssignment *(US)*

Trunking Assignment

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
IsRelinquished	Is Relinquished	Req	Code List CBO
AgencySerialNum	Agency Serial Number	Opt	S12
FreqMax	Frequency Maximum	Opt	UN(16,9)*(MHz)*
FreqMin	Frequency Minimum	Opt	UN(16,9)*(MHz)*
RelinquishmentDate	Relinquishment Date	Opt	D
Sub-Element Of:	Trunking		

Description

The AgencySerialNum refers to the Agency Serial Number of the existing assignment to be relinquished or used in the trunked land mobile system.

Input Requirement

* **IsRelinquished**: Enter the Yes if this is an existing assignment to be relinquished by the trunked land mobile system. If No, the existing assignment will be used by (incorporated into) the system.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **AgencySerialNum**: Enter the externally-assigned unique identifier of a frequency assignment..
* **FreqMax**: Enter the upper frequency of band.
* **FreqMin**: Enter the lower frequency of band or discrete frequency.
* **RelinquishmentDate**: Enter the expected date the existing assignment will be relinquished by the trunked land mobile system.

Tuning

Tuning

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
TuningStep	Tuning Step	Req	UN(16,9)*(MHz)*
NumFreq	Number of Frequencies	Req	UN(4)
Priority	Priority	Opt	UN(1)
Exclusive	Exclusive Assignment	Opt	Code List CBO
FreqSep		**Opt**	
FreqSep	Frequency Separation	Req	UN(16,9)*(MHz)*
FreqSepType	Frequency Separation Type	Req	S10 (Code List CDS)
Sub-Element Of:	Link		
Sub-Elements:	RequestedFreq [0..n]		

Description

Data element Tuning indicates the specific frequency or range of frequencies, tuning increment, and number of frequencies, required for an assignment.

Input Requirement

* **TuningStep**: Enter the tuning increment expressed in MHz (do not insert any unit). Note that this tuning increment should be compatible with the tuning capability of the equipment which will be used.
* **NumFreq**: Enter the number of frequencies required.
* **Priority**: Enter a number from 0 to 9 that is used to influence the positioning of the Assignment in the ordering of the assignment process, where 9 represents the highest priority and 0 is the lowest priority.
* **Exclusive**: Enter Yes if the assigned frequency should not be reused within the area of exercise/operation.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No

* **FreqSep**: This group is OPTIONAL.

  This group identifies the required (exact or minimum) frequency separation between the requested frequencies.

  - **FreqSep**: Enter the minimum or exact frequency separation as a number in MHz (without unit).
  - **FreqSepType**: indicate if the stated frequency separation is an exact or minimum value.

    Recommend values from **Code List CDS:**

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

Example

```
<Tuning>
  <TuningStep cls="U">0.025</TuningStep>
  <NumFreq cls="U">1</NumFreq>
</Tuning>
```

TxAntModeRef

Transmitter Antenna

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Antenna Identifier	Req	pattern (S29)
ModeID	Antenna Mode Identifier	Opt	S20
CouplingLoss	Coupling Loss	Opt	SN(6,3)*(dB)*
SpectralPowerDensity	Spectral Power Density	Opt	SN(6,3)*(dBW/Hz)*
Inherits from:	RxAntModeRef		
Sub-Element Of:	TxRef		

Description

This element inherits attributes and sub-elements from element RxAntModeRef.

Data element TxAntModeRef contains references to the Antenna and its AntMode, used to construct a Transmitter Configuration.

Input Requirement

* **Serial**: Enter the reference to an Antenna in this configuration. This antenna is associated with the receiver specified in the Serial field of the parent RxRef element.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "**AN**".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

* **ModeID**: Enter the unique name of an AntMode of the Antenna specified in the corresponding Serial field. This antenna mode is grouped with the receiver modes specified in RxModeRef.

  [XSL WRN RELATED] This item, with item Serial SHOULD refer to an existing Antenna/AntMode in the data repository.

* **CouplingLoss**: Indicate the loss (in dB) that occurs when energy is transferred between the transmitter/receiver and the antenna.

* **SpectralPowerDensity**: Enter the maximum spectral power density supplied to the input of the antenna.

Example

```
<TxAntModeRef>
  <Serial cls="U">USA:NTIA:AN:123</Serial>
  <ModeID cls="U">TRACKING</ModeID>
  <SpectralPowerDensity cls="U">15</SpectralPowerDensity>
</TxAntModeRef>
```

TxMode

Transmitter Mode

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
curves	Links to Curves	Opt	List of UN6
Metadata Attribute Tag	**Metadata Attribute Name**	**Occurrence**	**Format**
ModeInfo		**Req**	
ModeID	Mode Identifier	Req	S20
Description	Mode Description	Opt	S100
NecessaryBw	Necessary Bandwidth	Opt	UN(16,9)*(MHz)*
Tunability		**Opt**	
Tunability	Tunability	Opt	S25 (Code List CTU)
TuningMethod	Tuning Method	Opt	S50 (Code List CTN)
NumSubCarriers	Number of Subcarriers	Opt	UN(5)
NumSideTones	Number of Side Tones	Opt	UN(5)
Intermodulation		**Opt**	
IntermodPct	Intermodulation Value	Opt	UN(4,2)[0..100]*(%)*
IntermodEffect	Intermodulation Effect	Opt	MEMO
Burst		**Opt**	
BurstRate	Burst Rate	Opt	UN(12,3)
BurstDuration	Burst Duration	Opt	UN(12,6)*(us)*
BurstNumPulses	Number of Pulses in Burst	Opt	UN(8)
BurstOffTime	Burst Off-Time	Opt	UN(12,6)*(us)*
OccupiedBw		**Opt**	
OccBw	Occupied Bandwidth	Req	UN(16,9)*(MHz)*
OccBwCalculated	Calculated Occupied Bandwidth Indicator	Opt	Code List CBO
Spurious		**Opt**	
SecondHarmonicLevel	Second Harmonic Level	Opt	SN(6,3)*(dB)*
ThirdHarmonicLevel	Third Harmonic Level	Opt	SN(6,3)*(dB)*
OtherHarmonicLevel	Other Harmonic Level	Opt	SN(6,3)*(dB)*
SpuriousLevel	Spurious Emissions Level	Opt	SN(6,3)*(dB)*
FreqTolerance		**Opt**	
FreqTolerance	Frequency Tolerance	Req	UN(18,6)
FreqToleranceUnit	Frequency Tolerance Unit	Req	Code List CFO
RadarType	Radar Modulation Type	Opt	S25 (Code List CRA)
GpsNBL1Level ***(US)***	GPS NBL1 Level	Opt	SN(5,3)*(dBW)*
GpsNBL2Level ***(US)***	GPS NBL2 Level	Opt	SN(5,3)*(dBW)*
GpsWBL1Level ***(US)***	GpsWBL1Level	Opt	SN(9,6)*(dBW/Hz)*
GpsWBL2Level ***(US)***	GPS WBL2 Level	Opt	SN(9,6)*(dBW/Hz)*
ModulationType ***(US)***	Modulation Type	Opt	S10 (Code List UMD)
ModeName ***(US)***	Mode Name	Opt	S40
Sub-Element Of:	Transmitter		
Sub-Elements:	Baseband [0..n] EmsClass [0..n] Power [0..n] Pulse [0..n] SpreadSpectrum [0..1] SubCarrierFreq [0..n] SubCarrierTone [0..n] TxModulation [0..n] TxSignalTuning [0..n]		

Description

This element and its sub-elements define all the technical parameters for a mode of operation of the Transmitter. A mode can be defined as a set of parameters or settings for a radio or radar, allowing the equipment to perform a given function (e.g. voice, data, seek, tracking, etc).
See TxMode Diagram
See TxModulation Diagram
See Pulse Diagram
See SpreadSpectrum Diagram

Input Requirement

* **curves** *(Attribute)*: Enter the list of indices referring to a Curve index applicable to the current data item.
* **Mode Information**: This group is REQUIRED.
  - **ModeID**: Enter a short name for the mode; this name should be a meaningful identification of the mode, but it can also be automatically generated in some systems. The Name MUST be unique within the dataset and SHOULD NOT be modified during the entire lifetime of the dataset.

    [XSD ERR UNIQUE] Each value of this data item MUST be unique within the parent element.
  - **Description**: Enter a description of the operational mode; this description should be a meaningful explanation of the mode main characteristics.
* **NecessaryBw**: Enter the necessary bandwidth which is defined as the value in MHz, for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. This is approximately at the -20 dB level on an emission curve.
* **Tunability**: This group is OPTIONAL.
  - **Tunability**: Enter the tuning capability.

    Recommend values from **Code List CTU:**

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous +Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed +Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode

  - **TuningMethod**: Enter the device or process used to tune the equipment through the RF spectrum.

    Recommend values from **Code List CTN (extract only):**

Code
Cavity
Cavity Mechanically Tuned
Cavity Resonant
Cavity Tunable
Continuous
Continuous VCO
Crystal Controlled
Crystal Fixed
Crystal Interchangeable
Crystal SAW

...

* **NumSubCarriers**: Enter the number of subcarrier frequencies for the subcarriers modulating the carrier individually.
* **NumSideTones**: Enter the number of side tone frequencies for the sidetones modulating the carrier individually.
* **Intermodulation**: This group is OPTIONAL.

  This group describes the distortion that is the result of two or more signals mixing together that are not harmonic frequencies. These signals mix to create additional non-harmonic frequencies that are undesirable.

  - **IntermodPct**: Enter the percentage of the total signal either transmitted or received affected by the distortion products.
  - **IntermodEffect**: Enter the effect on circuit operation caused by the level of intermodulation distortion.
* **Burst**: This group is OPTIONAL.

  This group contains the time characteristics of a pulse burst.

  - **BurstRate**: Enter the number of pulse bursts per second.
  - **BurstDuration**: Enter the pulse burst duration in microseconds.
  - **BurstNumPulses**: Enter the number of pulses in a single pulse burst.
  - **BurstOffTime**: Enter the pulse burst off time in microseconds (duration of time between the end of one pulse burst to the start of the next pulse burst).
* **OccupiedBw**: This group is OPTIONAL.

  This group contains the Occupied Bandwidth which is defined as the bandwidth that contains 99% of the spectral power under the emission curve.

  - **OccBw**: Enter the occupied bandwidth in MHz, without unit symbol.
  - **OccBwCalculated**: Enter Yes to indicate that the data was calculated, or "No" if the data is issued from measurement. Leave blank if the origin of the data is not known.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CBO:**

Code
Yes
No
* **Spurious Emissions**: This group is OPTIONAL.

  This group contains levels of emissions on a frequency or frequencies that are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions.

  - **SecondHarmonicLevel**: Enter the out-of-band emission level at the frequency that is two times the fundamental frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.
  - **ThirdHarmonicLevel**: Enter the out-of-band emission level at the frequency that is three times the fundamental frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.
  - **OtherHarmonicLevel**: Enter the greatest out-of-band emission level at harmonic frequencies greater than three times the fundamental frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.
  - **SpuriousLevel**: Enter the maximum of all emission levels which occur outside the -60 dB bandwidth of the fundamental and not at a harmonic frequency. The value is expressed as the power level in decibels relative to the peak output power of the carrier signal.
* **Frequency Tolerance**: This group is OPTIONAL.

  The maximum drift from an equipment's center frequency after normal warm-up time has been allowed.

- **FreqTolerance**: Enter the drift in Hz or in ppm using the formula: Frequency tolerance (ppm) = Maximum drift (Hz) / Center frequency (MHz). Enter the units (Hz or ppm) in FreqToleranceUnit.
- **FreqToleranceUnit**: Enter the units in which the Frequency Tolerance is expressed.

  [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CFO:**

Code	Meaning
Hz	Hertz
ppm	parts per million

* **RadarType**: Enter the type of radar.

  Recommend values from **Code List CRA:**

Code
Coded Pulse
CW
FM CW
FM Pulse
Non-FM Pulse
Other

* **GpsNBL1Level** ***(US)***: Enter the narrowband levels emitted by this system in the Navstar Global Positioning System (GPS) 1164-1240 MHz band. (dBW)
* **GpsNBL2Level** ***(US)***: Enter the narrowband levels emitted by this system in the Navstar Global Positioning System (GPS) 1559-1610 MHz band. (dBW)
* **GpsWBL1Level** ***(US)***: Enter the wideband levels emitted by this system in the Navstar Global Positioning System (GPS) 1164-1240 MHz band.
* **GpsWBL2Level** ***(US)***: Enter the wideband levels emitted by this system in the Navstar Global Positioning System (GPS) 1559-1610 MHz band.
* **ModulationType** ***(US)***: Enter the type of modulation used by a non-radar (communications) transmitter, indicating whether it is analog, digital, or pulse. If the 1st symbol of the Emission Designator is "B", "C", "H", "J", or "R", then the Modulation Type should be A - Analog. If the 1st symbol is "W" or "X", it should be D - Digital.

  Recommend values from **Code List UMD:**

Code
Pulse
Digital
Analog

* **ModeName** ***(US)***: Enter a short name for the mode.

TxModeRef

Transmitter Reference (incl. mode)

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
ModeID	Mode Identifier	Req	S20
PowerLimit	Power Limit	Opt	SN(10,7)*(dBW)*
Sub-Element Of:	TxRef		

Description

Data element TxModeRef contains references to the Transmitter and its modes, used to construct a Configuration.

Input Requirement

* **ModeID**: Enter the unique identifier of a TxMode of the transmitter in this configuration. This mode is from the transmitter specified in the Serial field of the parent TxRef element.

  [XSL WRN RELATED] This item, with item Serial in parent element SHOULD refer to an existing Transmitter/ TxMode in the data repository.

* **PowerLimit**: Enter the power limit of this transmitter mode when in this configuration.

Example

```
<TxModeRef>
  <Serial cls="U">USA:NTIA:TX:123</Serial>
  <ModeID cls="U">CLEAR VOICE H. POWER</ModeID>
</TxModeRef>
```

TxModulation

Transmitter Modulation

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
DigitalModType	Digital Modulaton Type	Opt	S50 (Code List CMO)
MaxBitRate	Maximum Bit Rate	Opt	UN(10,3)
DigitalFormat		**Opt**	
NumStates	Number of Digital States	Opt	UN(5)
LineCoding	Line Coding	Opt	S50 (Code List CDF)
CodeRate	Pseudorandom Code Rate	Opt	UN(10,3)
CodePeriod	Pseudorandom Code Repetition Period	Opt	UN(12,6)*(us)*
MaxDevRatio	Maximum Deviation Ratio	Opt	UN(5,3)
AM		**Opt**	
AMIdx	Amplitude Modulation Index	Opt	UN(5,3)
AMRMSIdx	RMS Amplitude Modulation Index	Opt	UN(5,3)
FM		**Opt**	
FMPeakFreqDev	Peak Frequency Deviation	Opt	UN(16,9)*(MHz)*
FMRMSFreqDev	RMS Frequency Deviation	Opt	UN(16,9)*(MHz)*
FMDeviationCode	RMS Frequency Deviation Code	Opt	S25 (Code List CFM)
FMPeakModulationIdx	FM Peak Modulation Index	Opt	UN(5,3)
Suppression		**Opt**	
CarrierSuppression	Level of Carrier Suppression	Opt	SN(6,3)*(dB)*
SidebandSuppression	Level of Sideband Suppression	Opt	SN(6,3)*(dB)*
SidebandSuppressed	Sideband Suppressed	Opt	Code List CSI
Inherits from:	RxModulation		
Sub-Element Of:	TxMode		

Description

This element inherits attributes and sub-elements from element RxModulation.

This data element contains the detailed characteristics of the modulation on the transmitter side.

Input Requirement

* **DigitalModType**: Enter the type of digital modulaton.

  Recommend values from **Code List CMO (extract only):**

Code
AM Clear Voice
AM Secure Voice
ASK/OOK
Audio FSK
Binary Phase Shift Key
Code Division Multiplex
COFDM
CPFSK
Data
Differential PSK
...

* **MaxBitRate**: Enter the maximum bit rate in kilobits per second applicable to digital communications systems. For spread spectrum transmissions enter the bit rate after error-correction coding. Do not enter the spectrum-spreading clock or chip rate.

* **DigitalFormat**: This group is OPTIONAL.

  This group contains information about data coding.

- **NumStates**: Enter the number of states, e.g., 4 for 4-ary Phase Shift-Keying, 64 for 64 level Quadrature AM.
- **LineCoding**: Indicate the format used to represent binary digit sequencing when digital modulation is used.

  Recommend values from **Code List CDF (extract only):**

Code
Bi-Phase-Level
Bi-Phase-Mark
Bi-Phase-Space
Differential Bi-Phase-Level
Differential Bi-Phase-Mark
Differential Bi-Phase-Space
NRZ
NRZ-Mark
NRZ-Space
Return to Zero
...

- **CodeRate**: Enter the pseudorandom code rate in kilobits per second (kbps).
- **CodePeriod**: Enter the length of time of the pseudorandom code repetition period in microseconds.

* **MaxDevRatio**: Enter the deviation ratio data applicable to frequency- or phase-modulation equipment. For FM systems the deviation ratio is directly proportional to the frequency deviation of the variance of the modulator. In PM systems the deviation ratio is tied to both the amplitude of the modulating signal and phase deviation constant of the modulator. For example, for an FM system a deviation ratio of 1 indicates that a 3 kHz input frequency will cause a peak instantaneous frequency deviation of 3 kHz. a deviation ratio of 3 is the result of a 9 kHz deviation of the emission when modulated with a 3 kHz signal. Do not use this item for amplitude or pulse modulated systems.

* **Amplitude Modulation**: This group is OPTIONAL.

  This group contains the modulation index (percentage) when double-sideband amplitude modulation (DSB/AM) is employed.

  - **AMIdx**: Enter the amplitude modulation index, which is a unitless value for an amplitude modulation signal derived by dividing the peak modulating voltage by the peak carrier voltage. The modulation index should always be > 0 and < 1. If = 0, the resultant modulated waveform is a constant keyed carrier without a modulating signal. If > 1, the envelope is over modulated and distorted. A typical value is 0.6
  - **AMRMSIdx**: Enter the RMS modulation index when analog or phase modulation is used and the baseband consists of FDM channels or multiple subcarrier signals. The RMS Amplitude Modulation Index is a unitless value for an amplitude modulation signal derived by dividing the RMS peak modulating voltage by the RMS peak carrier voltage.

* **Frequency Modulation**: This group is OPTIONAL.

  This group contains information about a frequency modulated transmission.

  - **FMPeakFreqDev**: Enter the peak frequency deviation when analog modulation is employed, in MHz without unit symbol;
  - **FMRMSFreqDev**: Enter the Root Means Square (RMS) frequency deviation when frequency modulation (FM) is employed and the base band consists of frequency-division multiplexed (FDM) channels or multiple subcarrier signals, in MHz without unit symbol;
  - **FMDeviationCode**: Enter the code that indicates the type of Root Mean Square (RMS) deviation (multichannel or per-channel);

    Recommend values from **Code List CFM:**

Code
Multichannel
Per Channel

  - **FMPeakModulationIdx**: Enter the peak modulation index (deviation ratio) when using analog frequency or phase modulation.

* **Suppression**: This group is OPTIONAL.

  This group describes the radio frequency carrier suppression and the amount of sideband suppression, typically referenced to single sideband communications equipment.

  - **CarrierSuppression**: Enter the amount of reduction of the signals carrier, as compared to a non attenuated signal carrier.
  - **SidebandSuppression**: Enter the amount that one or both of the sidebands of a signal are reduced prior to transmission. “One or both" is determined by evaluation of the emission designator.
  - **SidebandSuppressed**: Enter the sideband that is suppressed in a single sideband signal.

    [XSD ERR CODELIST] This data item MUST use one of the codes from **Code List CSI:**

Code
Lower sideband
Upper sideband

Example

```
<TxModulation>
  <DigitalModType>ASK/OOK</DigitalModType>
  <MaxBitRate>27000000</MaxBitRate>
  <MaxDevRatio>3</MaxDevRatio>
</TxModulation>
```

TxRef

Transmitter Reference

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Serial	Transmitter Serial	Req	pattern (S29)
Sub-Element Of:	Configuration		
Sub-Elements:	TxAntModeRef [0..n] TxModeRef [0..n]		

Description

This element contains the reference of a Transmitter, and optionnally some of its TxModes and the associated Antennas and AntMode.

Input Requirement

* **Serial**: A reference to a Transmitter in this configuration. The same transmitter can be referenced in different TxRef elements in order to properly group transmitter modes with antenna modes.

  [XSL ERR DSTYPE] Part 3 of the serial reference (dataset type) MUST be "`TX`".

  [XSD ERR REGEX] This data item MUST comply to the regular expression: "[A-Z0-9-]{1,5}:\w{0,4}:[A-Z]{2}:\S{1,15}"

TxSignalTuning

Transmitter Signal Tuning

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
FreqRangeGrp		**Req**	
FreqMin	Nominal or Minimum Frequency	Req	UN(16,9)*(MHz)*
FreqMax	Maximum Frequency	Opt	UN(16,9)*(MHz)*
TuningStep	Tuning Step	Opt	UN(16,9)*(MHz)*
NumPresetChannels	Number of Preset Channels	Opt	UN(8)
LowestUsableChannel ***(US)***	Lowest Usable Channel	Opt	UN(16,9)*(MHz)*
MinSeparation ***(US)***	Minimum Separation	Opt	UN(16,9)*(MHz)*
Sub-Element Of:	TxMode		

Description

Data element TxSignalTuning indicates the tuning capabilities, the specific frequency or range of frequencies within which the equipment may tune, and the tuning increments of the equipment.

Input Requirement

* **Frequency Range**: This group is REQUIRED.

  This group indicates a range of frequencies or a tuning range.

  - **FreqMin**: Enter the nominal frequency or minimum value of the frequency range.
  - **FreqMax**: Enter the maximum value of the frequencies in the range.

* **TuningStep**: Enter the tuning increment expressed in MHz (do not insert any unit).
* **NumPresetChannels**: Enter the number of preset channels available.
* **LowestUsableChannel** ***(US)***: Enter the center frequency of the lowest channel usable within this transmitter's frequency range.
* **MinSeparation** ***(US)***: Enter the minimum frequency separation required at one transmitter or receiver location.

Usage

Usage

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
EqpFnct	Equipment Function	Opt	S50 (Code List CEF)
StnClass	Class of Station	Opt	S5 (Code List USC)
RadioService	Radiocommunication Service	Opt	S100 (Code List CSN)
Sub-Element Of:	Configuration		

Description

This element identifies how an operational configuration can be used or will be used.

Input Requirement

* **EqpFnct**: Data item EqpFnct contains the equipment function.

  Recommend values from **Code List CEF (extract only):**

Code	Extended
Communications	Basic
Control	Basic
Electronic Warfare	Basic
Electroptical Equipment	Basic
Instrumentation	Basic
Location	Basic
Meteor Burst	Basic
Meteorological Aid	Basic
Missile Guidance	Basic
Missile Homing	Basic
...	...

* **StnClass**: Allowable Station Class values are defined by the appropriate Administration.

  Recommend values from **Code List USC (extract only):**

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion.
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon.
ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service in-tended for the benefit of aircraft.
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon).
ALG	Glide Path (Slope) Sta-tion: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft.
ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a

	radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.
...	...

* **RadioService**: Enter the Radiocommunication Service associated with the frequency usage in this configuration. Allowable values are defined by the appropriate Administration.

Recommend values from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

VSWR

Voltage Standing Wave Ratio

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Freq	Frequency	Opt	UN(16,9)*(MHz)*
Ratio	Ratio	Req	UN(2,1)
Sub-Element Of:	AntMode		

Description

Element VSWR stores the Voltage Standing Wave Ratio information for an Antenna Mode; it may be used to describe the VSWR curve as a function of frequency.
VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load (for example, from a power amplifier through a transmission line, to an antenna). In an ideal system, 100% of the energy is transmitted. This requires an exact match between the source impedance, the characteristic impedance of the transmission line and all its connectors, and the load's impedance. The signal's AC voltage will be the same from end to end since it runs through without interference. In real systems, mismatched impedances cause some of the power to be reflected back toward the source (like an echo). Reflections cause destructive interference, leading to peaks and valleys in the voltage at various times and distances along the line. VSWR measures these voltage variances. It is the ratio of the highest voltage anywhere along the transmission line to the lowest. Since the voltage doesn't vary in an ideal system, its VSWR is 1:1. When reflections occur, the voltages vary and VSWR is higher (1.2:1 or 2:1, for instance).

Input Requirement

* **Freq**: Enter the specific frequency the VSWR measurement was taken at. If multiple points are described, freq MUST be filled in.
* **Ratio**: Enter the standing wave ratio referenced to the specific frequency, as a number without unit (e.g enter "2" to represent a ratio of 2:1).

Example

```
<VSWR>
  <Freq cls="U">225</Freq>
  <Ratio cls="U">1.2</Ratio>
</VSWR>
```

Variance

Variance

Metadata Attribute Tag	Metadata Attribute Name	Occurrence	Format
Type	Type	Req	S10 (Code List CAV)
AllocatedService	Allocated Service	Req	S100 (Code List CSN)
Priority	Priority	Req	S10 (Code List CPS)
Sub-Element Of:	Allocation		
Sub-Elements:	Administration [0..n]		

Description

This element indicates if the local allocation deviates from an upper level allocation (e.g. a national allocation not aligned with the ITU RR).

Input Requirement

* **Type**: Enter the type of variance.

  Recommend values from **Code List CAV:**

Code
Additional
Different

* **AllocatedService**: Enter a radiocommunication service recognized by an administration that is allocated to this frequency band (e.g., "Fixed Service").

  Recommend values from **Code List CSN (extract only):**

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
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Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
...	...

* **Priority**: Indicate if this service is a primary or secondary use of this band. ("Permitted" SHOULD only be used if the priority is unknown.)

