COT Domain Model

FTS Documentation

Implemented

This document has been generated on 2020-09-02 from the model ATAK. please contact the authors at https://github.com/FreeTAKTeam/FreeTakServer to obtain a fresh version.

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1.1 FreeTAKServer Model

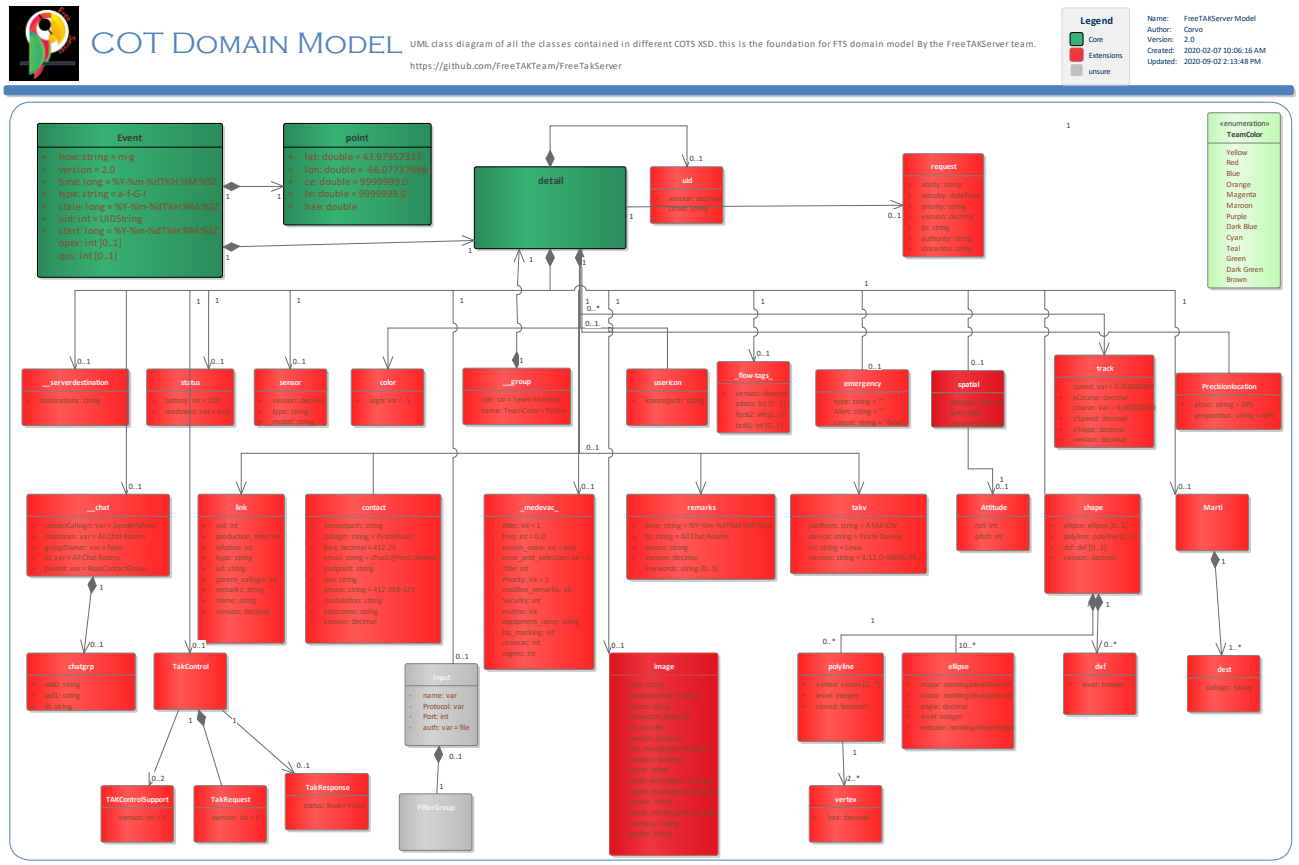

Figure 1: FreeTAKServer Model

the domain model with all the know objects used by FreeTakServer.
The Cursor-On-Target (CoT) data strategy centers on the use of a “common language” for tactical systems that is critical in communicating much needed time sensitive position information. Analogous to functioning acceptably in foreign countries, while only learning a few important words of the native language, CoT starts with a focus on a particular set of important common information on the battlefield. This is seen as a time sensitive position or the “What, When, and Where” (W3) of a specific event. The proof of concept prototype also allows for structured special purpose extensions.

2 COT Domain Model

Parent package 'Domain'

this package contains the logical data model of Center on Target (CoT) expressed as a Platform Independent Model (PIM). A PIM can be transformed into a Platform Specific Model (PSM) for implementation of a specific technology. From the PSM it's possible to generate code for running application (e.g. FTS code in a language like Python), messages in different formats (XSD, JSON, ProtoBuff), tables for the persistence and so on.

Version 2.0 Implemented
Corvo created on 2020-02-08. Last modified 2020-09-02

2.1 TakResponse

Class in package 'COT Domain Model'

is sent in the procedure of negotiating protolcs to indicates if the server is accepting the client request to switch to an higher level of the protocol

TakResponse
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-27. Last modified 2020-08-31

ATTRIBUTES

status : Bool Private = False
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) TakResponse
Cardinality: [0..1]

Target: Public (Class) TakControl
Cardinality: [1]

2.2 __chat

Class in package 'COT Domain Model'

Class that holds information regarding chat. When communicating with a group, the **__chat** attributes specify the unique ID of the chat group, and the common name as to be read by the user. The recipient, upon receipt, will see that these fields do not match their information, and create the appropriate group. Members will be populated from the attributes of the **chatgrp** element.

__chat
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-10. Last modified 2020-08-11
Keywords FreeTakServer

ATTRIBUTES

senderCallsign : var Public = SenderNAme

ATTRIBUTES

the call sign of the sender

[Is static True. Containment is Not Specified.]

chatroom : var Public = All Chat Rooms

TBD: the callsign of the receiver?

[Is static True. Containment is Not Specified.]

groupOwner : var Public = false

TBD,

[Is static True. Containment is Not Specified.]

id : var Public = All Chat Rooms

TBD: the unique ID of the sender?

[Is static True. Containment is Not Specified.]

parent : var Public = RootContactGroup

the group where thise chat is attached

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) __chat
Cardinality: [0..1]

Target: Public (Class) detail

Association (direction: Source -> Destination)

Source: Public (Class) __chat
Cardinality: [1]

Target: Public (Class) chatgrp
Cardinality: [0..1]

2.3 __group

Class in package 'COT Domain Model'

__group
Version 1.0 Phase 1.0 Proposed
natha created on 2020-08-28. Last modified 2020-08-31

ATTRIBUTES

role : str Private = Team Member

[Is static True. Containment is Not Specified.]

name : TeamColor Private = Yellow

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) __group
Cardinality: [1]

Target: Public (Class) detail
Cardinality: [1]

2.4 __serverdestination

Class in package 'COT Domain Model'

the destination of a certain message. indicates how to communicate back to the sender.

