



ISAN

INTERNATIONAL STANDARD
AUDIOVISUAL NUMBER

ISAN REST Web Services API

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1. INTRODUCTION

This document outlines the ISAN Rest Web Services API, a collection of http interfaces to ISAN services that enables to read and write data in the ISAN registry. Operations such as ISAN / V-ISAN resolutions (lookups) and validations, search for registered works with ISAN, registrations / editions of works and versions of works, audiovisual metadata matching, can be realized with this API. This API will evolve and be enriched with additional services whenever needed by the industry. API users can therefore contact their ISAN registration agency or ISAN international agency to submit new API needs. To be able to use this API, users should be registered as authorized users within their ISAN registration agency.

ISAN API web services produce and consume widely used standard data formats XML and JSON. The choice of using either XML or JSON format is specified in every API query by the user. Client applications should parse XML or JSON responses using a standard XML processor or a JSON parser library to address elements within the corresponding format.

A web interface to test manually the ISAN Rest Web Services API is available at: <http://test.isan.org/api/> (credentials required)

works : Operations : Lookup / Registration / Queries
Show/Hide List Operations Expand Operations Raw

POST `/works`
Register a new work

GET `/works`
Querying ISAN database

GET `/works/{id:.*}`
Lookup ISAN data

Implementation Notes
 Anonymous requests can only retrieve partial metadata description.
 To get the complete metadata description, user should be registered as an ISAN user, and should authenticate using its ISAN login and password.

Parameters

Parameter	Value	Description	Parameter Type	Data Type
x-ISAN-Authentification		ISAN Authorization header	header	string
id	((required))	ID of the work to be fetched	path	string
idtype		Identifier type	query	string
Accept	application/xml; charset=UTF-8 (default)	Accept	header	string

Results Status Codes

HTTP Status Code	Reason
200	The identifier has been retrieved, see response body to get the description
304	The identifier retrieved has not changed since the provided date See If-Modified-Since header
400	Invalid identifier or parameters supplied
401	Unauthorized: missing or invalid authentication information
404	No work found: submitted identifier can't be retrieved
500	Other unexpected errors

Try it out!

GET `/works/{id:.*}/{filter}`
Lookup ISAN data with filter

matchingworks : Operations : Matching
Show/Hide List Operations Expand Operations Raw

POST `/matchingworks`
Match ISAN work

Screenshot of the ISAN API test interface (<http://test.isan.org/api/>)

Note that testing the ISAN API through the web interface does not require other technical knowledge as reading data formatted in XML or JSON.

It is assumed that the reader of this document is familiar with XML, JSON and REST as well as with basic ISAN principles outlined in the [ISAN user guide](#), the [ISAN data fields](#) description (currently under revision), and the [ISAN Data Fields Appendix - List of Codes](#).

More ISAN documents are available on <http://www.isan.org/resources/>.

2. METADATA SCHEMAS

2.1 ISAN & V-ISAN Schema

Both XML and JSON data format respect the following schemas:

Main schema for non episodic (single) works:

- <http://www.isan.org/schema/v1.11/common/common.xsd>

Main schema for serial headers (series) and episodic works (serial episodes):

- <http://www.isan.org/schema/v1.21/common/serial.xsd>

Main XML schema used for version of works (V-ISAN):

- <http://www.isan.org/schema/v1.11/common/version.xsd>

Other dependent schemas:

- <http://www.isan.org/ISAN/isan.xsd>
- <http://www.isan.org/schema/v1.11/common/title.xsd>
- <http://www.isan.org/schema/v1.11/common/externalid.xsd>
- <http://www.isan.org/schema/v1.11/common/participant.xsd>
- <http://www.isan.org/schema/v1.11/common/language.xsd>
- <http://www.isan.org/schema/v1.11/common/country.xsd>

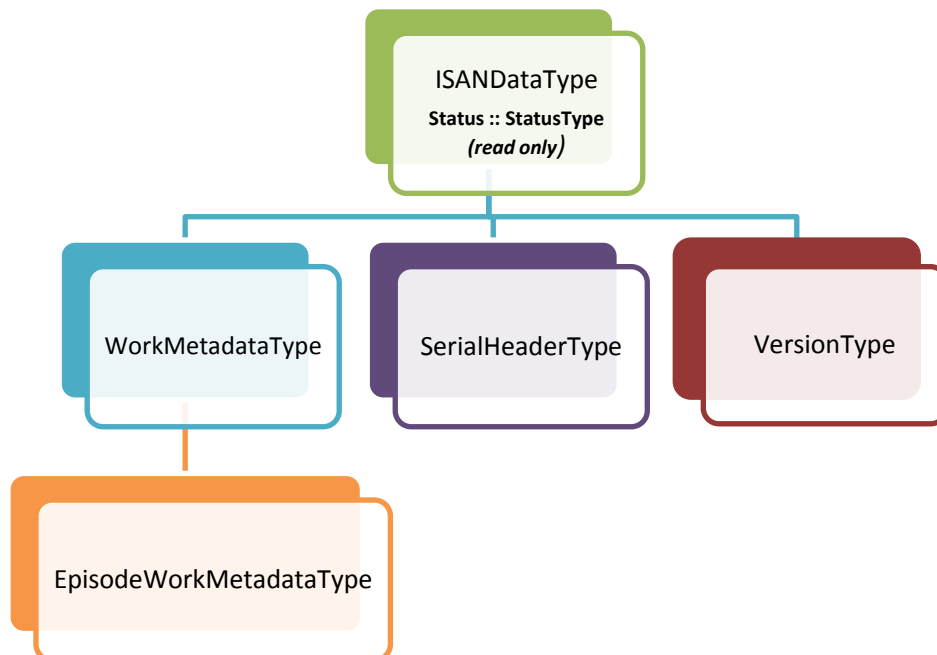
2.2 ISANDataType

ISANDataType is the main type definition used for most of the API requests or responses. It is defined in the xml schema: <http://www.isan.org/schema/v1.11/common/common.xsd> .

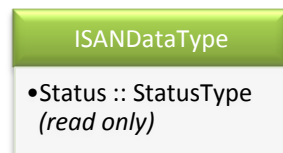
ISANDataType is the common base definition for audiovisual content, i.e. non episodic (single) works, episodic works (serial episodes), serial headers (series) and versions of works (V-ISAN).

ISANDataType provides **readable only** information about the status of a work, then specific descriptive metadata for series, works or versions of works is addressed by specialized type definition:

- WorkMetadataType : for non episodic works:
- EpisodeMetadataType: for episodic works
- SerialHeaderType: for serial headers
- VersionsType: for versions of works



2.3 Status of a work or version of a work: StatusType



StatusType provides **readable only** information about the status of a work (see [ISANDataType](#))

StatusType	
Field Name	Description
<i>DataType</i>	Type: String ; Occurrence : 1 Describes the type of metadata that is processed, values are - WORK_METADATA_TYPE : <i>non episodic (single) work metadata</i> - EPISODE_WORK_METADATA_TYPE: <i>episodic work metadata (serial episode)</i> - SERIAL_HEADER_TYPE: <i>serie (serial header) metadata</i> - VERSION_TYPE: <i>version of a work metadata</i>

	#XML Example: <code><common:DataType> </common:DataType></code> #JSONExample <code>"dataType": ""</code>
ISAN	Type: <code>isan:isanType</code> (See Schema: http://www.isan.org/ISAN/isan.xsd) Occurrence : 1 24 digit ISAN / V-ISAN identifier of the work or version (when applicable). Contains root, episodeOrPart, checkDigit1, version, checkDigit2 #XML Example: <code><common:ISAN check2="" version="" check1="" episodeOrPart="" root="" /></code> #JSONExample <code>"isan": { "root": "", "episodeOrPart": "", "check1": "", "version": "", "check2": "" }</code>
WorkStatus	Type: <code>String</code> ; Occurrence : 1 Status of the work (or version) in the ISAN registry, values are - <code>ACTIVE</code> : the work or version is an active registration in the ISAN registry. - <code>INACTIVE</code> : the work / version / identifier has been inactivated in the ISAN registry. An inactivation is <u>always</u> linked to an active ISAN identifier, see ActiveISAN field for the corresponding active ISAN. - <code>INDEV</code> : the work is still in development. At this stage of the production, metadata can still change and is only available to the registrant of the work. <code>INDEV</code> works are activated by the registrant once the work is finalized, metadata becomes public and the status will then be <code>ACTIVE</code>. - <code>PENDING</code> (registration service only): the registration processes is pending as the work is potentially already registered with ISAN, i.e. the submitted work is matching with one or several other works in the ISAN registry; a duplicate check and a manual action (web user interface) is required to finalize the registration process.

