

Navy Common Reference Profile

Requirements and Guidelines for Implementing xAPI in Common Types of Content



Document Version: 1.3

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Revision History

Version	Release Date	Notes
0.5	5/05/2020	Initial draft of the profile. Authors review only.
0.9	6/29/2020	Second draft of the profile. Internal Navy review only.
1.0	7/31/2020	All edits and feedback incorporated. First full version of the profile released.
1.1	3/12/2021	Specification of new context extensions in the profile’s concepts section.
1.2	7/20/2021	Global update from “NETC” to “Navy.”
1.3	11/15/2022	Made several minor text updates to align with other Navy profile updates.

Table 1: Navy Common Reference Profile Revision History

1. Overview

1.1. Purpose

This document provides the general xAPI Concepts - verbs, activity types, context extensions - and requirements for formatting xAPI statements commonly associated with many types of learning or training events. These general Concepts and requirements can be reused across multiple types of content and with other Navy xAPI Profiles.

1.2. How to Read this Document

This document assumes an understanding of the xAPI Specification and the underlying concepts explained therein, and is provided as an auxiliary resource to the formal xAPI Specification. If an object or property is listed as “optional” in the xAPI Specification, but that same object or property is listed as a requirement herein, then this document takes precedence.

The following common syntactic and typographic conventions will be used in this document:

- Footnotes appear at the bottom of pages where there is a need to provide additional information or references.
- Words or concepts will use *Italics* or “double quotations” when there is a need to draw special attention to them.
- Title Case is used to identify concepts and terminology from the xAPI Specification.
- A `Courier` font such as `this` is used to represent data objects or properties associated with the xAPI Statement Data Model. A `Courier` font is also used to distinguish between technical terminology or concepts originating from the xAPI Specification or an xAPI Profile. A `Courier` font is also used to represent unique identifiers such as IRIs or IDs.
- xAPI Statement examples represented as JSON snippets and other types of syntax examples are provided inside of light blue background box area like the one below:

```
"data-object":{
  "property1": "value",
  "property2": "value"
}
```

1.2.1. Conformance Requirements

There are two levels of obligation with regards to xAPI conformance requirements identified by the terms herein. Since these xAPI conformance requirements are intended to be reused as part of the contract requirements in a Data Item Description (DID) deliverable or Contract Data Requirements List (CDRL), the use of “SHOULD” and “MAY” was avoided since these types of contract documents normally contain only mandatory instructions. Complete definitions are provided below. Not following these recommendations could risk interoperability and and/or lead to xAPI deliverables not being accepted by the Navy.

1. SHALL OR SHALL NOT. If a product fails to implement a SHALL or SHALL NOT requirement, the product is non-conformant to the Navy’s requirements.

2. Navy Common Reference Profile

This document provides the authoritative Navy xAPI Statement requirements and examples on the correct way to implement the general set of xAPI learning events. All of these general events can be reused in several different types of content and with other Profiles. If any of these general events are used in combination with other Navy Profiles, please refer to those Profiles for additional guidance and requirements.

2.1. Navy Common Reference Profile Concepts

The following tables provide a list of available vocabulary Concepts specifically for use in the Navy Common Reference Profile. If additional common use cases are identified and new Concepts are added, then an updated version of this Profile will be issued.

2.1.1. Verbs

The following table provides the list of Verbs used in the Navy Common Reference Profile.

Concept	Description	IRI
---------	-------------	-----

accessed	Indicates the actor accessed or navigated to an object.	https://w3id.org/xapi/netc/verbs/accessed
closed	Indicates the actor ended or shut down an object that was previously opened.	https://w3id.org/xapi/netc/verbs/closed
downloaded	Indicates that the actor downloaded (rather than accessed or opened) a file or document.	http://id.tincanapi.com/verb/downloaded
disliked	Indicates that the Actor does not approve of the object or event.	https://w3id.org/xapi/acrossx/verbs/disliked
exited	Indicates the actor intentionally departed from the object.	http://adlnet.gov/expapi/verbs/exited
liked	Indicates that the Actor approves of, recommends, or endorses the object or event.	https://w3id.org/xapi/acrossx/verbs/liked
opened	Indicates the actor opened an object.	https://w3id.org/xapi/netc/verbs/opened
printed	Indicates the actor printed an electronic file or other digital content from their screen to a printing device.	https://w3id.org/xapi/netc/verbs/printed
uploaded	Indicates the actor transferred a file from a local computer to a remote computer, application, or web server.	https://w3id.org/xapi/netc/verbs/uploaded
viewed	Indicates the actor arrived at, entered or visited an object.	http://id.tincanapi.com/verb/viewed

Table 2: Verbs in the Navy Common Reference Profile

2.1.2. Activity Types

The following table provides the list of Activity Types used in the Navy Common Reference Profile.

Concept	Description	IRI
file	A file is a digital resource for storing information in a specific format on a computer.	http://adlnet.gov/expapi/activities/file
link	A link refers to a hyperlink in the content to another resource.	http://adlnet.gov/expapi/activities/link
menu	A list of options in a software interface presented to a user to act on. A menu can be an entire user interface or only part of one. The menu Activity is the parent of the menu-item Activity.	https://w3id.org/xapi/netc/activity-types/menu
menu-item	A single option in a software interface's menu list of options. The menu-item is a child of the menu Activity.	https://w3id.org/xapi/netc/activity-types/menu-item
page	The representation of a specific page number and the information on that page which can be displayed on a screen at one time.	https://w3id.org/xapi/acrossx/activities/page

Table 3: Activity Types in the Navy Common Reference Profile

2.1.3. Activity Extensions

The following table provides a list of the Activity Extensions used in the Navy Common Reference Profile.