  Recommend values from **Code List CPS:**

Code
Primary
Secondary
Permitted
Other

Example

```
<Variance>
  <Type cls="U">Additional</Type>
  <AllocatedService cls="U">Aeronautical Mobile (Off Route) Service</
AllocatedService>
  <Priority cls="U">Permitted</Priority>
</Variance>
```

Code Lists

Code List CAC

Used in element CodeList

Code
Add Code
Add List
Delete Code
Delete List

Code List CAD

Used in element AntMode

Code	Meaning
Directional	The antenna radiates towards a fixed direction
Non-Dir Or Omni	Non-Directional Or Omnidirectional (the direction cannot be determined or the radiation is non directional)
Rotating	The antenna rotates at a fixed rate
Sector Scan H	Scanning horizontally through a limited sector
Sector Scan V	Scanning vertically through a limited sector
Steerable	Fixed direction but steerable in the reference plane
Tracking	Tracking that can observe a moving object

Code List CAF

Used in element AntHardware

Code
Balun
Cassegrain
Eight Feed Horn Cluster
Feed Horn Cluster
Four Horn Cluster
Conical
Cutler
Dipole
Dipole Array
Rotating Dipole
Faired Set Horns
Float Strip Type Power Divider
Half Wave Radiator
Horn
Horn-Rotating Spinner
Lens
Lewis Scanner
Multiple Array Of Folded Dipoles
Multiple Feed Horn Array
Pill Box
Probe
Rod
Slot
Slotted Linear Array
Waveguide
Yagi Element
Other

Code List CAL

Used in element AntHardware

Code
Cable Air Dielectric
Cable Coaxial
Cable Flexible Coaxial
Cable Rigid Coaxial
Line Coplaner Strip
Line Ladder
Line Microstrip
Line Surface-Wave
Open Wire
Twin Lead
Waveguide
Waveguide Beam
Waveguide Circular
Waveguide Dielectric
Waveguide Elliptic
Waveguide Fin-Line
Waveguide Flexible
Waveguide Optic-Fiber
Waveguide Rectangular
Waveguide Ridge
Waveguide Semirigid
Other

Code List CAP

Used in element AntPattern

Code	Meaning	Extended
Azimuth	Pattern in the horizontal plane	Basic
Elevation	Pattern in the vertical plane	Basic
ELHH	Horizontal polarised port response to a horizontally polarised signal in the vertical direction	Extended
ELHV	Horizontal polarised port response to a vertically polarised signal in the vertical direction	Extended
ELVH	Vertically polarised port response to a horizontally polarised signal in the vertical direction	Extended
ELVV	Vertically polarised port response to a vertically polarised signal in the vertical direction	Extended
HH	Horizontal polarised port response to a horizontally polarised signal in the horizontal direction	Extended
HV	Horizontal polarised port response to a vertically polarised signal in the horizontal direction	Extended
VH	Vertically polarised port response to a horizontally polarised signal in the horizontal direction	Extended
VV	Vertically polarised port response to a vertically polarised signal in the horizontal direction	Extended

Code List CAS

Used in element AntMode

Code
360 Degrees Rotating
Bi-Directional Sector
Conical
Electronic Scan (360 Degrees)
Electronic Scan (Sector)
Fixed
Fixed-3 Axis Stabilised
Helical
Horizontal
Lobing
Manual
Mechanically Steerable
Palmer Raster
Raster
Sector Scan
Spiral
Tracker
Unidirectional Sector
Vertical
Other

Code List CAT

Used in element Antenna

Code	Extended
Adcock Array	Extended
Annular Slot	Extended
Aperture	Extended
Axial Mode Helix	Extended
Backfill Radiator	Extended
Backfire	Extended
Backfire Array	Extended
Balanced T	Extended
Batwing	Extended
Batwing Array	Extended
Biconical	Extended
Biconical Dipole	Extended
Biconical Horn	Extended
Billboard	Extended
Blade	Basic
Bow Tie	Extended
Bow Tie Array	Extended
Broadside Array	Extended
Cassegrain	Basic
Cavity Backed Dipole	Extended
Cavity Backed Monopole	Extended
Cavity Backed Slot	Extended
Cavity Backed Spiral	Extended
Clover Leaf	Extended
Coaxial Dipole	Extended
Collinear Array	Basic
Conformal Array	Extended
Conical Horn	Extended
Conical Monopole	Extended

Conical Spiral	Extended
Coplanar Array	Extended
Corner Reflector	Extended
Corrugated Horn	Extended
Corrugated Rod	Extended
Crossed Dipoles	Extended
Crossed Log Periodic Array	Extended
Crossed Loops	Extended
CSC2 Reflector	Extended
Cubical Quad	Extended
Cubical Quad Array	Extended
Cup-Dipole	Extended
Cup-Dipole-Array	Extended
Cylindrical Array	Extended
Cylindrical Slot	Extended
Dichroic	Extended
Dielectric Horn	Extended
Dielectric Lens	Extended
Dielectric Rod	Extended
Dipole	Basic
Dipole Array	Basic
Dipole Stacked	Basic
Dipole W/Reflector	Extended
Discage	Extended
Discone	Basic
Doublet	Extended
Endfire Array	Extended
Equi-Angular Spiral	Extended
E-Sectoral Horn	Extended
Fan Monopole	Extended
Feed	Extended
Ferrite Loop	Extended
Ferrite Loop Stick	Extended
Fin Cap	Extended
Flat Plate	Extended
Flat Screen Reflector	Extended
Flat Top	Extended
Flexible Tape	Extended
Folded Dipole	Extended
Folded Dipole/W Ground Plane	Extended
Folded Helix	Extended
Folded Monopole	Extended
Folded Trapezoidal Log-Periodic Array	Extended
Franklin	Extended
Gregorian	Extended
Ground Plane	Extended
Ground-Plane Whip	Extended
Half Loop	Extended
Half Rhombic	Extended
Halfwave Dipole	Extended
Halfwave Whip	Extended
Halo	Extended
Helical	Basic
Helical Whip	Extended
Helix Array	Extended
Hog Horn	Extended

Horizontal Dipole	Extended
Horizontal Vee	Extended
Horn	Basic
H-Sectoral Horn	Extended
Inverted L	Extended
Inverted Cone	Extended
Inverted Discone	Extended
Inverted Vee	Extended
Leaky Coax	Extended
Lens	Extended
Linear	Extended
Log Conical Spiral	Extended
Log Periodic	Basic
Log Periodic Array	Extended
Long Wire	Basic
Loop	Basic
Loop Array	Extended
Luneburg Lens	Extended
Mattress	Extended
Metal Plate Lens	Extended
Microstrip	Extended
Micro-Strip Array	Extended
Monopole	Basic
Monopole Array	Extended
Monopole With Reflector	Extended
Multi-Curtain Rhombic	Extended
Multi-Horn Array	Extended
Multiple Slot	Extended
Nested Rhombics	Extended
Normal Mode Helix	Extended
Open Wire	Extended
Open-Ended Waveguide	Extended
Orange Peel Reflector	Extended
Organ Pipe	Extended
Parabolic Cylinder	Extended
Parabolic High	Extended
Parabolic Mesh	Extended
Parabolic Reflector	Basic
Parabolic Segment	Extended
Parabolic Segment Mesh	Extended
Passive Reflector	Extended
Patch	Extended
Periscope	Extended
Phased Array	Basic
Phased Array Dipole	Extended
Phased Array Horn	Extended
Phased Array Ridged Waveguide	Extended
Phased Array Waveguide	Extended
Phased Array Yagi	Extended
Phased-Array Slotted Waveguide	Extended
Pill Box	Extended
Pine Cone	Extended
Planar Array	Extended
Planar Slot	Extended
Ported Coaxial Cable	Extended
Probe	Extended

Pyramidal Horn	Extended
Quad Log Periodic	Extended
Quadrafilar Helix	Extended
Radial Line	Extended
Rhombic	Extended
Ridged Waveguide	Extended
Rod	Extended
Scimitar	Extended
Single Curtain Rhombic	Extended
Single Slot	Extended
Single-Turn Loop	Extended
Skeleton Slot	Extended
Skeleton Slot W/Reflector	Extended
Sleeve Dipole	Extended
Slot	Extended
Slot Array	Extended
Slotted Waveguide	Extended
Slotted Waveguide Planar Array	Extended
Spiral	Extended
Stacked Yagi	Extended
Standing-Wave Waveguide Planar Array	Extended
Stripline	Extended
Stripline Dipole	Extended
Stub	Extended
Swastika	Extended
Symmetrical Tee	Extended
Synthetic Aperture	Basic
Top Hat	Extended
Tower	Extended
Trailing Wire	Extended
Traveling Wave	Extended
Traveling-Wave Waveguide Planar Array	Extended
Trilinear Array	Extended
Turnstile	Extended
Vee	Extended
Vertical Array	Extended
Vertical Dipole	Extended
Vertical Half Rhombic	Extended
Vertical Radiator	Extended
Vertical Top Hat	Extended
Whip	Basic
Whip Half Wave	Basic
Whip Quarter Wave	Basic
Wullenweber Array	Extended
Yagi Array	Extended
Yagi-Unidirectional Array	Basic
Other	Basic

Code List CAU

Used in elements AntFreqs, AntMode, AsgnFreqBase, JRFLEntry, StationConfig

Code
Transmit Only
Receive Only
Transmit-Receive

Code List CAV

Used in element Variance

Code
Additional
Different

Code List CBD

Used in element AntMode

Code
Cardioid
Cosecant Squared
Elliptical
Fan
Hyperbolic
Omni
Pencil
Shaped Beam
Single Symmetrical Lobe
Other

Code List CBO

Used in elements Allocation, AntGain, AntMode, AntPattern, Antenna, Assignment, ConfigFreq, Configuration, Curve, DiagramEndpoint, EMail, Ellipse, EndpointLocation, ExternalReference, IntfReport, Point, Polygon, Power, RFSystem, Receiver, SSRequest, SpreadSpectrum, StageLocation, StationLoc, TelephoneFax, Transmitter, Trunking, TrunkingAssignment, Tuning, TxMode

Code
Yes
No

Code List CCD

Used in element SSReply

Code
Draft
Pending
Not Supported
Supported
Supported with Recommendations
Supported with Restrictions
Request Frequency Assignment
Temporary Assignment Only

Code List CCI

Used in element POCInformation

Code
Submitter
Reviewer
Program Manager
Project Engineer
Point of Contact
User
Supplier
Spectrum Manager
Other

Code List CCL

Used in elements Common, Downgrade, EMail, ExternalReference, TelephoneFax

Code	Meaning
U	Unclassified
R	Restricted (This classification SHALL NOT be used in USA-created datasets)
C	Confidential
S	Secret
T	Top Secret

Code List CCN

Used in element AntHardware

Code
MC
Micro-coaxial
Micro-miniature coaxial
MMX
Neill-Concelman Bayonet
Neill-Concelman Threaded
Sub-Miniature version A
Sub-Miniature version B
Sub-Miniature version C
Type N
Other

Code List CCO

Used in elements IntfReport, StationConfig

Code
Global
Eastern Hemisphere
Western Hemisphere
Northern Hemisphere
Southern Hemisphere
North-eastern Earth Quarter
North-western Earth Quarter
South-eastern Earth Quarter
South-western Earth Quarter
Narrow Beam
Other

Code List CCT

Used in element Curve

Code	Meaning
Filter	External filter between TxRx and Antenna
Selectivity-IF1	Receiver 1st intermediate frequency selectivity
Selectivity-IF2	Receiver 2nd intermediate frequency selectivity
Selectivity-IF3	Receiver 3rd intermediate frequency selectivity
Selectivity-IF4	Receiver 4th intermediate frequency selectivity
Selectivity-IF5	Receiver 5th intermediate frequency selectivity
Selectivity-Overall	Overall Selectivity
Selectivity-RF	Receiver radio-frequency selectivity
Tx RF Spectrum	Transmitter RF spectrum

Code List CDD

Used in element RelatedSupportability

Code	Meaning
Dependant	Dependant Dataset (e.g. in AsgnAllot or SSRequest, one system cannot operate without the other)
Related	Related Dataset (e.g. in AsgnAllot or SSRequest, each system may still operate without the related system)
Superseded	Superseded Dataset

Code List CDF

Used in element RxModulation

Code
Bi-Phase-Level
Bi-Phase-Mark
Bi-Phase-Space
Differential Bi-Phase-Level
Differential Bi-Phase-Mark
Differential Bi-Phase-Space
NRZ
NRZ-Mark
NRZ-Space
Return to Zero
Split Phase (Manchester)
Other

Code List CDR

Used in element Administrative

Code	Meaning
Code List Change	The dataset adds, deletes, or modifies Codes or Code Lists
Data Invalid	An invalid dataset was received (other than Missing refs).
Data Not Supported	The referenced dataset is not supported by the system.
Data Recall	The referenced dataset is being recalled.
Data Rejected	The received dataset does not fulfill the requirement.
Data Deleted	The referenced datasets should be removed from the recipient local repository
Missing Refs	The referenced dataset has been rejected because of missing cross-references.
Data Retired	The dataset is no longer Active, but may be reactivated at a future date

Code List CDS

Used in elements Receiver, Transmitter, Tuning

Code	Meaning
Exactly	The separation must be exactly the value entered (for use when transmit and receive radio frequencies are assigned in fixed pairs).
Minimum	The separation must be at least the value entered.

Code List CEA

Used in element EarthStation

Code
Specific
Typical

Code List CEF

Used in element Usage

Code	Extended
Broadcast Radio/Television	Extended
Broadcast-Satellite	Extended
Collision Avoidance	Extended

Comms-Air Traffic Control	Extended
Comms-Data	Extended
Comms-Emergency	Extended
Comms-Monitor	Extended
Comms-P/P Or Net	Extended
Comms-Pager	Extended
Comms-Radio Relay	Extended
Comms-Satellite	Extended
Comms-Secure Voice	Extended
Comms-Troposcatter	Extended
Comms-Trunking	Extended
Comms-Video	Extended
Comms-Video/Data	Extended
Communications	Basic
Communications, Special	Extended
Communications, Spread Spectrum	Extended
Control	Basic
Control-Guidance	Extended
Control-Satellite (Uplink)	Extended
Deep Space Mission	Extended
Electronic Warfare	Basic
Electroptical Equipment	Basic
Elint Reconnaissance	Extended
EO-Forward Looking Infrared	Extended
EO-Forward Looking Radar	Extended
EO-Infrared Countermeasures	Extended
EO-Infrared Search And Track	Extended
EO-Infrared Seeker	Extended
EO-Infrared Surveillance	Extended
EO-Infrared Warning Receiver	Extended
EO-Laser Communications	Extended
EO-Laser Designator	Extended
EO-Laser Radar	Extended
EO-Laser Range Finder	Extended
EO-Laser Seeker	Extended
EO-Laser Tracker	Extended
EO-Laser Warning Receiver	Extended
EO-Laser Weapon	Extended
EO-Night Vision/Image Intensifier	Extended
EO-Night Vision/Thermal Image	Extended
EO-Surveillance	Extended
EO-Telescope	Extended
EO-TV Seeker	Extended
EO-Ultraviolet Warning Receiver	Extended
EW-Active jamming	Extended
EW-Anti-Satellite	Extended
EW-Anti-Satellite Target	Extended
EW-Deception	Extended
EW-ECCM/EPM	Extended
EW-Frequency Hopping	Extended
EW-Intercept	Extended
EW-Jamming	Extended
EW-Jamming-Barrage	Extended
EW-Jamming-Spot	Extended
EW-Jamming-Sweep	Extended
EW-Radar Warning Receiver	Extended

EW-Reactive jamming	Extended
Instrumentation	Basic
Instrumentation-Calibration	Extended
Instrumentation-Equipment Monitor	Extended
Instrumentation-Frequency Standard	Extended
Instrumentation-Test Equipment	Extended
Instrumentation-Test Range	Extended
Interrogator	Extended
Ionospheric Sounder	Extended
Location	Basic
Location-Homing	Extended
Location-Intrusion Detector	Extended
Location-Laser Reflector	Extended
Location-Low-Light Level Television	Extended
Location-Miss Distance Indicator (MDI)	Extended
Location-Satellite Beacon	Extended
Location-Satellite Tracking	Extended
Location-Sonobuoy	Extended
Location-Tracking/Ranging	Extended
Manned Platform	Extended
Meteor Burst	Basic
Meteorological Aid	Basic
Meteorological Satellite	Extended
Missile Guidance	Basic
Missile Homing	Basic
Missile Tracking	Extended
Nav-Altimeter	Extended
Nav-Beacon	Extended
Nav-Direction Finder	Extended
Nav-DME	Extended
Nav-Drift Angle Measurement	Extended
Nav-GPS/Navstar	Extended
Nav-IFF/SIF	Extended
Navigation Aids	Basic
Nav-ILS	Extended
Nav-Localizer	Extended
Nav-LORAC	Extended
Nav-LORAN	Extended
Nav-MLS	Extended
Nav-Navigation Transponder	Extended
Nav-SHORAN	Extended
Nav-Space Based Navigation Aid	Extended
Nav-TACAN	Extended
Nav-VOR	Extended
Nav-VORTAC	Extended
Nuclear Detonation Detection	Extended
Optical Astronomy	Extended
Photo Reconnaissance	Extended
Radar	Basic
Radar Calibration Aid	Extended
Radar Intercept	Extended
Radar Navigation	Extended
Radar Transponder	Extended
Radar, Spread Spectrum	Extended
Radar-Acquisition	Extended
Radar-Bombing	Extended

Radar-CW	Extended
Radar-Doppler	Extended
Radar-Duplex Repeater	Extended
Radar-Fire Control	Extended
Radar-Ground Control Approach	Extended
Radar-Height Finder	Extended
Radar-Illuminator	Extended
Radar-Mapping	Extended
Radar-Meteorological	Extended
Radar-Monopulse	Extended
Radar-Over The Horizon	Extended
Radar-Precision Approach	Extended
Radar-Pulse Compression	Extended
Radar-Ranging	Extended
Radar-Reconnaissance	Extended
Radar-Search	Extended
Radar-Side Looking	Extended
Radar-Space-Based	Extended
Radar-Special	Extended
Radar-Synthetic Aperture	Extended
Radar-Tail Warning	Extended
Radar-Target Acquisition	Extended
Radar-Terrain Avoidance	Extended
Radar-Terrain Following	Extended
Radar-Tracking	Extended
Radar-Track-While Scan	Extended
Radar-Transponder	Extended
Radar-Velocity Measurement	Extended
Radar-Warfare Simulator	Extended
Radar-Weather Avoidance	Extended
Radio Astronomy	Extended
Radiosonde	Extended
Remote Sensing	Extended
Research	Extended
Retransmission	Extended
Scientific Investigation	Extended
Search And Rescue	Extended
Seeker	Extended
Signal Collection	Extended
Simulator	Extended
Space-Based Surveillance	Basic
Submarine Buoy	Extended
Telemetry	Extended
Telemetry-Satellite	Extended
Trainer	Extended
Other	Extended

Code List CEN

Used in element Notation

Code
CENOT
DIA Equipment Number
ELNOT
Interim identifier
SPOT

Other

Code List CET

Used in element ForceElement

Code
Aircraft
Air Drop
Helicopter
V/STOL
Air Launched Missile
Armored Land Vehicle
Non-Tactical Land Vehicle
Tactical Land Vehicle
Surface Launched Missile
Water Launched Missile
Unmanned Air Vehicles
Lighter/Boat
Amphibious Vessel
Tug Boat
Command Ship
Landing Craft, Air Cushion
Amphibious Command Ship
Amphibious Assault Ship
Amphibious Transport Dock
Amphibious Cargo Ship
Landing Craft Utility
Amphibious Assault Vehicle
Expeditionary Fighting Vehicle
Rigid Raiding Craft
Riverine Assault Craft
High Speed Vessel
Joint High Speed Vessel
Aid to Navigation Boat
High Endurance Cutter
Motor Life Boat
Medium Endurance Cutter
Patrol Boat
Utility Boat
Transportable Port Security Boat
Mine Countermeasure Ship
Coastal Mine Hunter
Cruiser
Aircraft Carrier
Destroyer
Guided Missile Destroyer
Frigates
Coastal Patrol Craft
Littoral combat Ship
Crane Ship
Ammunition Ship
Combat Stores Ship
Research Ship
Surveillance Ship
Survey Ship
Hospital Ship

Container Ship
Dry Cargo/Ammunition Ship
Fast Sealift Ship
Underway Replenishment Oiler
Fast Combat Support Ship
Transport Tanker
Cable Repair Ship
Rescue & Salvage
Ocean-Going Tug
Aviation Support Ship
Research Vessel
Ballistic Missile Submarine
Attack Submarine
Fast Combat Support Ship
Salvage Ship
Submarine Tender
Yard Patrol Craft
Special Operations Craft
Other

Code List CFD

Used in element FEDeployment

Code	Meaning
Location-Home	Home location of the force element
Location-Current	Physical location of the force element
Location-Planned	Planned location of the force element
Operating Area-Current	Operating area of the force element (typically a polygon / AOR)
Operating Area-Planned	Planned operating area
Route-Current	Current route
Route-Planned	Planned route
Other	Other

Code List CFE

Used in element ForceElement

Code
Specific Platform
Platform Class
Specific Weapon
Weapon Class
Unit

Code List CFM

Used in element TxModulation

Code
Multichannel
Per Channel

Code List CFO

Used in elements RxMode, TxMode

Code	Meaning
Hz	Hertz
ppm	parts per million

Code List CFR

Used in elements RelatedOrganisation, RelatedSystem

Code	Meaning
Child	The referenced Organisation / Force Element is child of the current Organisation / Force Element
Parent	The referenced Organisation / Force Element is parent of the current Organisation / Force Element
Sibling	The referenced Organisation / Force Element is a sibling of the current Organisation / Force Element

Code List CFT

Used in element RelatedOrganisation

Code
Budget
Plan ORBAT
Reference ORBAT
Related
Reporting

Code List CHN

Used in element Assignment

Code	Meaning
Host nominations acceptable	Host Nation Nominations are acceptable.
NATO HQ-assigned	The frequency is preassigned by NATO headquarters (NHQC3S/SC3IB).
NUFAS-assigned	The frequency was assigned by the NATO UHF Frequency Assignment Software (NUFAS) at NHQC3S/SC3IB.
User-assigned	The frequency was preassigned by the user.

Code List CIC

Used in element DiagramEndpoint

Code	Meaning
Airborne	
Earth	
Fixed	
Land	
Land Mobile	
METAIDS Ground	
METAIDS Radar	

METAIDS Radiosonde	
Mobile Earth-Air	
Mobile Earth-Land	
Mobile Earth-Sea	
Radar-Air	
Radar-Land	
Radar-Sea	
Satellite	
Sea	
Secondary Radar-Air	
Secondary Radar-Land	
Secondary Radar-Sea	
Target	
Transport	

Code List CIN

Used in element Deployment

Code
Air
Amphibious
Deep Space
Handheld
Land
Land Fixed
Land Mobile
Manpack
Missile
Non Synchronous Orbit
Unmanned Aerial Vehicle (UAV)

Unmanned Aircraft System (UAS)
Unmanned Ground Vehicle (UGV)
Unmanned Surface Vehicle (USV)
Unmanned Underwater Vehicle (UUV)
Satellite
Shipboard
Space
Submarine
Synchronous Orbit
Transport
Water
Other

Code List CIR

Used in element Assigned

Code	Meaning
Not requested-Security	Registration with ITU-R not requested for security reasons
Not required	Registration with ITU-R not required
Outside Rules	Not notified to ITU-R due to the rules laid down in the ITU regulations
Pending	Pending notification to ITU-R
Registered	Registered with ITU-R
Registered on Insistence	Registration with ITU-R on an insistence basis
Registered-Needs modification	Registered with ITU-R but needs to be modified
Required	Registration with ITU-R is required
Unfavourable	Notified to ITU-R but received unfavourable findings and therefore not registered in the International Frequency List (IFL)

Code List CJ1

Used in element IntfReport

Code
Environmental
Interference
Intrusion
Jamming
Meaconing

Code List CLC

Used in element ForceElement

Code
Academy
Accounts Control Section
Activity
Admission
Agency
Air Facility
Air Patrol
Air Station
Annex
Area
Area Regional Office
Army Group
Arsenal

Augmentation
Band
Barge
Barracks
Base
Basin
Battalion
Battalion Landing Team
Battery
Board
Boat
Branch
Brigade
Business Unit
Camp
Centre
Clinic
College
Command
Commission
Communications-Electronics Complex
Communications-Electronics Package
Company
Consolidated Distribution Centre
Corps
Corps Artillery
Crew
Defense Attache Office
Depot
Detachment
Detachment For MEB
Detachment For MEF
Detachment For MEU
Detachment Residual
Detail
Director/Directorate
Dispensary
District
Division
Division Artillery
Element
Facility
Field Artillery
Field Operating Activity
Flight
Flotilla
Force
Force Troops
Garrison
Group
Home
Hospital
HQ
HQ And HQ Battery
HQ And HQ Company
HQ And HQ Detachment

HQ And HQ Troop
HQ And Maintenance Company
HQ And Service Battery
HQ And Service Company
HQ And Service Company
HQ And Support Company
HQ Company
HQ Company And Band
HQ Detachment
II MEB And MEU DET Residual
II MEB Detachment Residual
Inspector
Installation
Institute
Laboratory
Library
Magazine
Maintenance Float
Manager
Marine Air Group
Marine Air Wing
Marine Expeditionary Brigade
Marine Expeditionary Force
Marine Expeditionary Unit
Marine Forces
MEB DET Residual
Merchant Ship
MEU DET Residual
Military Assistance Advisory Group
Mission
MSC One-Time Charter
MSC Ship
Museum
Navy Support Craft
No Significant Level
Numbered Air Force
Numbered Army
Numbered Fleet
Observatory
Office
Office Of Defense Cooperation
Office Of Military Cooperation
Officer
Officer-In-Charge
Operating Location
Package
Packet
Party
Plant
Platoon
Port
Port Captain
Post Office
Proving Ground
Range
Regiment

Regimental Combat Team
Regimental Landing Team
Region
Region(al)
Representative
Reserves
School
Section
Sector
Service
Service Company
Ship, Foreign/Merchant
Shipyard
Shop
Shop Stores
Special Troops
Squad
Squadron
Staff
Station
Store
Substation
Subunit
Supervisor
Support Command
System
Task Element
Task Force
Task Group
Task Unit
Team
Terminal
Train
Troop
Unit
US Ship
USCG Cutter
Wing
Works
Other

Code List CLO

Used in element FreqConversion

Code
LO above or below RF
LO above RF
LO below RF

Code List CLS

Used in element Satellite

Code
Cancelled
Decayed
Firm Future
Ground Spare

Inoperative
Launched
Operational
Orbital Spare
Orbital Test
Partially Operational
Possible Future
Retired
Total Launch Failure

Code List CMC

Used in element ForceElement

Code
Admin and Special Services
Armor/Antitank
Artillery /Air and Space Defense
Aviation Support
Aviation/Anti-Aircraft
Chemical/Ordnance
Civil Affairs
Civil Air Patrol
Combat Support
Communications
Composite Forces
Engineering
Finance
Infantry
Intelligence / Psychological Ops
Law enforcement / Security
Maintenance
Major Command
Medical/Dental
Miscellaneous
Multifunction Post
Naval Support
Recruiting
Research and Development
Special Ops
Supply
Tactical Control
Task Organisation
Training
Transportation / Fleet Auxiliaries
Warships
Other

Code List CMO

Used in elements Baseband, RxModulation

Code
AM Clear Voice
AM Secure Voice
ASK/OOK
Audio FSK
Binary Phase Shift Key
Code Division Multiplex

COFDM
CPFSK
Data
Differential PSK
Doppler Frequency-Shift
FM Clear Voice
FM Secure Voice
Frequency Division Multiplex
FSK
Gaussian MSK
Minimum Shift Keying
Multichannel
Multichannel Data
Multichannel PCM Voice
Multi-channel PCM Voice
Multichannel Voice
Multichannel Voice/Data
NOISE
OFDM
PSK
QAM
Quadrature Partial Response Signaling
Quadrature PSK
Secure Data
Single Channel
Single Secure Voice Channel
Single Voice Channel
Time Division Multiplex
Tuned Frequency Modulation
Video
Binary FSK
Coherent FSK
Coherent MSK
Coherent Quadrature PSK
Differential Binary PSK
Differential Gaussian MSK
Differential Quadrature PSK
Differential Raised Cosine MSK
Direct Sequence Binary FSK
Direct Sequence Binary PSK
Direct Sequence Complementary Code Keying
Direct Sequence FSK
Direct Sequence MSK
Direct Sequence Offset Quadrature PSK
Direct Sequence PSK
Direct Sequence Quadrature PSK
Feher QPSK-B
Feher QPSK-JR
Gaussian FSK
Multi-index Continuous Phase Modulation
Offset Quadrature PSK
Quadrature FSK
Shaped Binary PSK
Shaped FSK
Shaped MSK
Shaped Offset Quadrature PSK

Other

Code List CNU

Used in elements Identifier, Nomenclature

Code
Primary
Alternate
Nickname
Pennant Number

Code List COT

Used in element Transmitter

Code
Amplitron
Backward Wave Oscillator
Carcinatron
Cross Field Amplifier
Diode
FET
FET Push-Pull
Fixed Magnetron
Gallium Arsinide FET
Gunn Diode
Gyrotron
Impatt Diode
Integrated Circuit
Klystron
Lighthouse
Magnetron
Pentode
Reactance Tube
Solid State
Stabilotron
Step Recovery Diode
Tetrode
Transformer
Transistor
Traveling-Wave Tube
Triode
Tunable Magnetron
Twystron
Voltage Controlled Oscillator
Yttrium Iron Garnet
Other

Code List CPC

Used in element JRFLEntry

Code	Meaning
Guarded	Frequencies with interest to the Intelligence sections.
Protected	Frequencies that have importance to the operation, but may be jammed because of geographic or time separation.
Taboo	Safety of life, stop buzzer, etc. If priorities are used, Taboo should always be A1.

Code List CPI

Used in element Assignment

Code	Meaning
International Approval	The dataset is outside national boundaries; however, it must be processed to national or international level authority for approval
Local Approval	The dataset is within national boundaries; however, it need not be processed to national level authority for approval
National Approval	The dataset is to be processed to national level authority for approval
Outside National Boundaries	The dataset is outside national boundaries and need not be processed to national level authority for approval

Code List CPJ

Used in element Project

Code
COMPLAN
Exercise
Mission
Operation
OPLAN
Other

Code List CPO

Used in elements AntMode, IntfReport

Code
45-degrees
Left-hand circular
Right-hand circular
Dual
Elliptical
Elliptic left
Elliptic right
Horizontal linear
Horizontal and vertical
Linear
Mixed
Oblique, angled, crossed
Rotating
Right-hand slant
Left-hand slant
Right and left-hand circular
Vertical linear
Other or unknown

Code List CPS

Used in elements Allocation, ConfigFreq, Variance

Code
Primary
Secondary
Permitted
Other

Code List CPT

Used in elements Configuration, Power

Code	Meaning
C8b	Use this entry for the submission of space data to the ITU if the maximum peak power and power density values are of type C8b.

