



STIXTM Version 1.2.1. Part 8: Campaign

Committee Specification Draft 01

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Technical Committee:

OASIS Cyber Threat Intelligence (CTI) TC

Chair:

Richard Struse (Richard.Struse@HQ.DHS.GOV), DHS Office of Cybersecurity and Communications (CS&C)

Editors:

Sean Barnum (sbarnum@mitre.org), MITRE Corporation
Desiree Beck (dbeck@mitre.org), MITRE Corporation
Aharon Chernin (achernin@soltra.com), Soltra
Rich Piazza (rpiazza@mitre.org), MITRE Corporation

Additional artifacts:

This prose specification is one component of a Work Product that also includes:

- *STIX Version 1.2.1. Part 1: Overview.* <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part1-overview/stix-v1.2.1-csd01-part1-overview.html>
- *STIX Version 1.2.1. Part 2: Common.* <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part2-common/stix-v1.2.1-csd01-part2-common.html>
- *STIX Version 1.2.1. Part 3: Core.* <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part3-core/stix-v1.2.1-csd01-part3-core.html>
- *STIX Version 1.2.1. Part 4: Indicator.* <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part4-indicator/stix-v1.2.1-csd01-part4-indicator.html>
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- *STIX Version 1.2.1. Part 7: Threat Actor.* <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part7-threat-actor/stix-v1.2.1-csd01-part7-threat-actor.html>

- *STIX Version 1.2.1. Part 8: Campaign* (this document). <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part8-campaign/stix-v1.2.1-csd01-part8-campaign.html>
- *STIX Version 1.2.1. Part 9: Course of Action*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part9-coa/stix-v1.2.1-csd01-part9-coa.html>
- *STIX Version 1.2.1. Part 10: Exploit Target*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part10-exploit-target/stix-v1.2.1-csd01-part10-exploit-target.html>
- *STIX Version 1.2.1. Part 11: Report*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part11-report/stix-v1.2.1-csd01-part11-report.html>
- *STIX Version 1.2.1. Part 12: Default Extensions*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part12-extensions/stix-v1.2.1-csd01-part12-extensions.html>
- *STIX Version 1.2.1. Part 13: Data Marking*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part13-data-marking/stix-v1.2.1-csd01-part13-data-marking.html>
- *STIX Version 1.2.1. Part 14: Vocabularies*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part14-vocabularies/stix-v1.2.1-csd01-part14-vocabularies.html>
- *STIX Version 1.2.1. Part 15: UML Model*. <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/part15-uml-model/stix-v1.2.1-csd01-part15-uml-model.html>
- UML Model Serialization: <http://docs.oasis-open.org/cti/stix/v1.2.1/csd01/uml-model/>

Related work:

This specification replaces or supersedes:

- *STIXTM 1.2 Campaign Specification (v1.2)*
https://github.com/STIXProject/specifications/blob/version1.2/documents/pdf%20versions/STIX_Campaign_Draft.pdf

This specification is related to:

- *CyboxTM Version 2.1.1*. Work in progress. https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=cti-cybox
- *CyboxTM 2.1*. <https://cyboxproject.github.io/>

Abstract:

The Structured Threat Information Expression (STIX) framework defines nine core constructs and the relationships between them for the purposes of modeling cyber threat information and enabling cyber threat information analysis and sharing. This specification document defines the Campaign construct, which encompasses one or more Threat Actors pursuing an Intended Effect as observed through sets of Incidents and/or TTP, potentially across organizations.

Status:

This document was last revised or approved by the OASIS Cyber Threat Intelligence (CTI) TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document. Any other numbered Versions and other technical work produced by the Technical Committee (TC) are listed at https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=cti#technical.

TC members should send comments on this specification to the TC’s email list. Others should send comments to the TC’s public comment list, after subscribing to it by following the instructions at the “[Send A Comment](#)” button on the TC’s web page at <https://www.oasis-open.org/committees/cti/>.

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1 Introduction

[All text is normative unless otherwise labeled]

The Structured Threat Information Expression (STIX^[TM]) framework defines nine top-level component data models: Observable¹, Indicator, Incident, TTP, ExploitTarget, CourseOfAction, Campaign, ThreatActor, and Report. This document serves as the specification for the STIX Campaign Version data model.

As defined within the STIX language, a Campaign construct is an instance of a Threat Actor (adversary), whether characterized or not, pursuing an Intended Effect as observed through sets of Incidents and/or TTP, potentially across organizations. In addition to Threat Actor, Intended Effect, Incident, and TTP information, a Campaign construct may also comprise a variety of additional information, including status of the Campaign, a textual description, and alias names for the Campaign.

In Section 1.1 we discuss additional specification documents, in Section 1.2 we provide document conventions, and in Section 1.3 we provide terminology. References are given in Section 1.4. In Section 2, we give background information to help the reader better understand the specification details that are provided later in the document. We present the Threat Actor data model specification details in Section 3 and conformance information in Section 4.

1.1 STIX^[TM] Specification Documents

The STIX specification consists of a formal UML model and a set of textual specification documents that explain the UML model. Specification documents have been written for each of the key individual data models that compose the full STIX UML model.

The [STIX Version 1.2.1 Part 1: Overview](#) document provides a comprehensive overview of the full set of STIX data models, which in addition to the nine top-level component data models mentioned in the Introduction, includes a core data model, a common data model, a cross-cutting data marking data model, various extension data models, and a set of default controlled vocabularies. [STIX Version 1.2.1 Part 1: Overview](#) also summarizes the relationship of STIX to other languages, and outlines general STIX data model conventions.

Figure 1-1 illustrates the [set of specification documents](#) that are available. The color black is used to indicate the specification overview document, altered shading differentiates the overarching Core and Common data models from the supporting data models (vocabularies, data marking, and default extensions), and the color white indicates the component data models. The solid grey color denotes the overall STIX Language UML model. This Campaign specification document is highlighted in its associated color (see Section 1.2.3.3). For a list of all STIX documents and related information sources, please see [STIX Version 1.2.1 Part 1: Overview](#).