Concept	Description	IRI	Value Type	Expected Values / Examples
---------	-------------	-----	------------	----------------------------

course-id-number	A string value of the identifier of the course.	https://w3id.org/xapi/netc/extensions/course-id-number	string	The school's or learning center's official course identification number. Use uppercase format. Do NOT include revision or version information. (Example. A-150-9021)
hull-applicability	A string value of the hull number(s) to which the content is applicable.	https://w3id.org/xapi/netc/extensions/hull-applicability	string	An official Navy ship, submarine, or airframe identifier. Shall be provided in UPPERCASE, without spaces, hyphens, or any other special characters. (Examples: DDG81, F22)
hull-configuration	A string value of the hardware/software configuration that is represented in the content.	https://w3id.org/xapi/netc/extensions/hull-configuration	string	An official Navy ship configuration nomenclature. ¹ (Example: 9.C2.3.0.2D).
navy-enlisted-classification	A string value used to identify the Navy Enlisted Code that the content supports.	https://w3id.org/xapi/netc/extensions/navy-enlisted-classification	array	One or more alphanumeric codes that are associated with a specific rating and are frequently used to indicate specialized qualifications. Refer to Navy Personnel Command for current NEC values ² . Use uppercase format. ["ET-1402", "ETV-15V9", "ET-V011", "FC-V020", "IC-V001"]
target-audience	The target audience for the content.	https://w3id.org/xapi/netc/extensions/target-audience	array	One or more of the following in lowercase: - apprentice

¹ Ship configuration nomenclature can be confirmed by an internal company Program Management Office or Government PMO.

² NEC List, <https://www.mynavyhr.navy.mil/Career-Management/Detailing/Placement-Management/NEC-Information>

				- journeyman - master
target-rating	The specific Navy rating(s) targeted by this content.	https://w3id.org/xapi/netc/extensions/target-rating	array of strings	One or more of the following abbreviated ratings from NEOCS Manual ³ denoted in uppercase: - AB - ABE - ABF - ABH - AC - AD - AE - AG - AM - AME - AN - AO - AS - AT - AW - AWF - AWO - AWR - AWS - AWV - AZ - BM - BU - CE - CM - CN - CS - CSS - CT - CTI - CTM - CTN - CTR - CTT - DC - EA - EM - EMN - EOD - EN

³ The authoritative source of Navy ratings is the NEOCS Manual. Refer to the NEOCS Manual for the most up-to-date list of ratings, located here: <https://www.mynavyhr.navy.mil/References/NEOCS-Manual/NEOCS-Vol-I/>

				<ul style="list-style-type: none">- EO- ET- ETN- ETV- FC- FCA- FN- FT- GM- GSE- GSM- HM- HN- HT- IC- IS- IT- ITS- LS- LSS- LN- MA- MC- MN- MMA- MMN- MN- MR- MT- MU- NC- NCC- NCR- ND- OS- PS- PR- QM- RP- RS- SB- SN- SO- STG- STS- SW- TM- UT- YN- YNS
--	--	--	--	---

tech-doc-id	A string value of the technical document or PMS series and version/revision used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-id	Use uppercase format of value in the Tech Doc ID column in the program's bibliography of technical documentation. Do NOT include revision or version information. (Example: ST890-A8-AEG-020)	tech-doc-id
tech-doc-procedure-id	A string value of the technical document or MRC and version/revision used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-procedure-id	Use uppercase format of value in the Procedure ID column in the program's bibliography of technical documentation. (Example: WP009)	tech-doc-procedure-id
tech-doc-procedure-title	A string value of the approved title of the documented procedure used to support the content.	https://w3id.org/xapi/netc/extensions/tech-doc-procedure-title	Use uppercase format of value in the Procedure Title column in the program's bibliography of technical documentation. (Example: Data Channel Fault Localization)	tech-doc-procedure-title

Table 4: Activity Extensions in the Navy Common Reference Profile

2.1.4. Context

2.1.4.1. Context Activities Category

The Context Activities Category array is a location in an xAPI Statement reserved for objects used to categorize, or tag, the Statement. This location is used in profiles to indicate that a Statement follows a specific

profile or a collection of profiles. This is represented in xAPI Statements by adding the following two activities to the Context Activities Category array of the Statements.

```
{
  "id": "https://w3id.org/xapi/netc/v1.0",
  "definition": {
    "type": "http://adlnet.gov/expapi/activities/profile"
  }
}
```

Navy Common Reference Profile activity

2.1.4.2. Context Extensions

The following table provides a list of the Context Extensions used in the Navy Common Reference Profile.