Carrier	Carrier Power
Mean	Mean Power
PEP	Peak Envelope Power

Code List CRA

Used in element TxMode

Code
Coded Pulse
CW
FM CW
FM Pulse
Non-FM Pulse
Other

Code List CRD

Used in element AntMode

Code
Clockwise
Counter-Clockwise

Code List CRE

Used in element ExternalReference

Code	Meaning
CF299	C/F 299 Number
Contact Report	Contact Report: A brief report of a telephone call or a site visit
Contract	Contract Reference
Data Retrofit	Database Retrofit
Document	Document in any format not otherwise covered
ECSA	Equipment Characteristics / Space Archive
Email	Electronic Mail: any email not covered in one of the other specific categories, or any electronic media/transfer.
Eng Report	Engineering Report
EWIR	Electronic Warfare Integrated Reprogramming
FCC	Federal Communications Commission Filing: A document registered with the FCC.
Industry Publication	Industry Publication: any document published by a company. Frequently, they are brochures or Specifications Sheets describing the capabilities of an equipment or system.
Interference	Interference Report (to be used only when the interference report is not in SMADEF-XML format)
ITU Notification	ITU Notification
ITU Sat	ITU SSG (Satellite) Filing
Janes	Janes Publications
JF12	J/F 12 Document
License	General License Reference
Memo	Memorandum
MIPI	Multilateral Interoperability Programme Identifier
National Number	National control/request number (may be entered by any organisational level)
Nomenclature Card	Nomenclature Card (DD FORM 61)
NTIA	Spectrum Planning Subcommittee Number (USA code used by NTIA)
Prev Certification	Previous Certification
SIN	Systems ID Number (USA code used by NTIA)
Standard	STANAG or other Standard documentation
Technical Manual	Technical Manual
Spectrum Support Certification	Certification of Spectrum Support
Other	Any other type not listed in this list; see remarks

Code List CRS

Used in element Antenna

Code
Boxed Slot
Cavity
Clamshell
Cone
Corner
Curved Convergent
Cylindrical
Double Corner
Elliptical
Horn
Hyperbolic
Lens
Mattress
Orange Peel
Parabolic
Parabolic Segment
Parasitic
Plane
Plate
Polarized
Rectangular
Rod
Screen
Trough
Other

Code List CRT

Used in element RxMode

Code
Coherent
Crystal
Direct View Optics
Double Conversion Superheterodyne
Homodyne
Imaging Detector
Non-Coherent
Non-Imaging Detector
Quad Conversion Superheterodyne
Super Regenerative
Superheterodyne
Triple Conversion Superheterodyne
Tuned Radio Frequency
Other

Code List CSE

Used in element RxMode

Code	Meaning
Pulse Width Opposition	Pulse Width Opposition; value is in dB
Bit Error Rate	Bit Error Rate; value is a number in scientific notation
Minimum Discernable Signal	Minimum Discernable Signal

Minimum Target Recognition	Minimum Target Recognition
SINAD	Signal-Plus-Noise-Plus-Distortion to Noise-Plus-Distortion; value is in dB
S/N	Signal-to-Noise ratio; value is in dB
(S+N)/N	(Signal plus-Noise)-to-Noise ratio; value is in dB

Code List CSG

Used in elements ExternalReference, RFSystem, SSRequest, Stage

Code
Conceptual
Developmental
Experimental
Operational

Code List CSI

Used in element TxModulation

Code
Lower sideband
Upper sideband

Code List CSN

Used in elements Allocation, Usage, Variance

Code	Meaning
Aeronautical Fixed Service	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.
Aeronautical Mobile (Off Route) Service	An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
Aeronautical Mobile (Route) Service	An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile Service	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite (OR) Service	An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
Aeronautical Mobile-Satellite (R) Service	An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
Aeronautical Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of aircraft.
Aeronautical Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board aircraft.
Amateur Service	A radiocommunication service for the purpose of self-training, inter-communication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
Amateur-Satellite Service	A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.
Broadcasting Service	A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmissions.

Broadcasting-Satellite Service	A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. In the broadcasting-satellite service, the term "direct reception" shall encompass both individual reception and community reception.
Earth Exploration-Satellite (active)	A radiocommunication service between earth stations and one or more active space stations, which may include links between space stations, in which:; -information relating to the characteristics of the Earth and its natural phenomena including data relating to the state of the environment is obtained from active sensors or passive sensors on earth satellites -similar information is collected from airborne or earth-based platforms; -such information may be distributed to earth stations within the system con- cerned; -platform interrogation may be included.;This service may also include feeder links necessary for its operation.
Earth Exploration-Satellite (passive)	A radiocommunication service between earth stations and one or more passive space stations, which may include links between space stations, in which:; -information relating to the characteristics of the Earth and its natural phenomena including data relating to the state of the environment is obtained from active sensors or passive sensors on earth satellites -similar information is collected from airborne or earth-based platforms; -such information may be distributed to earth stations within the system con- cerned; -platform interrogation may be included.;This service may also include feeder links necessary for its operation.
Earth Exploration-Satellite Service	A radiocommunication service between earth stations and one or more space stations, which may include links between space stations, in which: - information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on earth satellites; - similar information is collected from airborne or Earth-based platforms; - such information may be distributed to earth stations within the system concerned; - platform interrogation may be included.
Fixed Service	A radiocommunication service between specified fixed points.
Fixed-Satellite Service	A radiocommunication service between earth stations at given positions when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service, the fixed-satellite service may also include feeder links for other space radiocommunication services.
Inter-Satellite Service	A radiocommunication service providing links between artificial earth satellites.
Land Mobile Service	A mobile service between base stations and land mobile stations, or between land mobile stations.
Land Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on land.
Maritime Mobile Service	A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Mobile-Satellite Service	A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Radionavigation Service	A radionavigation service intended for the benefit and for the safe operation of ships.
Maritime Radionavigation-Satellite Service	A radionavigation-satellite service in which earth stations are located on board ships.
Meteorological Aids Service	A radiocommunication service used for meteorological, including hydrological, observations and exploration.
Meteorological-Satellite Service	An Earth exploration-satellite service for meteorological purposes.
Mobile Service	A radiocommunication service between mobile and land stations, or between mobile stations.
Mobile-Satellite Service	A radiocommunication service: - between mobile earth stations and one or more space stations, or between space stations used by this service; or - between mobile Earth stations

	by means of one or more space stations. This service may also include feeder links necessary for its operation.
Radio Astronomy Service	A service involving the use of radio astronomy.
Radiodetermination Service	A radiocommunication service for the purpose of radiodetermination.
Radiodetermination-Satellite Service	A radiocommunication service for the purpose of radio-determination involving the use of one or more space stations. This service may also include feeder links necessary for its own operation.
Radiolocation Service	A radiodetermination service for the purpose of radiolocation.
Radiolocation-Satellite Service	A radiodetermination-satellite service used for the purpose of radiolocation. This service may also include the feeder links necessary for its operation.
Radionavigation Service	A radiodetermination service for the purpose of radionavigation.
Radionavigation-Satellite Service	A radiodetermination-satellite service used for the purpose of radionavigation. This service may also include feeder links necessary for its operation.
Space Operation Service	A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand. These functions will normally be provided within the service in which the space station is operating.
Space Research (active)	A radiocommunication service in which spacecraft or other active objects in space are used for scientific or technological research purposes.
Space Research (passive)	A radiocommunication service in which spacecraft or other passive objects in space are used for scientific or technological research purposes.
Space Research Service	A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.
Space Telecommand	The use of radiocommunication for the transmission of signals to a space station to initiate, modify or teminate functions of equipment on an associated space object, including the space station.
Space Telecommand (TT&C)	The use of radiocommunication for the transmission of signals to a space station to initiate, modify or teminate functions of equipment on an associated space object, including the space station.
Space Telemetering	The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft.
Space Telemetering (TT&C)	The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft. (RR)
Space Tracking	Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object.
Space Tracking (TT&C)	Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object.
Special Service	A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence.
Specialised Mobile Radio Service	A radio service in which licensees provide land mobile communications services in the 800 MHz and 900 MHz bands on a commercial basis to entities eligible to be licensed under this part, federal government entities, and individuals.
Standard Frequency and Time Signal Service	A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.
Standard Frequency and Time Signal-Satellite Service	A radiocommunication service using space stations on earth satellites for the same purpose as those of the standard frequency and time signal service. This service may also include feeder links necessary for its operation.
Other	

Code List CSP

Used in element Satellite

Code
Deep Eccentric

Deep Space
GEO Drift
GEO Inclined
GEO Inclined Drift
GEO Near-Synchronous
GEO Stationary
GEO Synchronous
GEO Transfer
Heliocentric
Highly Elliptic (HEO)
LEO
LEO Equatorial
LEO Intermediate
LEO Polar
LEO Retrograde
LEO Sun-Synchronous
Lunar
MEO
Molniya
Non-Earth
Non-GEO
Other

Code List CSR

Used in element ForceElement

Code
AG/Band
Air Defense
Airborne Division
Airmobile
Armor
Army
Army Material Command
Aviation
Brigade Combat Team/IDIV
Censorship
Chaplain
Chemical
Civil Affairs
Combat Service Support
Corps
Engineering
Field artillery
Finance
General
Heavy Division/Brigade
Infantry
Judge Advocate
Maintenance
Medical
Military Intelligence (corps and below)
Military intelligence (EAC)
Military intelligence (SIGINT EAC)
Military police
Ordnance

Psychological Operations
Quartermaster
Separate Light Infantry
Signal
Space/Missile Defense
Special Forces
Supply
Transportation
Other
Unknown

Code List CSS

Used in element SpreadSpectrum

Code
Automatic Channel Selection
Chirp
Direct sequence
Direct sequence + Frequency hopped
Direct sequence + Time hopped
Diversity
Free Channel Search
Frequency + Time hopped
Frequency hopped
Time hopped
Other

Code List CSU

Used in elements Common, Deployment

Code
Active
Inactive

Code List CTI

Used in elements Assignment, IntfReport, Time

Code	Meaning
Continuous	Continuously 24 hours per day
Day	Day time
Night	Night time
Transition	Transition period
Intermittent	Intermittently throughout 24 hours
Once	Once

Code List CTN

Used in elements RxMode, TxMode

Code
Cavity
Cavity Mechanically Tuned
Cavity Resonant
Cavity Tunable
Continuous
Continuous VCO
Crystal Controlled
Crystal Fixed
Crystal Interchangeable

Crystal SAW
Crystal Varactor/Phase lock
Crystals Manually Switch
Dielectric Resonant Oscillator
Electro Mechanical
Factory Fixed Phase Locked Gunn
Factory Fixed PLL
Factory Tuned
Fixed
Gunn VCO
Klystron Mechanically Tuned
Magnetron Fixed
Magnetron Tunable
Manual
Oscillator Manually Adjustable Gunn
Oscillator Non-Adjustable Gunn Diode
Oscillator Tunable Cavity
Oscillator Voltage Controlled
Oscillator Yig
Phase-Locked Loop
SAW Resonator
Synthesizer
Synthesizer Crystal Controlled
Synthesizer Crystal Controlled PLL
Synthesizer Digital
Synthesizer Direct Digital
Synthesizer Manually Adjustable
Synthesizer Microprocessor Controlled
Synthesizer Non-Adjustable Crystal
Synthesizer PLL
Synthesizer Programmable Frequency
Synthesizer VCO
Tunable PLL
Varactor Tuned
Voltage Tuned Yig
Other

Code List CTO

Used in elements Nomenclature, Organisation

Code
Civilian/Commercial
Generic
Government
Military
Other

Code List CTP

Used in element AntPattern

Code	Meaning
PHI	Rotation angle about the boresight
THETA	Angle off the boresight

Code List CTS

Used in element JRFLEntry

Code

Approved
For Review
Pending

Code List CTU

Used in elements RxMode, TxMode

Code	Meaning
Continuous	Systems capable of being tuned to any frequency within the requested band
Continuous+Stepped	Combination of continuous and stepped
Fixed	Systems capable of operating on a single discrete frequency
Fixed+Continuous	Combination of fixed and continuous
Fixed+Stepped	Combination of fixed and stepped
Stepped	Systems capable of being tuned across the authorised or requested band in discrete steps or increments. This includes crystal control
Fixed-Constrained	Systems capable of operating on a single discrete frequency, determined by the bandwidth constraints of the power generating or frequency determining device
Fixed or Random	Frequency-agile radars that operate on various frequencies within a band, either specified or random mode

Code List CUT

Used in elements Allotment, Assignment

Code
Request Temporary
Request Permanent
Approved Temporary
Approved Permanent
Cancelled/Rejected

Code List CCY

Used in elements Common, Role

Code	Meaning
AFG	Afghanistan
ALB	Albania
DZA	Algeria
AND	Andorra
AGO	Angola
ATG	Antigua and Barbuda
ARG	Argentine Republic
ARM	Armenia
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BHS	Bahamas
BHR	Bahrain
BGD	Bangladesh
BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BTN	Bhutan
BOL	Bolivia
BIH	Bosnia and Herzegovina
BWA	Botswana
BRA	Brazil

BRN	Brunei Darussalam
BGR	Bulgaria
BFA	Burkina Faso
BDI	Burundi
KHM	Cambodia
CMR	Cameroon
CAN	Canada
CPV	Cape Verde
CCEB	CCEB Nations (AUS, CAN, GBR, NZL, USA)
CAF	Central African Republic
TCD	Chad
CWCS	Chemical Weapons Convention States
CHL	Chile
CHN	China
COL	Colombia
COM	Comoros
COG	Congo
COD	Congo (Democratic Republic of the)
CRI	Costa Rica
CIV	Ivory Coast
HRV	Croatia
CUB	Cuba
CYP	Cyprus (See footnote 1)
CZE	Czech Republic
DNK	Denmark
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
TLS	East Timor
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
FJI	Fiji
FIN	Finland
FVEY	FIVE EYES (USA, CAN, GBR, AUS, NZL)
ACGU	FOUR EYES (USA, CAN, GBR, AUS)
FRA	France
GAB	Gabon
GMB	Gambia
GEO	Georgia
DEU	Germany
GHA	Ghana
GRC	Greece
GRD	Grenada
GTM	Guatemala
GIN	Guinea
GNB	Guinea-Bissau
GUY	Guyana
HTI	Haiti
HND	Honduras
HUN	Hungary
ISL	Iceland

IND	India
IDN	Indonesia
IRN	Iran
IRQ	Iraq
IRL	Ireland
ISR	Israel
ITA	Italy
JAM	Jamaica
JPN	Japan
JOR	Jordan
KAZ	Kazakhstan
KEN	Kenya
KIR	Kiribati
PRK	Korea, North
KOR	Korea, South
YU-KM	Kosovo
KWT	Kuwait
KGZ	Kyrgyzstan
LAO	Laos
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libya
LIE	Liechtenstein
LTU	Lithuania
LUX	Luxembourg
MDG	Madagascar
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
MHL	Marshall Islands
MRT	Mauritania
MUS	Mauritius
MEX	Mexico
FSM	Micronesia
MDA	Moldova
MCO	Monaco
MNG	Mongolia
MNE	Montenegro
MAR	Morocco
MOZ	Mozambique
MMR	Myanmar
NAM	Namibia
NRU	Nauru
NPL	Nepal
NLD	Netherlands
NZL	New Zealand
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NATO	NATO Nations (28 Nations: ALB, BEL, BUL, CAN, CZE, D, DNK, E, EST, F, G, GRC, HNG, HOL, HRV, I, ISL, LUX, LIT, LVA, NOR, POL, POR, ROU, SVK, SVN, TUR, USA)
NOR	Norway

OMN	Oman
PAK	Pakistan
PLW	Palau
PSE	Palestine
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
PER	Peru
PHL	Philippines
POL	Poland
PRT	Portugal
QAT	Qatar
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
STP	Sao Tome and Principe
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SVK	Slovakia
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
ESP	Spain
LKA	Sri Lanka
SDN	Sudan
SUR	Suriname
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syria
TWN	Taiwan
TJK	Tajikistan
TZA	Tanzania
THA	Thailand
FYR	The former Yugoslav Republic of Macedonia (See footnote 2)
TEYE	THREE EYES (USA, CAN, GBR)
TGO	Togo
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TUV	Tuvalu
UGA	Uganda
UKR	Ukraine
ARE	United Arab Emirates

GBR	United Kingdom
UN	United Nations
USC	United States (CONUS)
USP	United States and Possessions
USA	United States of America
UNKN	Unknown
URY	Uruguay
UZB	Uzbekistan
VUT	Vanuatu
VAT	Vatican City State
VEN	Venezuela
VNM	Vietnam
YEM	Yemen
YO05	Yugoslavia (YUG) - Deprecated
ZMB	Zambia
ZWE	Zimbabwe

Notes:

1. Turkey states that the "Republic of Cyprus" / "Cyprus" referred to in this document is not the original partnership state established in 1960. Therefore, Turkey declares that signature, ratification and implementation of this document neither amount to any form of recognition of the Greek Cypriot Administration, as referred to in this document as "Republic of Cyprus" / "Cyprus", nor prejudice Turkey's rights and obligations emanating from the Treaty of Guarantee, the Treaty of Alliance, and Treaty of Establishment of 1960.
2. Turkey recognises the Republic of Macedonia with its constitutional name.

Code List CAO

Used in elements Address, Administration, CaseNum, CodeList, Country, ForceElement, HostNation, IntfReport, Location, Manufacturer, Note, SSReply, ServiceArea

Code	Meaning
AFG	Afghanistan
FF	Africa
US-AL	Alabama
ALA	Åland Islands
US-AK	Alaska
ALB	Albania
DZA	Algeria
NT-ASC	Allied Submarine Command
ASM	American Samoa
AND	Andorra
AGO	Angola
AIA	Anguilla
ANTR	Antarctic
4Z	Antarctic Ocean
ATA	Antarctica Continent
ATG	Antigua and Barbuda
5A	Arctic Ocean
ARG	Argentine Republic
US-AZ	Arizona
US-AR	Arkansas
ARM	Armenia
ABW	Aruba
SH-AC	Ascension
AB	Asia Continent
9A	Atlantic Ocean
AUS	Australia

AUSC	Australia Continent
AUT	Austria
AZE	Azerbaijan
PT-20	Azores
BHS	Bahamas
BHR	Bahrain
UM-8	Baker Island
BGD	Bangladesh
BRB	Barbados
BLR	Belarus
BEL	Belgium
BLZ	Belize
BEN	Benin
BMU	Bermuda
BTN	Bhutan
BWCS	Biological Weapons Convention States
BOL	Bolivia
BES	Bonaire, Saint Eustatius and Saba
BIH	Bosnia and Herzegovina
BWA	Botswana
BVT	Bouvet Island
BRA	Brazil
IOT	British Indian Ocean Territory
BRN	Brunei Darussalam
BGR	Bulgaria
BFA	Burkina Faso
BDI	Burundi
US-CA	California
KHM	Cambodia
CMR	Cameroon
CAN	Canada
ES-CN	Canary Islands
NT-BA1	CAOC 1 Finderup Denmark
NT-NA0	CAOC 10 Monsanto Portugal
NT-BA2	CAOC 2 Uedem Germany
NT-BA3	CAOC 3 Reitan Norway
NT-BA4	CAOC 4 Meßstetten Germany
NT-NA5	CAOC 5 Poggio Renatico Italy
NT-NA6	CAOC 6 Eskisehir Turkey
NT-NA7	CAOC 7 Larissa Greece
NT-NA8	CAOC 8 Torrejon Spain
NT-BA9	CAOC 9 High Wycombe United Kingdom
CPV	Cape Verde
CARB	Caribbean
CAI	Caroline Islands
CYM	Cayman Islands
NT-NA	CC-Air Izmir
NT-BA	CC-Air Ramstein
CCEB	CCEB Nations (AUS, CAN, GBR, NZL, USA)
NT-BL	CC-Land Heidelberg
NT-NL	CC-Land Madrid
NT-NM	CC-Maritime Naples
NT-BM	CC-Maritime Northwood
CAF	Central African Republic
CAM	Central America
TCD	Chad

CWCS	Chemical Weapons Convention States
CHL	Chile
CHN	China
CXR	Christmas Island
CPMT	Civilian Protection Monitoring Team for Sudan
CP	Clipperton Island
CCK	Cocos (Keeling) Islands
COL	Colombia
US-CO	Colorado
CMFC	Combined Maritime Forces
COM	Comoros
COG	Congo
COD	Congo (Democratic Republic of the)
US-CT	Connecticut
COK	Cook Islands
CMFP	Cooperative Maritime Forces Pacific
CRI	Costa Rica
CIV	Ivory Coast
HRV	Croatia
FR-TF	Crozet Archipelago
CUB	Cuba
CUW	Curaçao
CYP	Cyprus (See footnote 1)
CZE	Czech Republic
NT-NAD	D-CAOC P. Renatico
NT-BAD	D-CAOC Uedem Germany
US-DE	Delaware
DNK	Denmark
DG	Diego Garcia
US-DC	District of Columbia
DJI	Djibouti
DMA	Dominica
DOM	Dominican Republic
TLS	East Timor
EAS	Easter Island
ECU	Ecuador
EGY	Egypt
SLV	El Salvador
GNQ	Equatorial Guinea
ERI	Eritrea
EST	Estonia
ETH	Ethiopia
EE	Europe Continent
EUDA	European Union DARFUR
EFOR	European Union Stabilization Forces in Bosnia
FLK	Falkland Islands (Malvinas)
FRO	Faroe Islands
FJI	Fiji
FIN	Finland
FVEY	FIVE EYES (USA, CAN, GBR, AUS, NZL)
US-FL	Florida
ACGU	FOUR EYES (USA, CAN, GBR, AUS)
FRA	France
GUF	French Guiana
PYF	French Polynesia
ATF	French Southern Territories

GAB	Gabon
GMB	Gambia
GEO	Georgia
US-GA	Georgia
GEOS	Geostationary Satellite
DEU	Germany
GHA	Ghana
GIB	Gibraltar
GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
9Z	Great Lakes
GRC	Greece
GRL	Greenland
GRD	Grenada
GLP	Guadeloupe
GUM	Guam
GTM	Guatemala
GGY	Guernsey
GIN	Guinea
GNB	Guinea-Bissau
1M	Gulf of Mexico
GUY	Guyana
HTI	Haiti
US-HI	Hawaii
HMD	Heard and McDonald Islands
HEME	Hemisphere East
HEMN	Hemisphere North
HEMS	Hemisphere South
HEMW	Hemisphere West
HND	Honduras
HKG	Hong Kong
UM-84	Howland Island
HUN	Hungary
ISL	Iceland
US-ID	Idaho
US-IL	Illinois
IND	India
6A	Indian Ocean
US-IN	Indiana
IDN	Indonesia
INTL	International
ICAO	International Civil Aviation Organization
IESC	International Events Security Coalition
ITU	International Telecommunications Union
US-IA	Iowa
IRN	Iran
IRQ	Iraq
IRL	Ireland
ISAF-AFG	ISAF for Afghanistan
IMN	Isle of Man
ISR	Israel
ITA	Italy
ITU1	ITU Region 1
ITU2	ITU Region 2
ITU3	ITU Region 3
JAM	Jamaica

JPN	Japan
UM-86	Jarvis Island
JEY	Jersey
NT-B	JFC HQ Brunssum
NT-N	JFC Naples
NT-L	JHQ Lisbon
UM-67	Johnston Atoll
JOR	Jordan
US-KS	Kansas
KAZ	Kazakhstan
US-KY	Kentucky
KEN	Kenya
KER	Kerguelen Islands
UM-89	Kingman Reef
KIR	Kiribati
PRK	Korea, North
KOR	Korea, South
YU-KM	Kosovo
KWT	Kuwait
KGZ	Kyrgyzstan
9E	Lake Erie
9H	Lake Huron
9M	Lake Michigan
9N	Lake Ontario
9S	Lake Superior
LAO	Laos
LVA	Latvia
LBN	Lebanon
LSO	Lesotho
LBR	Liberia
LBY	Libya
LIE	Liechtenstein
LTU	Lithuania
US-LA	Louisiana
LUX	Luxembourg
MAC	Macao
MDG	Madagascar
PT-30	Madeira
US-ME	Maine
MWI	Malawi
MYS	Malaysia
MDV	Maldives
MLI	Mali
MLT	Malta
US-MP	Mariana Islands (excluding Guam)
MAI	Marion Island
MHL	Marshall Islands
MTQ	Martinique
US-MD	Maryland
US-MA	Massachusetts
MRT	Mauritania
MUS	Mauritius
MYT	Mayotte
89	Mediterranean Sea
MEX	Mexico
US-MI	Michigan

FSM	Micronesia
UM-71	Midway Islands
US-MN	Minnesota
US-MS	Mississippi
US-MO	Missouri
MDA	Moldova
MCO	Monaco
MNG	Mongolia
US-MT	Montana
MNE	Montenegro
MSR	Montserrat
MAR	Morocco
MOZ	Mozambique
MLEC	Multi-Lateral Enduring Contingency
MCFI	Multinational Coalition Forces - Iraq
MIFH	Multinational Interim Force Haiti
MULT	Multiple Areas
MMR	Myanmar
NAM	Namibia
NT-AEW	NATO Airborne Early Warning
NT-ACO	NATO Allied Command Operations (ACO)
NT-ACT	NATO Allied Command Transformation (ACT)
NT-EUR	NATO European Nations (NATO, excluding USA, CAN, ISL)
NT-HQ	NATO Headquarters
NT-TMI	NATO Training Mission Iraq
NRU	Nauru
UM-76	Navassa Island
NC3A	NC3A
US-NE	Nebraska
NPL	Nepal
NLD	Netherlands
ANT	Netherlands Antilles
US-NV	Nevada
NCL	New Caledonia
US-NH	New Hampshire
US-NJ	New Jersey
US-NM	New Mexico
US-NY	New York
NZL	New Zealand
NIC	Nicaragua
NER	Niger
NGA	Nigeria
NIU	Niue
NGEO	Non-Geostationary Satellite
NFK	Norfolk Island
NACT	North African Counter-Terrorism Forces
NN	North America Continent
NATO	NATO Nations (28 Nations: ALB, BEL, BUL, CAN, CZE, D, DNK, E, EST, F, G, GRC, HNG, HOL, HRV, I, ISL, LUX, LIT, LVA, NOR, POL, POR, ROU, SVK, SVN, TUR, USA)
US-NC	North Carolina
US-ND	North Dakota
MNP	Northern Mariana Islands
NOR	Norway
UU	Oceania
US-OH	Ohio
US-OK	Oklahoma

OMN	Oman
US-OR	Oregon
OTH	Other - See Remarks
4O	Pacific Ocean
PAK	Pakistan
PLW	Palau
PSE	Palestine
UM-95	Palmyra Atoll
PAN	Panama
PNG	Papua New Guinea
PRY	Paraguay
US-PA	Pennsylvania
PER	Peru
PHL	Philippines
KI-P	Phoenix Islands
PCN	Pitcairn Island
POL	Poland
PRT	Portugal
PRI	Puerto Rico
QAT	Qatar
RCVR	Radio Astronomy
REU	Réunion
US-RI	Rhode Island
MU-RO	Rodrigues
CFCK	ROK/US Combined Forces Command, Korea
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
BLM	Saint Barthélemy
SHN	Saint Helena
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
MAF	Saint Martin (French part)
AMS	Saint Paul and Amsterdam Islands
SPM	Saint Pierre and Miquelon
VCT	Saint Vincent and the Grenadines
WSM	Samoa
SMR	San Marino
DO-26	Santiago-Rodriguez
STP	Sao Tome and Principe
SAU	Saudi Arabia
SEN	Senegal
SRB	Serbia
SYC	Seychelles
SLE	Sierra Leone
SGP	Singapore
SXM	Sint Maarten (Dutch part)
SVK	Slovakia
SVN	Slovenia
SLB	Solomon Islands
SOM	Somalia
ZAF	South Africa
SR	South America Continent
US-SC	South Carolina
US-SD	South Dakota
SGS	South Georgia and the South Sandwich Islands

SPCE	Space
ESP	Spain
NT-HQS	Spectrum Management Branch in NATO HQ
LKA	Sri Lanka
KFOR	Stabilization Forces in Kosovo
NT-STF	STRIKEFORCENATO
SDN	Sudan
SUR	Suriname
SJM	Svalbard and Jan Mayen Islands
SWA	Swan Islands
SWZ	Swaziland
SWE	Sweden
CHE	Switzerland
SYR	Syria
TWN	Taiwan
TJK	Tajikistan
TZA	Tanzania
US-TN	Tennessee
US-TX	Texas
THA	Thailand
FYR	The former Yugoslav Republic of Macedonia (See footnote 2)
TEYE	THREE EYES (USA, CAN, GBR)
TGO	Togo
TKL	Tokelau
TON	Tonga
TTO	Trinidad and Tobago
SH-TA	Tristan da Cunha
TUN	Tunisia
TUR	Turkey
TKM	Turkmenistan
TCA	Turks and Caicos Islands
TUV	Tuvalu
UGA	Uganda
UKT1	UK Territories in Region 1
UKT3	UK Territories in Region 3
UKR	Ukraine
ARE	United Arab Emirates
GBR	United Kingdom
UN	United Nations
UNCK	United Nations Command, Korea
USC	United States (CONUS)
USP	United States and Possessions
UMI	United States Minor Outlying Islands
USA	United States of America
UNKN	Unknown
URY	Uruguay
USCE	US - Central
SCML	US - Mid Atlantic
USMW	US - Midwest
USNC	US - North Central
USNE	US - North East
USNW	US - North West
USSC	US - South Central
USSE	US - South East
USSW	US - South West
USWE	US - West