__serverdestination
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-10. Last modified 2020-08-11
Keywords FreeTakServer

ATTRIBUTES

destinations : string Public

string composed by IP:port: protocol:machineID.
e.g. 192.168.0.103:4242:tcp:ANDROID-R52JB0CDC4E

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) __serverdestination
Cardinality: [0..1]

Target: Public (Class) detail

2.5 _flow-tags_

Class in package 'COT Domain Model'

This is a Cursor On Target detail class that holds "fingerprints" of the system that have processed a particular CoT event. This information aids in the routine of CoT messages along a particular processing chain. Each system that touches a particular CoT event is expected to add its own attribute to this entity. The attribute name should reflect the particular system name, and the value should be the time stamp when the information was sent out from that system. Some illustrative _flow-tags_ attributes are adocs, fbcb2, and tadilj, but the attribute list is not a closed set.

flow-tags
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

version : decimal Public

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ATTRIBUTES

adocs : int Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static True. Containment is Not Specified.]

fbcb2 : int Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static True. Containment is Not Specified.]

tadilj : int Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) _flow-tags_
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.6 _medevac_

Class in package 'COT Domain Model'

the medevac class is used to describe a case of someone in need to be evacuated

medevac
Version 1.0 Phase 1.0 Proposed
Corvo created on 2020-04-13. Last modified 2020-04-13

ATTRIBUTES

litter : int Private = 1
[Is static True. Containment is Not Specified.]

freq : int Private = 0.0
[Is static True. Containment is Not Specified.]

terrain_none : int Private = true
[Is static True. Containment is Not Specified.]

zone_prot_selection : int Private = 0
[Is static True. Containment is Not Specified.]

Title : int Private
[Is static True. Containment is Not Specified.]

Priority : int Private = 1
[Is static True. Containment is Not Specified.]

medline_remarks : int Private
[Is static True. Containment is Not Specified.]

ATTRIBUTES

- Security : int Private
  [Is static True. Containment is Not Specified.]
- routine : int Private
  [Is static True. Containment is Not Specified.]
- equipment_none : string Private
  [Is static True. Containment is Not Specified.]
- hlz_marking : int Private
  [Is static True. Containment is Not Specified.]
- casevac : int Private
  [Is static True. Containment is Not Specified.]
- urgent : int Private
  [Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) _medevac_
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.7 Attitude

Class in package 'COT Domain Model'

Attitude
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

- roll : int Private
  [Is static True. Containment is Not Specified.]
- pitch : int Private
  [Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) Attitude
Cardinality: [0..1]

Target: Public (Class) spatial
Cardinality: [1]

2.8 chatgrp

Class in package 'COT Domain Model'

Class hosting IDs regarding the from and to

chatgrp
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-10. Last modified 2020-08-11
Keywords FreeTakServer

ATTRIBUTES

uid0 : string Public

the machine ID of the sender

[Is static True. Containment is Not Specified.]

uid1 : string Public

another ID

[Is static True. Containment is Not Specified.]

id : string Public

third ID

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) __chat
Cardinality: [1]

Target: Public (Class) chatgrp
Cardinality: [0..1]

2.9 color

Class in package 'COT Domain Model'

color
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-08
Keywords FreeTakServer

ATTRIBUTES

argb : int Public = -1

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) detail

Target: Public (Class) color
Cardinality: [0..1]

2.10 contact

Class in package 'COT Domain Model'

This is a Cursor On Target Class representing communications parameters for contacting a friendly element for human-to-human communications. The objective of this Class is to carry the essential information needed to contact this entity by a variety of means. Multiple ways of establishing contact can be specified;
noThe attributes callsign, phone, and email should be self-explanatory. particular mode of contact is required. Other attributes, freq, dsn, modulation, and hostname, are also available.

contact
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-08-06
Keywords FreeTakServer

ATTRIBUTES

iconsetpath : string Public

[Is static True. Containment is Not Specified.]

callsign : string Public = PirateRulez
Alias: screenName

The unit's voice call sign

[Is static True. Containment is Not Specified.]

freq : decimal Public = 412.25

The frequency (in MHz) on which the unit may be contacted via voice.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

email : string Public = chuck@host.domain

e-mail address for this element (if applicable)

Properties:
use = optional

[Is static True. Containment is Not Specified.]

endpoint : string Public

TBD

[Is static True. Containment is Not Specified.]

dsn : string Public

DSN number for this element (if applicable)

Properties:
use = optional

[Is static True. Containment is Not Specified.]

phone : string Public = 412-253-123

Phone number for this element (if applicable)

ATTRIBUTES

Properties:
use = optional
[Is static True. Containment is Not Specified.]

modulation : string Public

Amplifies the radio frequency information provided. Contains the modulation type for the communication. (Coding tbd, should cover complex modulations such as SINCGARS hopping, csma, etc...) am|fm

Properties:
use = optional
[Is static True. Containment is Not Specified.]

hostname : string Public

DNS-resolvable host name

Properties:
use = optional
[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Necessary to ensure upward compatibility with future revisions.

Properties:
use = optional
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) detail Target: Public (Class) contact

2.11 CoT

Class in package 'COT Domain Model'

The Cursor-On-Target (CoT) Event data model defines an XML data schema for exchanging time sensitive position of moving objects, or "what", "when", and "where" (WWW) information, between systems.

CoT
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-08
Keywords FreeTakServer

ATTRIBUTES

Identity : IdentityTypes Public = unknow
[Is static True. Containment is Not Specified.]

dimension : DimensionTypes Public = land-unit
[Is static True. Containment is Not Specified.]

entity : int Public = military

ATTRIBUTES
[Is static True. Containment is Not Specified.]
type : int Public = E-V-A-T [Is static True. Containment is Not Specified.]
lat : int Public [Is static True. Containment is Not Specified.]
lon : int Public [Is static True. Containment is Not Specified.]
uid : int Public [Is static True. Containment is Not Specified.]

2.12 dest

Class in package 'COT Domain Model'

dest
Version 1.0 Phase 1.0 Proposed
Giu Platania created on 2020-04-13. Last modified 2020-04-15

ATTRIBUTES
callsign : String Private the call sign of the destination [Is static True. Containment is Not Specified.]