Concept	Description	IRI	Values
launch-location	A string value describing whether the content was launched while ashore or afloat.	https://w3id.org/xapi/netc/extensions/launch-location	One of the following values based on the location where the content was experienced <ul style="list-style-type: none"> - Ashore - Afloat (Example: "Ashore")
school-center	A string value describing the schoolhouse or learning center that owns the content.	https://w3id.org/xapi/netc/extensions/school-center	One of the following values (Note: Developers will need to confirm the value with Navy Learning Stack Administrators as they will maintain the authoritative list): <ul style="list-style-type: none"> • Center for EOD/Divining (CEODD) • Center for Force Health Protection (CFHP) • Center of Information Warfare Training (CIWT) • Center of Information Warfare Training (CIWT-JCC) • Center for Naval Aviation Technical Training (CNATT) • Commander Naval Intelligence (CNI) • Commander Naval Installations Command (CNIC) • Center for Personal and Professional Development (CPPD) • Center for Seabees and Facilities Engineering (CSFE) • Center for SEAL/SWCC (CENSEALSWC) • Center for Security Forces (CSF) • Center for Service Support (CSS)

			<ul style="list-style-type: none"> • Center for Surface Combat Systems (CSCS) • Commander Naval Reserve Force (CNRFC) • Department of Defense (DOD) • Department of the Navy (DON) • Department of the Navy, Chief Information Officer (DON-CIO) • Department of Records (DOR) • Expeditionary Warfare Training Group, Pacific (EWTGPAC) • Fleet and Industrial Supply Center (FISC) • Information Dominance Corps Reserve Command (IDCRC) • Joint Knowledge Development and Distribution Capability (JKDDC) • Military Sealift Command (MSC) • Naval Air Systems Command (NAVAIR) • Naval Air Warfare Center Aircraft Division (NAWCAD) • Naval Chaplaincy School and Center (NCSC) • Naval Communications Security Material Systems Command (NCMS) • Naval Education & Training Command (NETC) • Naval Facilities Engineering Command (NAVFAC) • Naval Financial Management Career Center (NFMC) • Naval Information Warfare Training Group (IWTC) • Naval Meteorology and Oceanography Command (NMOC) • Naval Mine Anti Warfare Command (NMAWC) • Naval Network Warfare Command (NNWC) • Naval Operations Security Support Team (NOST) • Naval Ordnance Safety and Security Activity (NOSSA) • Naval Reserve Professional Development Center (NRPDC) • Naval Schools Command (NSC) • Naval Sea Systems Command (NAVSEA) • Naval Special Warfare Center (NSWCEN) • Naval Surface Warfare Center (NSWC) • Naval Surface Warfare Center, Port Hueneme Division (PHDNSWC) • Naval Undersea Warfare Center (NUWC) • Naval War College (NWC) • Navy Crane Center (NCC) • Navy eLearning (NEL) • Navy Information Forces (NAVIFOR)
--	--	--	---

			<ul style="list-style-type: none">• Navy Junior Reserve Officers Training Corps. (NJROTC)• Navy Supply Systems Command (NAVSUP)• Mine Warfare Learning Command (MWLC)• Office of the Assistant Secretary of the Navy (OASN)• Office of Civilian Human Resources (OCHR)• Office of the Chief of Naval Operations (OPNAV)• Office of the Judge Advocate General / Naval Legal Service Command (OJAG)• Office of Naval Intelligence (ONI)• PERS2 Navy Personnel Command (PERS2)• Supervisor of Shipbuilding Gulf Coast (SSGC)• Space and Naval Warfare Systems Command (SPAWAR)• Submarine Learning Center (SLC)• Surface Warfare Officers School Command (SWOS)• U.S. Fleet Forces Command (USFFC)
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Table 5: Context Extensions in the Navy Common Reference Profile

2.2. Statement Requirements & Examples

The requirements are provided in each section below as a bulleted list of mandatory data required in each type of xAPI Statement. Example Statements are also provided for illustrative purposes after each list of Statement requirements.

2.2.1. Files

Digital files can represent a number of different formats for different purposes (e.g. .docx, .mp3, .jpg). Tracking how a user interacts with a digital file is limited to the basic events provided below. Please refer to the respective Navy xAPI Profiles for more specific requirements for using file events within the context of other types of content (e.g., e-learning, performance support).

2.2.1.1. Opening a File

2.2.1.1.1. Opened File Statement Requirements

The following are the requirements for an xAPI Statement when opening a file::

- The actor property SHALL be set according to the requirements in the Navy Core xAPI Profile
- The verb.id SHALL be set to https://w3id.org/xapi/netc/verbs/opened

- The `verb.display.en` SHALL be set to opened
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to `http://adlnet.gov/expapi/activities/file`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The timestamp SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.1.1.2. Opened File Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/opened",
    "display": {
      "en": "opened"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/files/a98c23fb-70f1-4a0a-b155-d363e63d9082",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Special Mission Pod Deployment Mechanism Technical Manual"
      },
      "description": {
```

```

        "en": "A tech pub PDF used with training on advanced airborne sensor
general familiarization from the P-8A course."
    },
    "type": "http://adlnet.gov/expapi/activities/file"
}
},
"context":{
    "contextActivities":{
        "category": [
            {
                "id": "https://w3id.org/xapi/netc/v1.0",
                "definition": {
                    "type": "http://adlnet.gov/expapi/activities/profile"
                }
            }
        ]
    }
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.1.2. Uploading a File

2.2.1.2.1. Uploaded File Statement Requirements

The following are the requirements for an xAPI Statement when uploading a file:

- The `actor` property **SHALL** be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` **SHALL** be set to `https://w3id.org/xapi/netc/verbs/uploaded`
- The `verb.display.en` **SHALL** be set to `uploaded`
- The `object.id` **SHALL** be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` **SHALL** be set to `http://adlnet.gov/expapi/activities/file`

- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.1.2.2. Uploaded File Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/uploaded",
    "display": {
      "en": "uploaded"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/files/c132acb1-c4e1-4b7c-9798-badc4a587561",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Airborne Sensor Notes"
      },
      "description": {
        "en": "A text file of personal notes taken while training on the Airborne Sensor Lesson."
      },
      "type": "http://adlnet.gov/expapi/activities/file"
    }
  }
}
```

```

"context":{
  "contextActivities":{
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.1.3. Downloading a File

2.2.1.3.1. Downloaded File Statement Requirements

The following are the requirements for an xAPI Statement when downloading a file:

- The `actor` property **SHALL** be set according to the requirements in the Navy Core xAPI Profile
- The `verb.id` **SHALL** be set to `http://id.tincanapi.com/verb/downloaded`
- The `verb.display.en` **SHALL** be set to `downloaded`
- The `object.id` **SHALL** be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` **SHALL** be set to `http://adlnet.gov/expapi/activities/file`
- The `context.contextActivities.category` array **SHALL** include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` **SHALL** be set according to the requirements in the Navy Core xAPI Profile

2.2.1.3.2. Downloaded File Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://id.tincanapi.com/verb/downloaded",
    "display": {
      "en": "downloaded"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/files/e0fe897d-9351-4215-b5a5-741dc4070f43",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Aft-deployment mechanism (ADM) image"
      },
      "description": {
        "en": "A 3D rendering of the ADM from the P-8A Poseidon."
      },
      "type": "http://adlnet.gov/expapi/activities/file"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
```

```

        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.1.4. Closing a File

2.2.1.4.1. Closed File Statement Requirements

The following are the requirements for an xAPI Statement when opening a file:

- The `actor` property SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/netc/verbs/closed`
- The `verb.display.en` SHALL be set to `closed`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `http://adlnet.gov/expapi/activities/file`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.1.3.2. Closed File Statement Example

```

{
  "actor": {
    "name": "John Doe",

```

```

    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/closed",
    "display": {
      "en": "closed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/pages/b20b46e2-51e2-45b8-92f9-5ed797e6e762",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Course informational overview."
      },
      "description": {
        "en": "An informational file used for the Advanced Airborne Sensor announcement."
      },
      "type": "http://adlnet.gov/expapi/activities/file"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    }
  }
}

```

```
    ]  
  }  
},  
"timestamp": "2020-04-29T16:05:41.520Z"  
}
```

2.2.2. Pages

A page refers to a single “screen” within a larger body of content. Tracking how a user interacts with a page with xAPI is described in the basic use cases provided below. Please refer to the other Navy xAPI Profiles for more specific requirements for using these general activities within the context of other types of content (e.g., e-learning, performance support activities).

2.2.2.1. Viewing a Page

Viewing a page is an optional, general event that could occur in nearly any type of content. The Viewed Page Statement is typically associated with the user arriving at, accessing, entering or visiting a page. The Viewed Page Statement does not imply that the user physically viewed all the contents of the page.

2.2.2.1.1. Viewed Page Statement Requirements

The following are the requirements for an xAPI Statement when viewing a page:

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://id.tincanapi.com/verb/viewed`
- The `verb.display.en` SHALL be set to `viewed`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/acrossx/activities/page`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.2.1.2. Viewed Page Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://id.tincanapi.com/verb/viewed",
    "display": {
      "en": "viewed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/pages/a0db418e-961d-416d-9051-49ac3f812bc2",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Course informational page."
      },
      "description": {
        "en": "An informational page used for the Advanced Airborne Sensor announcement."
      },
      "type": "https://w3id.org/xapi/acrossx/activities/page"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
```

```

        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    }
]
}
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.2.2. Printing a Page

The Printed Page Statement is typically associated with a print button or some other type of user interface element that enables the user to print the contents of the page by sending a command to an electronic printer device.

2.2.2.2.1. Printed Page Statement Requirements

The following are the requirements for an xAPI Statement when printing a page.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/netc/verbs/printed`
- The `verb.display.en` SHALL be set to `printed`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/acrossx/activities/page`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.2.2.2. Printed Page Statement Example

```
{
```

```

"actor": {
  "name": "John Doe",
  "account": {
    "homePage": "https://edipi.navy.mil",
    "name": "0123456789"
  }
},
"verb": {
  "id": "https://w3id.org/xapi/netc/verbs/printed",
  "display": {
    "en": "printed"
  }
},
"object":{
  "id": "https://navy.mil/netc/xapi/activities/pages/a0db418e-961d-416d-9051-49ac3f812bc2",
  "objectType": "Activity",
  "definition": {
    "name": {
      "en": "Advanced Airborne Sensor Course informational page."
    },
    "description": {
      "en": "An informational page used for the Advanced Airborne Sensor announcement."
    },
    "type": "https://w3id.org/xapi/acrossx/activities/page"
  }
},
"context":{
  "contextActivities":{
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
}

```

```

    }
  }
]
}
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.2.3. Exiting a Page

Exiting a page is an optional, general event that could occur in many types of content. The Exited Page Statement is typically associated with an exit button or some other type of user interface element that enables the user to intentionally depart or leave the page.

2.2.2.3.1. Exited Page Statement Requirements

The following are the requirements for an xAPI Statement when exiting a page.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/exited`
- The `verb.display.en` SHALL be set to `exited`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/acrossx/activities/page`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.2.3.2. Exited Page Statement Example