US-UT	Utah
UZB	Uzbekistan
VUT	Vanuatu
VAT	Vatican City State
VEN	Venezuela
US-VT	Vermont
VNM	Vietnam
VGB	Virgin Islands (British)
VIR	Virgin Islands (U.S.)
US-VA	Virginia
XVE	Visible Earth
UM-79	Wake Island
WLF	Wallis and Futuna Islands
US-WA	Washington
US-WV	West Virginia
ESH	Western Sahara
US-WI	Wisconsin
US-WY	Wyoming
YEM	Yemen
YO05	Yugoslavia (YUG) - Deprecated
ZMB	Zambia
ZWE	Zimbabwe

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Code List UAG

Used in element IntfReport

Code
AFRICOM
CENTCOM
EUCOM
JFCOM
NORTHCOM
PACOM
SOCOM
SOUTHCOM
STRATCOM
TRANSCOM
OTHER

Code List UCH

Used in element IntfReport

Code
NOISE
PULSED
VOICE ENGLISH
VOICE FOREIGN
OTHERS NEARBY AFFECTED
OTHERS FAR AWAY AFFECTED

INTERFERENCE FOLLOWS WHEN I CHANGE
GARBLED
FRAME LOSS
STEADY RECEIVE INDICATION (SRI)
REDUCED RANGE
FALSE TARGETS
REDUCED INTELLIGIBILITY (VOICE)
DATA ERRORS

Code List UCJ

Used in element CoordinationData

Code
Canada
Mexico
Nato
Host Nation
NTIA Fas Members
FAA
DoD Joint Chiefs of Staff
Other

Code List UDA

Used in element Assignment

Code
FMSC/MRFL data from NATO
Industry Canada
Federal Communications Commission
Frequency Resource Record System
Government Master File
International Telecommunication Union
Radio Astronomy data from the National Research Council
Other

Code List UFN

Used in element Link

Code
UNKNOWN
A2C2S (Army Airborne Command & Control System)
ACS (Aerial Common Sensor)
ADMINISTRATIVE
AEGIS
A-EPLRS
AERO CLUB
AFATDS
AFAUX/CAP (Air Force Auxiliary/Civil Air Patrol)
AFSATCOM
AHFEWS (Army HF EW System)
AIR DEFENSE
AIR DEFENSE WARNING
AIR DEFENSE/INTERCEPT
AIR FORCE ONE
AIR FORCE SPECIAL OPERATIONS
AIR OPERATIONS
AIR ROUTE SURVEILLANCE RADAR
AIR TRAFFIC CONTROL

AIR/AIR COMMUNICATIONS
AIR/GROUND/AIR COMMUNICATIONS
AIRBORNE COMMAND CENTER
AIRCRAFT
AIRPORT SURVEILLANCE RADAR
ALARM SYSTEMS
AMPS (Air Movement Planning System)
AMSS (Automatic Meteorological Sensor System)
ANTI-TERRORISM
APPROACH CONTROL
AQF (Advanced Quick Fix)
ARL (Aerial Reconnaissance-Low)
ARMY AVIATION
ARMY SPECIAL OPERATIONS
ARTILLERY
ARTS (Automated Remote Tracking System) (Telemetry)
ASAS (All Source Analysis System)
ASOS (Automated Surface Observation System)
ASW (Anti-Submarine Warfare)
ATFP
ATIS (Auto Terminal Information Service)
AVENGER-STC
AWACS
AWOS (Automatic Weather Observing System)
BACKBONE
BASE OPERATIONS
BATTLE COMMAND
BEACON
BLUE ANGELS
BMDS (Ballistic Missile Defense System)
BMEWS (Ballistic Missile Early Warning System)
BROADCAST
C3 (Command, Control, & Communications)
CARS (Contingency Airborne Reconnaissance System)
CAVALRY
CBR (Chemical, Biological, Radiological)
CID
CIVIL AFFAIRS
CIVIL DISTURBANCES
CIVIL ENGINEERING
CIVIL SUPPORT TEAM
CIVIL WORKS
CIWS (Close-In Weapons System)
CLEARANCE DELIVERY
CLOSE AIR SUPPORT (CAS)
COG/COOP
COLOR/HONOR GUARD
COMBAT CONTROL TEAM
COMBATANT COMMAND/GENERAL OFFICER SUPPORT
COMMAND AND CONTROL
COMMAND DESTRUCT/TERMINATION
COMMAND NET
COMMAND POST
COMMAND POST/CENTER
COMMANDER
COMMUNICATIONS

COMMUNITY ASSISTANCE
CONSEQUENCE MANAGEMENT
CONSERVATION
CONSTRUCTION
CONTINGENCY
COUNTER DRUG
CSSCS (Combat Service Support Control System)
CTT (Commander's Tactical Terminal)
DATA COLLECTION PLATFORM
DATA LINK
DBRITE (Digital Bright Radar Indicator Tower Equipment)
DEPARTURE CONTROL
DIS (Defense Investigative Service)
DISASTER PLANNING
DMSP (Defense Meteorological Satellite Program)
DOMESTIC SUPPORT OPERATIONS
DRONE CONTROL
DSCS (Defense Satellite Communication System)
DTSS (Digital Topographic Support System)
EDUCATION
ELECTRONIC WARFARE
EMERGENCY SERVICES
EMWIN
ENGINEERS
ENVIRONMENTAL
ENVIRONMENTAL CLEANUP
EOD (Emergency Ordinance Disposal)
EPLRS (Enhanced Position Location Reporting System)
EQUIPMENT CHECKS
ERCS (Emergency Rocket Communications Systems)
ETCAS (Enhanced Traffic Collision Avoidance System)
ETRAC (Enhanced Tactical Radar Correlator)
EXECUTIVE
EXERCISE
EXPERIMENTAL
FAADC2 (Forward Area Air Defense, Command and Control)
FEEDER CONTROL
FEMA (Federal Emergency Mgt Agency)
FIRE
FIRE ALARM
FIRE SUPPORT
FLEET SUPPORT
FLIGHT FOLLOWING
FLIGHT INSPECTION
FLIGHT TEST
FLOOD WARNING SYSTEM
FLTSATCOM (Fleet Satellite Communications)
FORACS (Fleet Operational Readiness Accuracy Check Site)
FORWARD AIR CONTROL POST
GBCS-L (Ground Based Common Sensor-Light)
GBS (Global Broadcast System)
GCA (Ground Control Approach)
GCCS (Global Command and Control System-Army)
GLOBAL
GLOBAL ALE (Automatic Link Establishment)
GLOBAL BLACK

GLOBAL DISCRETE
GLOBAL RED
GMD (Ground Missile Defense)
GOES (Geostationary Operational Environmental Satellites)
GOLDEN KNIGHTS
GPS (Global Positioning System)
GRCS (Guardrail Common Sensor)
GRIZZLY (M1 Bleacher MineSweeper)
GROUND CONTROL
GROUND INTERDICTION
GROUND OPERATIONS
GSR (Ground Surveillance Radar)
HAARP (High Frequency Active Auroral Research Program)
HARBOR-PORT OPERATIONS
HAVE QUICK
HAZARDOUS MATERIAL RELEASE
HAZMAT (Hazardous Materials)
HELO CONTROL
HICOM (High Command)
HYDRA (Hierarchical Yet Dynamically Reprogrammable Architecture)
HYDROLOGIC
IEWCS (Intelligence Electronic Warfare Common Sensor)
IFF/SIF
ILS (Instrument Landing System)
IMETS (Integrated Meteorological System)
INDUSTRIAL CONTROLS
INFANTRY
INSPECTION
INSTALLATION PA SYSTEM (Giant Voice)
INSTRUCTOR/STUDENT TRAINING
INTELLIGENCE
INTERPLANE
INVENTORY/INVENTORY CONTROLS (e.g., Optical Scanners)
IONOSPHERIC SOUNDER
I-REMBASS (Improved-Remotely Monitored Battlefield Sensor System)
ISYSCON (Integrated System Control)
JSS (Joint Surveillance System)
JTIDS/MIDS (Joint Tactical Information Distribution System)
LAND WARRIOR
LAW ENFORCEMENT
LEASAT (Leased Satellite)
LINEBACKER
LLDR (Lightweight Laser Designator Rangefinder)
LMRDFS (Light Man-portable Radio Direction Finding System)
LOCAL CONTROL
LOCKS AND DAMS
LONGBOW (Apache Helicopter)
LOOTING PREVENTION
M93A1 FOX
MAINTENANCE
MARS (Military Affiliated Radio System)
MEDICAL
METEOROLOGICAL
MFCS (Mortar Fire control System)
MICROWAVE
MICROWAVE DATA LINK

MILITARY POLICE
MILSTAR (Military Strategic and Tactical Relay System)
MISC (Miscellaneous)
MISSILE
MITT/DTES (Mobile Integrated Tactical Terminal/Distributed Common Ground System Test and Evaluation Strategy)
MLRS (Multiple Launch Rocket System)
MLS (Microwave Landing System)
MOBILE TELEPHONE
MOMS (Man on the Move System)
MOTOR POOL
MSE (Mobile Subscriber Equipment)
MTS (Movement Tracking System)
MUNITIONS
MUTUAL AID
MYSTIC STAR
NAOC (National Airborne Operations Center)
NASA
NATURAL RESOURCES
NAVAIDS
NAVAIDS CONTROLS
NAVAL GUNFIRE SUPPORT
NAVIGATION RADAR
NAVY SPECIAL OPERATIONS
NCIS (Naval Criminal Investigative Service)
NDB
NERON (NOAA Environmental Real-Time Observation Network)
NEXRAD
NOAA WEATHER RADIO
NOAA WEATHER RADIO LINK
NORAD (North American Air defense Command)
NTDR (Near Term Digital Radio)
OCCS SUPPORT
OPERATION ALLIANCE
OSI (Office of Special Investigation)
OTHER OPERATIONS
OTHR/ROTHR (Over-the-Horizon Radars)
PAGING
PAR (Precision Approach Radar)
PATRIOT
PAVE PAWS (Precision Acquisition Vehicle Entry Phased Array Warning System)
PILOT-TO-DISPATCHER
PILOT-TO-METRO
PILOT-TO-PILOT
POL (Petroleum, Oil, and Lubricants)
POSTAL OPERATIONS
PRIME BEEF
PRISON BUS
PROJECT COTHEN
PSYCHOLOGICAL OPERATIONS
PUBLIC WORKS
RADAR (Radio Detection and Ranging)
RADIO RELAY
RADIOLOCATION
RADIOSONDE
RAMP CONTROL

RANGE CONTROL
RANGE OPERATIONS
RANGER UNITS
RDMS (Range Data Management Subsystem)
RDTE SUPPORT
RED HORSE
REFUELING
REMOTE BARRIER CONTROL SYSTEMS
REMOTE CONTROL CRANE
RESOURCES CONSERVATION
RESUPPLY
RF TAGS
RUNWAY ICE DETECTION SYSTEMS
RUNWAY LIGHTING CONTROL
SAFETY
SATELLITE COMMUNICATIONS
SAWDS (Satellite Automated WX Dist Sys)
SCAMP (Single Channel Anti-Jam Manportable Terminal)
SCOPE SHIELD
SEA OPERATIONS
SEABEES
SEARCH AND RESCUE
SECURITY FORCE
SEISMIC
SENTINEL (AN/MPQ-64 Surveillance Radar)
SGLS (Space Ground Link Subsystem) (Telemetry)
SHIP/AIR OPERATIONS
SHIP/SHIP
SHIP/SHORE OPERATIONS
SHIPYARD
SHORE PATROL
SHORT TERM INCIDENT RESPONSE
SHUTTLE
SIMULATOR
SINCGARS (Single Channel Ground and Airborne Radio System)
SINCGARS-ASIP (Single Channel Ground and Airborne Radio System-Advanced System Improvement Plan)
SNOW REMOVAL
SOF (Supervisor of Flying)
SONOBUOY
SORT (Special Operations Response Team)
SPACE OPERATIONS
SPECIAL COURIER
SPECIAL FORCES
SPECIAL OPERATIONS
SPECIAL PROJECTS
SPECIAL SECURITY OPERATIONS
SPEED MEASUREMENT SYSTEMS
SPITFIRE (SPITFIRE Manpack UHF SATCOM DAMA Terminal)
SQUADRON/WING COMMON
STRIKER II (Advanced Fire Support/Scout/Surveillance System)
SUPPLY AND LOGISTICS
SURFACE NAVAIDS
SURVEILLANCE SYSTEMS
SURVEILLANCE/ RECONNAISSANCE
SURVEY
SUSTAINING OPERATIONS

TACAN (Tactical Air Navigation)
TACCS (Tactical Army Combat Service Support Computer System)
TACJAM (Tactical Communications Jamming System)
TACTS (Tactical Trunk Signaling)
TADIL-A
TADIL-C
TARGET
TARGET ACQUISITION
TARGET SCORING
TAXI
TCAS (Traffic Collision Avoidance System)
TCRS (Target Control System)
TEAMMATE
TECHNICAL ESCORT UNIT
TELECOMMAND
TELEMETRY
TEST AND MEASUREMENT
TEST RANGE
TEST RANGE TIMING
TETHERED AREOSTAT RADAR
THUNDERBIRDS
TIS or TRAVELERS INFORMATION SYSTEM
TMGS (Transportable mobile ground subsystems)
TOSS (TV Ordnance Scoring System)
TOWER
TRACKWOLF
TRAILBLAZER (Ground Based Communications Intelligence System)
TRAINING
TRANSPORTATION
TROJAN SPIRIT
TRUNKING
TSU
UAV (Unmanned Aerial Vehicle)
UNLICENSED DEVICE
UTILITIES
VOR (Very High Frequency Omnidirectional Range)
VORTAC (VHF Omni-range TACAN)
WARNING SYSTEM
WEAPON SYSTEMS
WEAPONS STORAGE PROTECTION
WEATHER
WEATHER RADAR
WHCA (White House Communications Agency)
WIDEBAND GLOBAL SATCOM
WILDLIFE PRESERVATION
WIND PROFILER
WIN-T (Warfighter Information Network-Tactical)
WIRELESS LOCAL AREA NETWORK
WIRELESS MIKE
WOLVERINE (Assault Bridge)

Code List UMD

Used in element TxMode

Code
Pulse

Digital
Analog

Code List UNS

Used in element StockNum

Code
Agency Tracking ID
Commercial P/N
Drawing Number
Line Item Number
National Stock Number
NATO Stock Number

Code List UOW

Used in element AsgnAllotOwner

Code
Agency
Unified Command
Unified Command Service
Bureau
Major Command
Subcommand
Installation Frequency Manager
Operating Unit
Area AFC/DoD AFC/Other Organizations
Requestor
Other

Code List UPF

Used in element Assignment

Code
Air/ground/air
Air to air
Air/ground/air pool

Code List UPR

Used in element IntfReport

Code
Priority 1 Strategic Order
Priority 2 Tasked Plan Execution
Priority 3 Essential Operational Support
Priority 4 Training
Priority 5 VIP Support
Priority 6 RDT&E and General
Priority 7 Miscellaneous

Code List UPU

Used in element PairedFreq

Code
Repeater Out
Repeater In
Duplex Pairing
Frequency Diversity
Space Diversity

Code List URI

Used in element Assignment

Code
Routine Application
Regular Application
Aeronautical Assignment Group (AAG) Application
Marine Assignment Group (MAG) Application

Code List USC

Used in elements StnClass, Usage

Code	Meaning
AL	Aeronautical Radionavigation Land Station: A land station in the aeronautical radionavigation service not intended for use while in motion.
ALA	Aeronautical Marker Beacon Station: A radionavigation land station in the aeronautical radionavigation service which employs a marker beacon.
ALB	Aeronautical Radiobeacon Station: A radiobeacon station in the aeronautical radionavigation service in-tended for the benefit of aircraft.
ALC	Aeronautical Radar Beacon (racon) Station: A land station in the aeronautical radionavigation service which employs a radar beacon (racon).
ALG	Glide Path (Slope) Sta-tion: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.
ALL	Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.
ALO	Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omni-bearing) of that station from an aircraft.
ALR	Radio Range Station: A radionavigation land station in the aeronautical radionavigation service providing radial equisignal zones. (In certain instances a radio range station may be placed on board a ship.)
ALS	Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain instances, a surveillance radar station may be placed on board a ship.)
ALTM	Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.
ALTO	Radionavigation Land Test Station (Operational Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit the pilot to check a radionavigation system aboard the aircraft prior to takeoff.
AM	Aeronautical Radionavigation Mobile Station: A mobile station in the aeronautical radionavigation service intended to be used while in motion or during halts at unspecified points.
AMA	Altimeter Station: A radionavigation mobile station in the aeronautical radionavigation service which employs a radio altimeter.
APX	ALASKA PRIVATE
APX2	ALASKA PRIVATE (TEMPORARY)
AT	Amateur station
AX	Fixed station in the Aeronautical Fixed Service
AX2	AERONAUTICAL FIXED (TEMPORARY)
BC	Broadcasting Station (sound): A station (sound) in the broadcasting service.
BT	Broadcasting Station (television): A station (television) in the broadcasting service.
DAMS	DOMESTIC AERONAUTICAL MOBILE-SATELLITE SERVICE

DARS	SATELLITE DIGITAL AUDIO RADIO SERVICE
DBS	DIRECT BROADCAST SATELLITE SERVICE
DFSS	DOMESTIC FIXED SATELLITE SERVICE
DGP	Differential-Global-Positioning-System (DGPS) Station: a terrestrial station used for the transmission of differential correction information to DGPS receivers aboard aircraft for navigation.
DHFS	DIRECT TO HOME FIXED SATELLITE
DLMS	DOMESTIC LAND MOBILE SATELLITE SERVICE
DMMS	DOMESTIC MARITIME MOBILE SATELLITE SERVICE
DMSS	DOMESTIC MOBILE SATELLITE SERVICE
DTH	DIRECT TO HOME SATELLITE
E1	Space research (active sensor) space station
E2	Space research (passive sensor) space station
E3	Space station in the Earth exploration-satellite service(active sensor)
E4	Space station in the Earth exploration-satellite (passive sensor)
EA	Space station in the amateur-satellite service
EB	Broadcasting-Satellite Space Station (sound broadcasting): A space station in the broadcasting-satellite service (sound broadcasting).
EC	Fixed-Satellite Space Station: A space station in the fixed-satellite service.
ED	Space Telecommand Space Station: A space station which receives emissions used for space telecommand.
EE	Standard Frequency Satellite Space Station: A space station in the standard frequency satellite service.
EESS	EARTH EXPLORATION SATELLITE SERVICE
EF	Radiodetermination-Satellite Space Station: A space station in the radiodetermination-satellite service.
EG	Maritime Mobile-Satellite Space Station: A space station in the maritime mobile-satellite service.
EH	Space Research Space Station: A space station in the space research service.
EI	Mobile-Satellite Space Station: A space station in the mobile-satellite service.
EJ	Aeronautical Mobile-Satellite Space Station: A space station in the aeronautical mobile-satellite service.
EK	Space Tracking Space Station: A space station which transmits or receives and retransmits emissions used for space tracking.
ELT	ELT TEST
ELT1	ELT TEST (MOBILE)
EM	Meteorological-Satellite Space Station: A space station in the meteorological-satellite service.
EMER	Meteorological-Satellite Telemetry Space Station
EMSS	Meteorological-Satellite Tracking Space Station
EN	Radionavigation-Satellite Space Station: A space station in the radionavigation-satellite service.
EO	Aeronautical Radionavigation-Satellite Space Station: A space station in the aeronautical radionavigation-satellite service.
EQ	Maritime Radionavigation-Satellite Space Station: A space station in the maritime radionavigation-satellite service.
ER	Space Telemetering Space Station: A space station the emissions of which are used for space telemetering.
ES	Inter-Satellite Space Station: A space station in the inter-satellite service.
ESV	EARTH STATION ON BOARD VESSEL
ET	Space Operation Space Station: A space station in the space operation service.
EU	Land Mobile-Satellite Space Station: A space station in the land mobile-satellite service.
EV	Broadcasting-Satellite Space Station (television): A space station in the broadcasting-satellite service (television).
EW	Earth Exploration-Satellite Space Station: A space station in the Earth exploration-satellite service.

EX	Experimental Station: A station utilising radio waves in experiments with a view to development of science or technique. (EX is not used on applications.)
EY	Space station in the time signal-satellite service
FA	Aeronautical Station: A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example on board ship or on a platform at sea.
FA1	AERONAUTICAL ENROUTE (MOBILE)
FA2	AERONAUTICAL ENROUTE (TEMPORARY)
FAA	AERONAUTICAL ADVISORY (UNICOM)
FAA1	AERONAUTICAL ADVISORY (UNICOM) (MOBILE)
FAA2	AERONAUTICAL ADVISORY (UNICOM) (TEMPORARY)
FAB	Aeronautical Broadcast Station: An aeronautical station which makes scheduled broadcasts of meteorological information and notices to airmen. (In certain instances, an aeronautical broadcast station may be placed on board a ship.)
FAC	Airdrome Control Station: An aeronautical station providing communication between an airdrome control tower and aircraft.
FAD	Telecommand Aeronautical Station: A land station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.
FAS	AVIATION SUPPORT INSTRUCTIONAL
FAS1	AVIATION SUPPORT INSTRUCTIONAL (MOBILE)
FAT	Flight Test Station: An aeronautical station used for the transmission of essential communications in connection with the testing of aircraft or major components of aircraft.
FAT1	FLIGHT TEST (MOBILE)
FAT3	FLIGHT TEST (ITINERANT)
FB	Base Station: A land station in the land mobile service.
FB2	MOBILE RELAY
FB2A	MOBILE RELAY - AIRPORT TERMINAL USE
FB2C	MOBILE RELAY - INTERCONNECT
FB2I	MOBILE RELAY - ITINERANT
FB2J	MOBILE RELAY - TEMPORARY INTERCONNECT
FB2K	MOBILE RELAY - STAND-BY INTERCONNECT
FB2L	MOBILE RELAY - ITINERANT INTERCONNECT
FB2S	MOBILE RELAY - STAND-BY
FB2T	MOBILE RELAY - TEMPORARY
FB4	COMMUNITY REPEATER
FB4C	COMMUNITY REPEATER - INTERCONNECT
FB4I	COMMUNITY REPEATER - ITINERANT
FB4J	COMMUNITY REPEATER - TEMPORARY INTERCONNECT
FB4K	COMMUNITY REPEATER - STAND-BY INTERCONNECT
FB4S	COMMUNITY REPEATER - STAND-BY
FB4T	COMMUNITY REPEATER - TEMPORARY
FB6	PRIVATE CARRIER (PROFIT)
FB6C	PRIVATE CARRIER (PROFIT) - INTERCONNECT
FB6I	PRIVATE CARRIER (PROFIT) - ITINERANT
FB6J	PRIVATE CARRIER (PROFIT) - TEMPORARY INTERCONNECT
FB6K	PRIVATE CARRIER (PROFIT) - STAND -BY INTERCONNECT
FB6L	PRIVATE CARRIER (PROFIT) - ITINERANT INTERCONNECT
FB6S	PRIVATE CARRIER (PROFIT) - STAND-BY
FB6T	PRIVATE CARRIER (PROFIT) - TEMPORARY
FB7	PRIVATE CARRIER (NON-PROFIT)
FB7C	PRIVATE CARRIER (NON-PROFIT) - INTERCONNECT
FB7J	PRIVATE CARRIER (NON-PROFIT) - ITINERANT
FB7T	PRIVATE CARRIER (NON-PROFIT) - TEMPORARY INTERCONNECT
FB8	CENTRALIZED TRUNK RELAY
FB8A	CENTRALIZED TRUNK RELAY - AIRPORT TERMINAL USE
FB8C	CENTRALIZED TRUNK RELAY - INTERCONNECT
FB8I	CENTRALIZED TRUNK RELAY - ITINERANT

FB8J	CENTRALIZED TRUNK RELAY - TEMPORARY INTERCONNECT
FB8L	CENTRALIZED TRUNK RELAY - ITINERANT INTERCONNECT
FB8S	CENTRALIZED TRUNK RELAY - STANDBY
FB8T	CENTRALIZED TRUNK RELAY- TEMPORARY
FBA	SMALL BASE
FBAT	SMALL BASE - TEMPORARY
FBBS	BASE
FBC	BASE - INTERCONNECT
FBCT	BASE - INTERCONNECT
FBD	Telecommand Base Station: A land station in the land mobile service the emissions of which are used for terrestrial telecommand.
FBGS	GROUND
FBI	BASE - ITINERANT
FBJ	BASE- TEMPORARY INTERCONNECT
FBK	BASE - STAND-BY INTERCONNECT
FBL	BASE - ITINERANT INTERCONNECT
FBS	BASE - STAND-BY
FBSI	AIR-GROUND SIGNALING
FBST	STAND-BY
FBT	BASE - TEMPORARY
FC	Coast Station: A land station in the maritime mobile service.
FCA	MARINE SUPPORT - TESTING & TRAINING
FCA2	MARINE SUPPORT - TESTING & TRAINING (TEMPORARY)
FCB	Marine Broadcast Station: A coast station which makes scheduled broadcast of time, meteorological, and hydrographical information.
FCD	Telecommand Coast Station: A land station in the maritime mobile service the emissions of which are used for terrestrial telecommand.
FCL	PRIVATE COAST
FCL2	PRIVATE COAST (TEMPORARY)
FCU	MARINE UTILITY
FCU1	MARINE UTILITY (MOBILE)
FD	Aeronautical Station (R): An aeronautical station in the aeronautical mobile (R) service.
FDBS	FEEDER LIINK FOR DBS IN FIXED SATELLITE SERVICE
FG	Aeronautical Station (OR): An aeronautical station in the aeronautical mobile (OR) service.
FIS	FLIGHT INFORMATION SERVICES
FL	Land Station: A station in the mobile service not intended to be used while in motion.
FLD	Telecommand Land Station: A land station in the mobile service the emissions of which are used for terrestrial telecommand.
FLE	Telemetering Land Station: A land station the emissions of which are used for telemetering.
FLEA	Aeronautical Telemetering Land Station: A telemetering land station used in the flight testing of manned or unmanned aircraft, missiles, or major components thereof.
FLEB	Flight Telemetering Land Station: A telemetering land station the emissions of which are used for telemetering to a balloon; to a booster or rocket, excluding a booster or rocket in orbit about the Earth or in deep space; or to an aircraft, excluding a station used in the flight testing of an aircraft.
FLEC	Surface Telemetering Land Station: A telemetering land station the emissions of which are intended to be received on the surface of the Earth.
FLFS	FEEDER LINK IN FIXED SATELLITE SERVICE
FLH	Hydrologic and Meteorological Land Station: A land station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.
FLU	Aeronautical Utility Land Station: A land station located at airdrome control towers and used for control of ground vehicles and aircraft on the ground at airdromes.
FLU1	AVIATION SUPPORT SERVICE (MOBILE)
FLW	FEEDER LINK FOR WIDE AREA AUGMENTATION SYSTEM
FMA1	AIRCRAFT FLIGHT TEST STATION
FP	Port Station: A coast station in the port operations service.