ASSOCIATIONS
Association (direction: Source -> Destination) Source: Public (Class) Marti Cardinality: [1] Target: Public (Class) dest Cardinality: [1..*]

2.13 detail

Class in package 'COT Domain Model'

An optional element used to hold CoT sub-schema. Detail has no special properties

detail
Version 0.0.6 Phase Core Proposed
Corvo created on 2020-02-07. Last modified 2020-08-28
Keywords FreeTakServer

ASSOCIATIONS
Association (direction: Source -> Destination)

ASSOCIATIONS

Source: Public (Class) detail
Cardinality: [1]
Target: Public (Class) takv
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) detail
Cardinality: [1]
Target: Public (Class) link
Cardinality: [0..1]

Association (direction: Bi-Directional)

Source: Public (Class) detail
Cardinality: [1]
Target: Public (Class) track
Cardinality: [0..*]

Association (direction: Unspecified)

Source: Public (Class) detail
Target: Public (Class) contact

Association (direction: Unspecified)

Source: Public (Class) detail
Cardinality: [1]
Target: Public (Class) usericon
Cardinality: [0..1]

Association (direction: Unspecified)

Source: Public (Class) detail
Target: Public (Class) Precisionlocation

Association (direction: Source -> Destination)

Source: Public (Class) detail
Cardinality: [1]
Target: Public (Class) remarks
Cardinality: [0..1]

Association (direction: Source -> Destination)

Source: Public (Class) detail
Target: Public (Class) color
Cardinality: [0..1]

Association (direction: Destination -> Source)

Source: Public (Class) TakControl
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) _medevac_
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) __chat
Cardinality: [0..1]
Target: Public (Class) detail

Association (direction: Source -> Destination)

Source: Public (Class) Input
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) image
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) request
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) Marti
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Unspecified)

Source: Public (Class) emergency
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) _flow-tags_
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) __group
Cardinality: [1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) __serverdestination
Cardinality: [0..1]
Target: Public (Class) detail

Association (direction: Destination -> Source)

Source: Public (Class) uid
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) Event
Cardinality: [1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) sensor
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) status
Cardinality: [0..1]
Target: Public (Class) detail
Cardinality: [1]

Association (direction: Source -> Destination)

ASSOCIATIONS	
Source: Public (Class) spatial Cardinality: [0..1]	Target: Public (Class) detail
Association (direction: Source -> Destination)	
Source: Public (Class) shape	Target: Public (Class) detail

2.14 DimensionTypes

Class in package 'COT Domain Model'

DimensionTypes
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-10
Keywords FreeTakServer

ATTRIBUTES	
space : Public = p	[Stereotype is «enum». Is static True. Containment is Not Specified.]
air : Public = A	[Stereotype is «enum». Is static True. Containment is Not Specified.]
land-unit : Public = G	[Stereotype is «enum». Is static True. Containment is Not Specified.]
land-equipment : Public = G	[Stereotype is «enum». Is static True. Containment is Not Specified.]
land-installation : Public = G	[Stereotype is «enum». Is static True. Containment is Not Specified.]
sea-surface : Public = S	[Stereotype is «enum». Is static True. Containment is Not Specified.]
sea-subsurface : Public = U	[Stereotype is «enum». Is static True. Containment is Not Specified.]
subsurface : Public = U	[Stereotype is «enum». Is static True. Containment is Not Specified.]
other : Public = X	[Stereotype is «enum». Is static True. Containment is Not Specified.]

2.15 dxf

Class in package 'COT Domain Model'

dxf
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

level : integer Public

"level" is used to indicate the preferred ordering of multiple shape sub-schemas. For instance, if a polyline and ellipse are both present on the shape attribute, the one with the higher level value will be the "more desirable" representation of the object. This allows producers to provide alternative representation of an objects shape while ensuring that consumers will know which of the available representation is the best. (Note that not all consumers will implement all shape variations, hence the need for the allowing multiple shape objects.)
See the documentation for shape/ellipse/@level for remarks on determining the precedence order when level values are equal or are missing.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) shape
Cardinality: [1]

Target: Public (Class) dxf
Cardinality: [0..*]

2.16 dxf

Class in package 'COT Domain Model'

dxf
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-10

ATTRIBUTES

level : integer Public

"level" is used to indicate the preferred ordering of multiple shape sub-schemas. For instance, if a polyline and ellipse are both present on the shape attribute, the one with the higher level value will be the "more desirable" representation of the object. This allows producers to provide alternative representation of an objects shape while ensuring that consumers will know which of the available representation is the best. (Note that not all consumers will implement all shape variations, hence the need for the allowing multiple shape objects.)
See the documentation for shape/ellipse/@level for remarks on determining the precedence order when level values are equal or are missing.

Properties:
use = optional

[Stereotype is «XSDattribute». Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) dxf

Target: Public (Class) ModelGroup16 «XSDany»
Cardinality: [0..*]

ASSOCIATIONS

2.17 ellipse

Class in package 'COT Domain Model'

ellipse
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

CONNECTORS

Dependency Source -> Destination
From: Controller1 : Controller, Public
To: ellipse : Class, Public

ATTRIBUTES

major : nonNegativeDecimal Public

Ellipse major axis (meters)

Properties:
use = required

[Is static True. Containment is Not Specified.]

minor : nonNegativeDecimal Public

Ellipse minor axis (meters)

Properties:
use = required

[Is static True. Containment is Not Specified.]

angle : decimal Public

Orientation of major axis with respect to true north.

Properties:
use = required

[Is static True. Containment is Not Specified.]

level : integer Public

"level" is used to indicate the preferred ordering of multiple shape sub-schemas.
For instance, if a polyline and ellipse are both present on the shape attribute, the one with the higher level value will be the "more desirable" representation of the object. This allows producers to provide alternative representation of an objects shape while ensuring that consumers will know which of the available representation is the best. (Note that not all consumers will implement all shape variations, hence the need for the allowing multiple shape objects.)

Since the level attribute is optional, it is necesary for precedence rules to exist to ensure all consumers process the shape definition the same way.

1. The shape definition with the highest value level attribute is considered the most accurate interpretation.
2. If all shape definitions specify the same level, the order from least to most accurate interpretation is presumed to be ellipse, polyline, dxf.
3. A shape that specifies the level attribute has precedence over any that do not specify it.
4. If the level attribute is absent from all shape definitions, the order from least to most accurate interpretation is presumed to be ellipse, polyline, dxf.

ATTRIBUTES

Properties:
use = optional
[Is static True. Containment is Not Specified.]

extrude : nonNegativeInteger Public

A "Height" of the ellipse used to make the flat object encompas a volume.