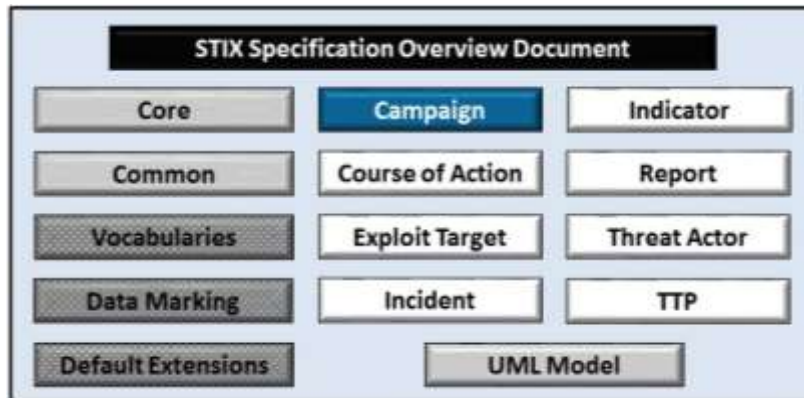


Figure 1-1. STIX[™] Language v1.2.1 specification documents

1.2 Document Conventions

The following conventions are used in this document.

1.2.1 Fonts

The following font and font style conventions are used in the document:

- Capitalization is used for STIX high level concepts, which are defined in [STIX Version 1.2.1 Part 1: Overview](#).

Examples: Indicator, Course of Action, Threat Actor

- The Courier New font is used for writing UML objects.

Examples: RelatedIndicatorsType, stixCommon:StatementType

Note that all high level concepts have a corresponding UML object. For example, the Course of Action high level concept is associated with a UML class named, CourseOfActionType.

- The '*italic*' font (with single quotes) is used for noting actual, explicit values for STIX Language properties. The *italic* font (without quotes) is used for noting example values.

Example: '*PackageIntentVocab-1.0*,' *high*, *medium*, *low*

1.2.2 UML Package References

Each STIX data model is captured in a different UML package (e.g., Core package, Campaign package, etc.) where the packages together compose the full STIX UML model. To refer to a particular class of a specific package, we use the format `package_prefix:class`, where `package_prefix` corresponds to the appropriate UML package. [STIX Version 1.2.1 Part 1: Overview](#) contains a list of the packages used by the Campaign data model, along with the associated prefix notations, descriptions, examples.

Note that in this specification document, we do not explicitly specify the package prefix for any classes that originate from the Campaign data model.

1.2.3 UML Diagrams

This specification makes use of UML diagrams to visually depict relationships between STIX Language constructs. Note that the diagrams have been extracted directly from the full UML model for STIX; they have not been constructed purely for inclusion in the specification documents. Typically, diagrams are

included for the primary class of a data model, and for any other class where the visualization of its relationships between other classes would be useful. This implies that there will be very few diagrams for classes whose only properties are either a data type or a class from the STIX Common data model. Other diagrams that are included correspond to classes that specialize a superclass and abstract or generalized classes that are extended by one or more subclasses.

In UML diagrams, classes are often presented with their attributes elided, to avoid clutter. The fully described class can usually be found in a related diagram. A class presented with an empty section at the bottom of the icon indicates that there are no attributes other than those that are visualized using associations.








1.2.3.1 Class Properties

Generally, a class property can be shown in a UML diagram as either an attribute or an association (i.e., the distinction between attributes and associations is somewhat subjective). In order to make the size of UML diagrams in the specifications manageable, we have chosen to capture most properties as attributes and to capture only higher level properties as associations, especially in the main top-level component diagrams. In particular, we will always capture properties of UML data types as attributes. For example, properties of a class that are identifiers, titles, and timestamps will be represented as attributes.

1.2.3.2 Diagram Icons and Arrow Types

Diagram icons are used in a UML diagram to indicate whether a shape is a class, enumeration, or a data type, and decorative icons are used to indicate whether an element is an attribute of a class or an enumeration literal. In addition, two different arrow styles indicate either a directed association relationship (regular arrowhead) or a generalization relationship (triangle-shaped arrowhead). The icons and arrow styles we use are shown and described in [Table 1-1](#).

Table 1-1. UML diagram icons

Icon	Description
	This diagram icon indicates a class. If the name is in italics, it is an abstract class.
	This diagram icon indicates an enumeration.
	This diagram icon indicates a data type.
	This decorator icon indicates an attribute of a class. The green circle means its visibility is public. If the circle is red or yellow, it means its visibility is private or protected.
	This decorator icon indicates an enumeration literal.
	This arrow type indicates a directed association relationship.
	This arrow type indicates a generalization relationship.

1.2.3.3 Color Coding

The shapes of the UML diagrams are color coded to indicate the data model associated with a class. The colors used in the Campaign specification are illustrated via exemplars in [Figure 1-2](#).



Figure 1-2. Data model color coding

1.2.4 Property Table Notation

Throughout Section 3, tables are used to describe the properties of each data model class. Each property table consists of a column of names to identify the property, a type column to reflect the datatype of the property, a multiplicity column to reflect the allowed number of occurrences of the property, and a description column that describes the property. Package prefixes are provided for classes outside of the Campaign data model (see Section 1.2.2).

Note that if a class is a specialization of a superclass, only the properties that constitute the specialization are shown in the property table (i.e., properties of the superclass will not be shown). However, details of the superclass may be shown in the UML diagram.

In addition, properties that are part of a “choice” relationship (e.g., Prop1 OR Prop2 is used but not both) will be denoted by a unique letter subscript (e.g., API_Call_A, Code_B) and single logic expression in the Multiplicity column. For example, if there is a choice of property API_Call_A and Code_B, the expression “A(1)|B(0..1)” will indicate that the API_Call property can be chosen with multiplicity 1 or the Code property can be chosen with multiplicity 0 or 1.

1.2.5 Property and Class Descriptions

Each class and property defined in STIX is described using the format, “The X property verb Y.” For example, in the specification for the STIX Campaign, we write, “The id property specifies a globally unique identifier for the Campaign instance.” In fact, the verb “specifies” could have been replaced by any number of alternatives: “defines,” “describes,” “contains,” “references,” etc.

However, we thought that using a wide variety of verb phrases might confuse a reader of a specification document because the meaning of each verb could be interpreted slightly differently. On the other hand, we didn’t want to use a single, generic verb, such as “describes,” because although the different verb choices may or may not be meaningful from an implementation standpoint, a distinction could be useful to those interested in the modeling aspect of STIX.