```

{
  "actor": {
    "name": "John Doe",
    "account": {

```

```

    "homePage": "https://edipi.navy.mil",
    "name": "0123456789"
  }
},
"verb": {
  "id": "http://adlnet.gov/expapi/verbs/exited",
  "display": {
    "en": "exited"
  }
},
"object":{
  "id": "https://navy.mil/netc/xapi/activities/pages/a0db418e-961d-416d-9051-49ac3f812bc2",
  "objectType": "Activity",
  "definition": {
    "name": {
      "en": "Advanced Airborne Sensor Course informational page."
    },
    "description": {
      "en": "An informational page used for the Advanced Airborne Sensor announcement."
    },
    "type": "https://w3id.org/xapi/acrossx/activities/page"
  }
},
"context":{
  "contextActivities":{
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
}

```

```
    }  
  },  
  "timestamp": "2020-04-29T16:05:41.520Z"  
}
```

2.2.3. Menus

A Menu refers to a digital representation of a list or set of menu items in a user interface. The general types of menu interactions below can be used with other Navy xAPI Profiles. Please refer to the respective Navy xAPI Profiles for more specific requirements for using these general events within the context of other types of content (e.g., performance support).

2.2.3.1. Accessing a Menu

2.2.3.1.1. Accessed Menu Statement Requirements

The following are the requirements for an xAPI Statement when accessing a menu.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/netc/verbs/accessed`
- The `verb.display.en` SHALL be set to `accessed`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/netc/activity-types/menu`
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.3.1.2. Accessed Menu Statement Example

```
{  
  "actor": {  
    "name": "John Doe",
```

```

    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/accessed",
    "display": {
      "en": "accessed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/menus/a0db418e-961d-416d-9051-49ac3f812bc2",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "AAS App Menu"
      },
      "description": {
        "en": "The main navigation menu provided for the Advanced Airborne Sensor App."
      },
      "type": "https://w3id.org/xapi/netc/activity-types/menu"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    }
  }
}

```

```

    ]
  }
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.4.1. Accessing a Menu Item

2.2.4.1.1. Accessed Menu Item Statement Requirements

The following are the requirements for an xAPI Statement when accessing a menu item.

- The actor SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The verb.id SHALL be set to `https://w3id.org/xapi/netc/verbs/accessed`
- The verb.display.en SHALL be set to `accessed`
- The object.id SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The object.definition.type SHALL be set to `https://w3id.org/xapi/netc/activity-types/menu-item`
- The context.contextActivities.parent array SHALL include the menu Activity
- The context.contextActivities.category array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The timestamp SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.4.1.2. Accessed Menu Item Statement Example

```

{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  }
}

```



```

    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/accessed",
    "display": {
      "en": "accessed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/menu-items/8ac12904-0774-43d8-9527-ccfb264cce01",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Airborne Sensor Videos."
      },
      "description": {
        "en": "A menu item in the AAS Menu."
      },
      "type": "https://w3id.org/xapi/netc/activity-types/menu-item"
    }
  },
  "context": {
    "contextActivities": {
      "parent": [
        {
          "id": "https://navy.mil/netc/xapi/activities/menus/a0db418e-961d-416d-9051-49ac3f812bc2",
          "definition": {
            "name": {
              "en": "AAS App Menu"
            },
            "description": {
              "en": "The main navigation menu provided for the Advanced Airborne Sensor App."
            }
          }
        }
      ]
    }
  }
}

```

```

        },
        "type": "https://w3id.org/xapi/netc/activity-types/menu"
    }
}
],
"category": [
    {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    }
]
}
},
"timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.4. Links

A link refers to a web-based hyperlink. Tracking how a user interacts with an external link beyond opening it is not possible unless the resource is also independently instrumented with xAPI. This type of event can be used to identify internal or external link clicks within other Navy xAPI Profiles. Please refer to the respective Navy xAPI Profiles for more specific requirements for using links within the context of other types of content.

2.2.4.1. Opening a Link

2.2.4.1.1. Opened Link Statement Requirements

The following are the requirements for an xAPI Statement when opening a link.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/netc/verbs/opened`
- The `verb.display.en` SHALL be set to `opened`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile

- The `object.definition.type` **SHALL** be set to `http://adlnet.gov/expapi/activities/link`
- The `context.contextActivities.category` array **SHALL** include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The timestamp **SHALL** be set according to the statement requirements in the Navy Core xAPI Profile

2.2.4.1.2. Opened Link Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/netc/verbs/opened",
    "display": {
      "en": "opened"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/links/22ab7777-c6df-4ab7-9848-5fc12c96cdea",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Wikipedia Link."
      },
      "description": {
        "en": "An external link from Wikipedia on the Advanced Airborne Sensor at https://en.wikipedia.org/wiki/Advanced_Airborne_Sensor"
      }
    },
    "type": "http://adlnet.gov/expapi/activities/link"
  }
}
```

```

    }
  },
  "context":{
    "contextActivities":{
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    }
  },
  "timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.5. Like & Dislike Buttons

Similar to social media applications, user interfaces can feature interactive elements or buttons for users to indicate their level of satisfaction or dissatisfaction with specific resources. The Navy Common Reference Profile enables content to track which things are liked or disliked the most by the users in order to provide quantitative insights and analytics. The same xAPI Statements for liking and disliking something can also be used to represent favoriting or unfavoriting. All of the Navy xAPI requirements for a Liked or Disliked Statement are provided below. For the sake of brevity, only one xAPI Statement example is provided below.

2.2.5.1. Liked & Disliked Statement Requirements

The following are the requirements for an xAPI Statement when liking or disliking a resource.

- The `actor` SHALL be set according to the Statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/acrossx/verbs/liked` or `https://w3id.org/xapi/acrossx/verbs/disliked`
- The `verb.display.en` SHALL be set to `liked` or `disliked`

- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy Core xAPI Profile
- The `object.definition.type` SHALL be set to the type of resource that was liked or disliked
- The `context.contextActivities.category` array SHALL include the Navy Common Reference Profile activity as defined in the Context Activities Category section above
- The `timestamp` SHALL be set according to the requirements in the Navy Core xAPI Profile

2.2.5.2. Liked Statement Example