FR	Receiving station only, connected with the general network of telecommunication channels
FSS	FIXED SATELLITE SERVICE
FSSF	FIXED SATELLITE SERVICE
FX	Fixed Station: A station in the fixed service.
FX1	CONTROL
FX1A	CONTROL - AIRPORT TERMINAL USE
FX1C	CONTROL - INTERCONNECT
FX1I	CONTROL - ITINERANT
FX1J	CONTROL - TEMPOARY INTERCONNECT
FX1K	CONTROL - STAND-BY INTERCONNECT
FX1L	CONTROL - ITINERT INTERCONNECT
FX1S	CONTROL- STAND-BY
FX1T	CONTROL - TEMPORARY
FX2	FIXED RELAY
FX2C	FIXED RELAY - INTERCONNECT
FX2I	FIXED RELAY - ITINERANT
FX2J	FIXED RELAY - TEMPORARY INTERCONNECT
FX2K	FIXED RELAY - STAND-BY INTERCONNECT
FX2L	FIXED REALY - ITINERANT INTERCONNECT
FX2S	FIXED RELAY - STAND-BY
FX2T	FIXED RELAY - TEMPORARY
FX3	SECONDARY FIXED (TONE SIGNALLING)
FX3C	SECONDARY FIXED - INTERCONNECT
FX3J	SECONDARY FIXED - TEMPORARY INTERCONNECT
FX3S	SECONDARY FIXED - STAND-BY
FX3T	SECONDARY FIXED - TEMPORARY
FX5	TEMPORARY FIXED
FXC	FIXED - INTERCONNECT
FXCO	CENTRAL OFFICE
FXCT	CONTROL
FXD	Telecommand Fixed Station: A fixed station in the fixed service the emissions of which are used for terrestrial telecommand.
FXDI	DISPATCH
FXE	Telemetering Fixed Station: A fixed station the emissions of which are used for telemetering.
FXH	Hydrologic and Meteorological Fixed Station: A fixed station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.
FXI	FIXED - ITINERANT
FXIO	INTER-OFFICE
FXK	FIXED - STAND-BY INTERCONNECT
FXO	OPERATIONAL FIXED
FXOC	OPERATIONAL FIXED - INTERCONNECT
FXOI	OPERATIONA FIXED - ITINERANT
FXOJ	OPERATIONAL FIXED - TEMPORARY INTERCONNECT
FXOS	OPERATIONAL FIXED - STAND-BY
FXOT	OPERATIONAL FIXED - TEMPORARY
FXRP	REPEATER
FXRX	FIXED RELAY
FXS	FIXED - STAND-BY
FXSB	FIXED SUBSCRIBER
FXT	FIXED - TEMPORARY
FXTS	AUXILIARY TEST
GCO	GROUND COMMUNICATIONS OUTLET
GS	Station on board a warship or a military or naval aircraft
IAMS	INTERNATIONAL AERONAUTICAL MOBILE SATELLITE SERVICE
IFLM	FEEDER LINK FOR MOBILE SATELLITE SERVICE
IFSS	INTERNATIONAL FIXED SATELLITE SERVICE

IMMS	INTERNATIONAL MARITIME MOBILE SATELLITE SERVICE
IMSS	INTERNATIONAL MOBILE SATELLITE SERVICE
LR	Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion.
LRT	RADIOLOCATION LAND - TEMPORARY
MA	Aircraft Station: A mobile station in the aeronautical mobile service other than a survival craft station, located on board an aircraft.
MAD	Telecommand Aircraft Station: A mobile station in the aeronautical mobile service the emissions of which are used for terrestrial telecommand.
MAP	Portable Aircraft Station: A portable station operating in the aeronautical mobile service.
ME	Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (ME is not used on applications.)
MFL	AERONAUTICAL MULTICOM
MFL1	AERONAUTICAL MULTICOM (MOBILE)
MFL2	AERONAUTICAL MULTICOM (TEMPORARY)
MFX	MARINE OPS FIXED
ML	Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent.
MLD	Telecommand Land Mobile Station: A mobile station in the land mobile service the emissions of which are used for terrestrial telecommand.
MLP	Portable Land Mobile Station: A portable station operating in the land mobile service.
MMS	MARITIME MOBILE SATELLITE SERVICE
MO	Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points.
MO3	MOBILE/VEHICULAR REPEATER
MO3C	MOBILE/VEHICULAR REPEATER WITH INTERCONNECT
MO3I	MOBILE/VEHICULAR REPEATER - ITINERANT
MO5	MOBILE & TEMPORARY FIXED
MO6	PRIVATE CARRIER MOBILE OP (PROFIT)
MO6C	PRIVATE CARRIER MOBILE OP (PROFIT) - INTERCONNECT
MO6I	PRIVATE CARRIER MOBILE OP (PROFIT) - ITINERANT
MO6L	PRIVATE CARRIER MOBILE OPERATION (PROFIT) WITH TEMPORARY INTERCONNECT
MO6S	PRIVATE CARRIER MOBILE OP (PROFIT) - STAND-BY
MO7	PRIVATE CARRIER MOBILE OP (NON-PROFIT)
MO7C	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - INTERCONNECT
MO7I	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - ITINERANT
MO7L	PRIVATE CARRIER MOBILE OP (NON-PROFIT) - WITH ITINERANT INTERCONNECT
MO8	CENTRALIZED TRUNK MOBILE
MO8A	CENTRALIZED TRUNK MOBILE - AIRPORT TERMINAL USE
MO8C	CENTRALIZED TRUNK MOBILE - INTERCONNECT
MOA	MOBILE - AIRPORT TERMINAL USE
MOB	Radio Beacon Mobile Station: A mobile station the emissions of which are used to determine its location.
MOC	MOBILE - INTERCONNECT
MOD	Telecommand Mobile Station: A mobile station in the mobile service the emissions of which are used for terrestrial telecommand.
MOE	Telemetering Mobile Station: A mobile station the emissions of which are used for telemetering.
MOEA	Aeronautical Telemetering Mobile Station: A telemetering mobile station used for transmitting data directly related to the airborne testing of the vehicle, (or major components), on which the station is installed.
MOEB	Flight Telemetering Mobile Station: A telemetering mobile station used for transmitting data from an airborne vehicle, excluding data related to airborne testing of the vehicle itself, (or major components thereof).

MOEC	Surface Telemetering Mobile Station: A telemetering mobile station located on the surface of the Earth and the emissions of which are intended to be received on the surface of the Earth.
MOH	Hydrologic and Meteorological Mobile Station: A mobile station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.
MOI	MOBILE - ITINERANT
MOL	MOBILE WITH ITINERANT INTERCONNECT
MOP	Portable Mobile Station: A portable station operating in the mobile service.
MOS	MOBILE - STAND-BY
MOT	TEMPORATY MOBILE
MOU	Aeronautical Utility Mobile Station: A mobile station used for communication at airdromes with the aeronautical utility land station, the airdrome control station, the US FAA flight service station, ground vehicles, and aircraft on the ground. (All transmissions shall be subject to the control of the airdrome control station and shall be discontinued immediately when so requested by the airdrome control operators.)
MOU1	AERONAUTICAL UTILITY MOBILE
MR	Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points.
MRP	Portable Radiolocation Station: A portable station operating in the radiolocation service.
MRT	MARINE RECEIVER TEST
MRT2	MARINE RECEIVER TEST (TEMPORARY)
MS	Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station.
MSC	SHORE RADAR TEST
MSD	Telecommand Ship Station: A mobile station in the maritime mobile service the emissions of which are used for terrestrial telecommand.
MSP	Portable Ship Station: A portable station operating in the maritime mobile service.
MSR	SHORE RADIONAVIGATION
MSS	MOBILE SATELLITE SERVICE
NL	Maritime Radionavigation Land Station: A land station in the Maritime Radionavigation Service not intended for use while in motion
NLC	Maritime Radar Beacon (racon) Station: A land station in the maritime radionavigation service which employs a radar beacon (racon).
NLM	Marine Radiobeacon Station: A radiobeacon station in the maritime radionavigation service intended for the benefit of ships.
NR	Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points.
OD	Oceanographic Data Station: A station in the maritime mobile service located on a ship, buoy or other sensor platform the emissions of which are used for the transmission of oceanographic data.
OE	Oceanographic Data Interrogating Station: A station in the maritime mobile service the emissions of which are used to initiate, modify, or terminate functions of equipment directly associated with an oceanographic data station, including the station itself.
OTH	OTHER
PA	Passenger Ship
PL	Combination of 2 or more classes of station
PLAN	FIXED SATELLITE SERVICE ORB-88 ALLOTMENT PLAN
RA	Radio Astronomy Station: A station in the radio astronomy service. (This is always a receiving station.)
RCO	REMOTE COMMUNICATIONS OUTLET
RDS	RADIO DETERMINATION SATELLITE SERVICE
RG	Radiodetermination station using radio direction finding
RLA	AERONAUTICAL MARKER BEACON
RLB	AERONAUTICAL RADIO BEACON
RLB1	AERONAUTICAL RADIO BEACON (MOBILE)
RLB2	AERONAUTICAL RADIO BEACON (TEMPORARY)
RLC	SHORE RADIOLOCATION TEST

RLC2	SHORE RADIOLOCATION TEST (TEMPORARY)
RLD	RADAR/RADAR TEST
RLG	GLIDE PATH (SLOPE)
RLL	LOCALIZER
RLO	OMNIDIRECTIONAL RADIO RANGE
RLR	SHORE RADIOLOCATION/RACON
RLT	RADIONAVIGATION LAND TEST
RLT1	RADIONAVIGATION LAND TEST (MOBILE)
RM	Maritime radionavigation mobile station
RN	Radionavigation Land Station: A station in the radionavigation service not intended to be used in motion.
RNL	Loran Station: A long distance radionavigation land station transmitting synchronised pulses. Hyperbolic lines of position are determined by the measurement of the difference in the time of arrival of these pulses.
RNV	RADIONAVIGATION LAND
RPC	RAMP CONTROL
SA	Meteorological Aids Mobile Station: A mobile station in the meteorological aids service intended to be used while in motion or during halts at unspecified points.
SAR	Radiosonde Station: A station in the meteorological aids service employing a radiosonde.
SAR1	SEARCH AND RESCUE (MOBILE)
SM	Meteorological Aids Base Station: A land station in the meteorological aids service not intended for use while in motion.
SMB	Radar Beacon Precipitation Gage Station: A transponder station in the meteorological aids service, the emissions of which are used for telemetering.
SMD	Meteorological Radar Station: A station in the meteorological aids service employing radar.
SMRG	Radiosonde Ground Station: A station in the meteorological aids service employing a ground station associated with a radiosonde.
SN	Sounder Network Station: A station equipped with an ionosphere sounder used for the real-time selection of frequencies for operational communication circuits.
SP	Sounder Prediction Station: A station equipped with an ionosphere sounder for real-time monitoring of upper atmosphere phenomena or to obtain data for the prediction of propagation conditions.
SS	Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service.
TA	Space operation earth station in the amateur-satellite service
TB	Aeronautical Earth Station: An earth station in the fixed-satellite service or in some cases in the aeronautical mobile-satellite service located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service.
TC	Fixed-Satellite Earth Station: An earth station in the fixed-satellite service.
TD	Space Telecommand Earth Station: An earth station the emissions of which are used for space telecommand.
TE	Satellite EPIRB Station: A satellite Emergency Position-Indicating Radio Beacon (EPIRB) in the mobile-satellite service
TF	Radiodetermination-Satellite Earth Station: A fixed earth station in the radiodetermination-satellite service.
TG	Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship.
TH	Space Research Earth Station: An earth station in the space research service.
TI	Coast Earth Station: An earth station in the fixed-satellite service or in some cases in the maritime mobile-satellite service located at a specified fixed point on land to provide a feeder link for the maritime mobile-satellite.
TJ	Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft.
TK	Space Tracking Earth Station: An earth station which transmits or receives emissions used for space tracking.
TL	Radiodetermination-Satellite Mobile Earth Station: A mobile earth station in the radiodetermination-satellite service.

TM	Meteorological-Satellite Earth Station: An earth station in the meteorological-satellite service.
TN	Radionavigation-Satellite Fixed Earth Station: A fixed earth station in the radionavigation-satellite service.
TO	Aeronautical Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the aeronautical radionavigation-satellite service.
TP	Earth Station (receiving): An earth station used for receiving. (TP is not used on applications.)
TQ	Maritime Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the maritime radionavigation-satellite service.
TR	Space Telemetering Earth Station: An earth station which receives emissions used for space telemetering.
TS	Television Sound Channel
TT	Space Operation Earth Station: An earth station in the space operation service.
TU	Land Mobile Earth Station: A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent.
TV	Television Vision Channel
TW	Earth Exploration-Satellite Earth Station: An earth station in the Earth exploration-satellite service.
TX	Maritime Radionavigation-Satellite Earth Station: A fixed earth station in the maritime radionavigation-satellite service.
TY	Base Earth Station: An earth station in the fixed-satellite service or in some cases in the land mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the land mobile-satellite service.
TZ	Aeronautical Radionavigation-Satellite Earth Station: A fixed earth station in the aeronautical radionavigation-satellite service.
UA	Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points.
UB	Earth station in the broadcasting-satellite service (sound broadcasting)
UD	Space telecommand mobile earth station
UE	Earth station in the standard frequency-satellite service
UH	Mobile earth station in the space research service
UK	Space tracking mobile earth station
UM	Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the radionavigation-satellite service.
UN	Mobile earth station in the meteorological-satellite service
UR	* Space telemetering mobile earth station
UT	Mobile earth station in the space operation service
UV	Earth station in the broadcasting-satellite service (television)
UW	Mobile earth station in the earth exploration-satellite service
UY	Earth station in the time signal-satellite service
VA	Land Earth Station: An earth station in the fixed-satellite service or in some cases in the mobile-satellite service located at a specified point or within a specified area on land to provide a feeder link for the mobile-satellite service.
WDX	RADIOLOCATION WEATHER RADAR
WDXT	RADIOLOCATION WEATHER RADAR - TEMPORARY
X	The station class is not known (legacy data only)
XC	Experimental Contract Developmental Station: An experimental station used for the evaluation or testing under Government contract of electronics equipment or systems in a design or development stage.
XD	Experimental Developmental Station: An experimental station used for evaluation or testing of electronics equipment or systems in a design or development stage.
XE	Experimental Export Station: An experimental station intended for export and used for the evaluation or testing of electronics equipment or systems in the design or development stage.

XM	Experimental Composite Station: An experimental station used in experimental operations of a complex nature not readily specified or used in an operation which is a composite of two or more of the established experimental categories.
XR	Experimental Research Station: An experimental station used in basic studies concerning scientific investigation looking toward the improvement of the art of radiocommunications.
XT	Experimental Testing Station: An experimental station used for the evaluation or testing of electronics equipment or systems, including site selection and transmission path surveys, which have been developed for operational use.

Code List UST

Used in element StatusLog

Code
ACCEPTED BY
ACTIVATED BY
ADMIN MOD BY
APPROVED BY
ASSIGNED BY
AUTHORISED BY
COMMENT BY
COMPLIANCE
COORDINATION (from, to list)
DELETED BY
EXPIRED BY
FORWARDED (from, to)
IMPORTED BY
IN-PROCESS AT
INFO (from, to list)
LATERAL COORDINATION
MODIFIED BY
NOTIFIED BY
ORIGINATED BY
RECALLED (from, to)
RECEIVED BY
REGISTERED WITH
REJECTED (from, to)
RESOLVED (from, to)
REVIEW REQUIRED (from, to)
SUBMITTED TO
TABLED BY
EXPORT BY
IMPORT BY
UNAPPROVED BY

Code List UTY

Used in element Assignment

Code
Simplex
Duplex
Semiduplex
Simplex Net
One Directional Transmission
Broadcast
Simultaneous Broadcast
Radionavigation
Radiolocation

Reception Only
Radio Determination
Other

Code List UUC

Used in element Assignment

Code
Wartime circuits required to be operated or to be ready for operation in Peacetime
Wartime circuits that have a limited capability in peacetime for exchanging traffic between the planned terminals
Required for wartime only
Required for occasional and temporary usage for training exercises or maneuver purposes
Required for the deployment phase of contingency operations
Required for the employment phase of contingency operations
Required for peacetime only

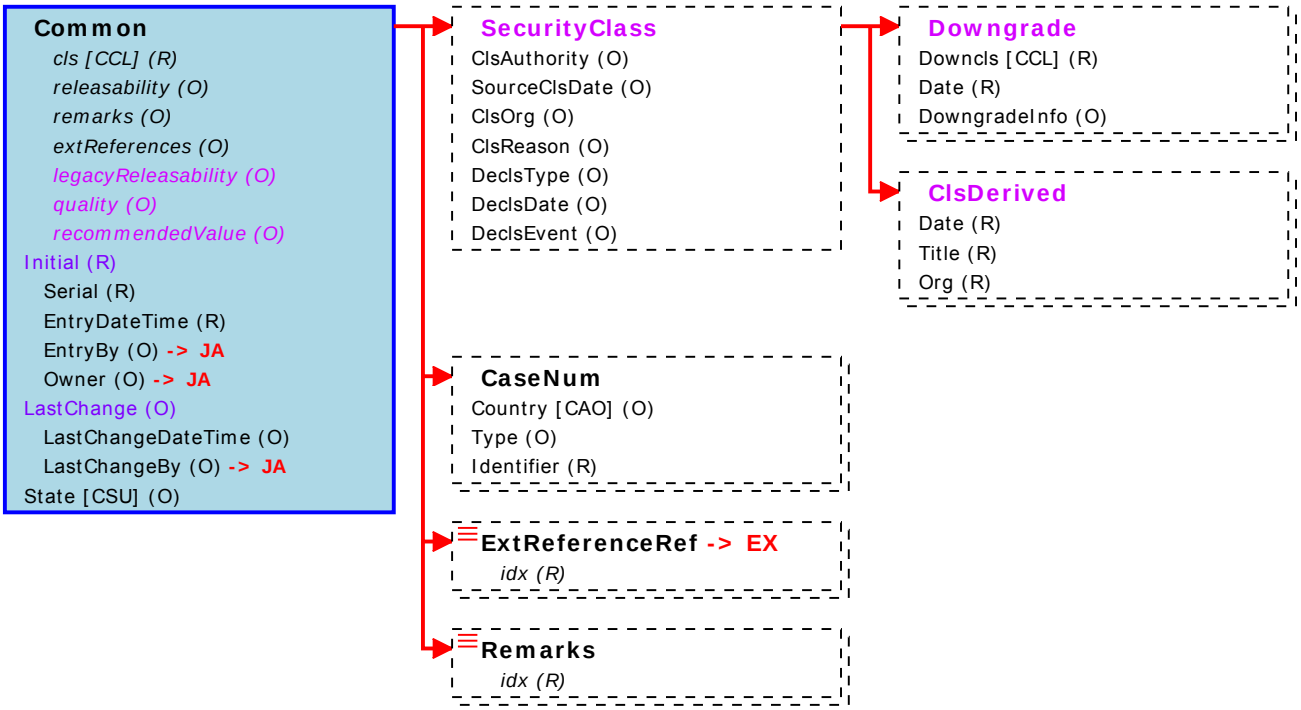
Code List UUF

Used in element Assignment

Code
Regular, not limited to workweek
Regular, workweek
Occasional, not limited to workweek
Occasional, workweek

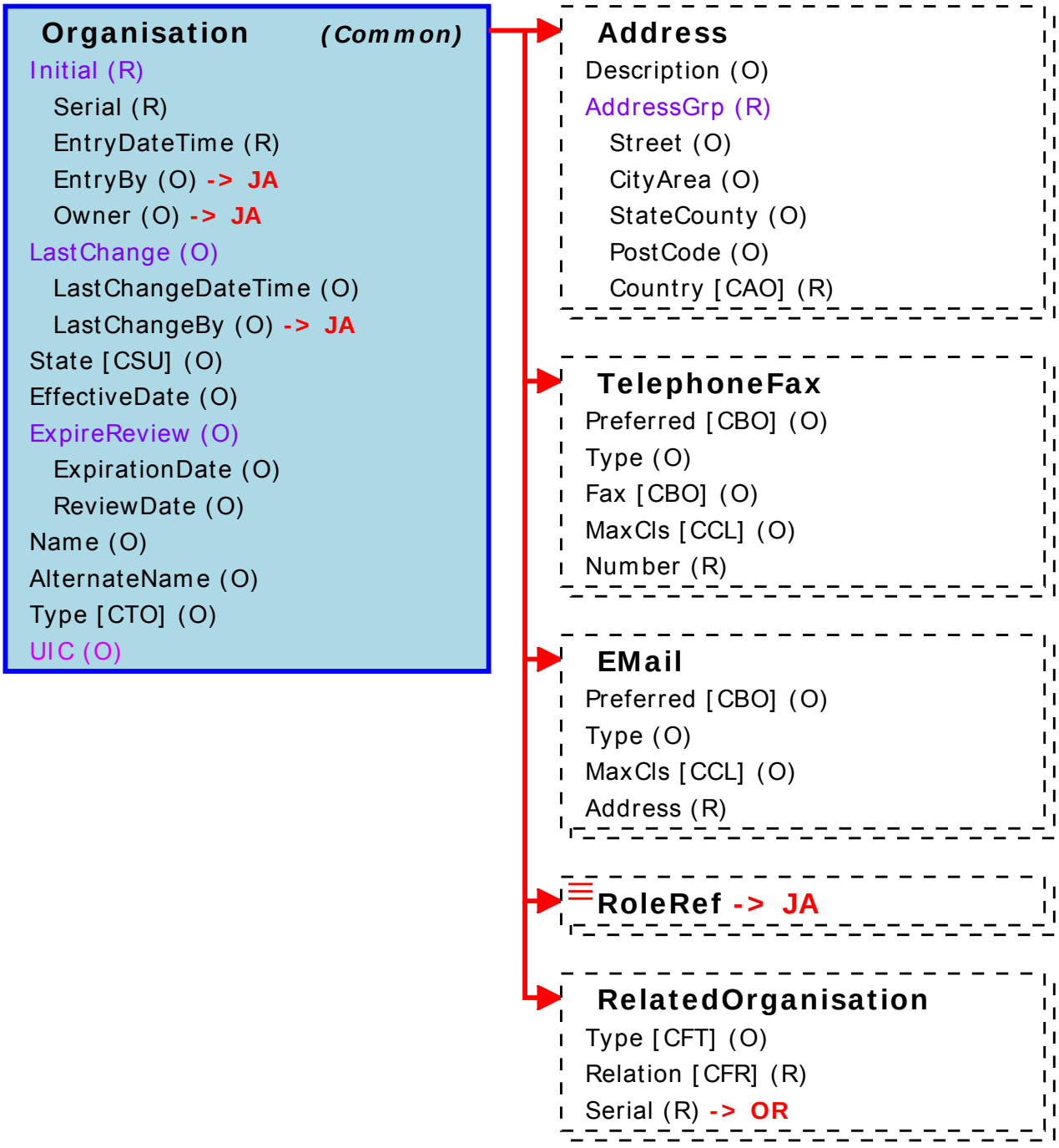
Common

References:, CaseNum, ClsDerived, Common, Downgrade, ExtReferenceRef, Remarks, SecurityClass



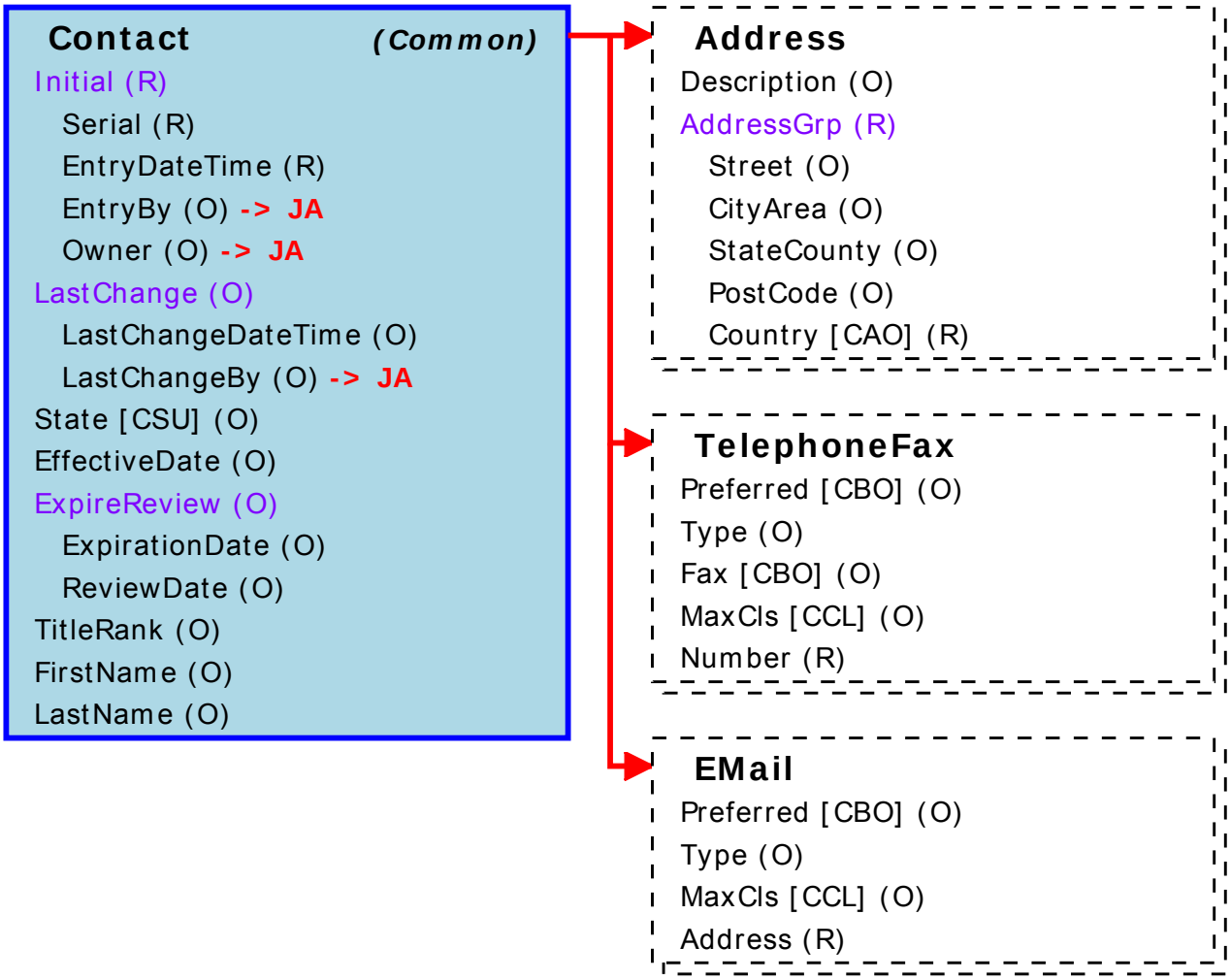
Organisation

References:, Address, Common, EMail, Organisation, RelatedOrganisation, RoleRef, TelephoneFax