Consequently, we have chosen to use the three verbs, defined as follows, in class and property descriptions:

Verb	STIX Definition
<u>captures</u>	Used to record and preserve information without implying anything about the structure of a class or property. Often used for properties that encompass general content. This is the least precise of the three verbs.
	<i>Examples:</i> The <u>Source</u> property characterizes the source of the sighting information. Examples of details <u>captured</u> include identifying characteristics, time-related

	<p>attributes, and a list of the tools used to collect the information.</p> <p>The <code>Description</code> property <u>captures</u> a textual description of the Indicator.</p>
<u>characterizes</u>	<p>Describes the distinctive nature or features of a class or property. Often used to describe classes and properties that themselves comprise one or more other properties.</p>
	<p><i>Example:</i></p> <p>The <code>Confidence</code> property <u>characterizes</u> the level of confidence in the accuracy of the overall content captured in the Incident.</p> <p>The <code>ActivityType</code> class <u>characterizes</u> basic information about an activity a defender might use in response to a Campaign.</p>
<u>specifies</u>	<p>Used to clearly and precisely identify particular instances or values associated with a property. Often used for properties that are defined by a controlled vocabulary or enumeration; typically used for properties that take on only a single value.</p>
	<p><i>Example:</i></p> <p>The <code>version</code> property <u>specifies</u> the version identifier of the STIX Campaign data model used to capture the information associated with the Campaign.</p>

1.3 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [\[RFC2119\]](#).

1.4 Normative References

- [RFC2119]** Bradner, S., “Key words for use in RFCs to Indicate Requirement Levels”, BCP 14, RFC 2119, March 1997. <http://www.ietf.org/rfc/rfc2119.txt>.

2 Background Information

In this section, we provide high level information about the Campaign data model that is necessary to fully understand the Campaign data model specification details given in Section 3.

2.1 Campaign-Related Component Data Models

As will be explicitly detailed in Section 3, a STIX Campaign leverages four other core STIX constructs, namely Threat Actor, TTP, Incident, and Indicator (as indicated by the outward-oriented arrows). As stated in Section 1.1, each of these components is defined in a separate specification document. [Figure 2-1](#) illustrates the relationship between the Campaign and the other core constructs.

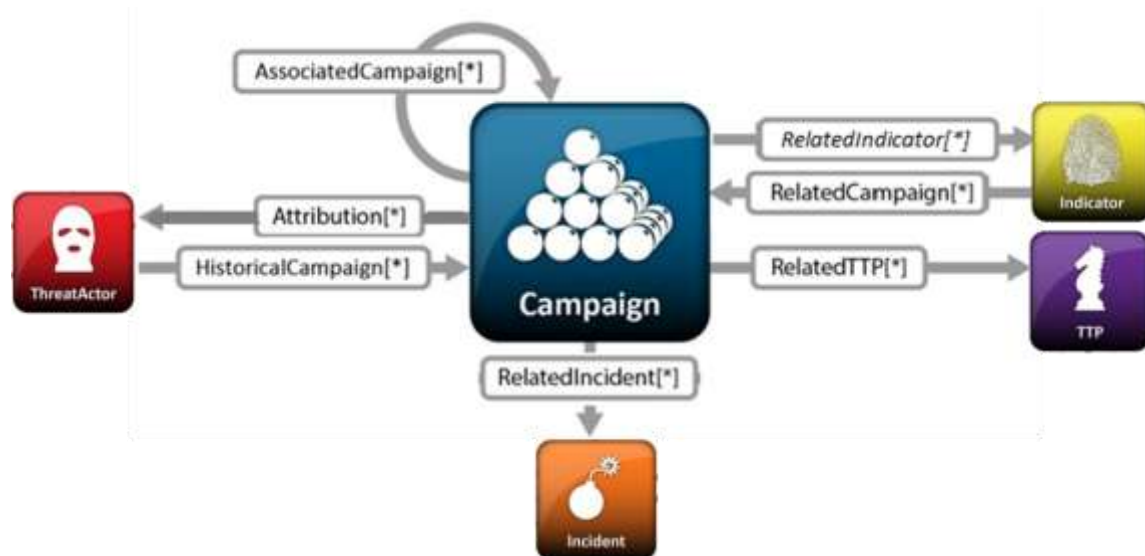


Figure 2-1. High level view of the Campaign data model

In this section, we give a high level summary of the relationship between the Campaign data model and the other components to which a Campaign may refer. We also make note of the fact that the Campaign data model can be self-referential. Other relationships shown in the diagram are defined in the specification of the component that they originate from.

- **Campaign**
The Campaign data model is self-referential, enabling one Campaign to reference other Campaigns that are asserted to be related. Self-referential relationships between Campaigns may indicate general associativity or can be used to indicate relationships between different versions of the same Campaign.
- **Indicator**
A STIX Indicator conveys specific Observable patterns combined with contextual information intended to represent artifacts and/or behaviors of interest within a cyber security context. Please see [STIX Version 1.2.1 Part 4: Indicator](#) for details.

STIX Version 1.2.1 of the Campaign data model references the Indicator data model as a means of referring to indicators relevant to the Campaign. Beginning in STIX Version 1.1, this reference relationship was deprecated; however, it remains in STIX v1.2.1 for backward compatibility. The relationship will be removed in STIX Version 2.0.

Under STIX Version 1.2.1 – unless backward compatibility is necessary – relationships between Indicators and Campaigns SHOULD be captured from the Indicator to Campaign direction (i.e., Indicators SHOULD reference associated Campaigns rather than the other way around). [Figure 2-1](#) shows the deprecated direction using italics.

- **Incident**

An STIX Incident corresponds to sets of related security events affecting an organization, along with information discovered or decided during an incident response investigation. Please see [STIX Version 1.2.1 Part 6: Incident](#) for details.

The Campaign data model references the Incident data model in order to identify sets of observed Incidents that are part of the Campaign (or in some way related to the Campaign).

- **Tactics, Techniques and Procedures (TTP)**

A STIX Tactics, Techniques, and Procedures (TTP) are representations of the behavior or modus operandi of cyber adversaries. Please see [STIX Version 1.2.1 Part 5: TTP](#) for details.