Properties:
use = optional
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) ellipse
Cardinality: [1]
Target: Public (Class) shape
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public (Class) ellipse
Target: Public (Class) ModelGroup15 «XSDany»
Cardinality: [0..*]

2.18 emergency

Class in package 'COT Domain Model'

An emergency beacon the is continually send to all the connected clients until deactivated from the original creator

emergency
Version 1.0 Phase 1.0 Proposed
Corvo created on 2020-04-13. Last modified 2020-05-24

ATTRIBUTES

type : string Private = ""

default constructor def __init__(self):
[Is static True. Containment is Not Specified.]

Alert : string Private = ""
[Is static True. Containment is Not Specified.]

cancel : string Private = "false"

if true the emergency beacon is canceled
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

ASSOCIATIONS

Source: Public (Class) emergency
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.19 EntityTypes

Class in package 'COT Domain Model'

EntityTypes
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-10
Keywords FreeTakServer

ATTRIBUTES

military : var Public
[Stereotype is «enum». Is static True. Containment is Not Specified.]

civilian : var Public
[Stereotype is «enum». Is static True. Containment is Not Specified.]

2.20 Event

Class in package 'COT Domain Model'

represents a TAK event: this class is instantiated with a standard set of values.

Event
Version 0.0.6 Phase Core Proposed
Corvo created on 2020-02-07. Last modified 2020-08-27
Alias coordSource
Keywords FreeTakServer

CONNECTORS

Usage Source -> Destination
From: GeoChat : REST Definition, Public
To: Event : Class, Public

ATTRIBUTES

how : string Public = m-g
Alias: coordSource

Gives a hint about how the coordinates were generated. It is used specifically to relay a hint about the types of errors that may be expected in the data and to weight the data in systems that fuse multiple inputs.
[Is static True. Containment is Not Specified.]

version : Public = 2.0

Schema version of this event instance (e.g. 2.0)
[Is static True. Containment is Not Specified.]

ATTRIBUTES

time : long Public = %Y-%m-%dT%H:%M:%SZ
Alias: SendTime

time stamp with respect to Zulu time indicating when an event was generated in extended ISO 8601 format

in ProtoBugg is in milliseconds

[Is static True. Containment is Not Specified.]

type : string Public = a-f-G-I

Defines what the event is about. An event may describe a physical object, a set of raw, unprocessed bits, or a tasking.
Hierarchically organized hint about event type (**default** is is 'a-f-G-I' for infrastructure)
The "type" attribute is a composite of components delimited by the semi-colon character. The first component of this composite attribute is defined below.
Future versions of this schema will define other components which we expect will aid in machine filtering. Despite the exclusion of definitions
for additional components in this version of the schema, users of
this schema should expect and design an optional trailing field
delimited by the semi-colon character. This field can be ignored.

- *component1*;optional field

The first component (component1) is a hierarchically organized hint about type.
The intention is that this hierarchy be flexible and extensible and facilitate simple filtering, translation and display. To facilitate filtering, the hierarchy needs to present key fields in an easily parsed and logical order. To facilitate this, this component is a composite of fields separated by the "-" punctuation character, so a valid type would be: x-x-X-X-x. Using a punctuation for field separation allows arbitrary expansion of the type space,
e.g., a-fzp-mlk-gm-...

Field meanings are type specific. That is, the third field of an "atom" type may represent air vs. ground while the same field for a "reservation" type may represent purpose.
The "Atoms" portion of the type tree requires some additional explanation past the taxonomy defined below. The "Atoms" portion of the type tree contains CoT defined fields and part of the MIL-STD-2525 type definition. To distinguish MIL-STD-2525 type strings from CoT defined fields, the MIL-STD-2525 types must be represented in all upper case. Differentiation of type namespace with upper/lower case facilitates extension of CoT types and MIL-STD-2525 types without name space conflict. An example:
a-f-A-B-C-x
The organization of CoT and MIL-STD-2525 types can be determined from the taxonomy below, but additional details are provided here.

The "Atoms" portion of the "type" tree contains the "Battle Dimension" and "Function ID" fields taken from MIL-STD-2525.
"Battle Dimension" is a single character taken from MIL-STD-2525.

The typical 2525 representation for "Function ID" is three groups of two characters separated by a space (e.g. "12 34 56"). The CoT
schema maps this to a "-" delimited list of characters. (e.g. "1-2-3-4-5-6").
The concatenation of the "Battle Dimension" and "Function ID" fields from the MIL-STD-2525 specification represented in the CoT schema
will be as follows:
battle dimension-func id char1-func id char2- ... -func id char6

When an appropriate MIL-STD-2525 type exists, it should be used. If there is a MIL-STD-2525 representation which is close, but may be
refined, a CoT extension to the 2525 type can be appended.
for example:
a-h-X-X-X-X-X-**i** might represent hostile MIL-STD-2525 type X-X-X-X-X of **Israeli** (the 'i'**)** manufacture. Again, the CoT extension uses lower case.
Conceptually, this extension defines further branching from the nearest MIL-STD-2525 tree point.

If no appropriate 2525 representation exists, a type definition can be added to the CoT tree defined here. The resulting definition would be represented in all lower case. For example
a-h-G-p-i
might define atoms-hostile-Ground-photon cannon-infrared.

The taxonomy currently looks like this: Note that the coding of the sub fields are determined entirely by the preceding fields!) The
current type tree is defined here.

ATTRIBUTES

+--- First position, this event describes
|
V
a - Atoms - this event describes an actual "thing"

+--- 2nd CoT affiliation of these atoms
|
V

p - Pending
u - Unknown
a - Assumed friend
f - Friend
n - Neutral
s - Suspect
h - Hostile
j - Joker
k - Faker
o - None specified
x - Other

+--- Battle dimension
| Taken from MIL-STD-2525 "Battle Dimension" (upper case)
|
V

See MIL-STD-2525B specification for single character battle dimension

+--- Function (dimension specific!)
|
|
V
...
See MIL-STD-2525B specification for function fields (must be upper case)
...

+--- The event describes ...
|
V

b - Bits - Events in the "Bit" group carry meta information about raw data sources. For example, range-doppler radar returns or SAR imagery represent classes of information that are "bits". However, tracks derived from such sources represent objects on the battlespace and this have event type "A-..."

The intention with the "Bit" type is to facilitate the identification of germane information products.
This hierarchy is not intended to replace more detailed domain-specific meta information (such as that contained in NITF image headers or the GMTI data formats), rather it is intended to provide a domain-neutral mechanism for rapid filtering of information products.