```
{
  "actor": {
    "name": "Jane Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "9876543210"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/acrossx/verbs/liked",
    "display": {
      "en": "liked"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/images/526b3af6-c0a0-11ea-b3de-0242ac130005",
    "objectType": "Activity",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Infographic"
      },
      "description": {
        "en": "An infographic used for the Advanced Airborne Sensor."
      },
      "type": "https://w3id.org/xapi/performance-support/activity-types/image"
    }
  }
}
```

```

    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    }
  },
  "timestamp": "2020-04-29T16:05:41.520Z"
}

```

2.2.6. Video & Audio

The xAPI Statement requirements and examples below will also only show <https://w3id.org/xapi/video/activity-type/video> as the Activity Type. However, audio tracking in xAPI is essentially the same as a video except the `object.definition.type` must be set to <https://w3id.org/xapi/video/activity-type/audio>. To implement audio and video in an e-learning lesson or performance support content please refer to the additional Context Grouping requirements and Context Extension options provided in those Navy Profiles. To implement additional xAPI video tracking options beyond the requirements and examples provided in this Profile (e.g., interacting with advanced video player controls such as closed captioning, full screen toggle, quality or speed settings, etc.) please refer to the requirements provided in the official xAPI Video Profile⁴.

2.2.6.1. Initializing a Video

An Initialized Video Statement is required to be communicated at the beginning of each video attempt. A new, unique Registration ID SHALL be generated for each attempt of the video. An attempt is the period of

⁴ The Official xAPI Video Profile Documentation, <https://liveaspankaj.gitbooks.io/xapi-video-profile/content/>

time from an Initialized Statement to a Terminated Statement. The specific Navy xAPI requirements for an Initialized Video Statement are provided below.

2.2.6.1.1. Initialized Video Statement Requirements

The following are the requirements for an xAPI Statement when initializing a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/initialized`
- The `verb.display.en` SHALL be set to `initialized`
- The `object.id` SHALL be set to a unique identifier according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`
- The `context.registration` SHALL be set to a new UUID for each attempt
- The Context Extension, `https://w3id.org/xapi/video/extensions/length`, SHALL be set to the actual length of the media in seconds (float value with maximum 3 decimals)
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.1.2. Initialized Video Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/initialized",
    "display": {
```

```

    "en": "initialized"
  }
},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
  "definition": {
    "name": {
      "en": "Advanced Airborne Sensor Overview"
    },
    "description": {
      "en": "An overview video on the Advanced Airborne Sensor."
    },
    "type": "https://w3id.org/xapi/video/activity-type/video"
  }
},
"context":{
  "contextActivities":{
    "category": [
      {
        "id": "https://w3id.org/xapi/netc/v1.0",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      },
      {
        "id": "https://w3id.org/xapi/video",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  },
  "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",

```



```
"extensions": {  
  "https://w3id.org/xapi/video/extensions/length": 194.937  
}  
,  
"timestamp": "2020-04-29T16:05:41.520Z"  
}
```

2.2.6.2. Playing a Video

A Played Video Statement is required to be communicated for each video when the user clicks or taps the play button in a video player interface. The specific Navy xAPI requirements for a Played Video Statement are provided below.

2.2.6.2.1. Played Video Statement Requirements

The following are the requirements for an xAPI Statement when playing a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/video/verbs/played`
- The `verb.display.en` SHALL be set to `played`
- The `object.id` SHALL be set to a unique identifier for the video according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`
- The `context.registration` SHALL be set to the same UUID established during the last Initialization of the video
- The Result Extension, `https://w3id.org/xapi/video/extensions/time`, SHALL be set to the time elapsed in the video (float value with maximum 3 decimals)
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.2.2. Played Video Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/video/verbs/played",
    "display": {
      "en": "played"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Overview"
      },
      "description": {
        "en": "An overview video on the Advanced Airborne Sensor."
      },
      "type": "https://w3id.org/xapi/video/activity-type/video"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
```