The Campaign data model references the TTP data model as a means to identify sets of specific TTPs leveraged within a Campaign (or in some way related to a Campaign).

- **Threat Actor**

A STIX Threat Actor is a characterization of a malicious actor (i.e., adversary) that represents a cyber attack threat. A variety of information can be captured in a Threat Actor construct, including identity, motivations, intended effect, and sophistication level. Please see [STIX Version 1.2.1 Part 7: Threat Actor](#) for details.

The Campaign data model references the Threat Actor data model as necessary to identify the Threat Actors who are potentially responsible for the Campaign (for the purpose of attribution) or who are in some way related to the Campaign. A reference of the Threat Actor data model may also be used in a Campaign to capture the suspected intended effect of the Threat Actor.

3 STIXTM Campaign Data Model

The primary class of the STIX Campaign package is the `CampaignType` class, which characterizes a cyber threat campaign by capturing an asserted relationship between the threat actors who are involved, the TTPs used, and the incidents that comprise parts of the campaign in addition to other intrinsic properties. Similar to the primary classes of all of the component data models in STIX, the `CampaignType` class extends a base class defined in the STIX Common data model; more specifically, it extends the `CampaignBaseType` base class, which provides the essential identifier (`id`) and identifier reference (`idref`) properties.

The relationship between the `CampaignType` class and the `CampaignBaseType` base class, as well as the properties of the `CampaignType` class, are illustrated in the UML diagram given in [Figure 3-1](#).

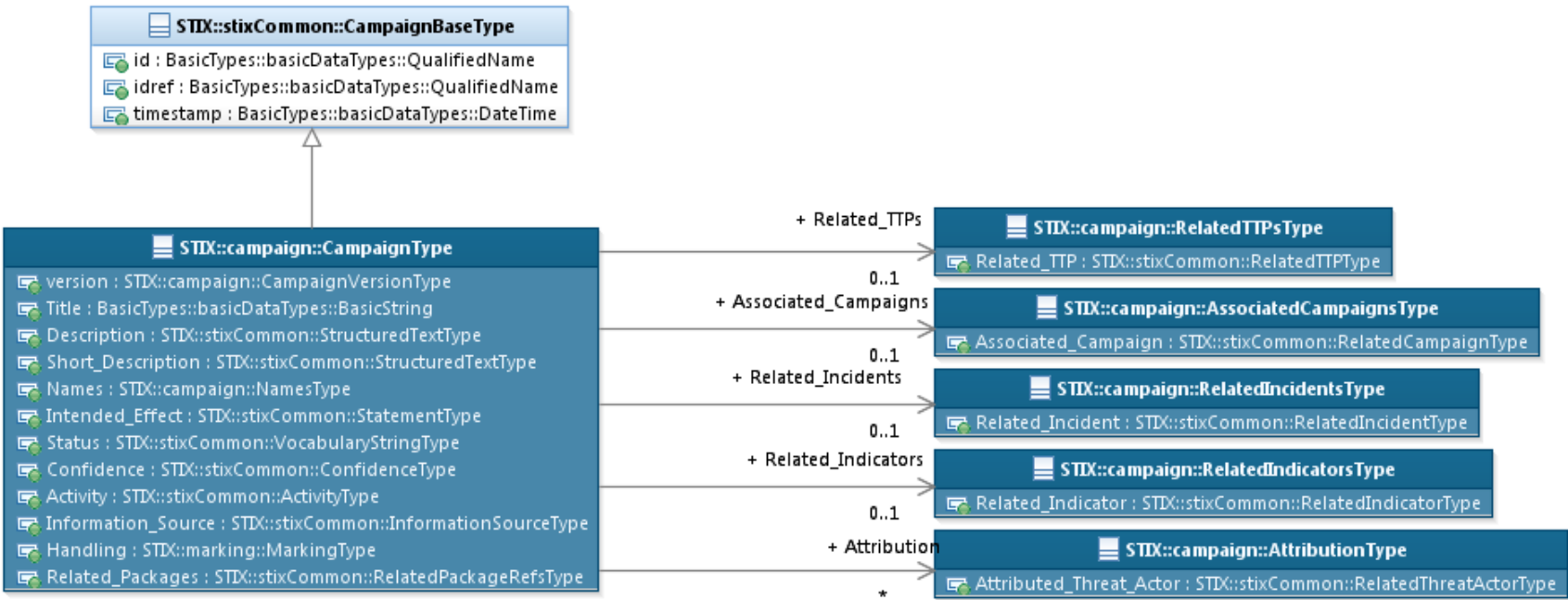


Figure 3-1. UML diagram of the `CampaignType` class

The property table, which includes property descriptions and corresponds to the UML diagram given in [Figure 3-1](#), is provided in [Table 3-1](#).

All classes defined in the Campaign data model are described in detail in Sections 3.1 through 3.7. Details are not provided for classes defined in non-Campaign data models; instead, the reader is referred to the corresponding data model specification as indicated by the package prefix specified in the Type column of the table.

Table 3-1. Properties of the *CampaignType* class

Name	Type	Multiplicity	Description
version	CampaignVersionType	0..1	The <code>version</code> property specifies the version number of the STIX Campaign data model for STIX v1.2.1 used to capture the information associated with the Campaign.
Title	basicDataTypes:BasicString	0..1	The <code>Title</code> property captures a title for the Campaign and reflects what the content producer thinks the Campaign as a whole should be called. The <code>Title</code> property is typically used by humans to reference a particular Campaign; however, it is not suggested for correlation.
Description	stixCommon:StructuredTextType	0..*	The <code>Description</code> property captures a textual description of the Campaign. Any length is permitted. Optional formatting is supported via the <code>structuring_format</code> property of the <code>StructuredTextType</code> class.
Short_Description	stixCommon:StructuredTextType	0..*	The <code>Short_Description</code> property captures a short textual description of the Campaign. This property is secondary and should only be used if the <code>Description</code> property is already populated and another, shorter description is available.
Names	NamesType	0..1	The <code>Names</code> property specifies a set of one or more names (i.e., aliases) used to identify the Campaign. An organization may use names that are created internally or externally (outside the organization). Note that the purpose of the <code>Names</code> property is different than that of the <code>Title</code> property: while the <code>Title</code> property is used to title the Campaign construct instance, the <code>Names</code> property gives the names of the set of activity that the Campaign describes.
Intended_Effect	stixCommon:StatementType	0..*	The <code>Intended_Effect</code> property characterizes the suspected effect that the Campaign is intended to have on its target(s), which includes a <code>Value</code> property that specifies the type of the