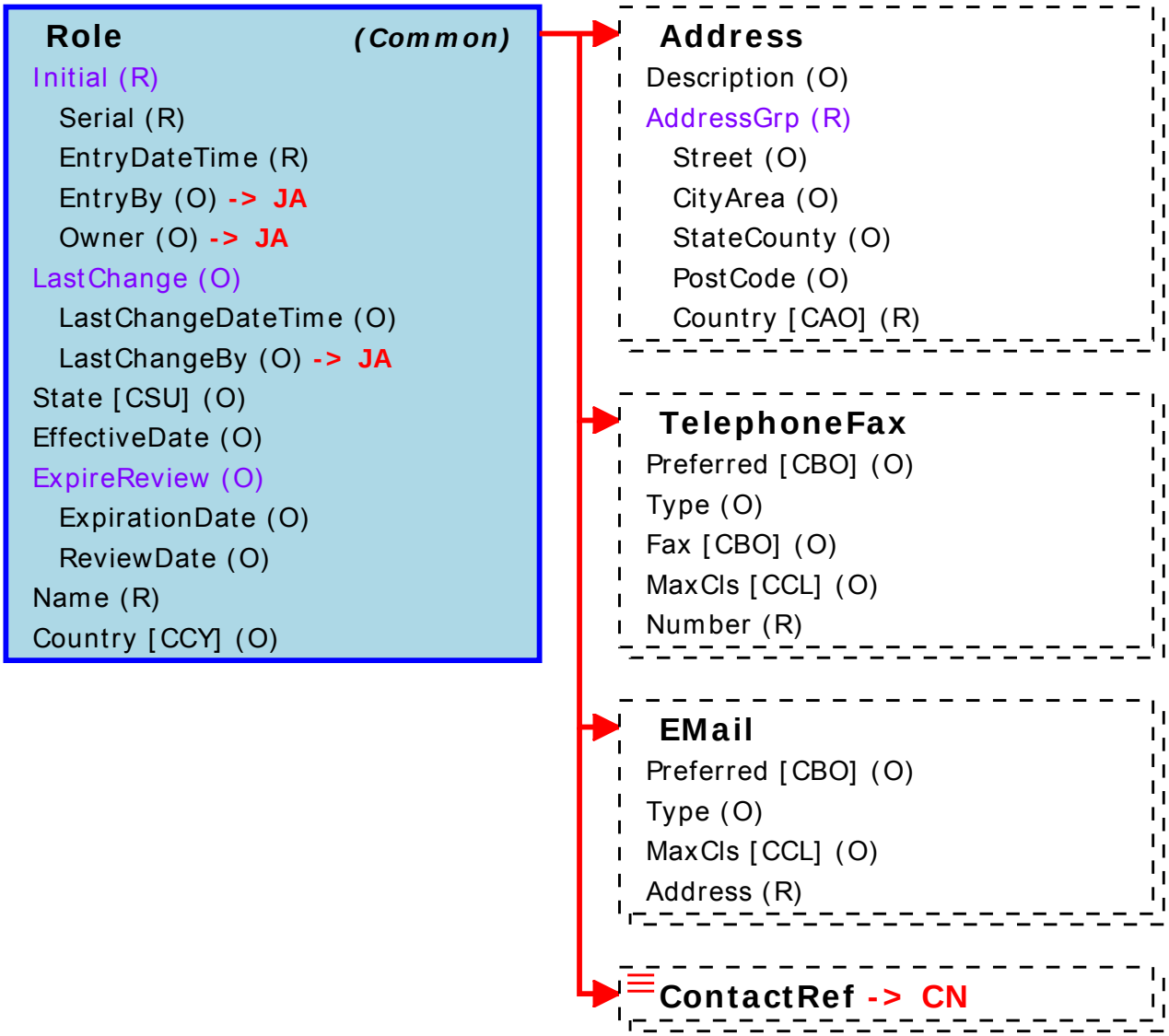
Contact

References:, Address, Common, Contact, EMail, TelephoneFax



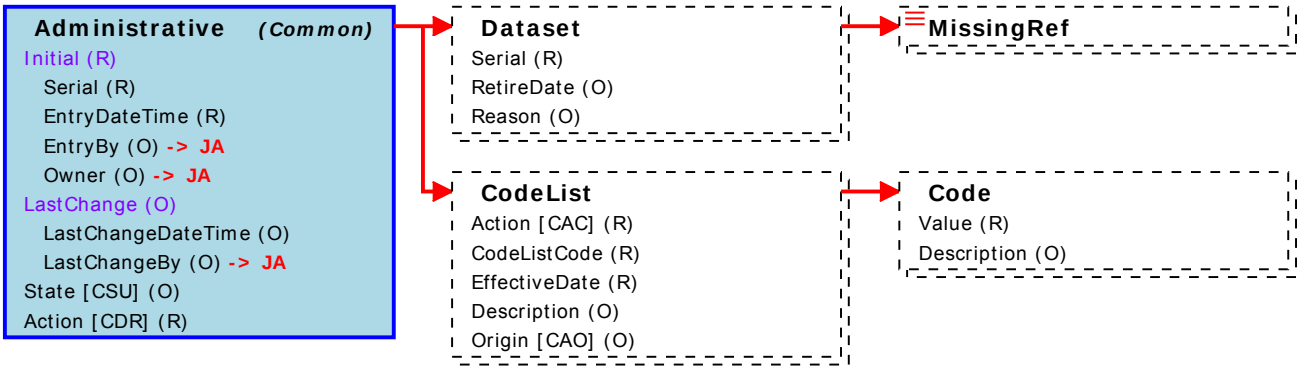
Role

References:, Address, Common, ContactRef, EMail, Role, TelephoneFax



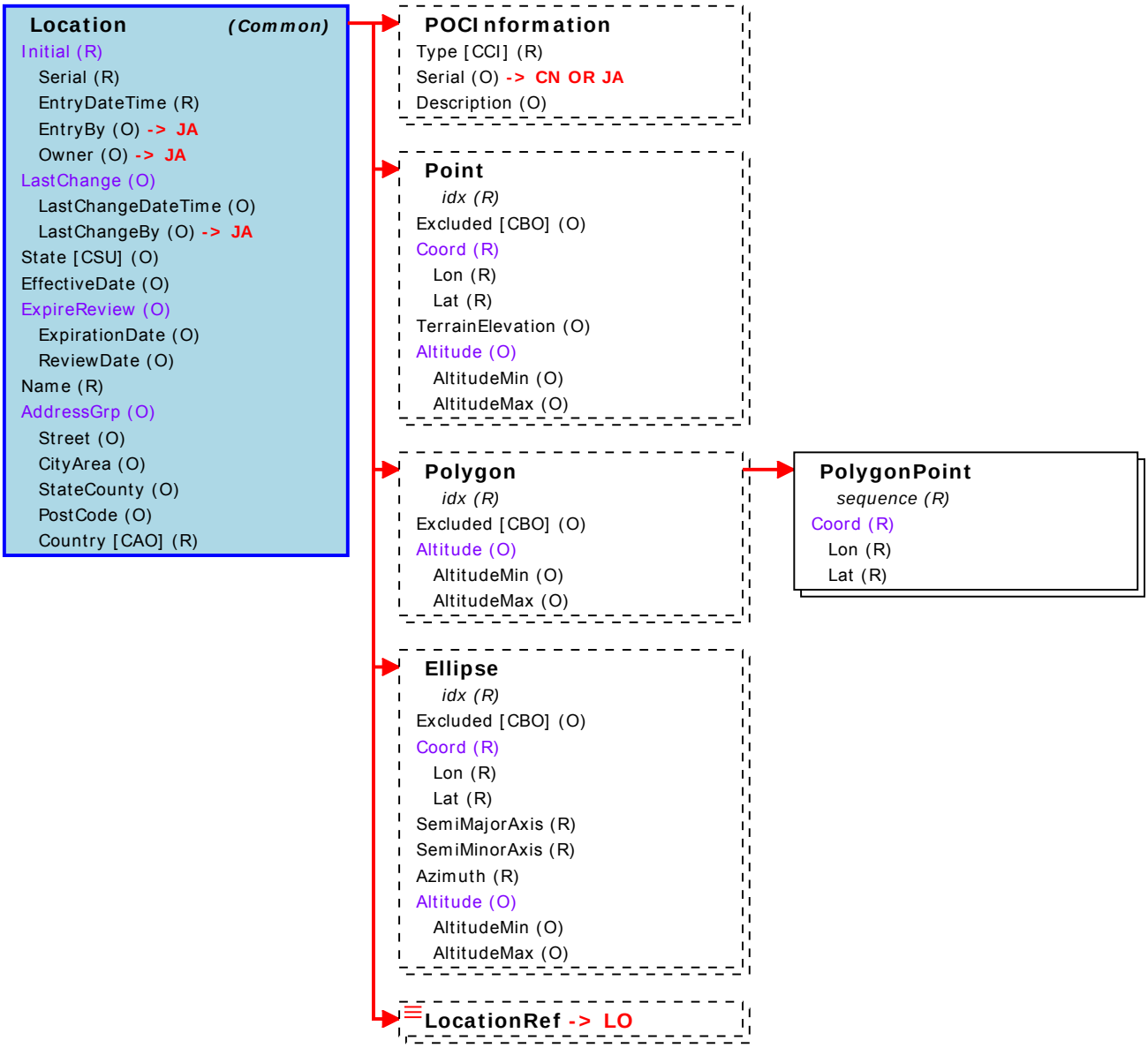
Administrative

References:, Administrative, Code, CodeList, Common, Dataset, MissingRef



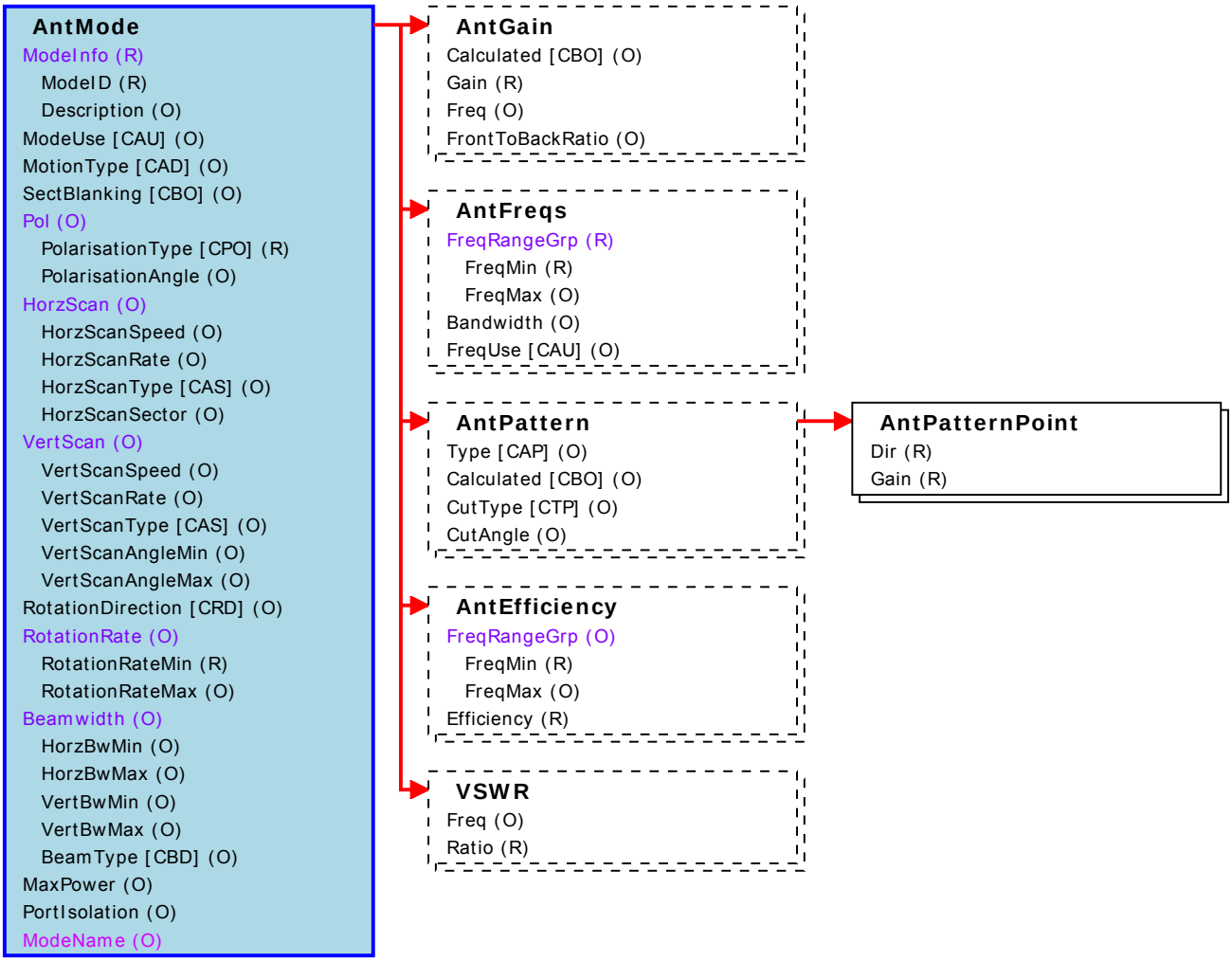
Location

References:, Common, Ellipse, Location, LocationRef, POCInformation, Point, Polygon, PolygonPoint



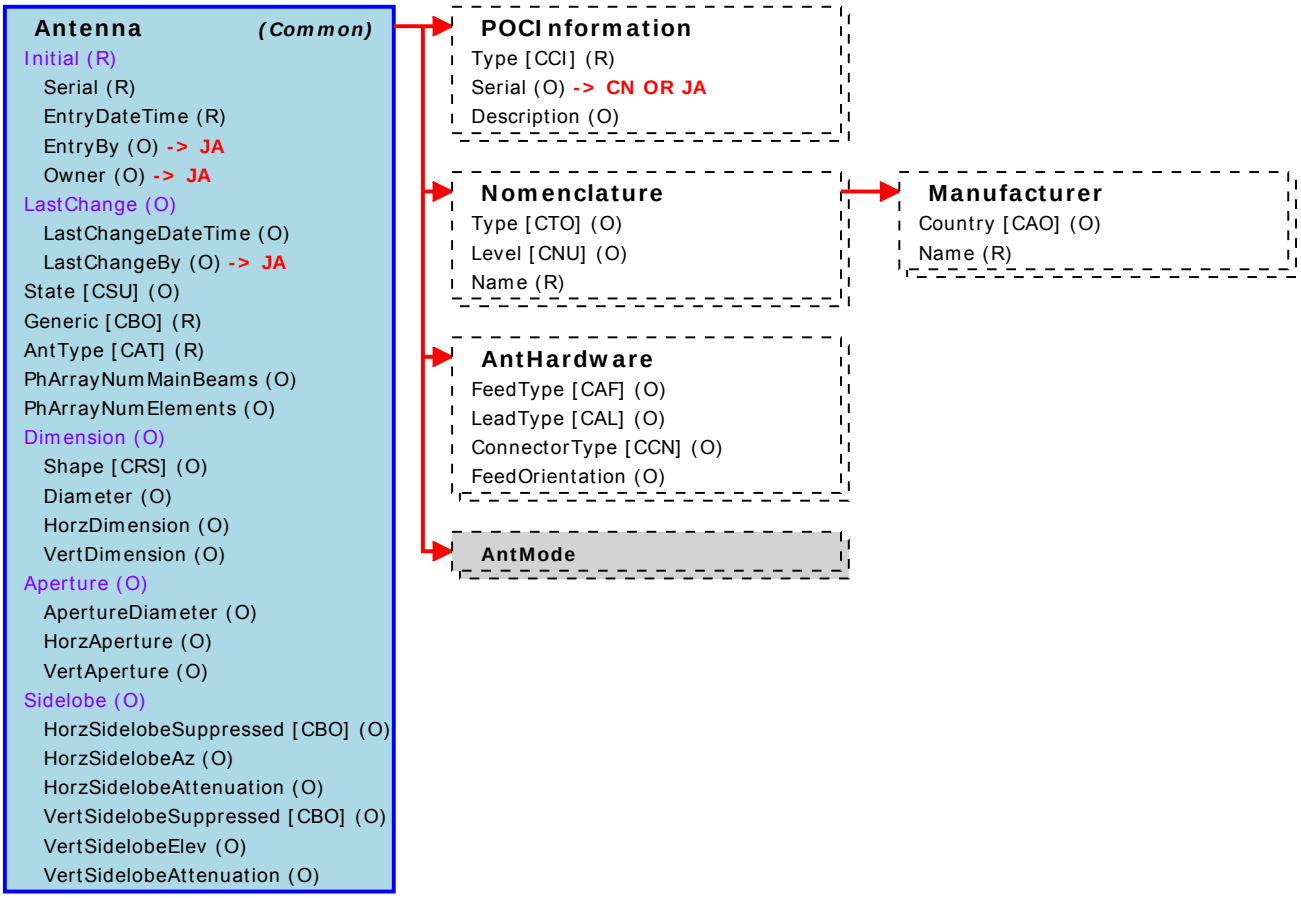
AntMode

References:, AntEfficiency, AntFreqs, AntGain, AntMode, AntPattern, AntPatternPoint, VSWR



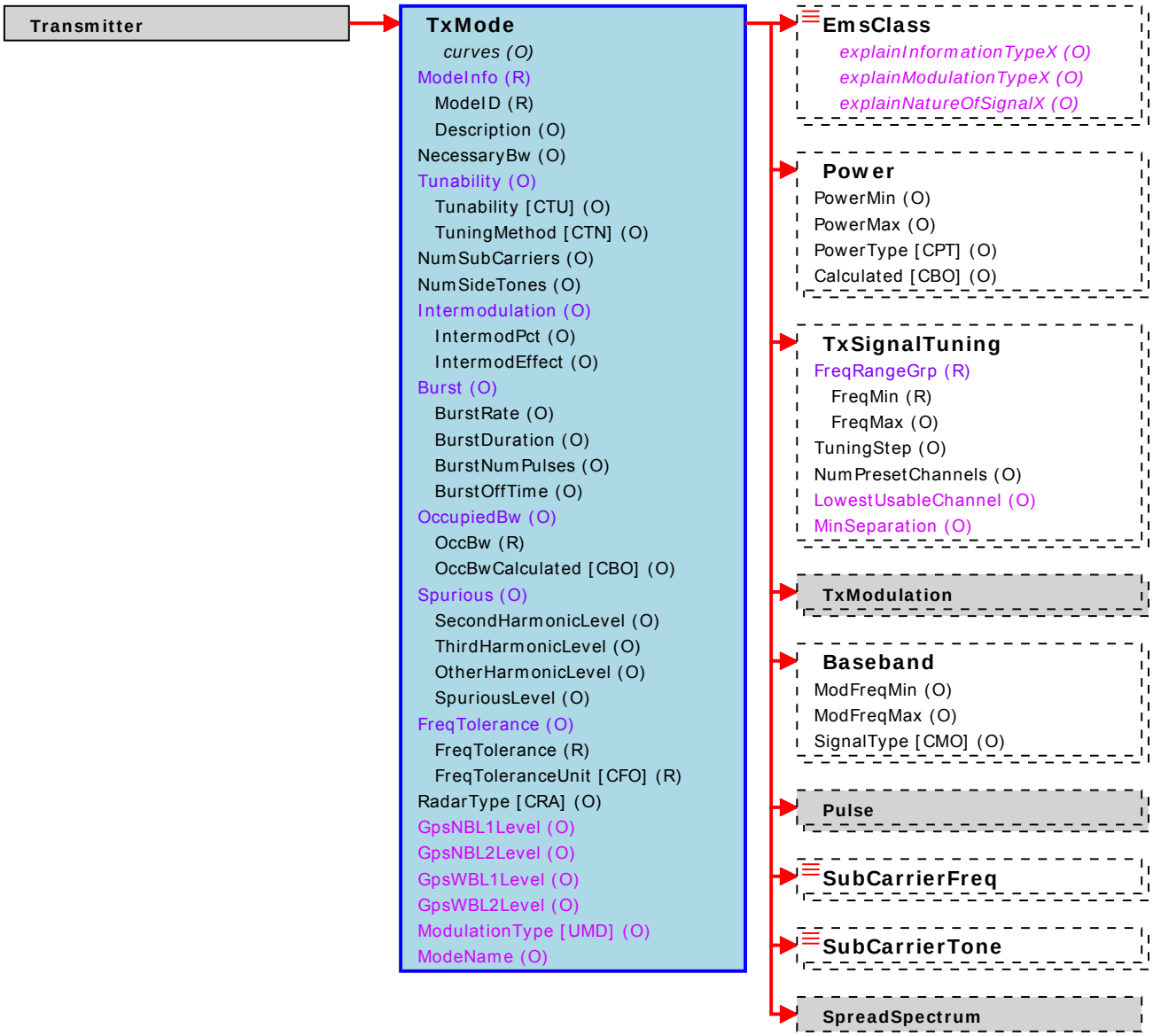
Antenna

References:, AntHardware, AntMode, Antenna, Common, Manufacturer, Nomenclature, POCInformation



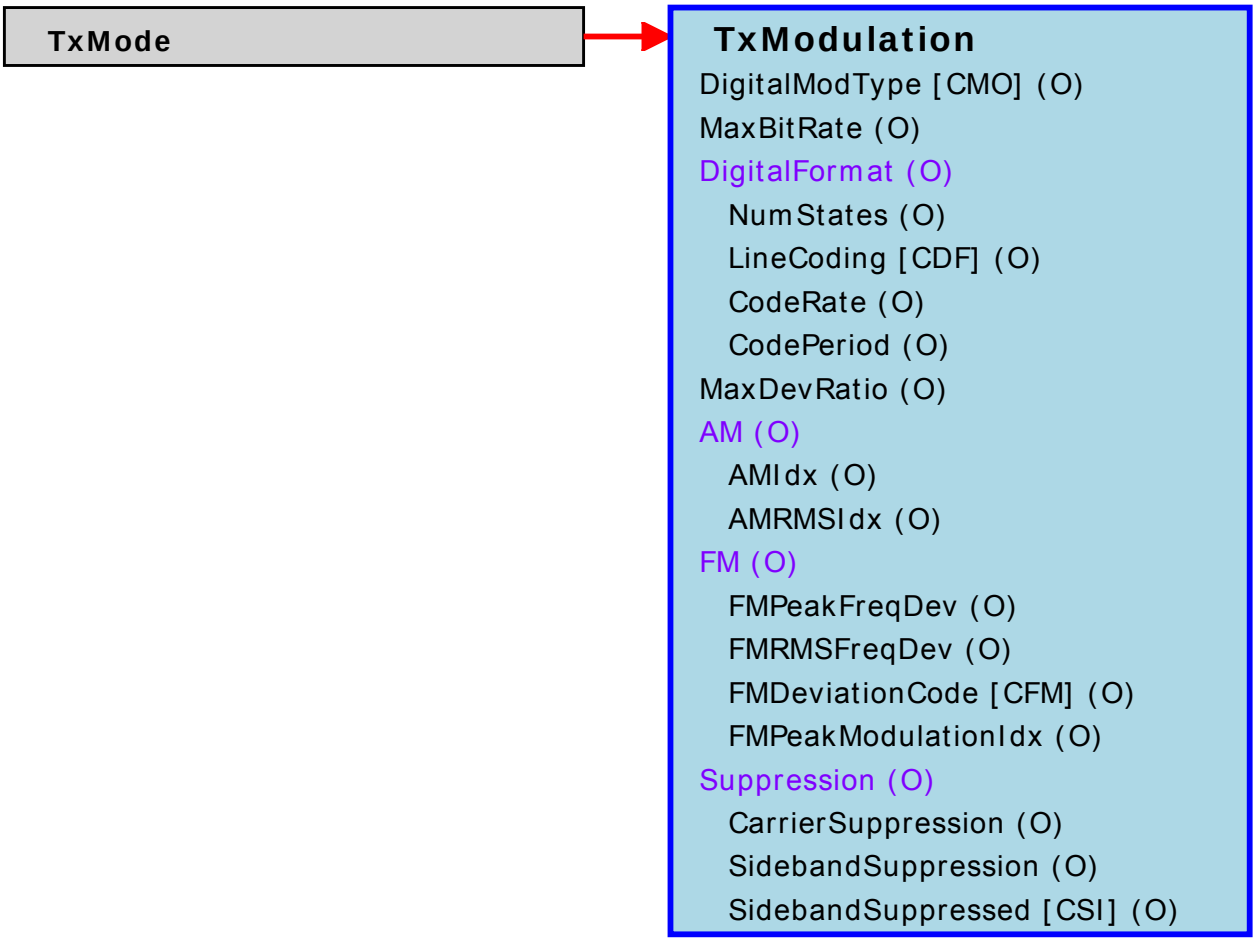
TxMode

References:, Baseband, EmsClass, Power, Pulse, SpreadSpectrum, SubCarrierFreq, SubCarrierTone, Transmitter, TxMode, TxModulation, TxSignalTuning