+--- Dimension
|
V

- i - Imagery
- e - Electro-optical
- i - Infra red
- s - SAR
- v - video
- ...
- r - Radar
- m - MTI data
- ...
- d - Sensor detection events
- s - Seismic
- d - Doppler

ATTRIBUTES

- a - Acoustic
- m - Motion (e.g., IR)
- m - Mapping
- p - Designated point (rally point, etc.)
- i - initial points
- r - rally points
- ...

r - Reservation/Restriction/References
Events in this category are generally "notices" about specific areas. These events are used for deconfliction and conveyance of significant "area" conditions. Generally, the "point" entity will describe a conical region that completely encloses the affected area. The details entity will provide more specific bounds on precisely the region affected.
u - Unsafe (hostile capability)
o - Occupied (e.g., SOF forces on ground)
c - Contaminated (NBC event)
c - chemical
x - agents, direction,
y
z
f - Flight restrictions

t - Tasking (requests/orders)
Events in this category are generalized requests for service. These may be used to request for data collection, request mensuration of a specific object, order an asset to take action against a specific point. Generally, the "details" entity will identify the general or specific entity being tasked.

- s - Surveillance
- r - Relocate
- e - Engage
- m - Mensurate

c - Capability (applied to an area)
s - Surveillance
r - Rescue
f - Fires
d - Direct fires
i - Indirect fires
l - Logistics (supply)
f - Fuel
...
c - Communications

[Is static True. Containment is Not Specified.]

stale : long Public = %Y-%m-%dT%H:%M:%SZ
Alias: StaleTime

ending time when an event should no longer be considered valid l (with respect to Zulu time in extended ISO 8601 format)

In protobuff is in milliseconds

[Is static True. Containment is Not Specified.]

uid : int Public = UIDString

Globally unique name for this information on this event.
can have additional information attached.
[EventTYPE].[MACHINESENDERID].Nichname.UniqueID

e.g. *-ping* means that this event is a ping,

GeoChat indicates a chat type structure.
The **UID** should be in the following format: GeoChat.<sender uid>.<recipient callsign or name of the group>.<random string for uniqueness>. Diverging from this format should not cause significant issues; however, the UID is used as a fallback if other information cannot be parsed from the message, so issues may still be experienced. If uid does not contain any "." characters, the chat room will default to "All Chat Rooms".

ATTRIBUTES

GeoChat.ANDROID-7C:91:22:E8:6E:4D.DIPPER.44bf77cd-289e-4ea4-8756-ce295de168ca

[Is static True. Containment is Not Specified.]

start : long Public = %Y-%m-%dT%H:%M:%SZ
Alias: StartTime

starting time of the event's validity interval (with respect to Zulu time in extended ISO 8601 format)
. As different from the moment in which the element was generated

in protobuff this is ewxpressed in milliseconds

[Is static True. Containment is Not Specified.]

opex : int Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

OPTIONAL: Specifies whether the event is part of a live operation, an exercise, or a simulation.

[Is static True. Containment is Not Specified.]

qos : int Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

OPTIONAL: Specifies a quality of service desired from applications processing or routing the event

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) Event
Cardinality: [1]

Target: Public (Class) detail
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) Event
Cardinality: [1]

Target: Public (Class) point
Cardinality: [1]

2.21 FilterGroup

Class in package 'COT Domain Model'

the name of the group authorized to see the CoT

FilterGroup
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-10. Last modified 2020-08-10

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from FilterGroup to Input

[Direction is 'Source -> Destination'.]

2.22 IdentityTypes

Class in package 'COT Domain Model'

IdentityTypes
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-10
Keywords FreeTakServer

ATTRIBUTES	
pending : var Public = p pending	[Stereotype is «enum». Is static True. Containment is Not Specified.]
unknown : Public = u unknown	[Stereotype is «enum». Is static True. Containment is Not Specified.]
friend : Public = f friend	[Stereotype is «enum». Is static True. Containment is Not Specified.]
neutral : Public = n	[Stereotype is «enum». Is static True. Containment is Not Specified.]
hostile : Public = h	[Stereotype is «enum». Is static True. Containment is Not Specified.]
assumed-friend : Public = a	[Stereotype is «enum». Is static True. Containment is Not Specified.]
suspect : Public = s	[Stereotype is «enum». Is static True. Containment is Not Specified.]
joker : Public = j	[Is static True. Containment is Not Specified.]
faker : Public = f	[Is static True. Containment is Not Specified.]

2.23 Input

Class in package 'COT Domain Model'

this class can drive input filtering without auth messages.

Input
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-10. Last modified 2020-08-10

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from FilterGroup to Input
[Direction is 'Source -> Destination'.]

ATTRIBUTES

name : var Private
[Is static True. Containment is Not Specified.]

Protocol : var Private
[Is static True. Containment is Not Specified.]

Port : int Private
[Is static True. Containment is Not Specified.]

auth : var Private = file

Previously the only valid value for the <input> “auth” attribute was “ldap”. “file” is now another valid value.
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) Input
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.24 link

Class in package 'COT Domain Model'

This is a Cursor On Target Class for linking to either another CoT event or an arbitrary Internet resource. The objective of this schema is to provide an abstract way to express a relationship between a CoT object and other object. This allows, for example, a sensor point of interest to be linked back to its source, or a PPLI from a wingman to be associated with his flight lead. Linkages are always unidirectional. One entity may have multiple links (i.e., it may be related to multipls other entities). For processing simplicity, it is required that the relationship graphs will directed and acyclic (no cycles). The link, itself, names the relationship (using a hierarchy similar to the CoT type), the UID of the related object (whether CoT or not), possibly provides a URL for retrieving that object.

link
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-08-31
Keywords FreeTakServer

ATTRIBUTES

uid : int Public
[Is static True. Containment is Not Specified.]

production_time : int Public
[Is static True. Containment is Not Specified.]

relation : int Public

ATTRIBUTES

The type of relationship (e.g, subject, object, indirect object) that this link describes. This is a hierarchy much like the event type field.

[Is static True. Containment is Not Specified.]

type : string Public

The CoT type of the referenced object. This is included because it is generally the key item needed in a tasking.