			effect. Examples of potential types include <i>theft</i> , <i>disruption</i> , and <i>unauthorized access</i> (these specific values are only provided to help explain the <code>Value</code> property: they are neither recommended values nor necessarily part of any existing vocabulary). The content creator may choose any arbitrary value or may constrain the set of possible types by referencing an externally-defined vocabulary or leveraging a formally defined vocabulary extending from the <code>stixCommon:ControlledVocabularyStringType</code> class. The STIX default vocabulary class for use in the <code>Value</code> property is ' <i>IntendedEffectVocab-1.0</i> ' (which is different than the default vocabulary provided for the <code>StatementType</code> class).
Status	<code>stixCommon: VocabularyStringType</code>	0..1	The <code>Status</code> property specifies the status of the Campaign. Examples of potential statuses include <i>ongoing</i> , <i>historical</i> , and <i>future</i> (these specific values are only provided to help explain the property: they are neither recommended values nor necessarily part of any existing vocabulary). The content creator may choose any arbitrary value or may constrain the set of possible values by referencing an externally-defined vocabulary or leveraging a formally defined vocabulary extending from the <code>stixCommon:ControlledVocabularyStringType</code> class. The STIX default vocabulary class for use in the property is ' <i>CampaignStatusVocab-1.0</i> '.
Related_TTPs	<code>RelatedTTPsType</code>	0..1	The <code>Related_TTPs</code> property specifies a set of one or more TTPs leveraged within the Campaign (or in some way related to a Campaign).
Related_Incidents	<code>RelatedIncidentsType</code>	0..1	The <code>RelatedIncidents</code> property specifies a set of one or more Incidents that are part of the Campaign (or in some way related to the Campaign).
Related_Indicators	<code>RelatedIndicatorsType</code>	0..1	The <code>Related_Indicators</code> property specifies a set of one or more Indicators relevant to the Campaign. <i>Note: as discussed in Section 3.5, this property is deprecated and is planned for removal in STIX Campaign Version 2.0.</i>
Attribution	<code>AttributionType</code>	0..*	The <code>Attribution</code> property specifies attribution information in the form of a set of one or more Threat Actors who are asserted to be responsible for the Campaign. <i>Multiple groups can be</i>

			<i>captured by defining multiple Attribution elements.</i>
Associated_Campaigns	AssociatedCampaignsType	0..1	The <code>Associated_Campaigns</code> property specifies a set of one or more other Campaigns related to this Campaign.
Confidence	stixCommon:ConfidenceType	0..1	The <code>Confidence</code> property characterizes the level of confidence in the accuracy of the collection of information captured for the Campaign.
Activity	stixCommon:ActivityType	0..*	The <code>Activity</code> property characterizes a defender activity associated with the Campaign. Its underlying abstract class must be extended to include the chosen format of activity characterization.
Information_Source	stixCommon: InformationSourceType	0..1	The <code>Information_Source</code> property characterizes the source of the Campaign information. Examples of details captured include identifying characteristics, time-related attributes, and a list of the tools used to collect the information.
Handling	marking:MarkingType	0..1	The <code>Handling</code> property specifies data handling markings for the properties of this Campaign. The marking scope is limited to the campaign and the content it contains. Note that data handling markings can also be specified at a higher level.
Related_Packages	stixCommon: RelatedPackagesRefsType	0..1	<p>The <code>Related_Packages</code> property specifies a set of one or more STIX Packages that are related to the Campaign.</p> <p>DEPRECATED: This property is deprecated and will be removed in the next major version of STIX. Its use is strongly discouraged except for legacy applications.</p>

3.1 CampaignVersionType Enumeration

The `CampaignVersionType` enumeration is an inventory of all versions of the Campaign data model for STIX Version 1.2.1. The enumeration literals are given in [Table 3-2](#).

Table 3-2. Literals of the *CampaignVersionType* enumeration

Enumeration Literal	Description
stix-1.2.1	Campaign data model for STIX v1.2.1

3.2 NameType Class

The `NameType` class specifies a set of one or more names used to identify the Campaign. Note that an equivalent `NameType` class is defined in the STIX Common data model; this duplication is due to backward-compatibility issues and will be corrected in the next major release of STIX². At that time, the `campaign:NameType` class will be removed, and Campaign names will be defined via the `stixCommon:NameType` class.

The property of the `NameType` class is shown in [Table 3-3](#).

Table 3-3. Properties of the *NameType* class

Name	Type	Multiplicity	Description
Name	<code>stixCommon: VocabularyStringType</code>	1..*	The <code>Name</code> property is used to specify a single name or alias that identifies the Campaign. The content creator may choose any arbitrary value or may constrain the set of possible values by referencing an externally-defined vocabulary or leveraging a formally defined vocabulary extending from the <code>stixCommon:ControlledVocabularyStringType</code> class. No default vocabulary class has been defined for STIX 1.2.

3.3 RelatedTTPsType Class

The `RelatedTTPsType` class specifies a set of one or more TTPs asserted to be leveraged within the Campaign (or in some way related to a Campaign). It extends the `GenericRelationshipListType` superclass defined in the STIX Common data model, which specifies the scope (whether the elements of the set are related individually or as a group).

The UML diagram corresponding to the `RelatedTTPsType` class is shown in [Figure 3-2](#).