- **NO_MATCH** (AV metadata matching service only): no registered work is matching with the AV metadata in the ISAN registry.
- **MATCH** (AV metadata matching service only): a unique match with the AV metadata has been found in the ISAN registry. See [MatchingISANs field](#) for obtaining the matching ISAN identifier.
- **PENDING_MATCH** (AV metadata matching service only): multiple matches with the AV metadata have been found in the ISAN registry. A manual duplicate check is required to identify the matching work among the several matching candidates. See [MatchingISANs field](#) for obtaining the matching candidates ISAN identifiers.

#XML Example:

```
<common:WorkStatus>
```

```
</common:WorkStatus>
```

#JSONExample

```
"workStatus": ""
```

ActiveISAN

Type: [isan:isanType](#) (See Schema: <http://www.isan.org/ISAN/isan.xsd>)
Occurrence : 0 or 1

ISAN number of the active work. Applies only when the status of the described work is INACTIVE

#XML Example:

```
<common:ActiveISAN
```

```
check2="" version="" check1="" episodeOrPart="" root=""/>
```

#JSONExample

```
"activeIsan": {
  "root": "",
  "episodeOrPart": "",
  "check1": "",
  "version": "",
  "check2": ""
}
```

MatchingISANs

Type: [isan:isanListType](#) (See Schema: <http://www.isan.org/ISAN/isan.xsd>)
Occurrence : 0 or 1

List of ISAN numbers.

Applies only for matching request when the submitted work status is MATCH or PENDING_MATCH: the list contains the matching ISAN candidate(s).

#XML Example:

```
<common:WorkStatus>PEND_MATCH</common:WorkStatus>
  <common:MatchingISANs>
    <isan:ISAN
      check2="" version="" check1="" episodeOrPart="" root=""/>
    <isan:ISAN
      check2="" version="" check1="" episodeOrPart="" root=""/>
  </common:MatchingISANs>
```

#JSONExample

```
"workStatus": "PEND_MATCH",
"matchingISANs": {
  "isans": [
    "java.util.ArrayList",
    [
      {
        "root": "",
        "episodeOrPart": "",
        "check1": "",
        "version": "",
        "check2": ""
      },
      {
        "root": "",
        "episodeOrPart": "",
        "check1": "",
        "version": "",
        "check2": ""
      }
    ]
  ]
}
```

Description

Type: String ; Occurrence : 0,1

Error description

Applies only for error description purpose

XML example of ISANDataType

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:isanDataType
  xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
```

```

xmlns:externalid="http://www.isan.org/schema/v1.1/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.1/common/common"
xmlns:participant="http://www.isan.org/schema/v1.1/common/participant"
xmlns:language="http://www.isan.org/schema/v1.1/common/language"
xmlns:country="http://www.isan.org/schema/v1.1/common/country">

  <common:status>
    <common:DataType>WORK_METADATA_TYPE</common:DataType>
    <common:ISAN
check2="C" version="0000-0000" check1="X" episodeOrPart="0000" root="0000-
0000-3566"/>
    <common:Description>INACTIVE</common:Description>
    <common:ActiveISAN
check2="P" version="0000-0000" check1="4" episodeOrPart="0000" root="0000-
0000-7F8D"/>
  </common:status>

</common:isandataType>

```

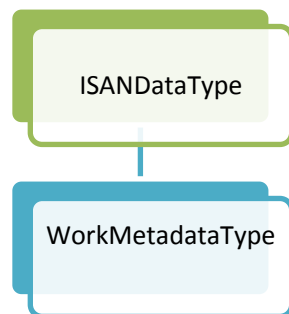
JSON example of ISANDataType

```

{
  "@type": "ISANDataType",
  "status": {
    "dataType": "WORK_METADATA_TYPE",
    "description": "MATCH",
    "matchingISANs": {
      "isans": [
        "java.util.ArrayList",
        [
          {
            "root": "0000-0002-163F",
            "episodeOrPart": "0000",
            "check1": "R",
            "version": "0000-0000",
            "check2": "U"
          }
        ]
      ]
    }
  }
}

```

2.4 Non-episodic work metadata: WorkMetadataType



The *WorkMetadataType* element extends [ISANDataType](http://www.isan.org/schema/v1.11/common/common.xsd) in the xml schema <http://www.isan.org/schema/v1.11/common/common.xsd>.

The element *WorkMetadataType* defines descriptive metadata for non-episodic (single) works, it includes:

- ⇒ the [work status](#) description inherited from *ISANDataType*,
- ⇒ all descriptive information of the non-episodic work such as the work classification (type, code), year of reference, duration, titles, participants, languages, production companies, countries,

WorkMetadataType is returned by the lookup service when the retrieved work is a non-episodic work. *WorkMetadataType* is required when submitting non-episodic work registrations or non-episodic work metadata update requests.

WorkMetadataType is required when submitting non-episodic work metadata matching requests.

XML example of a single work description:

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:workMetadataType

xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:status> ... </common:status>

  <common:ISAN check2="" version="" check1="" episodeOrPart="" root=""/>
  <common:Type> </common:Type>
  <common:Kind> </common:Kind>
  <common:ExternalIdList> </common:ExternalIdList>
  <common:TitleList> </common:TitleList>
  <common:YearOfReference> </common:YearOfReference>
  <common:Duration> </common:Duration>
  <common:ColorKind> </common:ColorKind>

```

```

<common:OriginalLanguageList>
<common:ParticipantList>
<common:ReferenceCountryList>
<common:CompanyList>
<common:CompositeList>

</common:workMetadataType>

```

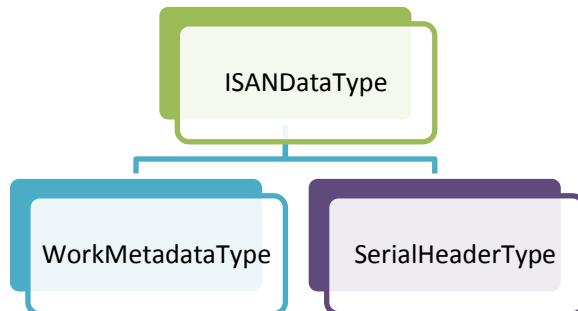
JSON example for a single work description:

```

{
  "@type": "WorkMetadataType",
  "status": {...},
  "isan": {...},
  "type": " ",
  "kind": " ",
  "externalIdList": {...},
  "titleList": {...},
  "yearOfReference": " ",
  "duration": {...},
  "colorKind": " ",
  "originalLanguageList": {...},
  "referenceCountryList": {...},
  "participantList": {...},
  "companyList": {...},
  "compositeList": {...}
}

```

2.5 Serial header (series) metadata: SerialHeaderType



The *SerialHeaderType* element extends [ISANDataType](http://www.isan.org/schema/v1.21/common/serial.xsd), it is defined in the xml schema <http://www.isan.org/schema/v1.21/common/serial.xsd>.