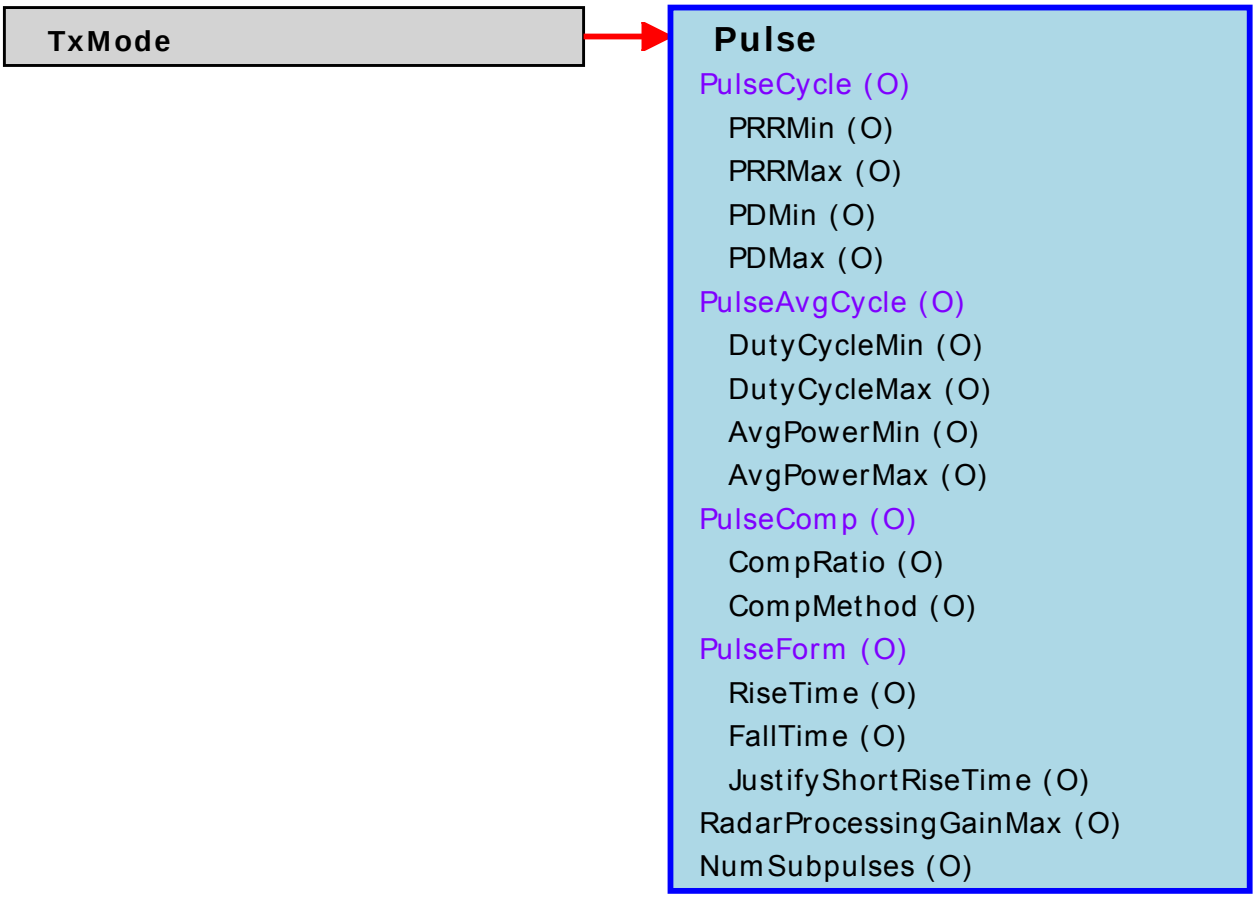
TxModulation

*References:*RxModulation, TxMode, TxModulation



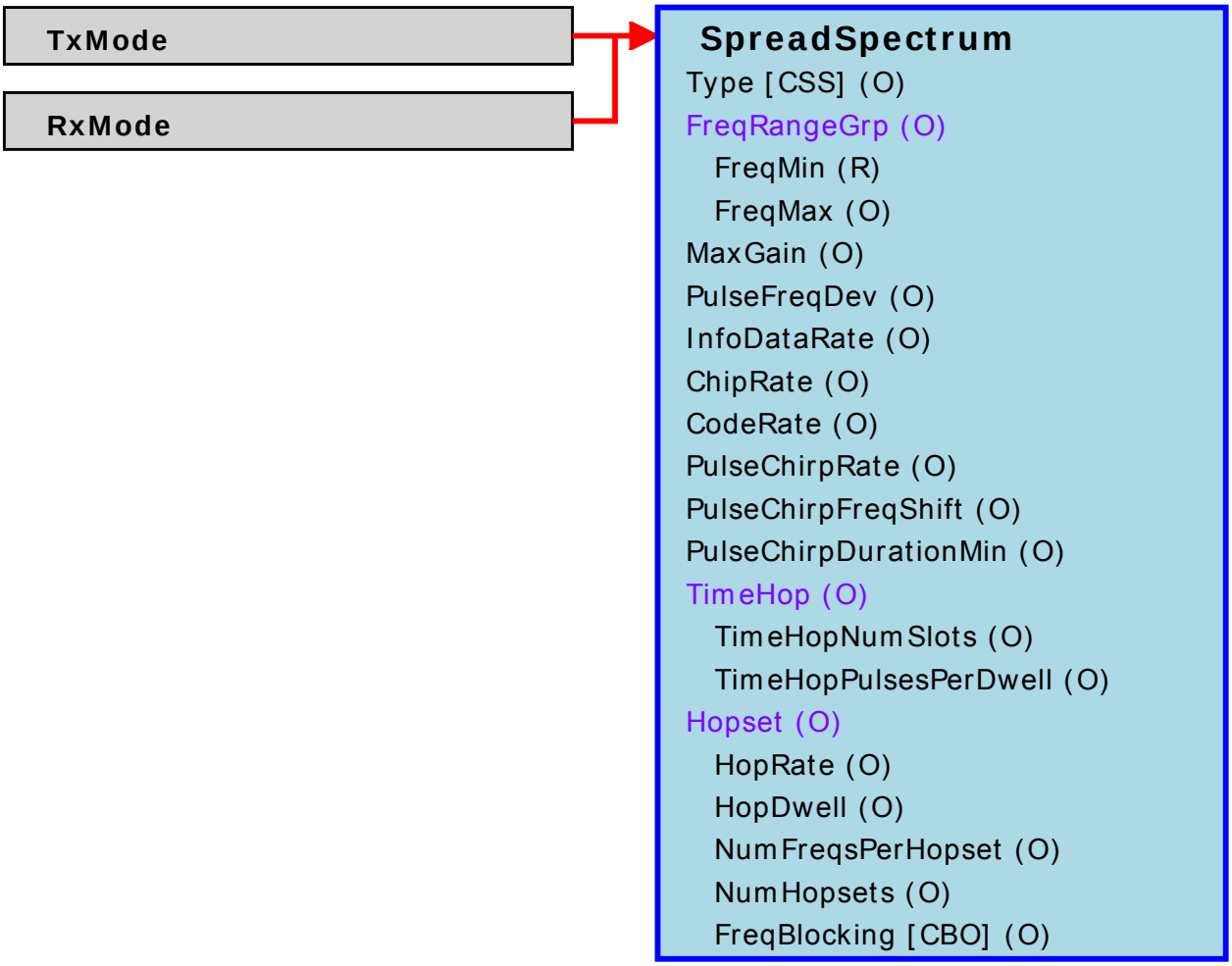
Pulse

References:, Pulse, TxMode



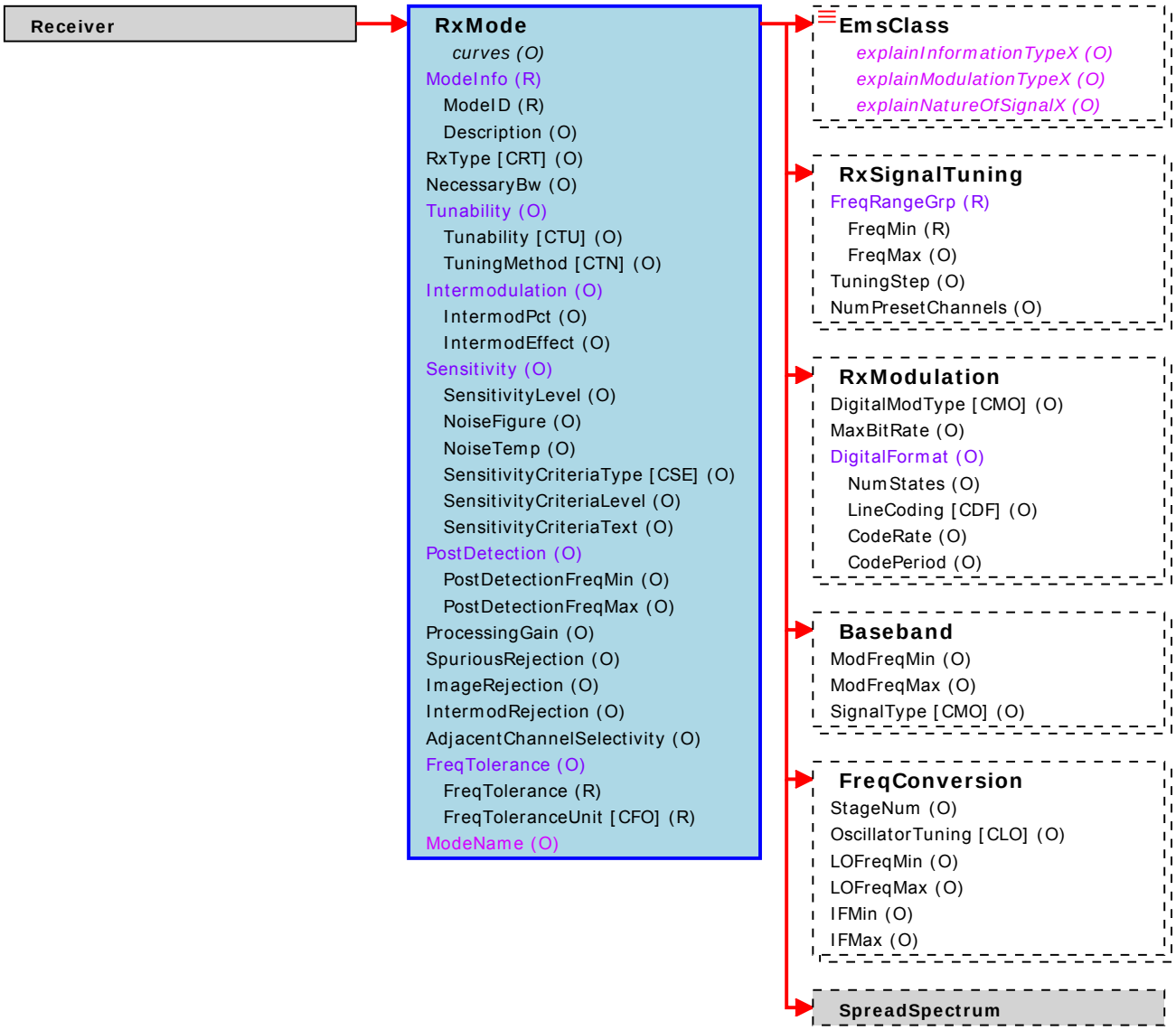
SpreadSpectrum

References:, RxMode, SpreadSpectrum, TxMode



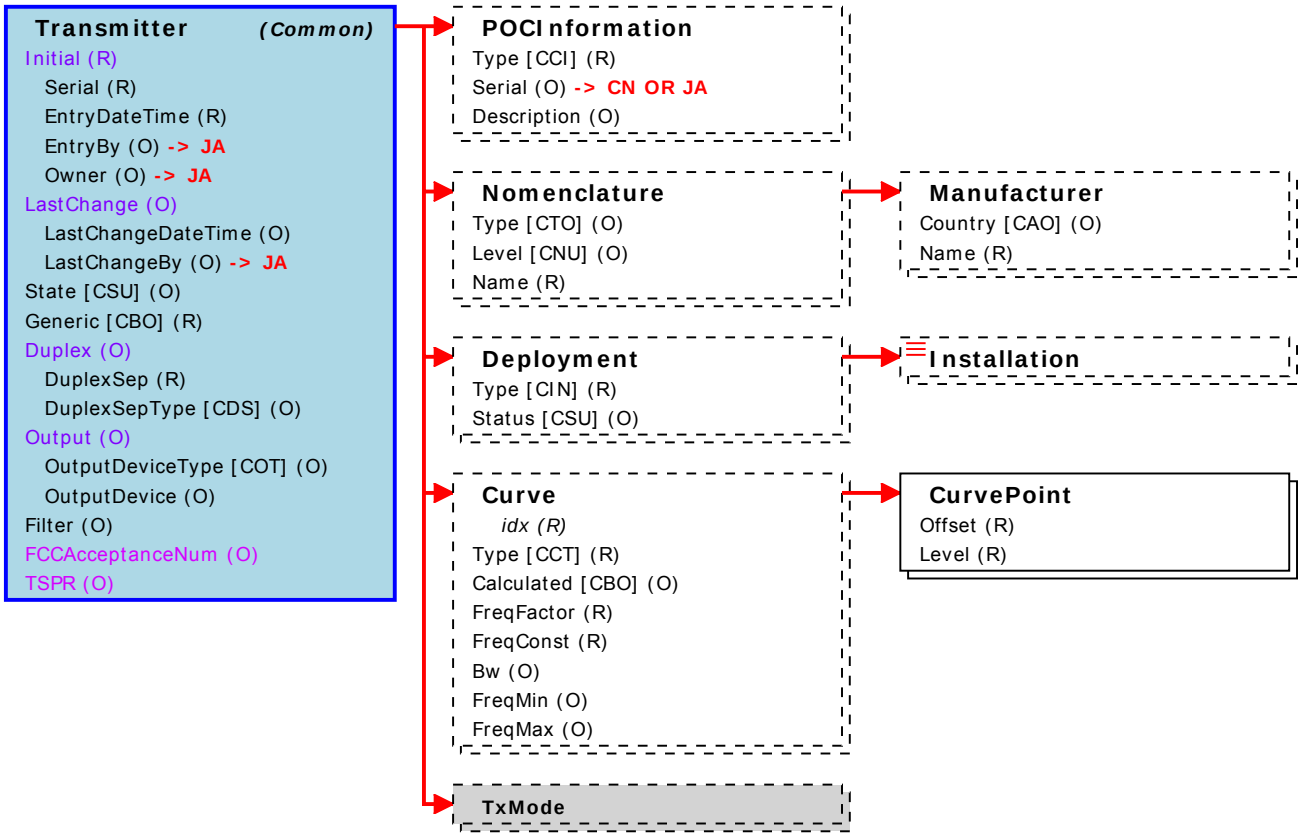
RxMode

References:, Baseband, EmsClass, FreqConversion, Receiver, RxMode, RxModulation, RxSignalTuning, SpreadSpectrum



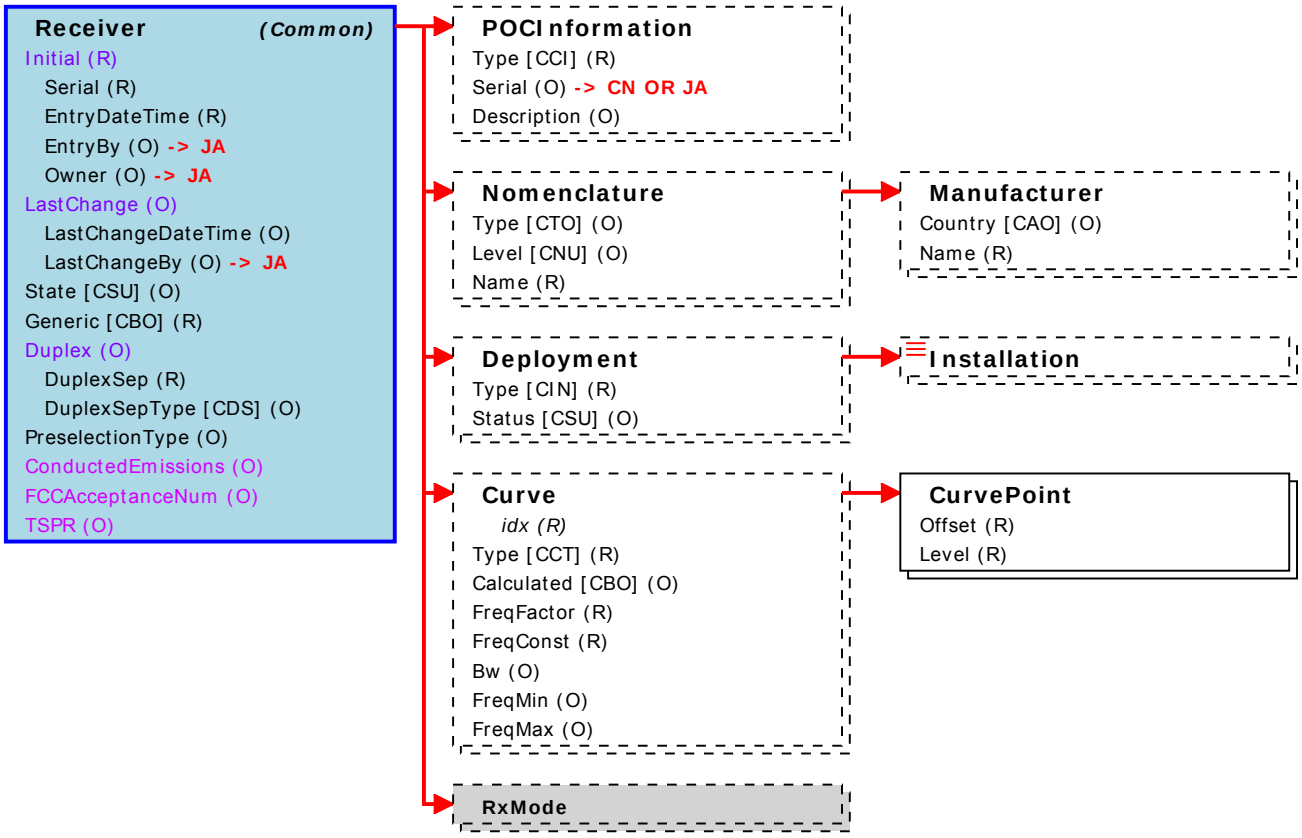
Transmitter

References:, Common, Curve, CurvePoint, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, Transmitter, TxMode



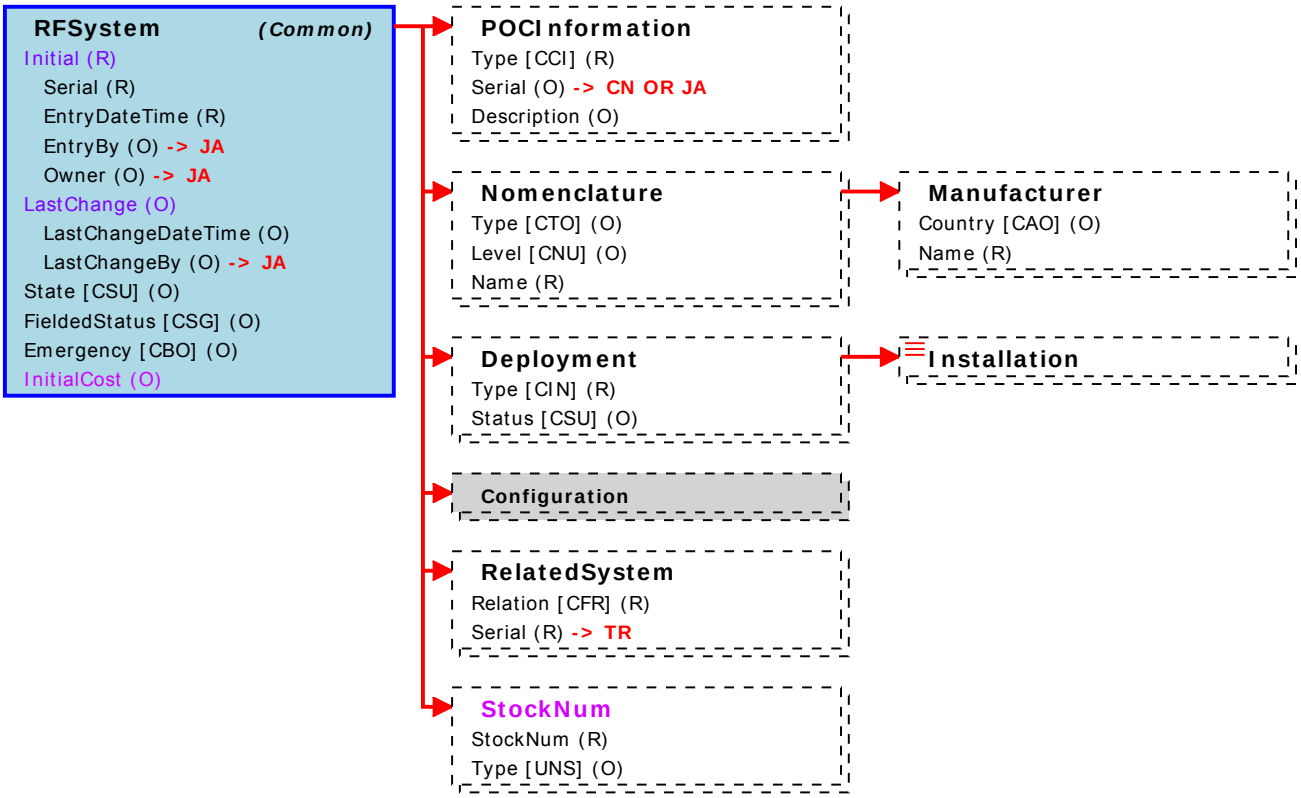
Receiver

References:, Common, Curve, CurvePoint, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, Receiver, RxMode



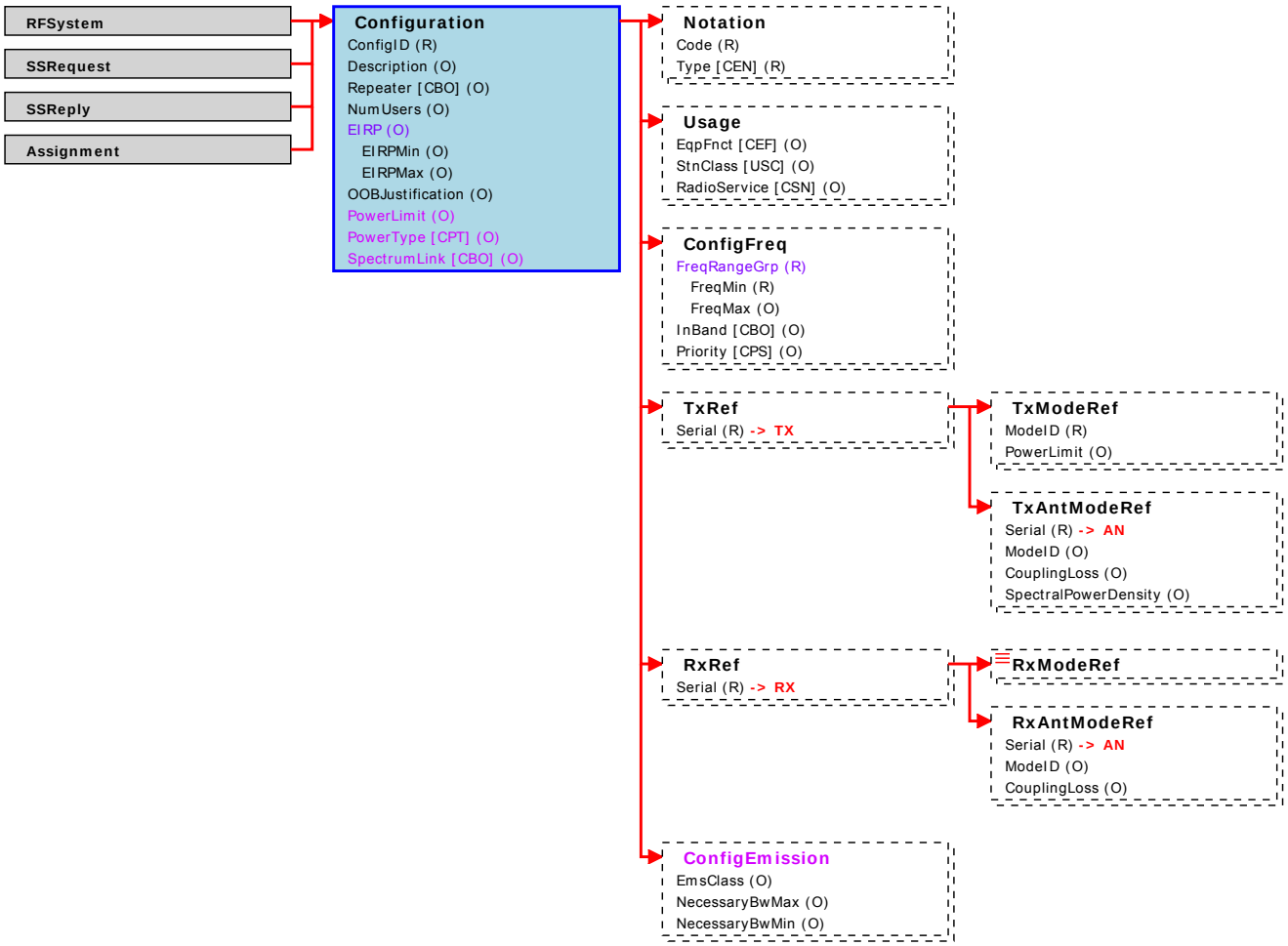
RFSystem

References:, Common, Configuration, Deployment, Installation, Manufacturer, Nomenclature, POCInformation, RFSystem, RelatedSystem, StockNum



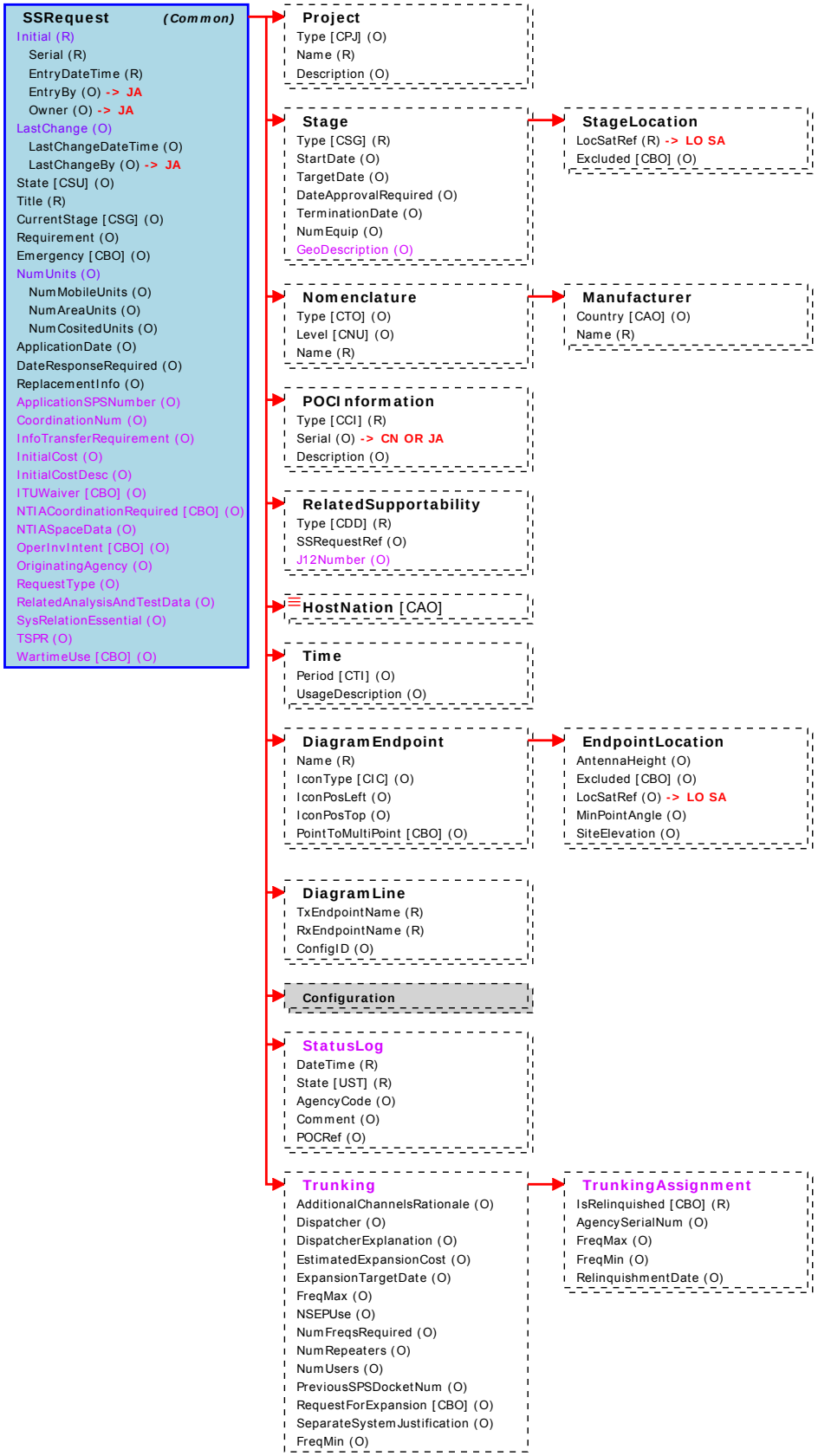
Configuration

References:, Assignment, ConfigEmission, ConfigFreq, Configuration, Notation, RFSystem, RxAntModeRef, RxModeRef, RxRef, SSReply, SSRequest, TxAntModeRef, TxModeRef, TxRef, Usage



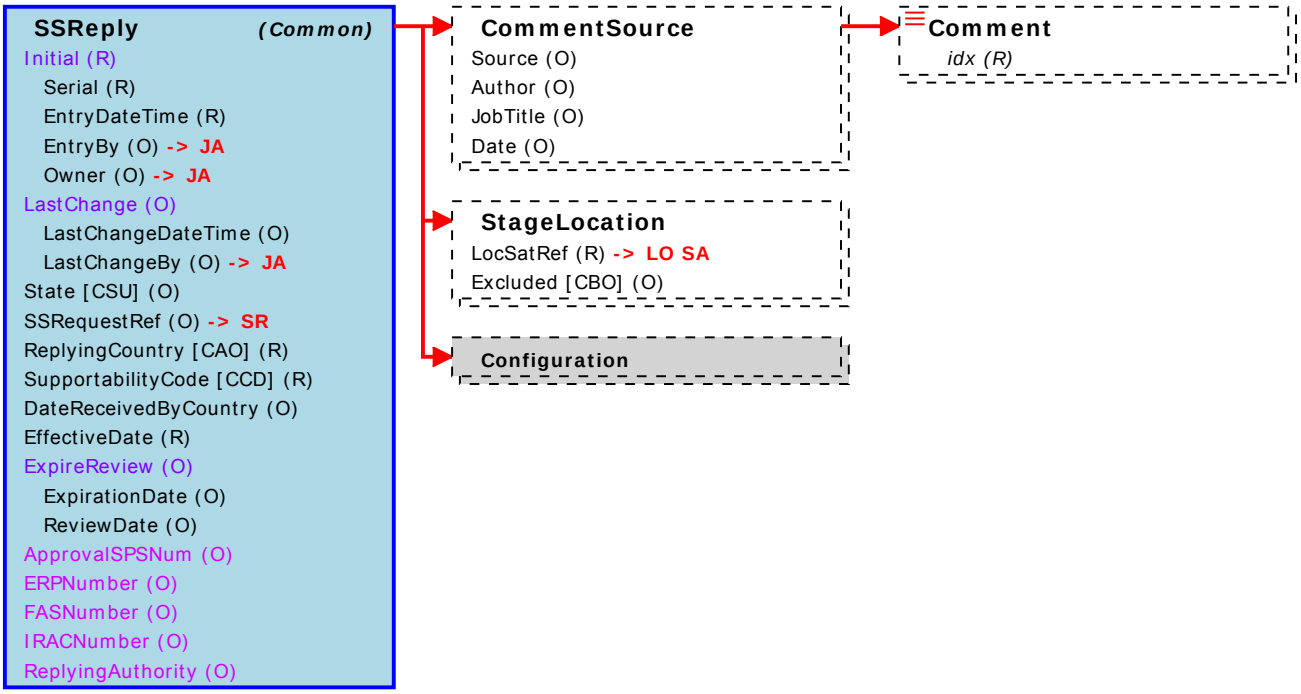
SSRequest

References:, Common, Configuration, DiagramEndpoint, DiagramLine, EndpointLocation, HostNation, Manufacturer, Nomenclature, POCInformation, Project, RelatedSupportability, SSRequest, Stage, StageLocation, StatusLog, Time, Trunking, TrunkingAssignment



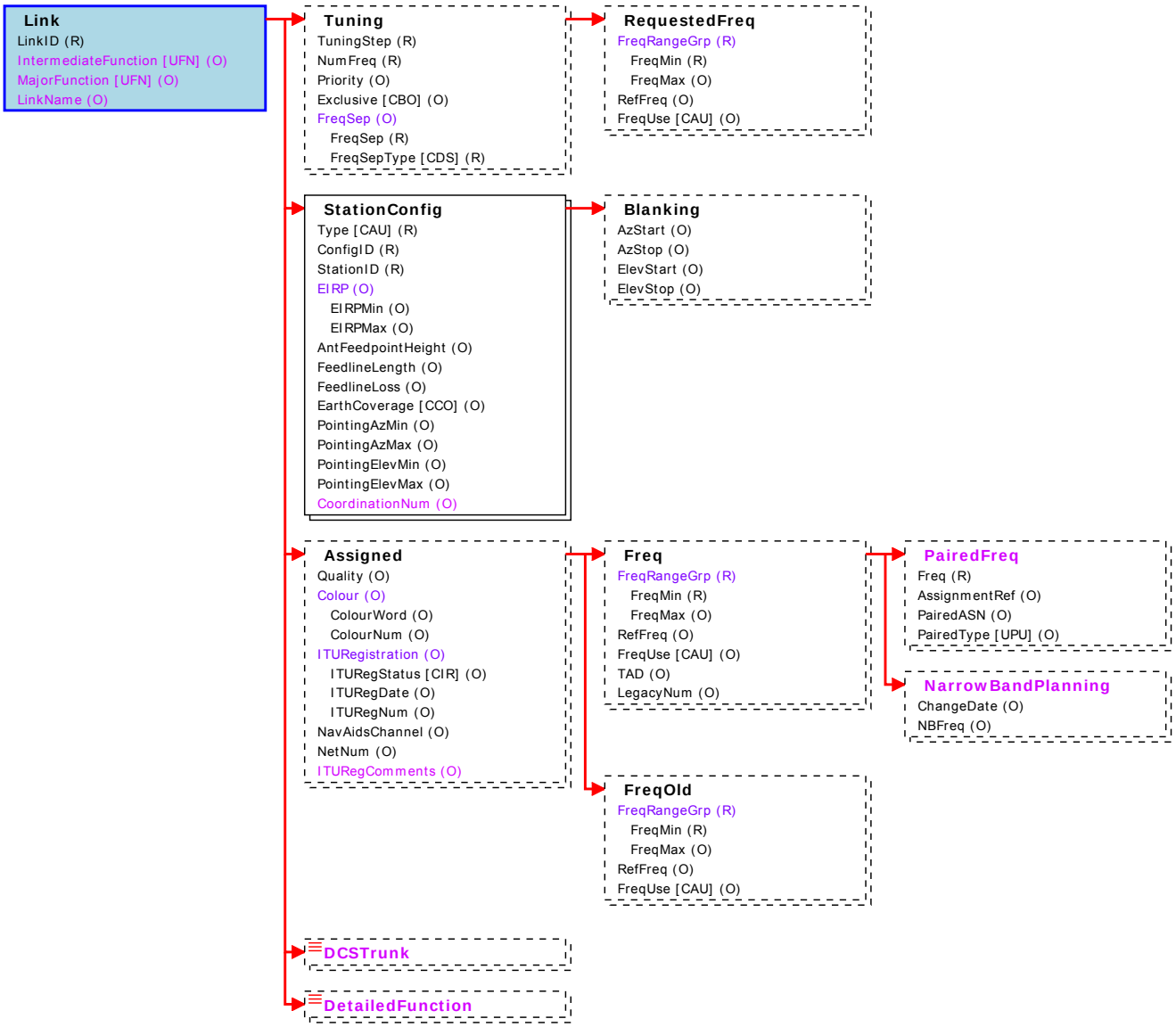
SSReply

References:, Comment, CommentSource, Common, Configuration, SSReply, StageLocation