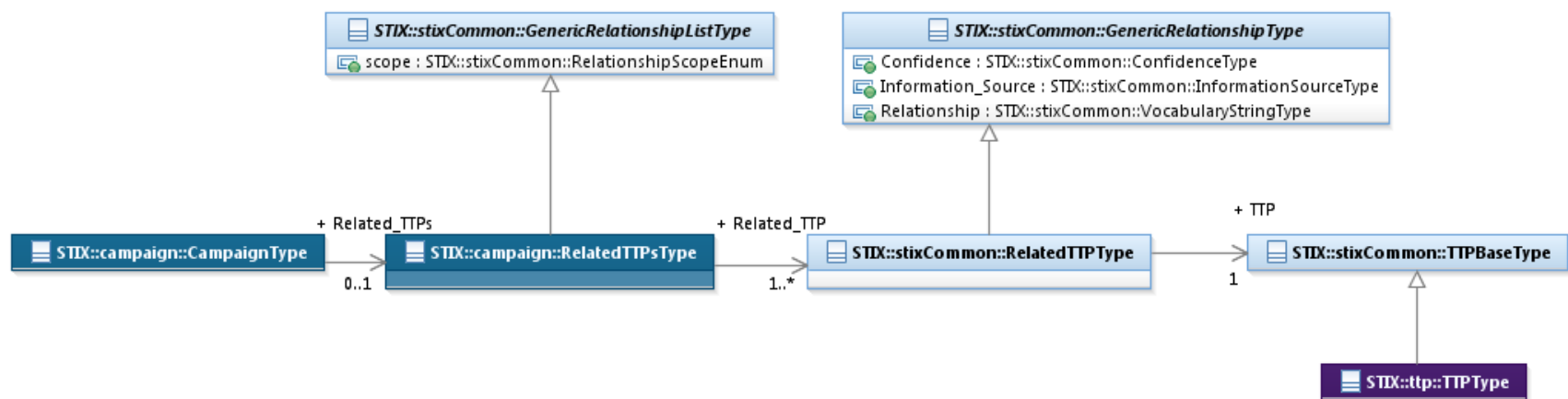


Figure 3-2. UML diagram of the *RelatedTTPsType* class

Table 3-4 shows the properties of the *RelatedTTPsType* specialization and is associated with the UML diagram given in Figure 3-2.

Table 3-4. Properties of the *RelatedTTPsType* class

Name	Type	Multiplicity	Description
Related_TTP	<code>stixCommon:RelatedTTPType</code>	1..*	The <code>Related_TTP</code> property specifies a TTP leveraged within the Campaign (or in some way related to a Campaign) and characterizes the relationship between the Campaign and the TTP by capturing information such as the level of confidence that the Campaign and the TTP are related, the source of the relationship information, and the type of relationship.

3.4 RelatedIncidentsType Class

The *RelatedIncidentsType* class specifies a set of one or more Incidents asserted as part of the Campaign (or in some way related to the Campaign). It extends the *GenericRelationshipListType* superclass defined in the STIX Common data model, which specifies the scope (whether the elements of the set are related individually or as a group).

The UML diagram corresponding to the *RelatedIncidentsType* class is shown in Figure 3-3.

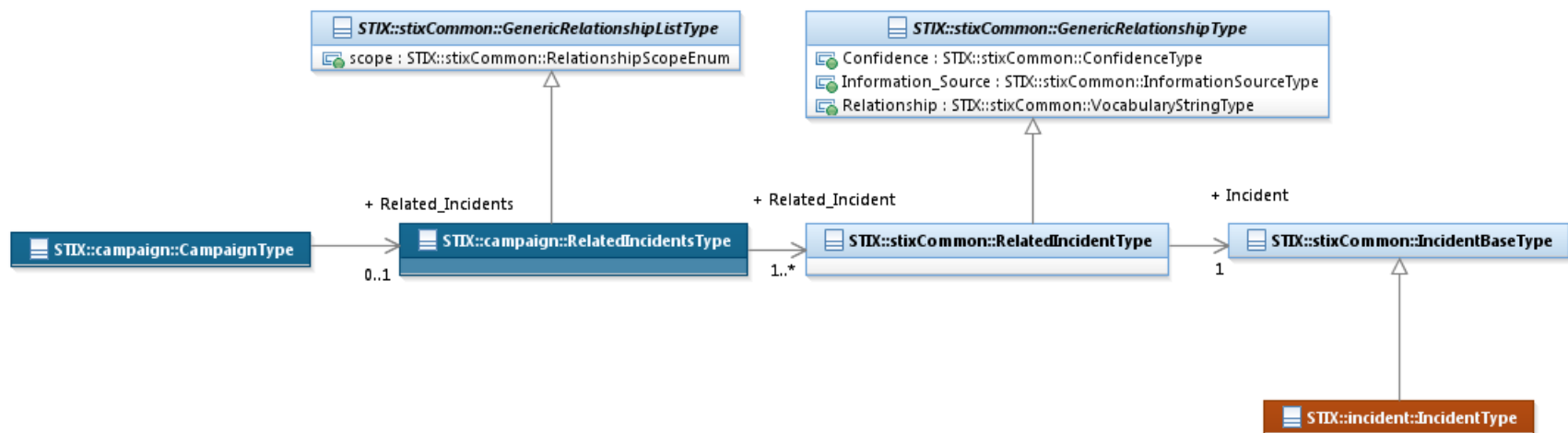


Figure 3-3. UML diagram of the *RelatedIncidentsType* class

Table 3-5 shows the properties of the *RelatedIncidentType* specialization and is associated with the UML diagram of Figure 3-3.

Table 3-5. Properties of the *RelatedIncidentsType* class

Name	Type	Multiplicity	Description
Related_Incident	<code>stixCommon:RelatedIncidentType</code>	1..*	The <code>Related_Incident</code> property specifies an Incident asserted as part of the Campaign (or in some way related to the Campaign) and characterizes the relationship between the Campaign and the Incident by capturing information such as the level of confidence that the Campaign and the Incident are related, the source of the relationship information, and the type of relationship.

3.5 RelatedIndicatorsType Class (deprecated)

The *RelatedIndicatorsType* class specifies a set of one or more Indicators asserted as relevant to a Campaign. It extends the *GenericRelationshipListType* superclass defined in the STIX Common data model, which specifies the scope (whether the elements of the set are related individually or as a group).

The UML diagram corresponding to the `RelatedIndicatorsType` class is shown in [Figure 3-4](#).