The element *SerialHeaderType* defines descriptive metadata for serial headers (series), it includes:

- ⇒ the [work status](#) description inherited from *ISANDataType*,
- ⇒ all descriptive information of the serial header such as the titles, the total number of episodes registered in the serial, the total number of seasons registered in the serial, the duration of shortest episode, the duration of longest episode, the year of reference of oldest episode, the year of reference of most recent episode, the most recurring participants, the most recurring production companies.

SerialHeaderType is returned by the lookup service when the retrieved work is a serial header (serie). *SerialHeaderType* is required when submitting serial headers registrations or serial headers metadata update requests.

XML example of a serial header work description:

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<serial:serialHeaderType

xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:status>...</common:status>
  <serial:SerialHeaderId root=""/>

```

```

<serial:MainTitles>
<serial:TotalEpisodes>
<serial:TotalSeasons>
<serial:MinDuration>
<serial:MaxDuration>
<serial:MinYear>
<serial:MaxYear>
<serial:MainParticipantList>
<serial:CompanyList>

</serial:serialHeaderType>

```

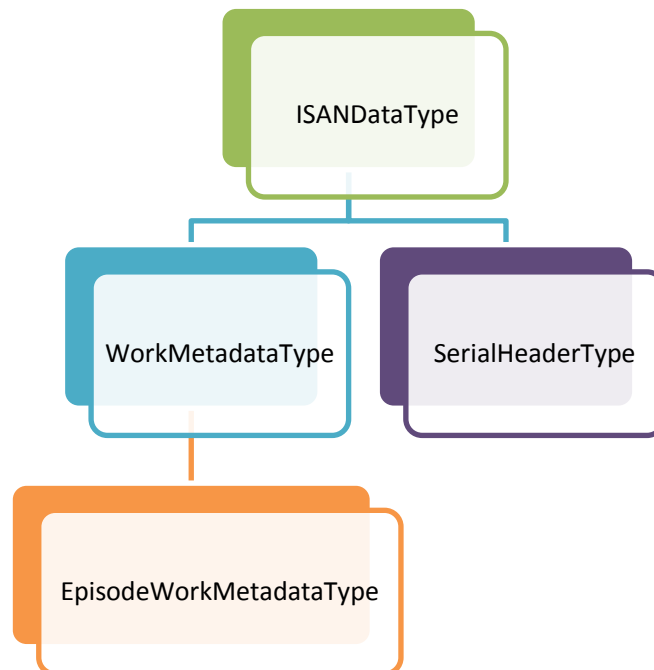
JSON example of a serial header work description:

```

{
  "@type": "SerialHeaderType",
  "status": {...},
  "serialHeaderId": {
    "root": ""
  },
  "mainTitles": {...},
  "totalEpisodes": ...,
  "totalSeasons": ...,
  "minDuration": {...},
  "maxDuration": {...},
  "minYear": " ",
  "maxYear": " ",
  "mainParticipantList": {...},
  "companyList": {...}
}

```


2.6 Episodic work metadata: EpisodeWorkMetadataType



The *EpisodeWorkMetadataType* element extends [WorkMetadataType](http://www.isan.org/schema/v1.21/common/serial.xsd), it is defined in the xml schema <http://www.isan.org/schema/v1.21/common/serial.xsd>.

The element *EpisodeWorkMetadataType* defines descriptive metadata for episodic works (serial episodes), it includes:

- ⇒ the [work status](#) description inherited from *ISANDataType*,
- ⇒ the same descriptive information as non-episodic works such as the work classification (type, code), year of reference, duration, titles, participants, languages, production companies, countries,
- ⇒ specific information for episodic works: season number, episode number, the reference to the serie / serial header (= the root ISAN shared by the ISAN of all episodes of the serie).

EpisodeWorkMetadataType is returned by the lookup service when the retrieved work is an episodic work (serial episode).

EpisodeWorkMetadataType is required when submitting episodic work (serial episode) registrations or episodic work metadata update requests.

XML example of an episode work description:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<serial:episodeWorkMetadataType
```

```

xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:status> ... </common:status>
  <common:ISAN check2="" version="" check1="" episodeOrPart="" root=""/>
  <common:Type> </common:Type>
  <common:Kind> </common:Kind>
  <common:ExternalIdList> </common:ExternalIdList>
  <common:TitleList> </common:TitleList>
  <common:YearOfReference> </common:YearOfReference>
  <common:Duration> </common:Duration>
  <common:ColorKind> </common:ColorKind>
  <common:OriginalLanguageList> </common:OriginalLanguageList>
  <common:ParticipantList> </common:ParticipantList>
  <common:ReferenceCountryList> </common:ReferenceCountryList>
  <common:CompanyList> </common:CompanyList>
  <common:CompositeList> </common:CompositeList>

  <serial:EpisodeDetails>
    <serial:SerialHeaderId root=""/>
    <serial:Season> </serial:Season>
    <serial:Episode> </serial:Episode>
  </serial:EpisodeDetails>

</serial:episodeWorkMetadataType>

```

JSON example for an episode work description:

```

{
  "@type": "EpisodeWorkMetadataType",
  "status": {...},
  "isan": {...},
  "type": " ",
  "kind": " ",
  "externalIdList": {...},
  "titleList": {...},
  "yearOfReference": " ",
  "duration": {...},
  "colorKind": " ",
  "originalLanguageList": {...},
  "referenceCountryList": {...},
  "participantList": {...},
  "companyList": {...},
  "compositeList": {...},
  "episodeDetails": {
    "serialHeaderId": {...},

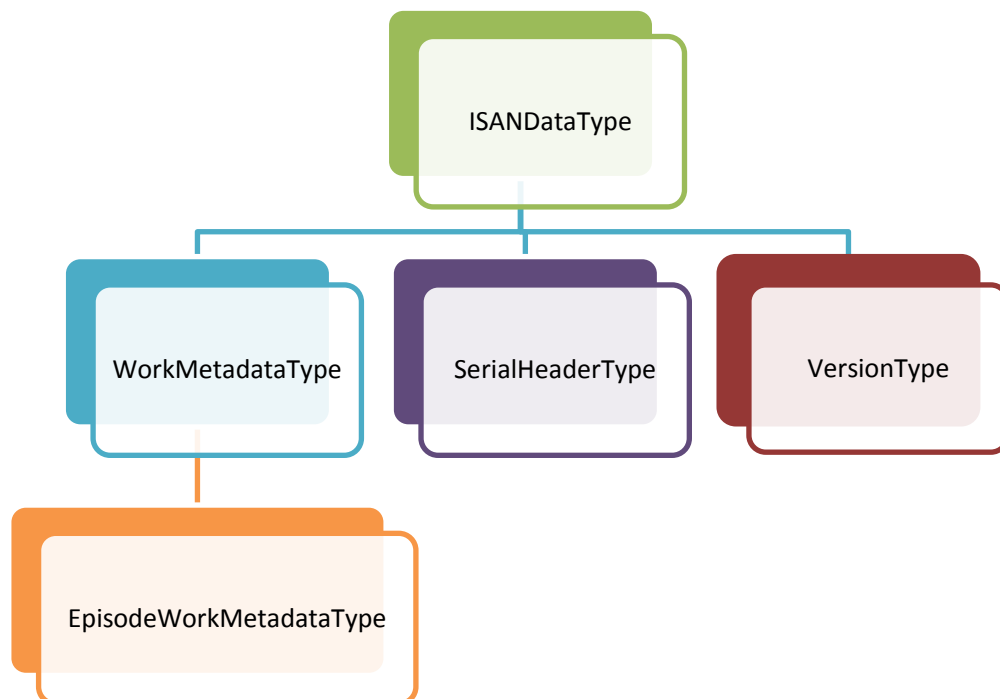
```

```

    "season":      " ",
    "episode":    " ",
  }
}

```

2.7 Versions of works (V-ISAN): VersionType



The *VersionType* element extends [ISANDataType](http://www.isan.org/schema/v1.11/common/version.xsd), it is defined in the xml schema <http://www.isan.org/schema/v1.11/common/version.xsd>.