```

        "type": "http://adlnet.gov/expapi/activities/profile"
    },
    {
        "id": "https://w3id.org/xapi/video",
        "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
        }
    }
]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994"
},
"result": {
    "extensions": {
        "https://w3id.org/xapi/video/extensions/time": 120.5
    }
},
"timestamp": "2020-04-29T16:05:42.520Z"
}

```

2.2.6.3. Pausing a Video

A Paused Video Statement is required to be communicated for each time a video is paused. The specific Navy xAPI requirements for a Paused Video Statement are provided below.

2.2.6.3.1. Paused Video Statement Requirements

The following are the requirements for an xAPI Statement when pausing a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/video/verbs/paused`
- The `verb.display.en` SHALL be set to `paused`
- The `object.id` SHALL be set to a unique identifier for the video according to the Activity ID requirements in the Navy xAPI Core Profile

- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`
- The `context.registration` SHALL be set to the same UUID established during the last Initialization of the video
- The Context Extension, `https://w3id.org/xapi/video/extensions/length`, SHALL be set to the actual length of the media in seconds (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/time`, SHALL be set to the time elapsed in the video (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/progress`, SHALL be set to the percentage of media consumed by the Actor (float value between 0 and 1, with a maximum of 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/played-segments`, SHALL be set to the time value(s) of all the played parts of the video the Actor played during current Registration in chronological order. Each part of the video watched is a string with the time from which they played to the time they stopped playing. The times are separated by `[.]`, while each pair of start/end times is separated with `[,]`. In summary, segments are formatted like `time-from[.]time-to[,] next time-from[.] next time-to`.
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.3.2. Paused Video Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/video/verbs/paused",
    "display": {
```

```

        "en": "paused"
    }
},
"object": {
    "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
    "definition": {
        "name": {
            "en": "Advanced Airborne Sensor Overview"
        },
        "description": {
            "en": "An overview video on the Advanced Airborne Sensor."
        },
        "type": "https://w3id.org/xapi/video/activity-type/video"
    }
},
"context":{
    "contextActivities":{
        "category":[
            {
                "id":"https://w3id.org/xapi/netc/v1.0",
                "definition":{
                    "type":"http://adlnet.gov/expapi/activities/profile"
                }
            },
            {
                "id":"https://w3id.org/xapi/video",
                "definition":{
                    "type":"http://adlnet.gov/expapi/activities/profile"
                }
            }
        ]
    },
    "registration":"d88ca9da-51b1-48eb-ae58-a68d4d3ae994",

```

```

    "extensions":{
      "https://w3id.org/xapi/video/extensions/length": 194.937
    }
  },
  "result":{
    "extensions":{
      "https://w3id.org/xapi/video/extensions/time": 2.567,
      "https://w3id.org/xapi/video/extensions/progress": 0.01,
      "https://w3id.org/xapi/video/extensions/played-segments": "0[.]6.489"
    }
  },
  "timestamp":"2020-04-29T16:07:41.520Z"
}

```

2.2.6.4. Seeking a Video

A Seeked Video Statement is required to be communicated for each time the learner moves the progress bar on a video player forward or backward to a specific point in time in the video. A Seeked Video Statement for a video SHALL be used in combination with the `time-from` and `time-to` Result Extensions. The specific Navy xAPI requirements for a Seeked Video Statement are provided below.

2.2.6.4.1. Seeked Video Statement Requirements

The following are the requirements for an xAPI Statement when seeking a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `https://w3id.org/xapi/video/verbs/seeked`
- The `verb.display.en` SHALL be set to `seeked`
- The `object.id` SHALL be set to a unique identifier for the video according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`

- The `context.registration` SHALL be set to the same UUID established during the last Initialization of the video
- The Result Extension, <https://w3id.org/xapi/video/extensions/time-from>, SHALL be set to the point in time where the seek action began (float value with maximum 3 decimals)
- The Result Extension, <https://w3id.org/xapi/video/extensions/time-to>, SHALL be set to the point in time where the seek action ended (float value with maximum 3 decimals)
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.4.2. Searched Video Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "https://w3id.org/xapi/video/verbs/searched",
    "display": {
      "en": "searched"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Overview"
      },
      "description": {
        "en": "An overview video on the Advanced Airborne Sensor."
      },
      "type": "https://w3id.org/xapi/video/activity-type/video"
    }
  }
}
```

```

    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        },
        {
          "id": "https://w3id.org/xapi/video",
          "definition": {
            "type": "http://adlnet.gov/expapi/activities/profile"
          }
        }
      ]
    },
    "registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994"
  },
  "result": {
    "extensions": {
      "https://w3id.org/xapi/video/extensions/time-from": 55.579,
      "https://w3id.org/xapi/video/extensions/time-to": 48.197
    }
  },
  "timestamp": "2020-04-29T16:09:41.520Z"
}

```

2.2.6.5. Completing a Video

A Completed Video Statement is required to be communicated each time the learner plays all parts of the video at least once. A Completed Video Statement for a video SHALL be used in combination with the

`result.completion` and `result.duration`. The specific Navy xAPI requirements for a Completed Video Statement are provided below.

2.2.6.5.1. Completed Video Statement Requirements

The following are the requirements for an xAPI Statement when completing a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/completed`
- The `verb.display.en` SHALL be set to `completed`
- The `object.id` SHALL be set to a unique identifier for the video according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`
- The `context.registration` SHALL be set to the same UUID established during the last Initialization of the video
- The Context Extension, `https://w3id.org/xapi/video/extensions/length`, SHALL be set to the actual length of the media in seconds (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/time`, SHALL be set to the time elapsed in the video (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/progress` SHALL be set to 1
- The Result Extension, `https://w3id.org/xapi/video/extensions/played-segments`, SHALL be set to the time value(s) of all the played parts of the video the Actor played during current Registration in chronological order. Each part of the video watched is a string with the time from which they played [.] to the time they stopped playing. Each segment is separated with [,]. For example, `time-from[.]time-to[.] next time-from[.] next time-to`
- The `result.completion` SHALL be set to “true”
- The `result.duration` SHALL be set to an ISO 8601 formatted duration value representing the total time spent consuming the video under the current Registration
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.5.2. Completed Video Statement Example