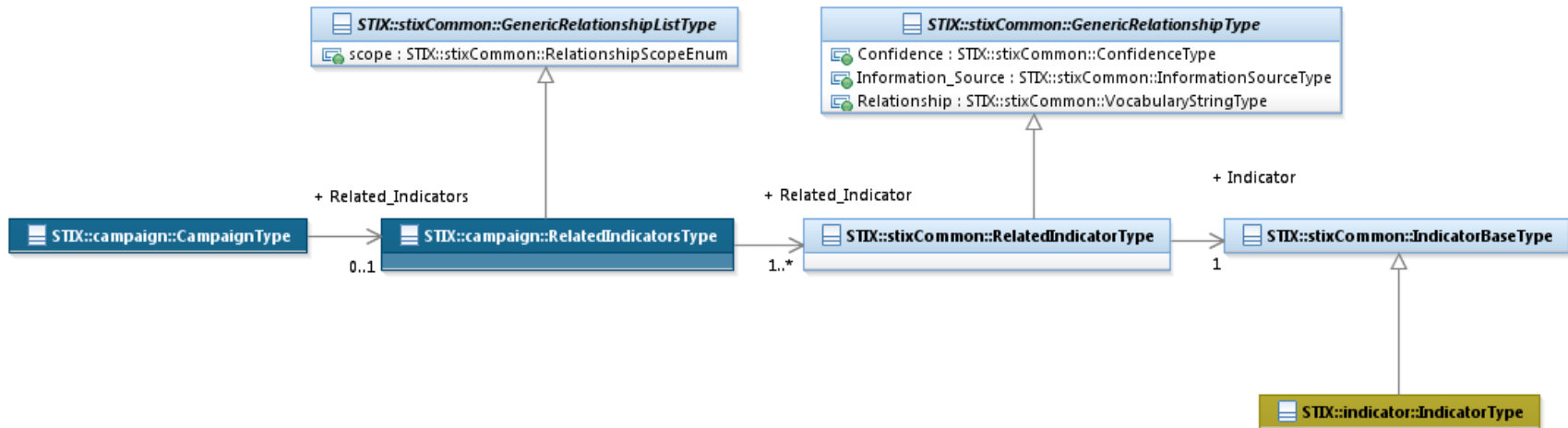


Figure 3-4. UML diagram of the `RelatedIndicatorsType` class

NOTE: The `Related_Indicators` property of the `CampaignType` was deprecated in STIX Version 1.1, and it is slated for removal in STIX Version 2.0 (it remains in the Campaign data model for backward compatibility). Therefore, because no other property requires it, the `RelatedIndicatorsType` class will be removed in STIX Version 2.0 of the Campaign data model. Unless legacy code or content require the use of the `Related_Indicators` property, Relationships between Indicators and Campaigns in STIX v1.2.1 SHOULD be represented using the `Related_Campaigns` property of the `indicator:IndicatorType` class.

[Table 3-6](#) (shaded to indicate deprecation) shows the properties of the `RelatedIncidentType` specialization and is associated with the UML diagram of [Figure 3-4](#).

Table 3-6. Properties of the *RelatedIndicatorsType* class (deprecated)

Name	Type	Multiplicity	Description
Related_Indicator	<code>stixCommon:RelatedIncidentType</code>	1..*	The <code>Related_Indicator</code> property specifies an Indicator asserted as relevant to this Campaign and characterizes the relationship between the Indicator and the Campaign by capturing information such as the level of confidence that the Indicator and the Campaign are related, the source of the relationship information, and the type of relationship.

3.6 AttributionType Class

The `AttributionType` class specifies a set of one or more Threat Actors asserted as related to a Campaign from an attribution perspective. It extends the `GenericRelationshipListType` superclass defined in the STIX Common data model, which specifies the scope (whether the elements of the set are related individually or as a group).

The UML diagram corresponding to the `AttributionType` class is shown in Figure 3-5.

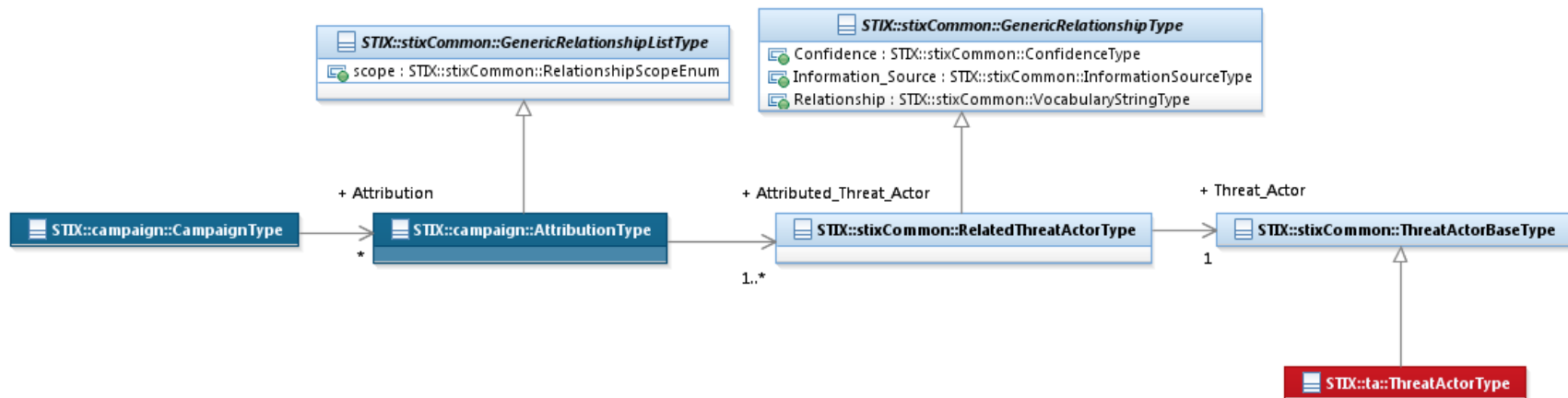


Figure 3-5. UML diagram of the *AttributionType* class

Table 3-7 shows the properties of the `AttributionType` specialization and is associated with the UML diagram in **Figure 3-5**.

Table 3-7. Properties of the *Attribution* class

Name	Type	Multiplicity	Description
Attributed_Threat_Actor	<code>stixCommon:RelatedThreatActorType</code>	1..*	The <code>Attributed_Threat_Actor</code> property specifies a Threat Actor asserted as related to the Campaign and characterizes the relationship between the Threat Actor and the Campaign by capturing information such as the level of confidence that the Threat Actor and the Campaign are related, the source of the relationship information, and the type of the relationship.