The element *VersionType* defines descriptive metadata for versions of works, it includes:

- ⇒ the [work status](#) description inherited from *ISANDataType*,
- ⇒ all descriptive information of the version of the work such as the kind of version and relationship with parent work, a descriptive name, version titles, running time, languages, color format, image dimension, image definition, image aspect ratio, media of fixation, digital container format, countries of distribution, distribution channel, distribution platform, ratings, content alerts, external identifiers, etc...

VersionType is returned by the lookup service when the retrieved work is a version of work. *VersionType* is required when submitting version registrations or version metadata update requests.

XML example of a version description:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<version:versionType
  xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country"
  xmlns:version="http://www.isan.org/schema/v1.11/common/version">

  <common:status> ... </common:status>

  <version:V-ISAN ="" version="" check1="" episodeOrPart="" root="">
  <version:ParentWork ="" version="" check1="" episodeOrPart="" root="">
  <version:Relations> </version:Relations>
  <version:DescriptiveName> </version:DescriptiveName>
  <version:Titles> </version:Titles>
  <version:RunningTime> </version:RunningTime>
  <version:ReferenceDate> </version:ReferenceDate>
  <version:SpokenLanguages> </version:SpokenLanguages>
  <version:WrittenLanguages> </version:WrittenLanguages>
  <version:SubtitleLanguages> </version:SubtitleLanguages>
  <version:ColorFormat> </version:ColorFormat>
  <version:ImageDimension> </version:ImageDimension>
  <version:ImageDefinition> </version:ImageDefinition>
  <version:ImageAspectRatio> </version:ImageAspectRatio>
  <version:DistributionCountries> </version:DistributionCountries>
  <version:DistributionChannel> </version:DistributionChannel>
  <version:DistributionPlatform> </version:DistributionPlatform>
  <version:MediaFixation> </version:MediaFixation>
  <version:ContainerFormat> </version:ContainerFormat>
  <version:Ratings> </version:Ratings>
  <version:ContentAlerts> </version:ContentAlerts>
  <version:ExternalIds> </version:ExternalIds>
  <version:Composites> </version:Composites>

</version:VersionType>
```

JSON example for a version description:

```
{
  "@type": "VersionType",
  "status": {...},
  "v-isan": {...},
  "parentWork": {...},
  "relations": {...},
  "descriptiveName": " ",
  "titles": {...},
  "runningTime": {...},
  "referenceDate": {...},
  "spokenLanguages": {...},
```

```
"writtenLanguages":      {...},  
"subtitleLanguages":     {...},  
"colorFormat":           " ",  
"imageDimension":        " ",  
"imageDefinition":       " ",  
"imageAspectRatio":      " ",  
"distributionCountries": {...},  
"distributionChannel":    " ",  
"distributionPlatform":   " ",  
"mediaFixation":         " ",  
"containerFormat":       " ",  
  
"ratings":               {...},  
"contentAlerts":         {...},  
"externalIds":           {...},  
"composites":            {...}  
}
```

3. API AUTHENTICATION

3.1. ISAN API Authorized user

To be able to access the ISAN Rest API, all users must authenticate by using the HTTP Basic authentication method with their ISAN API user account (*user.api*); otherwise, they will receive a 401 response code (*Authorization required*).

The required HTTP `Authorization` header should have the following form:

```
#Request
Authorization: apiSignatureValue
```

Where `apiSignatureValue` is obtained by computing a base 64 encoding of the username and password.

```
apiSignatureValue = Base64 (api_username:api_password)
```

Note: usernames and passwords are case sensitive.

3.2. ISAN System Authorized user

Few API operations require further access rights:

- Lookup or validation of private identifier (idtype=PRIVATE_ID)
- Retrieve full description of a work during lookup
- Register works
- Match works
- Queries

In such cases, the users must authenticate by using their ISAN API user account in addition to their ISAN System user account.

This requires the HTTP `Authorization` header and a custom `X-ISAN-Authorization` header.

The 2 required headers should have the following form:

```
#Request
Authorization:      apiSignatureValue
X-ISAN-Authorization: ISANUSER isanSignatureValue
```

Where `apiSignatureValue` is obtained by computing a base 64 encoding of the username and password whereas `isanSignatureValue` is obtained by computing a base 64 encoding of the ISAN username and the MD5 encrypted password:

```
apiSignatureValue  = Base64 (api_username:api_password)
isanSignatureValue = Base64 (isan_username : MD5 (isan_password))
```

4. ID RESOLUTIONS: LOOKUP SERVICE

4.1. Description

The lookup services enables to perform identifier resolutions within the ISAN registry by issuing an HTTP GET request. The primary purpose of the service is to lookup an ISAN for retrieving the descriptive information of the work or version identified with the ISAN. The lookup service can also be used to lookup any “External Identifier” associated to the work or version in the ISAN registry (more than 1 Million cross references), such external IDs can be private identifiers, industry identifiers (AGICOA numbers, IMDB identifiers, EIDR,...), ISO identifiers (ISRC: the soundtrack recording of the AV work, ISWC: a song of the soundtrack, ISBN : the book related to the AV work...).

The lookup service accept various standardized formatting of the ISAN identifier, particularly it accept the ISAN URN form as defined in [IETF RFC 4246](#). The lookup service acts therefore as a resolution service for URN representations of ISAN identifiers.

The lookup service is also useful to retrieve anytime the status of a work, this can be particularly useful when registering a work with ISAN ([registration service](#)) or matching AV metadata ([matching service](#)): in such cases users will lookup the private identifier (e.g. registration token) submitted previously with the registration or matching service.

Finally the lookup service is also useful to validate ISAN identifiers, typically when transmitted in (automated) workflows. The user will therefore use the “**status**” filter in the request in order to validate the two check digits of the ISAN, but also check if the ISAN exist in the registry and if it is ACTIVE. Indeed, some ISAN can be inactivated (see [status](#)) and linked to an active ISAN; when an ISAN is inactive, the lookup service will provide the corresponding active ISAN (see [ActiveISAN field](#)).

Users registered as ISAN registrants or ISAN readers within an ISAN registration agency will obtain the complete descriptive metadata from the lookup service. Such users will therefore lookup the ISAN registry using their `isanSignatureValue` (see [ISAN System Authorized user](#)).

If no `isanSignatureValue` is provided in the ISAN lookup, only a reduced set of metadata is returned enabling limited lookups to users that are not registered as ISAN system users. In such cases only the following metadata is returned:

- ⇒ the work’s status description,
- ⇒ the WorkType code, the year of reference, the duration, up to 5 titles, up to 2 participants

In any cases all users need to be ISAN API authorized users and therefore authenticate themselves with their `apiSignatureValue` (see [ISAN System Authorized user](#))

4.2. Request

4.2.1. Syntax

```
#Request
GET /api/works/id/{filter}?idtype=string
```

4.2.2. Parameters

Name	Description
<u>id</u>	Identifier to lookup
Required:	Yes
Type:	Path Parameter (String)
Valid Values :	The identifier parameter can be : • <u>an ISAN number</u> : - xxxx-xxxx-xxxx-xxxx-X-xxxx-xxxx-Y or - xxxxxxxxxxxxxxxxxxxxxxxxxxY (without separators) or - xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx (without separators or check digits) or - xxxx-xxxx-xxxx-xxxx-X (without version part) or - xxxxxxxxxxxxxxxxxxxxxxX (without version part or separators) - xxxxxxxxxxxxxxxxxxxxxx (without version part or separators or check digits) - xxxx-xxxx-xxxx¹ (root ISAN: without episode part or version part or check digits) or - xxxxxxxxxxxxxx (without episode part or version part or separators or check digits) • <u>An ISAN formatted as an URN (IETF RFC 4246)</u> - URN: ISAN:xxxxxxxxxxxxxxxxxxxxxxxY • Or <u>an external identifier</u> (In such case, <i>idtype</i> query parameter will be required to precise the corresponding type) See idtype definition

¹ If only the root ISAN is looked up, the work information is returned in case of non episodic works (single work), but only the serial header is returned in case of episodic works.

EIDR Example : 10.5240/FD9C-CC5C-27F9-A9B0-C733-M

Examples :