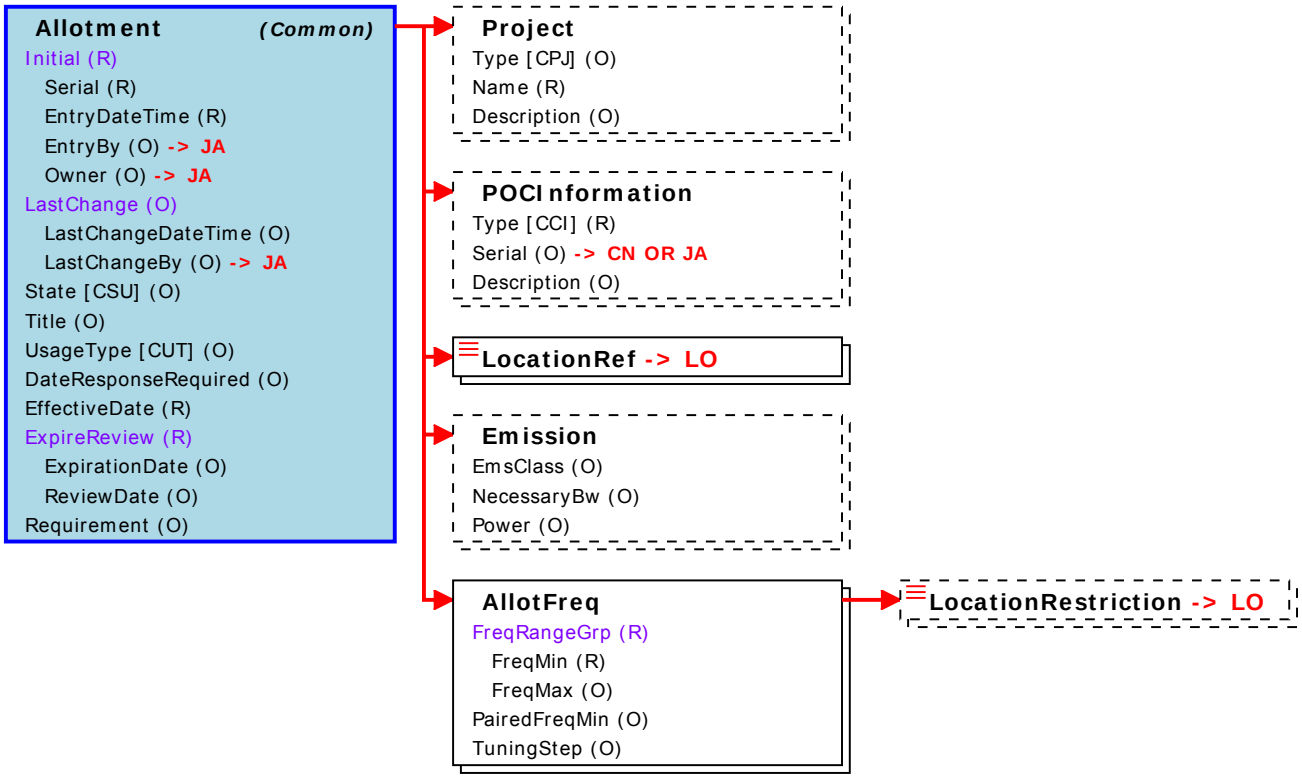
Link

References:, AsgnFreqBase, Assigned, Blanking, DCSTrunk, DetailedFunction, Freq, FreqOld, Link, NarrowBandPlanning, PairedFreq, RequestedFreq, StationConfig, Tuning



Allotment

References:, AllotFreq, Allotment, Common, Emission, LocationRef, LocationRestriction, POCInformation, Project

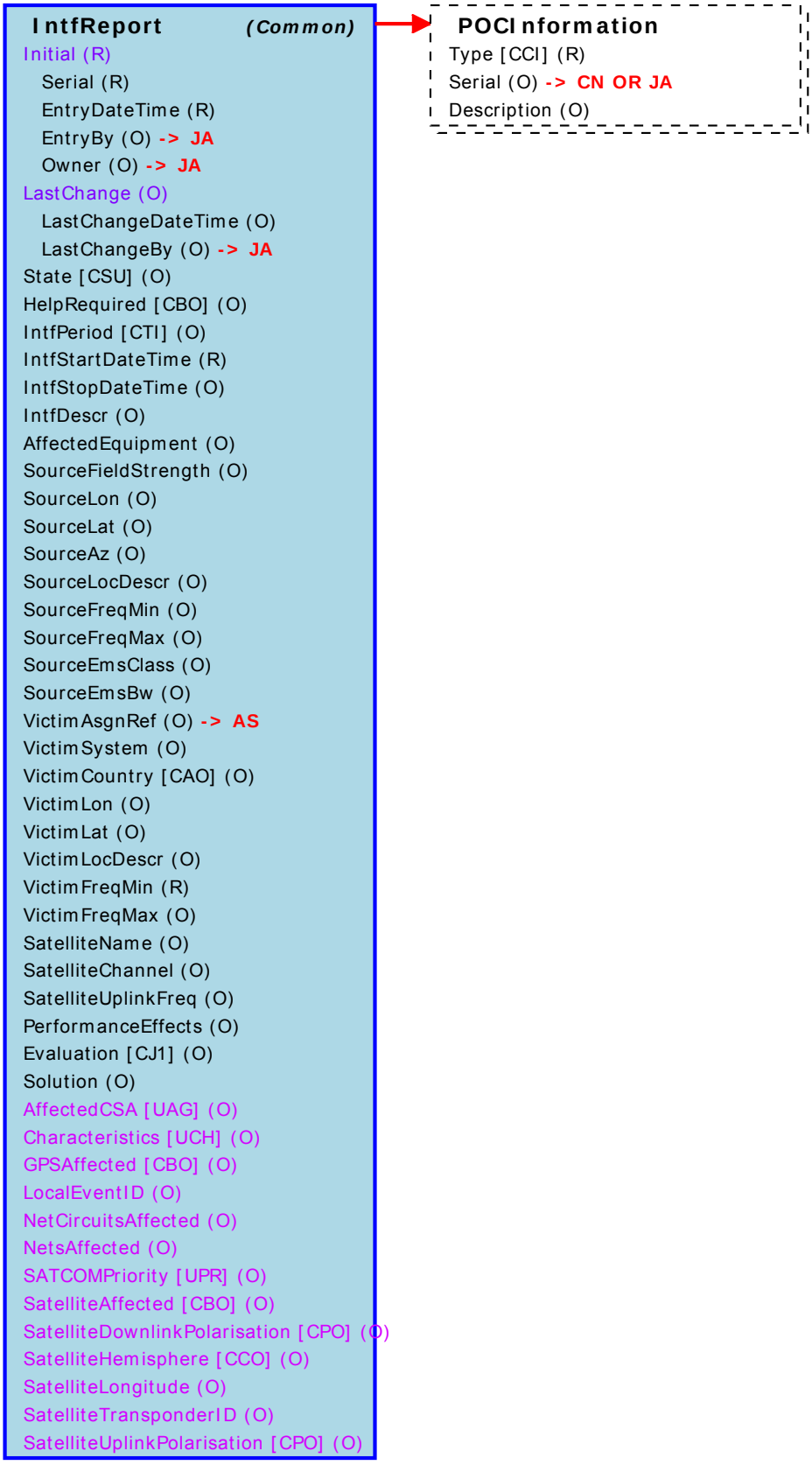


Assignment

References:, AsgnAllotOwner, Assignment, CircuitRemarks, Common, Configuration, CoordinationData, DocketNum, HostDocketNum, Link, OffTheShelfEquipment, POCInformation, PreviousAuthorization, Project, RecordNote, RelatedRef, Station, StationLoc, StatusLog, SysOfStation

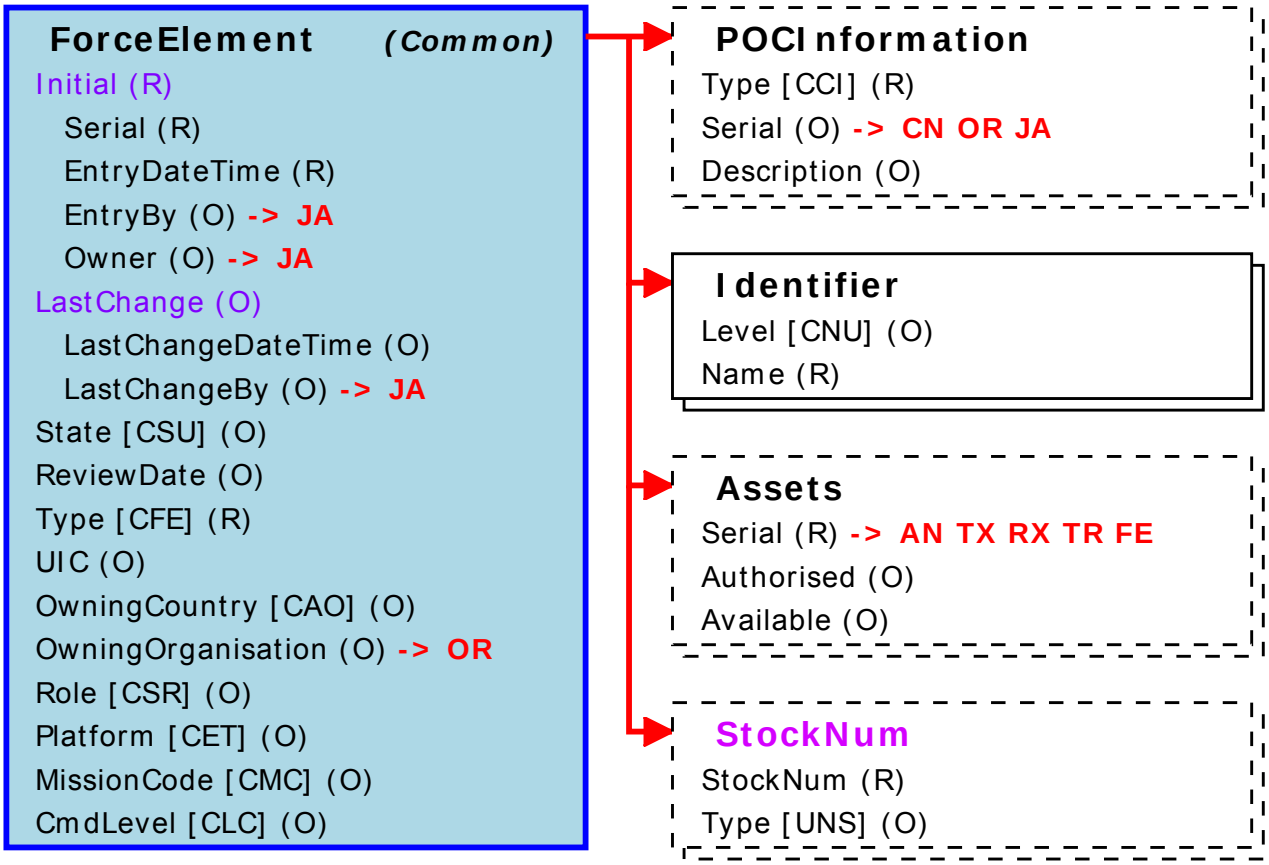
IntfReport

References:, Common, IntfReport, POCInformation



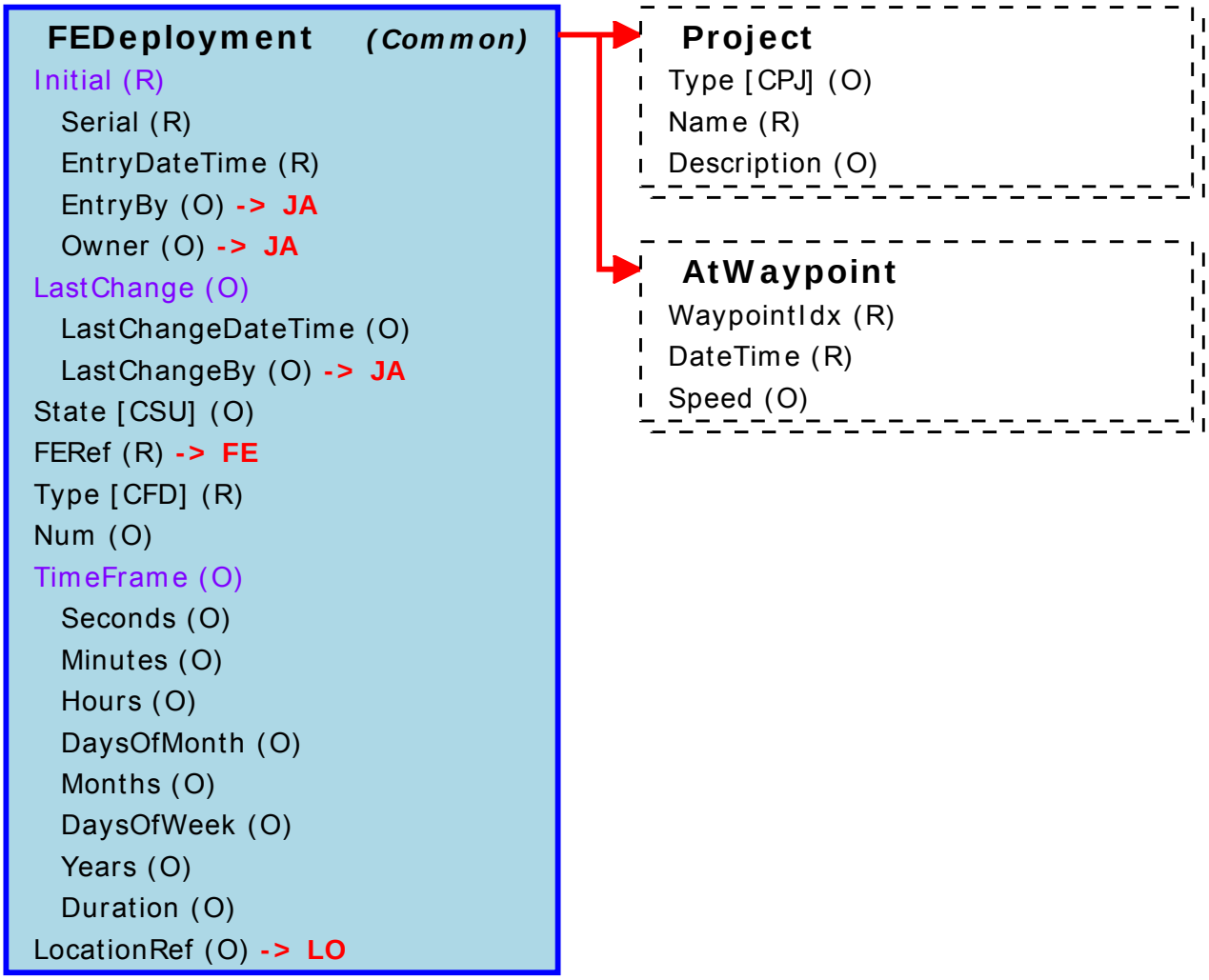
ForceElement

References:, Assets, Common, ForceElement, Identifier, POCInformation, StockNum



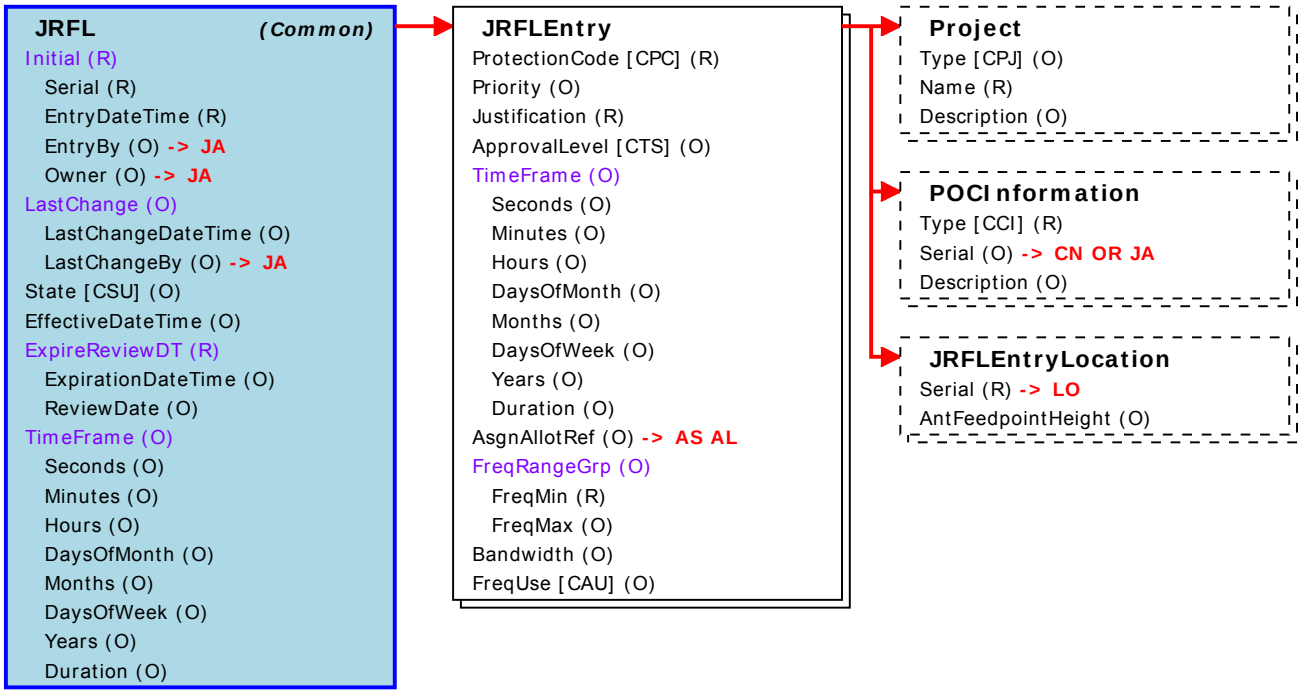
FEDeployment

References:, AtWaypoint, Common, FEDeployment, Project



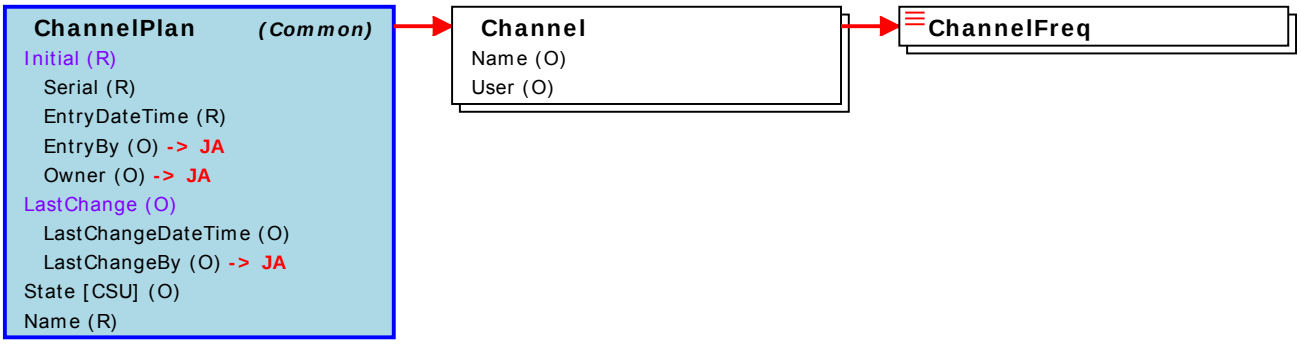
JRFL

References:, Common, JRFL, JRFLEntry, JRFLEntryLocation, POCInformation, Project



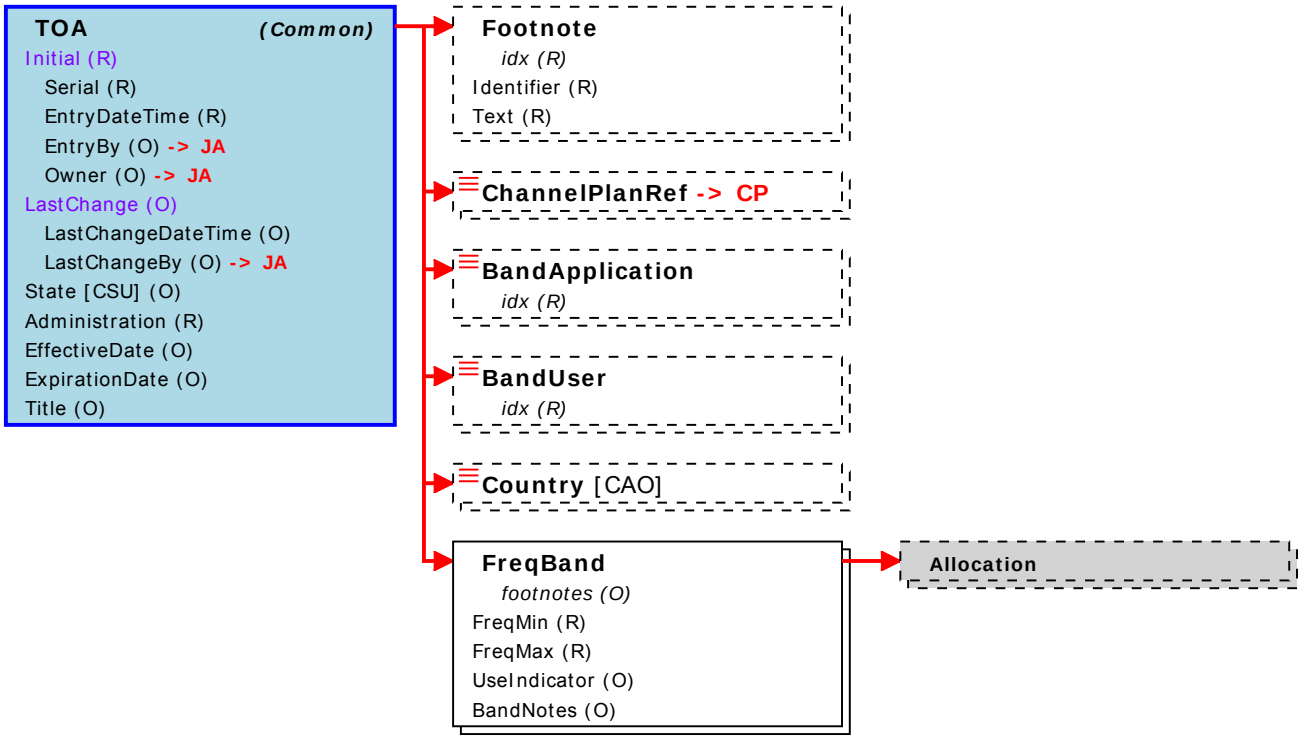
ChannelPlan

References:, Channel, ChannelFreq, ChannelPlan, Common



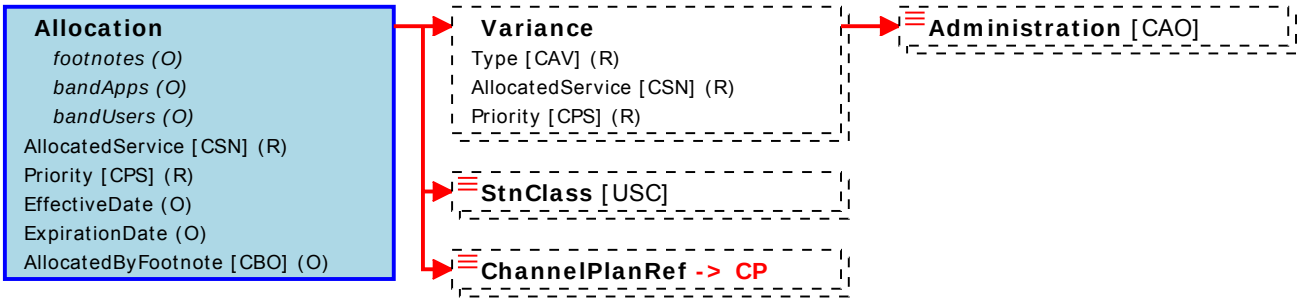
TOA

References:, Allocation, BandApplication, BandUser, ChannelPlanRef, Common, Country, Footnote, FreqBand, TOA



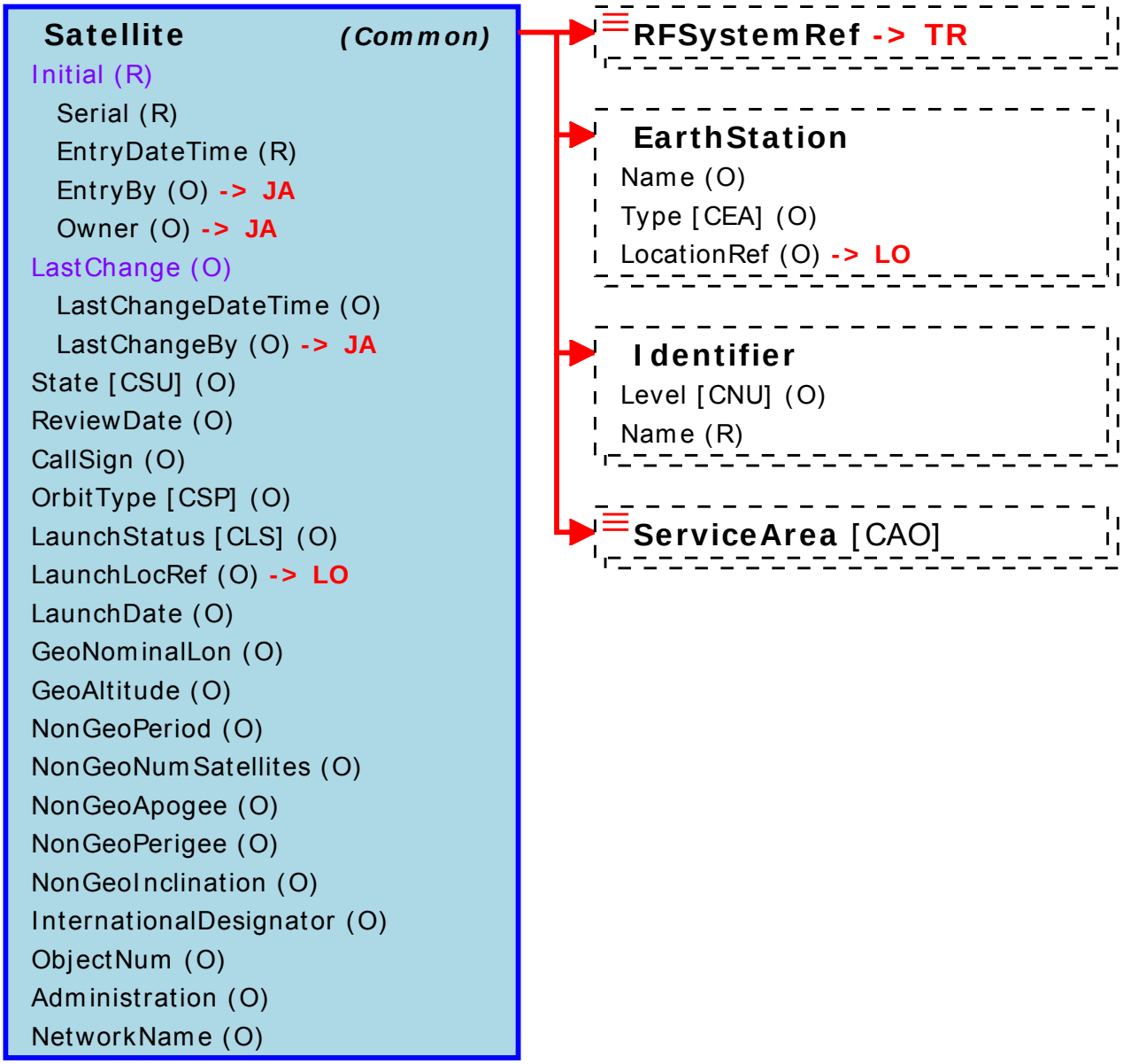
Allocation

References:, Administration, Allocation, ChannelPlanRef, StnClass, Variance



Satellite

References:, Common, EarthStation, Identifier, RFSystemRef, Satellite, ServiceArea



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