Properties:
use = required

[Is static True. Containment is Not Specified.]

url : string Public

If present, this is a URL through which the linked object can be retrieved. If the URL is missing, then the object should be a periodic message (e.g., blue force track) that can be read from a CoT stream.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

parent_callsign : int Public

[Is static True. Containment is Not Specified.]

remarks : string Public

Remarks associated with this link.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

mime : string Public

Internet Media type of the referenced object. If the link is to a CoT event, the mime attribute is optional and its type may be application/xml or text/xml as described in RFC 3023, "XML Media Types", or the unregistered type, application/cot+xml. If the link is to an arbitrary resource, the mime attribute is required and and appropriate Internet media type must be specified. Registered media types are managed by the IANA and are listed at http://www.iana.org/assignments/media-types/.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Neccessary to ensure upward compatibility with future revisions.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) detail
Cardinality: [1]

Target: Public (Class) link
Cardinality: [0..1]

2.25 Marti

Class in package 'COT Domain Model'

Messages sent through the TAK server require an additional element to assist the server with properly routing your messages. If this element is not included, the server will interpret this as a message to all recipients, and the message will be sent to everyone, and depending upon the client software, this could mean a private message would be displayed publicly.

Marti
Version 1.0 Phase 1.0 Proposed
Giu Platania created on 2020-04-13. Last modified 2020-08-11

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) Marti
Cardinality: [1]

Target: Public (Class) dest
Cardinality: [1..*]

Association (direction: Destination -> Source)

Source: Public (Class) Marti
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.26 Mission

Class in package 'COT Domain Model'

Represent a TAK Mission

Mission
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-03-26
Keywords FreeTakServer

ATTRIBUTES

name : int Private
[Is static True. Containment is Not Specified.]

server : int Private
[Is static True. Containment is Not Specified.]

description : int Private
[Is static True. Containment is Not Specified.]

2.27 point

Class in package 'COT Domain Model'

class COTPOINT

point
Version 0.0.6 Phase Core Proposed
Corvo created on 2020-02-07. Last modified 2020-08-06
Keywords FreeTakServer

ATTRIBUTES

lat : double Public = 43.97957317

Latitude referred to the WGS 84 ellipsoid in degrees

[Is static True. Containment is Not Specified.]

lon : double Public = -66.07737696

Longitude referred to the WGS 84 in degrees

[Is static True. Containment is Not Specified.]

ce : double Public = 9999999.0

Circular area around the point defined by lat and lon fields in meters. When used to represent error, the value represents the one sigma point for a zero mean normal (Gaussian) distribution.

[Is static True. Containment is Not Specified.]

le : double Public = 9999999.0

A height range about the event point in meters associated with the HAE field. When used to represent error, the value represents the one sigma point for a zero mean normal (Gaussian) distribution.

[Is static True. Containment is Not Specified.]

hae : double Public

Height above Ellipsoid based on WGS-84 ellipsoid (measured in meters)

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) Event
Cardinality: [1]

Target: Public (Class) point
Cardinality: [1]

2.28 polyline

Class in package 'COT Domain Model'

polyline
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from polyline to shape

[Direction is 'Source -> Destination'.]

ATTRIBUTES

ATTRIBUTES

vertex : vertex Public
Multiplicity: ([2..*], Allow duplicates: 0, Is ordered: False)

Properties:
maxOccurs = unbounded
minOccurs = 2

[Is static True. Containment is Not Specified.]

level : integer Public

"level" is used to indicate the preferred ordering of multiple shape sub-schemas. For instance, if a polyline and ellipse are both present on the shape attribute, the one with the higher level value will be the "more desirable" representation of the object. This allows producers to provide alternative representation of an objects shape while ensuring that consumers will know which of the available representation is the best. (Note that not all consumers will implement all shape variations, hence the need for the allowing multiple shape objects.)

See the documentation for shape/ellipse/@level for remarks on determining the precedence order when level values are equal or are missing.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

closed : boolean Public

True if the list of verticies should be considered a closed polygon (an implicit line will be added from vertex N to vertex 0).

Properties:
default = true
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) vertex
Cardinality: [2..*]

Target: Public (Class) polyline
Cardinality: [1]

2.29 Precisionlocation

Class in package 'COT Domain Model'

some type of location?

Precisionlocation
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-10. Last modified 2020-05-24
Keywords FreeTakServer

ATTRIBUTES

altsrc : string Public = GPS

TDB can be DTED0 or ???

[Is static True. Containment is Not Specified.]

ATTRIBUTES

geopointsrc : string Private = GPS

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) detail Target: Public (Class) Precisionlocation

2.30 remarks

Class in package 'COT Domain Model'

This is a Cursor On TargetClass for a generic remarks (aka "FreeText").
Provides a place to annotate CoT with free text information. e.g. comments from other users about the current COT.
Used also fro the geoChat.
the xml body of this class is used to transport the chat message
While the use of free text is strongly discouraged (it hampers machine-to-machine communication) it is a pragmatic necessity. This entity attempts to encapsulate freetext in a way that simplifies subsequent machine processing. The content of this entity is presumed to be a human-readable chunk of textual data. The attributes merely aid in the machine handling of the data.

remarks
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-08-06
Keywords FreeTakServer

ATTRIBUTES

time : string Public = %Y-%m-%dT%H:%M:%SZ

the time of the remark was added to the CoT object

[Is static True. Containment is Not Specified.]

to : string Public = All Chat Rooms

Intended recipeint(s) of this remark information. Tentative field coding as follows: The to attribute may contain the UID of the entity to whom the message is addressed. (Implementors should expect that future versions of this sub schema will allow a comma separated list of UIDs.) Absense of an explict addressee means the message is broadcast.
e.g. ANDROID-359975090666199

[Is static True. Containment is Not Specified.]

source : string Public

Source specifies the sender's UID – this is what is parsed by recipients to determine the sender, with the UID format being the fallback.

[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Neccessary to ensure upward compatibility with future revisions.

Properties:
use = optional

ATTRIBUTES

[Is static True. Containment is Not Specified.]

keywords : string Private
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

Used to track a conversation thread. The format is a comma-separated list of freetext keywords.

ex. keywords="debriefing" - Describes a conversation about debriefing
ex. keywords="mission-A" - Describes a conversation about mission-A
ex. keywords="tasking_B, subject_C" - Describes a conversation about tasking_B and subject_C

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) detail
Cardinality: [1]

Target: Public (Class) remarks
Cardinality: [0..1]

2.31 request

Class in package 'COT Domain Model'

This is a Cursor On Target sub-schema for a generic request. This schema contains information common to all requests, specifically where responses should be sent, the overall priority of the request, if immediate willco/cantco acknowledgement is needed, etc. Detail information for specific request types are carried in sub-schemas nested within this one.

Notice that this is not the same as in **TAKRequest**

request
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-09-02

ATTRIBUTES

notify : string Public

Network endpoint to which status notifications should be delivered. (A network endpoint is represented as an URL, e.g., tcp://hostname:port, udp://hostname:port. The previous format, host:port, e.g., 192.168.0.1:71556, is deprecated, but implementers should be aware that this format may be in use.