```
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N
GET /api/works/00000002E6D00000
GET /api/works/URN:ISAN:00000002E6D00000H00000000N
```

filter

To retrieve and extract a specific set of metadata

Required: No

Default: None If not provided, no filter is applied and the metadata description will be obtained

Type: **Path Parameter (String)**

Valid values: *status*: to validate and retrieve the [status](#) of the identifier.
titles: to return only the titles list associated to the identifier
participants: to return only the participants list associated to the identifier

More filter values are expected in future releases of the API

Examples :

```
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/status
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/titles
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/participants
```

idtype

Required if the type of the lookup identifier is not an ISAN or an URN:ISAN

Required: No If not provided the lookup identifier will be threaten as an ISAN number or URN

Default: None

Type: **Query Parameter (String)**

Valid values: Refer to the following schema to get the list of authorized identifier's types :
<http://www.isan.org/schema/v1.11/common/externalid.xsd> (See *idType* definition)

Note: To look up from an `idtype=private_id` ; the custom X-ISAN-Authorization header is required

Examples :

```
GET /api/works/10.5240/0041-B200-711D-77A7-5807-X?idtype=EIDR
GET /api/works/EP0014S?idtype=PRIVATE_ID2
GET /api/works/90750-0?idtype=AGICOA
```

4.2.3. Request Headers

Header Name	Description
Authorization	<u>Required for all requests</u> For more information refer to Authentication Header - ISAN API authorized user
X-ISAN-Authorization	Required only to : - Lookup or validate a private external identifier (PRIVATE_ID) <pre>GET /api/works/myPrivateID?idtype=PRIVATE_ID GET /api/works/myPrivateID/status?idtype=PRIVATE_ID</pre> - Retrieve full description of any identifier <pre>GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N</pre> For more information refer to Authentication Header - ISAN System authorized user
Accept	By providing this header, users can choose the format (XML or JSON) of the server's response. <pre>Accept: application/xml Accept : application/json</pre> By default the server returns XML results.
If-Modified-Since	Client applications can implement conditional GET by sending <i>If-Modified-Since</i> headers based on the <i>Last-Modified</i> headers from a previous request. If the result has not changed since the provided date the server returns <i>HTTP status code 304 (Not Modified)</i> **, If the user has not sent an <i>If-Modified-Since</i> header, the service returns the latest copy of the representation included <i>Last-Modified</i> header. <u>Examples :</u>

² Note that only the registrant of the work is authorized to lookup a work with the private identifier registered in the ISAN Registry.

GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/titles Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT ⇒ to retrieve the description of ISAN 0000-0002-E6D0-0000-H-0000-0000-N only if it has been modified since Fri, 02 Sep 2011	
<i>Cache-Control</i>	By default, expiration caching is implemented. If needed client applications can keep a representation of a resource retrieved during 7200 seconds. To force getting the freshest representation from the server include Cache-control : no-cache **
<i>Pragma</i>	Same as above. To get the freshest representation from the server and to support legacy HTTP 1.0 caches include Pragma: no-cache **

** Make conditional lookup requests as much as possible to avoid altering performance and latency.

4.3. Response

4.3.1. Response Headers

Headers	Description
<i>Date</i>	Server response date-time *
<i>Last-Modified</i>	Last update date-time value of the retrieved identifier *
<i>Content-Type</i>	Type of representation and character set : application/xml;charset=UTF-8 or application/json;charset=UTF-8
<i>Cache-Control</i>	Expiration life-time (7200 seconds)
<i>Expires</i>	Expiration date-time value
<i>Content-Length</i>	Size in bytes of the body of the representation

*All dates are formatting as follow: Fri, 07 Jun 2013 09:14:19 GMT

4.3.2. Response Elements

The Lookup service returns in all cases an [ISANDataType](#) element.

The return type is specialized depending on the data type of the retrieved work:

Return type	Description
WorkMetadataType	When the fetched work is a non-episodic work
SerialHeaderType	When the fetched work is a serial header (serial)
EpisodeWorkMetadataType	When the fetched work is an episodic work
VersionType	When the fetched work is a version of a work
ISANDataType	When any errors occurs, the submitted identifier can't be retrieved

4.4. Errors

When an error is caused, the body response will contain an [ISANData Type](#) with an error status. For all encountered errors, API implementers should check the description field of the error status to get further details on possible causes.

The following table lists the possible errors that can be generated:

HTTP CODE	Description
401, UNAUTHORIZED	ERROR: THIS OPERATION REQUIRES AUTHENTICATION Applies if no valid Authorization header have been submitted or If X-ISAN-Authorization header is missing or is invalid
401, UNAUTHORIZED	ERROR: USER IS BLOCKED OR CLIENT ACCOUNT IS INACTIVE Applies for X-ISAN-Authorization header verification, if the user account is blocked or inactive
400, BAD REQUEST	ERROR: MALFORMED ISAN NUMBER : INCORRECT CHECK DIGIT 1 Applies if the submitted ISAN number is not valid due to incorrect check 1 digit
400, BAD REQUEST	ERROR: MALFORMED ISAN NUMBER : INCORRECT CHECK DIGIT 2 Applies if the submitted ISAN number is not valid due to incorrect check 2 digit
400, BAD REQUEST	ERROR: MALFORMED ISAN NUMBER Applies if the submitted ISAN number is not valid due to other reasons
400, BAD REQUEST	ERROR: EXTERNALIDTYPE VALUE {%1} IS INCORRECT Applies if the submitted query parameter idtype does not exist
404, NOT FOUND	ERROR : VISAN LOOKUP NOT YET IMPLEMENTED Applies if the submitted identifier is a V-ISAN. (This version of the API does not support version lookup)
404, NOT FOUND	ERROR: NO WORK FOUND - PLEASE CHECK THE PROVIDED IDENTIFIER Applies if the submitted identifier has not been retrieved in the registry
500, INTERNAL SERVER ERROR	ERROR: AN UNEXPECTED ERROR OCCURED - PLEASE CONTACT sysadmin@isan.org Applies for any other different reasons than previously listed

4.5. Notes

- Lookup an INACTIVE ISAN retrieves the metadata of the corresponding ACTIVE work.
 - The work's status element will provide the following details :
 - The *Description* field will be INACTIVE
 - And the *ActiveISAN* field will give the ISAN number of the corresponding ACTIVE work
- Lookup an INDEV ISAN (in development ISAN) returns only the status.
Only the registrant of the INDEV ISAN is authorized to obtain further information. In such event the custom X-ISAN-Authorization header need to be set.

4.6. Examples of possible requests

Lookup a Serial Header Identifier (root ISAN)

#Request

```
GET /api/works/0000-0002-3B9F HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
```

#Response

```
HTTP/ 1.1 200 OK
Content-Type: application/ xml; charset = UTF-8
Last-Modified: Fri, 13 Nov 2009 12:02:36 GMT

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<serial:serialHeaderType xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:status>
    <common:DataType>SERIAL_HEADER_TYPE</common:DataType>
    <common:ISAN root="0000-0002-3B9F"/>
    <common:WorkStatus>ACTIVE</common:WorkStatus>
  </common:status>
```