```
{
  "actor": {
    "name": "John Doe",
    "account": {
      "homePage": "https://edipi.navy.mil",
      "name": "0123456789"
    }
  },
  "verb": {
    "id": "http://adlnet.gov/expapi/verbs/completed",
    "display": {
      "en": "completed"
    }
  },
  "object": {
    "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
    "definition": {
      "name": {
        "en": "Advanced Airborne Sensor Overview"
      },
      "description": {
        "en": "An overview video on the Advanced Airborne Sensor."
      },
      "type": "https://w3id.org/xapi/video/activity-type/video"
    }
  },
  "context": {
    "contextActivities": {
      "category": [
        {
          "id": "https://w3id.org/xapi/netc/v1.0",
          "definition": {
```

```

        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    },
    {
      "id": "https://w3id.org/xapi/video",
      "definition": {
        "type": "http://adlnet.gov/expapi/activities/profile"
      }
    }
  ]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"extensions": {
  "https://w3id.org/xapi/video/extensions/length": 194.937
}
},
"result": {
  "extensions": {
    "https://w3id.org/xapi/video/extensions/time": 194.937,
    "https://w3id.org/xapi/video/extensions/progress": 1,
    "https://w3id.org/xapi/video/extensions/played-segments":
"0[.]6.489[, ]4.526[.]12.492[, ]4.526[.]187.913[, ]185.886[.]194.937"
  },
  "completion": true,
  "duration": "PT194.94S"
},
"timestamp": "2020-04-29T16:11:41.520Z"
}

```

2.2.6.6. Terminating a Video

For the LRS to know that a learner's video session has ended, the content must send a Terminated Video Statement, whether or not the video has been completed. A Paused Video Statement SHALL be sent immediately before the Terminated Video Statement. The Terminated Video Statement is always the last

Statement sent until a new session is started via the Initialized Video Statement. The specific Navy xAPI requirements for a Terminated Video Statement are provided below.

2.2.6.6.1. Terminated Video Statement Requirements

The following are the requirements for an xAPI Statement when terminating a video.

- The `actor` SHALL be set according to the statement requirements in the Navy Core xAPI Profile
- The `verb.id` SHALL be set to `http://adlnet.gov/expapi/verbs/terminated`
- The `verb.display.en` SHALL be set to `terminated`
- The `object.id` SHALL be set to a unique identifier for the video according to the Activity ID requirements in the Navy xAPI Core Profile
- The `object.definition.type` SHALL be set to `https://w3id.org/xapi/video/activity-type/video`
- The `context.contextActivities.category` array SHALL include the Navy Core xAPI Profile activity as defined in the Navy Core xAPI Profile
- The `context.contextActivities.category` array to include the xAPI Video Profile with the id `https://w3id.org/xapi/video`
- The `context.registration` SHALL be set to the same UUID established during the last Initialization of the video
- The Context Extension, `https://w3id.org/xapi/video/extensions/length`, SHALL be set to the actual length of the media in seconds (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/time`, SHALL be set to the time elapsed in the video (float value with maximum 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/progress`, SHALL be set to the percentage of media consumed by the Actor (float value between 0 and 1, with a maximum of 3 decimals)
- The Result Extension, `https://w3id.org/xapi/video/extensions/played-segments`, SHALL be set to the time value(s) of all the played parts of the video the Actor played during current Registration in chronological order. Each part of the video watched is a string with the time from which they played [.] to the time they stopped playing. Each segment is separated with [.,]. For example, `time-from[.]time-to[.] next time-from[.] next time-to`
- The `timestamp` SHALL be set according to the statement requirements in the Navy Core xAPI Profile

2.2.6.6.2. Terminated Video Statement Example

```
{
```

```

"actor": {
  "name": "John Doe",
  "account": {
    "homePage": "https://edipi.navy.mil",
    "name": "0123456789"
  }
},
"verb": {
  "id": "http://adlnet.gov/expapi/verbs/terminated",
  "display": {
    "en": "terminated"
  }
},
"object": {
  "id": "https://navy.mil/netc/xapi/activities/videos/60e710ac-aa50-11ea-bb37-0242ac130002",
  "definition": {
    "name": {
      "en": "Advanced Airborne Sensor Overview"
    },
    "description": {
      "en": "An overview video on the Advanced Airborne Sensor."
    },
    "type": "https://w3id.org/xapi/video/activity-type/video"
  }
},
"context": {
  "contextActivities": {
    "category": [
      {
        "id": "https://w3id.org/xapi/video",
        "definition": {
          "type": "http://adlnet.gov/expapi/activities/profile"
        }
      }
    ]
  }
}

```

```

    }
  ]
},
"registration": "d88ca9da-51b1-48eb-ae58-a68d4d3ae994",
"extensions": {
  "https://w3id.org/xapi/video/extensions/length": 194.937
}
},
"result": {
  "extensions": {
    "https://w3id.org/xapi/video/extensions/time": 194.937,
    "https://w3id.org/xapi/video/extensions/progress": 1,
    "https://w3id.org/xapi/video/extensions/played-segments":
"0[.]6.489[, ]4.526[.]12.492[, ]4.526[.]187.913[, ]185.886[.]194.937"
  }
},
"timestamp": "2020-04-29T16:11:41.520Z"
}

```