3.7 AssociatedCampaignsType Class

The `AssociatedCampaignType` class specifies a set of one or more other Campaigns asserted as related to this Campaign and therefore is a self-referential relationship. It extends the `GenericRelationshipListType` superclass defined in the STIX Common data model, which specifies the scope (whether the elements of the set are related individually or as a group).

The UML diagram corresponding to the `AssociatedCampaignsType` class is shown in **Figure 3-6**.

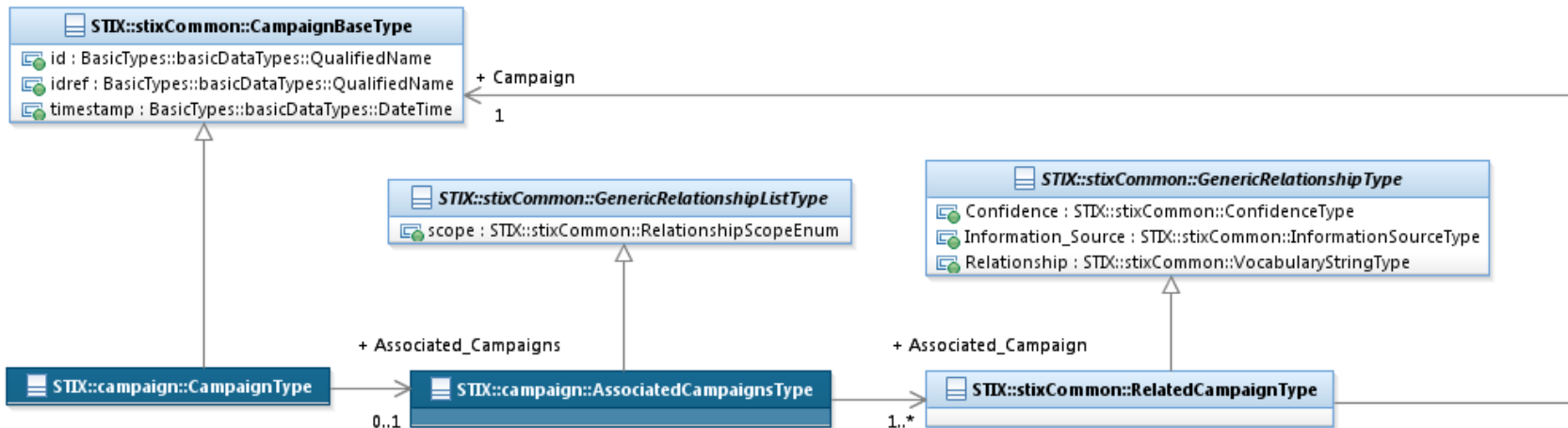


Figure 3-6. UML Diagram of the `AssociatedCampaignsType` class

Table 3-8 shows the properties of the `AssociatedCampaignType` specialization and is associated with the UML diagram in **Figure 3-6**.

Table 3-8. Properties of the `AssociatedCampaigns` class

Name	Type	Multiplicity	Description
Associated_Campaign	<code>stixCommon:RelatedCampaignType</code>	1..*	The <code>Associated_Campaign</code> property specifies another Campaign associated with this Campaign and characterizes the relationship between the Campaigns by capturing information such as the level of confidence that the Campaigns are related, the source of the relationship information, and type of the relationship. A relationship between Campaigns may represent assertions of general associativity or different versions of the same Campaign.

4 Conformance

Implementations have discretion over which parts (components, properties, extensions, controlled vocabularies, etc.) of STIX they implement (e.g., Indicator/Suggested_COAs).

[1] Conformant implementations must conform to all normative structural specifications of the UML model or additional normative statements within this document that apply to the portions of STIX they implement (e.g., Implementers of the entire TTP component must conform to all normative structural specifications of the UML model or additional normative statements within this document regarding the TTP component).

[2] Conformant implementations are free to ignore normative structural specifications of the UML model or additional normative statements within this document that do not apply to the portions of STIX they implement (e.g., Non-implementers of any particular properties of the TTP component are free to ignore all normative structural specifications of the UML model or additional normative statements within this document regarding those properties of the TTP component).

The conformance section of this document is intentionally broad and attempts to reiterate what already exists in this document. The STIX 1.2 Specifications, which this specification is based on, did not have a conformance section. Instead, the STIX 1.2 Specifications relied on normative statements and the non-mandatory implementation of STIX profiles. STIX 1.2.1 represents a minimal change from STIX 1.2, and in that spirit no requirements have been added, modified, or removed by this section.

Appendix A. Acknowledgments

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Participants:

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Terry MacDonald, Individual
Alex Pinto, Individual
Patrick Maroney, Integrated Networking Technologies, Inc.
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Rutger Prins, Intelworks BV
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John Wunder, MITRE Corporation
Mike Boyle, National Security Agency
Jessica Fitzgerald-McKay, National Security Agency
Takahiro Kakumaru, NEC Corporation
John-Mark Gurney, New Context Services, Inc.
Christian Hunt, New Context Services, Inc.
Daniel Riedel, New Context Services, Inc.
Andrew Storms, New Context Services, Inc.
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Chris O'Brien, United Kingdom Cabinet Office
Julian White, United Kingdom Cabinet Office
Anthony Rutkowski, Yaana Technologies, LLC

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Appendix B. Revision History

Revision	Date	Editor	Changes Made
wd01	21 August 2015	Sean Barnum Desiree Beck Aharon Chernin Rich Piazza	Initial transfer to OASIS template

Notes _____

¹ The CybOX Observable data model is actually defined in the [CybOX Language](#), not in STIX.

² Essentially, the first version of the `NamesType` class was defined within the Campaign data model to allow users to capture the names by which a campaign is known. However, when the relationship between a Campaign and an Indicator was moved from the Campaign data model to the Indicator data model, users still needed the ability to refer to a Campaign by name. Existing policy of not having one component data model (Indicator) depend on another (Campaign) meant that an equivalent `NamesType` class was added to the STIX Common data model. In the next major version of STIX, it is expected that the `NamesType` class will be removed from the Campaign data model and that all Campaign names will be defined via the STIX Common `NamesType` class.