```
<serial:SerialHeaderId root="0000-0002-3B9F"/>
<serial:MainTitles>
  <title:TitleDetail>
    <title:Title>Braquo</title:Title>
    <title:Language>
      <language:LanguageLabel>French</language:LanguageLabel>
      <language:LanguageCode>
        <language:CodingSystem>ISO639_2</language:CodingSystem>
        <language:ISO639_2Code>FRE</language:ISO639_2Code>
      </language:LanguageCode>
    </title:Language>
    <title:TitleKind>ORIGINAL</title:TitleKind>
  </title:TitleDetail>
</serial:MainTitles>
<serial:TotalEpisodes>11</serial:TotalEpisodes>
<serial:TotalSeasons>0</serial:TotalSeasons>
<serial:MinDuration>
  <common:TimeUnit>MIN</common:TimeUnit>
  <common:TimeValue>45</common:TimeValue>
</serial:MinDuration>
<serial:MaxDuration>
  <common:TimeUnit>MIN</common:TimeUnit>
  <common:TimeValue>144</common:TimeValue>
</serial:MaxDuration>
<serial:MinYear>2009</serial:MinYear>
<serial:MaxYear>2009</serial:MaxYear>
<serial:MainParticipantList>
  <participant:Participant>
    <participant:FirstName>Frédéric</participant:FirstName>
    <participant:LastName>Schoendoerffer</participant:LastName>
    <participant:RoleCode>DIR</participant:RoleCode>
  </participant:Participant>
  <participant:Participant>
    <participant:FirstName>Karole</participant:FirstName>
    <participant:LastName>Rocher</participant:LastName>
    <participant:RoleCode>ACT</participant:RoleCode>
  </participant:Participant>
</serial:MainParticipantList>
<serial:CompanyList>
  <common:Company>
    <common:CompanyKind>PRO</common:CompanyKind>
    <common:CompanyName>R. T. B. F. </common:CompanyName>
  </common:Company>
  <common:Company>
    <common:CompanyKind>PRO</common:CompanyKind>
    <common:CompanyName>Capa Drama</common:CompanyName>
  </common:Company>
  <common:Company>
    <common:CompanyKind>PRO</common:CompanyKind>
    <common:CompanyName>Marathon</common:CompanyName>
  </common:Company>
</serial:CompanyList>
```



```
</serial:serialHeaderType>
```

Validate an ISAN number:

#Request

```
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/status HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
```

#Response

```
HTTP/ 1.1 200 OK
Content-Type: application/ xml; charset = UTF-8
Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<common:workMetadataType xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:status>
    <common:DataType>WORK_METADATA_TYPE</common:DataType>
    <common:ISAN check2="N" version="0000-0000" check1="H"
episodeOrPart="0000" root="0000-0002-E6D0"/>
    <common:WorkStatus>ACTIVE</common:WorkStatus>
  </common:status>

</common:workMetadataType >
```

Look up an ISAN and retrieve titles only

#Request

```
GET /api/works/0000-0002-3B9F-0001/titles HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
```

#Response

```
HTTP/ 1.1 200 OK
Content-Type: application/xml; charset = UTF-8
Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<serial:episodeWorkMetadataType
  xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country">

  <common:TitleList>
    <title:TitleDetail>
      <title:Title>Max</title:Title>
      <title:Language>
        <language:LanguageLabel>French</language:LanguageLabel>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>FRE</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
      <title:TitleKind>ORIGINAL</title:TitleKind>
    </title:TitleDetail>
  </common:TitleList>

</serial:episodeWorkMetadataType>
```

Lookup an ISAN and retrieve participants only

#Request

```
GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N/participants HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
```

#Response

```
HTTP/ 1.1 200 OK
Content-Type: application/xml; charset = UTF-8
Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<serial:episodeWorkMetadataType xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country">
```

```
<common:ParticipantList>
  <participant:Participant>
    <participant:FirstName>Olivier</participant:FirstName>
    <participant:LastName>Marchal</participant:LastName>
    <participant:RoleCode>DIR</participant:RoleCode>
  </participant:Participant>
  <participant:Participant>
    <participant:FirstName>Geoffroy</participant:FirstName>
    <participant:LastName>Thiebaut</participant:LastName>
    <participant:RoleCode>ACT</participant:RoleCode>
  </participant:Participant>
</common:ParticipantList>

</serial:episodeWorkMetadataType>
```

Lookup an external identifier with JSON results

#Request

```
GET /api/works/90750-0?idtype=AGICOA HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
Accept: application/json
```

#Response

```
HTTP/ 1.1 200 OK
Content-Type: application/json; charset = UTF-8
Last-Modified: Mon, 09 Aug 2004 16:36:47 GMT
```

```
{ "@type": "WorkMetadataType",
  "status": {
    "dataType": "WORK_METADATA_TYPE",
    "description": "ACTIVE",
    "isan": {
      "root": "0000-0000-086E",
      "episodeOrPart": "0000",
      "check1": "8",
      "version": "0000-0000",
      "check2": "D"
    }
  },
  "isan": {
    "root": "0000-0000-086E",
    "episodeOrPart": "0000",
    "check1": "8",
    "version": "0000-0000",
    "check2": "D"
  },
}
```

```

"type": "FF",
"titleList": {
  "titleDetails": [
    "java.util.ArrayList",
    [
      {
        "title": "Vamp",
        "language": {
          "languageLabel": "English",
          "languageCode": {
            "codingSystem": "ISO_639_2",
            "iso6392Code": "ENG"
          }
        }
      },
      "titleKind": "ORIGINAL"
    ]
  ]
},
"yearOfReference": "1986",
"duration": {
  "timeUnit": "MIN",
  "timeValue": 94
},
"participantList": {
  "participants": [
    "java.util.ArrayList",
    [
      {
        "firstName": "Richard",
        "lastName": "Wenk",
        "roleCode": "DIR"
      },
      {
        "firstName": "Dedee",
        "lastName": "Pfeiffer",
        "roleCode": "ACT"
      }
    ]
  ]
}
}

```

Lookup an ISAN and retrieve full metadata description with JSON Results

#Request

```

GET /api/works/0000-0002-E6D0-0000-H-0000-0000-N HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlvYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=

```

Accept: *application/json*

#Response

HTTP/ 1.1 200 OK

Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT

Content-Type: application/json; charset=UTF-8

```
{
  "@type": "WorkMetadataType",
  "status": {
    "dataType": "WORK_METADATA_TYPE",
    "workStatus": "ACTIVE",
    "isan": {
      "root": "0000-0001-187D",
      "episodeOrPart": "0000",
      "check1": "H",
      "version": "0000-0000",
      "check2": "N"
    }
  },
  "isan": {
    "root": "0000-0001-187D",
    "episodeOrPart": "0000",
    "check1": "H",
    "version": "0000-0000",
    "check2": "N"
  },
  "type": "DO",
  "kind": "L",
  "externalIdList": {
    "externalIds": [
      "java.util.ArrayList",
      [
        {
          "code": "AGICOA",
          "id": "114210-1"
        }
      ]
    ]
  },
  "titleList": {
    "titleDetails": [
      "java.util.ArrayList",
      [
        {
          "title": "Artisti dei laghi in Boemia",
          "language": {
            "languageLabel": "Italian",
            "languageCode": {
              "codingSystem": "ISO_639_2",
              "iso6392Code": "ITA"
            }
          }
        }
      ]
    ]
  }
}
```