Properties:
use = required

[Is static True. Containment is Not Specified.]

wilcoby : dateTime Public

An optional field that requests the receiving system to provide a positive or negative akcnowledgement (WILCO/CANTCO) by a specific time. This is used to ensure that deadline driven requests are made known to the operator.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

priority : string Public

ATTRIBUTES

This optional field indicates this request's relative priority with respect to other requests. (At present, no specific coding scheme is in mandated, but a floating point value between 0.0(low) and 1.0(high) is in current (limited) use.)

Properties:
use = optional

[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Neccessary to ensure upward compatibility with future revisions.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

to : string Public

When present, this field contains the CoT UID of the specific entity who is being addressed. It is assumed that all CoT entities that can provide a service are reported as friendly atoms.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

authority : string Public

This is a 'signature block' which holds the CoT uid of the entity which has uathorized the request. The authorizing entity is not necessarily the originator of the request and might not be associated with the 'notify' field. Authority is intended to provide services (such as a striker) a mechanism to verify that the request has been approved.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

streamto : string Public

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) request
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.32 sensor

Class in package 'COT Domain Model'

This is (the root class of) a Cursor On Target sub-schema for a steerable, staring sensor such as EO, IR, or Radar sensor. The root class is intended to capture only information on the sensor's orientation and field of view is. Details about it's spectrum, sensitivity, resolution, modality, performance, etc., shouldbe captured in a "derived" subschema for that particular type of sensor. All orientation attributes associated with sensor are normalized to an geodedic frame of reference, removing platform factors such as roll, pitch, yaw, etc. Therefore an "azimuth" of 0 means the sensor is pointed north regardless of its platform heading or attitude.

sensor
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

version : decimal Public

Version tag for this sub schema. Neccessary to ensure upward compatibility with future revisions.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

type : string Public

The sensor type. This is a type hierarchy much like the CoT type tree. E.g., r - raster, r-e - raster EO, r-e-z-c - raster EO zoom continuous. See types.txt for details

Properties:
use = optional

[Is static True. Containment is Not Specified.]

model : string Public

This is the sensor model. E.g., LANTRIN, TARPS, etc.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) sensor
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.33 shape

Class in package 'COT Domain Model'

This is a Cursor On Target sub-schema for a generic shape description. Many objects are not adequately represented by the simple "point" object in the CoT base schema. However, it is counterproductive to burden all CoT applications to understand arbitrary shapes, so "shape" is an optional attribute that can be used to communicate between shape-aware appications. The "point" object in the base schema must still be populated and the CE and LE fields in the point entity must be set such that the point completely encloses the area described in any shape entity in the detail section. (This is needed so that CoT applications can quickly filter out objects that are clearly outside an area of interest.

shape
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from polyline to shape

[Direction is 'Source -> Destination'.]

ATTRIBUTES

ellipse : ellipse Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The "ellipse" is a common shape abstraction used by many geomanipulation applications; it is supported natively.

Properties:
maxOccurs = 1
minOccurs = 0

[Is static True. Containment is Not Specified.]

polyline : polyline Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

The poly line provides a mechanism to express arbitrarily complex two-dimenstional shapes. This is used for representing oddly shaped objects such as exclusion zones, etc. Though generally closed, it is not necessarily a closed line, thus allowing polyline to represent objects such as phasing lines, etc.

Properties:
maxOccurs = 1
minOccurs = 0

[Is static True. Containment is Not Specified.]

dxf : dxf Public
Multiplicity: ([0..1], Allow duplicates: 0, Is ordered: False)

This is a hook for an arbitrary 3D DXF description of a volume of space.

Properties:
maxOccurs = 1
minOccurs = 0

[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Can be used to ensure upward compatibility with future revisions.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) shape
Cardinality: [1]

Target: Public (Class) dxf
Cardinality: [0..*]

Association (direction: Source -> Destination)

Source: Public (Class) shape

Target: Public (Class) detail

Association (direction: Source -> Destination)

Source: Public (Class) ellipse
Cardinality: [1]

Target: Public (Class) shape
Cardinality: [0..*]

2.34 spatial

Class in package 'COT Domain Model'

This is a Cursor On TargetClass for spatial information of physical entity. It is intended to appear in the detail section of the Cursor On Target schema. It has elements to represent attitude and associated first derivatives (spin). The intention behind the spatial element is to convey the attitude of a body moving through space with respect to its "nominal" flight attitude.

spatial
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

attitude : attitude Public

Attitude represents the attitude of the entity described by the Cursor On Target base schema.

Properties:
maxOccurs = 1
minOccurs = 1

[Is static True. Containment is Not Specified.]

spin : spin Public

Spin represents the first derivative of attributes found in attitude.

Properties:
maxOccurs = 1
minOccurs = 1

[Is static True. Containment is Not Specified.]

version : decimal Public

Version tag for this sub schema. Neccessary to ensure upward compatibility with future revisions.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) spatial
Cardinality: [0..1]

Target: Public (Class) detail

Association (direction: Destination -> Source)

Source: Public (Class) Attitude
Cardinality: [0..1]

Target: Public (Class) spatial
Cardinality: [1]

2.35 status

Class in package 'COT Domain Model'

The status element provides a container for elements reporting different kinds of

status. e.g. a fuel subschema is used to report the amount of burnable fuel remaining in liters and the current burn rate (in liters per second).

status
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-08-06
Keywords FreeTakServer

ATTRIBUTES

battery : int Public = 100

% of the battery on the phone

[Is static True. Containment is Not Specified.]

readiness : var Public = true

probably boolean to determine if ready or not

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) status
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.36 TakControl

Class in package 'COT Domain Model'

A server which supports the TAK Protocol **MAY** send the following CoT XML message to indicate this support (whitespace added, xml header omitted):

```
<event version='2.0' uid='protouid' type='t-x-takp-v' time='TIME' start='TIME' stale='TIME' how='m-g'>
  <point lat='0.0' lon='0.0' hae='0.0' ce='999999' le='999999'/>
  <detail>
    <TakControl>
      <TakProtocolSupport version="1"/>
    </TakControl>
  </detail>
</event>
```

This message may contain one or more TakProtocolSupport elements inside the single <TakControl> detail, each specifying a supported version.
The TAK server MUST send this message no more than once per connection.

To allow for ancillary information in the negotiation, the TakProtocolSupport element *MAY* contain additional attributes compliant
with the Protocol version indicated.