```

    },
    "titleKind": "ORIGINAL"
  },
  {
    "title": "Zu fuss nach Prag",
    "language": {
      "languageLabel": "German",
      "languageCode": {
        "codingSystem": "ISO_639_2",
        "iso6392Code": "GER"
      }
    }
  },
  "titleKind": "ALTERNATE"
},
{
  "title": "Artistes en exil",
  "language": {
    "languageLabel": "French",
    "languageCode": {
      "codingSystem": "ISO_639_2",
      "iso6392Code": "FRE"
    }
  }
},
"titleKind": "ALTERNATE"
},
{
  "title": "Vlasi v Cechách",
  "language": {
    "languageLabel": "Czech",
    "languageCode": {
      "codingSystem": "ISO_639_2",
      "iso6392Code": "CZE"
    }
  }
},
"titleKind": "ALTERNATE"
}
]
]
},
"yearOfReference": "1993",
"duration": {
  "timeUnit": "MIN",
  "timeValue": 90
},
"colorKind": "COLOR",
"originalLanguageList": {
  "originalLanguages": [
    "java.util.ArrayList",
    [
      {
        "languageLabel": "Italian",
        "languageCode": {
          "codingSystem": "ISO_639_2",
          "iso6392Code": "ITA"
        }
      }
    ]
  ]
}

```

```
    }
  ]
},
"referenceCountryList": {
  "referenceCountries": [
    "java.util.ArrayList",
    [
      {
        "country": {
          "countryLabel": "Switzerland",
          "countryCode": {
            "codingSystem": "ISO_3166_1",
            "iso31661Code": "CH"
          }
        },
        "relatedAction": "PRO"
      }
    ]
  ]
},
"participantList": {
  "participants": [
    "java.util.ArrayList",
    [
      {
        "firstName": "Jiri",
        "lastName": "Havrdá",
        "roleCode": "DIR"
      },
      {
        "firstName": "Leos",
        "lastName": "Sucharipa",
        "roleCode": "ACT"
      },
      {
        "firstName": "Ilja",
        "lastName": "Racek",
        "roleCode": "ACT"
      },
      {
        "firstName": "Zdenek",
        "lastName": "Podhursky",
        "roleCode": "ACT"
      },
      {
        "firstName": "Jan",
        "lastName": "Kacer",
        "roleCode": "ACT"
      },
      {
        "firstName": "Hana",
        "lastName": "Jemelikova",
        "roleCode": "SCI"
      }
    ]
  ],
}
```

```
{
  {
    "firstName": "Jiri",
    "lastName": "Havrda",
    "roleCode": "SCI"
  }
]
},
"companyList": {
  "companies": [
    "java.util.ArrayList",
    [
      {
        "companyKind": "PRO",
        "companyName": "Topic Film Ag"
      },
      {
        "companyKind": "PRO",
        "companyName": "Radiotelevisione Svizzera di"
      }
    ]
  ]
},
"compositeList": {
  "isans": [
    "java.util.ArrayList",
    [
      {
        "root": "0000-0001-187E",
        "episodeOrPart": "0000",
        "check1": "M",
        "version": "0000-0000",
        "check2": "8"
      },
      {
        "root": "0000-0001-187F",
        "episodeOrPart": "0000",
        "check1": "R",
        "version": "0000-0000",
        "check2": "U"
      },
      {
        "root": "0000-0001-1880",
        "episodeOrPart": "0000",
        "check1": "0",
        "version": "0000-0000",
        "check2": "3"
      }
    ]
  ]
}
}
```


Lookup a V-ISAN (version of a work) and retrieve full metadata description with XML

Results

#Request

```
GET /api/works/0000-0003-A550-0000-M-0000-0002-4 HTTP/ 1.1
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=

Accept: application/xml
```

#Response

```
HTTP/ 1.1 200 OK
Last-Modified: Fri, 02 Sep 2011 01:05:04 GMT
Content-Type: application/xml; charset=UTF-8

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<version:VersionType
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:version="http://www.isan.org/schema/v1.11/common/version">
  <common:status>
    <common:DataType>VERSION_TYPE</common:DataType>
    <common:WorkStatus>ACTIVE</common:WorkStatus>
  </common:status>
  <version:V-ISAN root="0000-0003-A550" episodeOrPart="0000" check1="M"
    version="0000-0002" check2="4"/>
  <version:ParentWork root="0000-0003-A550" episodeOrPart="0000" check1="M"
    version="0000-0000" check2="8"/>
  <version:Relations>
    <version:Relation>
      <version:VersionKind>MEDIA</version:VersionKind>
    </version:Relation>
    <version:ParentRelationKind>ISOPTICALDISKOF</version:ParentRelationKind>
  </version:Relations>
  <version:DescriptiveName>Blu-ray disc for Japanese
  market</version:DescriptiveName>
  <version:Titles>
    <title:TitleDetail>
      <title:Title>12 Years A Slave</title:Title>
      <title:Language>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>ENG</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
      <title:TitleKind>ORIGINAL</title:TitleKind>
    </title:TitleDetail>
    <title:TitleDetail>
```

```
<title:Title>それでも夜は明ける</title:Title>
<title:Language>
  <language:LanguageCode>
    <language:CodingSystem>ISO639_2</language:CodingSystem>
    <language:ISO639_2Code>ENG</language:ISO639_2Code>
  </language:LanguageCode>
</title:Language>
<title:TitleKind>ALTERNATE</title:TitleKind>
</title:TitleDetail>
<title:TitleDetail>
  <title:Title>Soredemo Yoha Akeru</title:Title>
  <title:Language>
    <language:LanguageCode>
      <language:CodingSystem>ISO639_2</language:CodingSystem>
      <language:ISO639_2Code>JPN</language:ISO639_2Code>
    </language:LanguageCode>
  </title:Language>
  <title:TitleKind>ALTERNATE</title:TitleKind>
</title:TitleDetail>
</version:Titles>
<version:RunningTime>
  <common:TimeUnit>MIN</common:TimeUnit>
  <common:TimeValue>134</common:TimeValue>
</version:RunningTime>
<version:ReferenceDate>2014</version:ReferenceDate>
<version:SpokenLanguages>
  <language:OriginalLanguage>
    <language:LanguageCode>
      <language:CodingSystem>ISO639_2</language:CodingSystem>
      <language:ISO639_2Code>ENG</language:ISO639_2Code>
    </language:LanguageCode>
  </language:OriginalLanguage>
  <language:OriginalLanguage>
    <language:LanguageCode>
      <language:CodingSystem>ISO639_2</language:CodingSystem>
      <language:ISO639_2Code>JPN</language:ISO639_2Code>
    </language:LanguageCode>
  </language:OriginalLanguage>
</version:SpokenLanguages>
<version:ColorFormat>COLOR</version:ColorFormat>
<version:ImageDimension>2D</version:ImageDimension>
<version:ImageDefinition>HD(1080I/P)</version:ImageDefinition>
<version:ImageAspectRatio>16_9</version:ImageAspectRatio>
<version:DistributionChannel>HOMEVIDEO</version:DistributionChannel>
<version:DistributionPlatform>HOMEVIDEO</version:DistributionPlatform>
<version:MediaFixation>BLU-RAY</version:MediaFixation>
  <version:ContainerFormat>MPEG</version:ContainerFormat>
</version:VersionType>
```

5. ISAN REGISTRATION OR MATCHING SERVICES

5.1. Description

These services allow users to respectively register³ or match⁴ a work by issuing an HTTP POST request.

For all registration or matching requests, users must authenticate by using their ISAN API user account in addition to their ISAN System user account.

This requires the HTTP `Authorization` header and the custom `X-ISAN-Authorization` header.

For more information on authentication, see [API AUTHENTICATION](#).

The registration and matching procedures are asynchronous, therefore after a successful request; the user will receive a “202-ACCEPTED” response indicating that the request will be processed.

Users are invited to check for the status at a later time⁵, the “*Location*” HTTP header field of the server response indicates the address for checking the status. Note that the status of a request can also be checked with the Lookup service by performing a resolution of the private identifier (or registration token) provided as “External Identifier” in the registration or matching request.

In case of an unsuccessful registration or matching request (bad requests, invalid XML ...) users should check the response message body to get the causes before submitting other requests.

³ The registration of a work results in the issuance of a new ISAN for that work provided that the work was not yet registered with ISAN.

⁴ The matching of a work has for sole purpose to retrieve (if it exist) the ISAN of that work in the ISAN registry, by matching all work metadata with all descriptive information stored in the ISAN registry.

⁵ Requests are queued on an ESB and are processed sequentially according to their priorities and the load of the matching engine. The processing time depends therefore on the kind of request and the system load. In most of the cases users can expect that their request is processed in a couple of seconds and less than a minute. Note that registration requests have the priority on matching request. It is also possible that a matching requests is processed after a large bulk registration.

5.2. Request

5.2.1. Syntax

#Registration Request

POST /api/works

#Matching Request

POST /api/matchingworks

5.2.2. Parameters

Name	Description
<u>action</u>	Indicates which action to perform
Required:	No If not provided the work is validated
Type:	Query Parameter (String)
Valid values:	validation: to validate the descriptive metadata of the work against the ISAN xml schema and for compliance with ISAN data business rules. registration: to register the submitted work (Only for /works endpoint) matching: to match the submitted work (Only for /matchingworks endpoint)

5.2.3. Request Headers

Header Name	Description
Authorization	Required For more information refer to ISAN API Authorized user
X-ISAN-Authorization	Required For more information refer to ISAN System Authorized user
Accept	To specify the format of the server's response: - application/xml - application/json By default the server returns XML formatted results.
Content-Type	To specify the format of the request body Can be: - application/xml - application/json

5.3. Response

5.3.1. Response Headers

Headers	Description
<i>Date</i>	Server response date-time
<i>Content-Type</i>	Type of representation and character set : application/xml;charset=UTF-8 or application/json;charset=UTF-8
<i>Location</i>	To retrieve the status of the submitted request (i.e. URL to lookup the resource)

5.3.2. Response Elements

Name	Description
<i>StatusListType</i> (list of StatusType)	If the work is valid and can be loaded, the list will contain one success status. If the work is not valid and can't be loaded, the list will contains the errors statuses describing the reasons See XML Schema: http://www.isan.org/schema/v1.11/common/common.xsd Or StatusType Definition
	#XML Example: <pre><common:statusListType> <common:Status></common:Status> <common:Status></common:Status> ... </common:statusListType></pre> #JSONExample <pre>{ "statuses": ["java.util.ArrayList", [{ "description": "" }, { "description": "" }]] }</pre>