TakControl
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-10. Last modified 2020-08-12

INCOMING STRUCTURAL RELATIONSHIPS

INCOMING STRUCTURAL RELATIONSHIPS

Aggregation from TakRequest to TakControl

[Direction is 'Source -> Destination'.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) TakControl
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) TakResponse
Cardinality: [0..1]

Target: Public (Class) TakControl
Cardinality: [1]

Association (direction: Destination -> Source)

Source: Public (Class) TAKControlSupport
Cardinality: [0..2]

Target: Public (Class) TakControl
Cardinality: [1]

2.37 TAKControlSupport

Class in package 'COT Domain Model'

set from

TAKControlSupport
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-10. Last modified 2020-08-27

ATTRIBUTES

version : int Private = 1

version attribute is an integer number specifying a version of the TAK Protocol the server supports.

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) TAKControlSupport
Cardinality: [0..2]

Target: Public (Class) TakControl
Cardinality: [1]

2.38 TakRequest

Class in package 'COT Domain Model'

TakRequest
Version 1.0 Phase 1.0 Proposed
natha created on 2020-08-28. Last modified 2020-08-31

OUTGOING STRUCTURAL RELATIONSHIPS

Aggregation from TakRequest to TakControl

[Direction is 'Source -> Destination'.]

ATTRIBUTES

version : int Private = 1

[Is static True. Containment is Not Specified.]

2.39 takv

Class in package 'COT Domain Model'

takv
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-08. Last modified 2020-02-10
Keywords FreeTakServer

ATTRIBUTES

platform : string Private = ATAK-CIV

the variant of TAK

[Is static True. Containment is Not Specified.]

device : string Private = Pirate Device

type of physical device

[Is static True. Containment is Not Specified.]

os : string Private = Linux

the operating system running TAK

[Is static True. Containment is Not Specified.]

version : string Private = 3.12.0-45691.45691-CIV

the version of TAK running on the device

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Source -> Destination)

Source: Public (Class) detail
Cardinality: [1]

Target: Public (Class) takv
Cardinality: [0..1]

2.40 TeamColor

Enumeration in package 'COT Domain Model'

TeamColor

Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-28. Last modified 2020-08-31

ATTRIBUTES	
Yellow : Public	[Is static True. Containment is Not Specified.]
Red : Public	[Is static True. Containment is Not Specified.]
Blue : Public	[Is static True. Containment is Not Specified.]
Orange : Public	[Is static True. Containment is Not Specified.]
Magenta : Public	[Is static True. Containment is Not Specified.]
Maroon : Public	[Is static True. Containment is Not Specified.]
Purple : Public	[Is static True. Containment is Not Specified.]
Dark Blue : Public	[Is static True. Containment is Not Specified.]
Cyan : Public	[Is static True. Containment is Not Specified.]
Teal : Public	[Is static True. Containment is Not Specified.]
Green : Public	[Is static True. Containment is Not Specified.]
Dark Green : Public	[Is static True. Containment is Not Specified.]
Brown : Public	[Is static True. Containment is Not Specified.]

2.41 track

Class in package 'COT Domain Model'

The track element specifies direction and speed of travel. It has two required attributes: course and speed. It also has optional attributes for specifying the vertical component of the motion vector (slope) and errors associated with course, speed, and slope.

Course denotes the direction of motion and is specified as the number of degrees measured clockwise from true North.
Speed is specified in meters per second as speed over ground.
There is no constraint on the precision used for these values.

track
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-08. Last modified 2020-08-06
Keywords FreeTakServer

ATTRIBUTES

speed : var Private = 0.00000000
[Is static True. Containment is Not Specified.]

eCourse : decimal Public

1-sigma error on a Gaussian distribution associated with the course attribute

Properties:
use = optional
[Is static True. Containment is Not Specified.]

course : var Private = 0.00000000
[Is static True. Containment is Not Specified.]

eSpeed : decimal Public

1-sigma error on a Gaussian distribution associated with the speed attribute

Properties:
use = optional
[Is static True. Containment is Not Specified.]

eSlope : decimal Public

1-sigma error on a Gaussian distribution associated with the slope attribute

Properties:
use = optional
[Is static True. Containment is Not Specified.]

version : decimal Public

Properties:
use = optional
[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Bi-Directional)

Source: Public (Class) detail
Cardinality: [1]

Target: Public (Class) track
Cardinality: [0..*]

2.42 uid

Class in package 'COT Domain Model'

This is a Cursor On Target detailClass that holds the unique ID assigned by each system that processed this event. Most systems (including CoT) have their own method for assigning system-wide unique identifiers for a particular object. In general, it is not possible for a single UID to be used for all systems. This 'uid' entity provides a common place where each systems can record its particular UID for each CoT event. Like the _flow-tags_ element, each system is responsible for adding its own attribute to this entity. The name of the attribute should represent the system, and the value of the attribute should be the id that system assigned to this CoT object.

uid
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

version : decimal Public

Properties:
use = optional

[Is static True. Containment is Not Specified.]

Droid : String Private

TBD, maybe from Android?

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) uid
Cardinality: [0..1]

Target: Public (Class) detail
Cardinality: [1]

2.43 usericon

Class in package 'COT Domain Model'

usericon
Version 0.0.6 Phase 1.0 Proposed
Corvo created on 2020-02-07. Last modified 2020-02-08
Keywords FreeTakServer

ATTRIBUTES

iconsetpath : string Public

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Unspecified)

Source: Public (Class) detail
Cardinality: [1]

Target: Public (Class) usericon
Cardinality: [0..1]

2.44 vertex

Class in package 'COT Domain Model'

vertex
Version 1.0 Phase 1.0 Proposed
Giu.platania@sparxsystems.us created on 2020-08-06. Last modified 2020-08-06

ATTRIBUTES

hae : decimal Public

Height Above Ellipsoid (HAE) in Meters. If absent, the value of the point/@hae in the CoT event base schema is used.

Properties:
use = optional

[Is static True. Containment is Not Specified.]

ASSOCIATIONS

Association (direction: Destination -> Source)

Source: Public (Class) vertex
Cardinality: [2..*]

Target: Public (Class) polyline
Cardinality: [1]

Association (direction: Source -> Destination)

Source: Public (Class) vertex

Target: Public «XSDattribute» lon (Class) SimpleTypeClass35 «XSDsimpleType»

Longitude based on WGS-84 ellipsoid in signed degree-decimal format (e.g. 44.383333). Range -180 -> +180. Positive values denote east.

Association (direction: Source -> Destination)

Source: Public (Class) vertex

Target: Public «XSDattribute» lat (Class) SimpleTypeClass34 «XSDsimpleType»

Latitude based on WGS-84 ellipsoid in signed degree-decimal format (e.g. -33.350000). Range -90 -> +90. Positive values denote north.