```

    ...
  ]
}

```

5.4. Errors

When an error is caused, the body response will contain a *StatusListType* containing a list of error status.

For all encountered errors, the API implementer should check the description field of all element of the list to get further details on possible causes.

The following table lists the possible errors that can be generated.

HTTP CODE	Description
401, UNAUTHORIZED	ERROR: THIS OPERATION REQUIRES AUTHENTICATION Applies if no Authorization header have been submitted or If X-ISAN-Authorization header is missing
401, UNAUTHORIZED	ERROR: USER IS BLOCKED OR CLIENT ACCOUNT IS INACTIVE Applies for X-ISAN-Authorization header verification, if the user account is blocked
400, BAD REQUEST	ERROR: MISSING OR INVALID COLOR KIND PROVIDED
400, BAD REQUEST	ERROR: MISSING OR INVALID DURATION PROVIDED
400, BAD REQUEST	ERROR: MISSING OR INVALID WORK TYPE PROVIDED
400, BAD REQUEST	ERROR: MISSING OR INVALID WORK KIND PROVIDED
400, BAD REQUEST	ERROR: YEAR OF REFERENCE SHOULD BE GREATER THAN 1897 AND LOWER THAN %s
400, BAD REQUEST	ERROR: YEAR OF FIRST PUBLICATION SHOULD BE GREATER THAN 1897 AND LOWER THAN %s
400, BAD REQUEST	ERROR: PRIVATE_ID (%s) ALREADY EXISTS IN ISAN DATADABASE FOR THIS CLIENT Applies only for registration
400, BAD REQUEST	ERROR: MISSING OR INVALID ORIGINAL LANGUAGE LIST
400, BAD REQUEST	ERROR: RFC3066 CODE NOT YET IMPLEMENTED - PLEASE USE ISO639_2 CODE
400, BAD REQUEST	ERROR: MISSING OR INVALID PARTICIPANT LIST

<i>400, BAD REQUEST</i>	ERROR: DIRECTOR IS MISSING
<i>400, BAD REQUEST</i>	ERROR: MISSING OR INVALID PARTICIPANT ROLE COD
<i>400, BAD REQUEST</i>	ERROR: MISSING OR INVALID TITLE LIST
<i>400, BAD REQUEST</i>	ERROR: AT LEAST ONE ORIGINAL TITLE IS REQUIRED
<i>400, BAD REQUEST</i>	ERROR: MISSING OR INVALID TITLE KIND
<i>400, BAD REQUEST</i>	ERROR: INVALID COMPOSITE ISAN PROVIDED : %s %s
<i>400, BAD REQUEST</i>	ERROR: DUPLICATE COMPOSITE ISANS PROVIDED: %s
<i>400, BAD REQUEST</i>	ERROR: THE PROVIDED SH (%s) HAS BEEN INACTIVATED - USE THIS ACTIVE SHID = %s
<i>400, BAD REQUEST</i>	ERROR: THE PROVIDED SH (%s) IS A DUPLICATE - USE THIS ACTIVE SHID = %s
<i>400, BAD REQUEST</i>	ERROR: MISSING OR INVALID EPISODE DETAILS
<i>400, BAD REQUEST</i>	ERROR: SH (%s) HAS NOT BEEN FOUND
<i>400, BAD REQUEST</i>	ERROR: INCORRECT SEASON PROVIDED - SHOULD BE A POSITIVE INTEGER
<i>400, BAD REQUEST</i>	ERROR: EPISODE NUMBER(%s) ALREADY EXISTS FOR THIS SERIAL
<i>400, BAD REQUEST</i>	ERROR: SH MATCHING NOT AVAILABLE, PLEASE CONTACT THE SUPPORT FOR FURTHER INFORMATION Applies only for matching
<i>500, INTERNAL SERVER ERROR</i>	ERROR: AN UNEXPECTED ERROR OCCURED - PLEASE CONTACT sysadmin@isan.org Applies for any other different reasons than previously listed

5.5. Examples of use

Successful single work validation before matching (XML input)

```
#Request
POST /api/matchingworks?action=validation
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlvYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
```

```
<common:workMetadataType xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country">
  <common:Type>FF</common:Type>
  <common:Kind>LA</common:Kind>
  <common:ExternalIdList>
    <externalid:ExternalId>
      <externalid:Code>PRIVATE_ID</externalid:Code>
      <externalid:Id>TOKEN_001</externalid:Id>
    </externalid:ExternalId>
  </common:ExternalIdList>
  <common:TitleList>
    <title:TitleDetail>
      <title:Title>Alvin and the Chipmunks: The Squequel</title:Title>
      <title:Language>
        <language:LanguageLabel>English</language:LanguageLabel>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>ENG</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
      <title:TitleKind>ORIGINAL</title:TitleKind>
    </title:TitleDetail>
  </common:TitleList>
  <common:YearOfReference>2009</common:YearOfReference>
  <common:YearOfFirstPublication>2009</common:YearOfFirstPublication>
  <common:Duration>
    <common:TimeUnit>MIN</common:TimeUnit>
    <common:TimeValue>90</common:TimeValue>
  </common:Duration>
  <common:ColorKind>COLOR</common:ColorKind>
  <common:OriginalLanguageList>
    <language:OriginalLanguage>
      <language:LanguageLabel>English</language:LanguageLabel>
      <language:LanguageCode>
        <language:CodingSystem>ISO639_2</language:CodingSystem>
        <language:ISO639_2Code>ENG</language:ISO639_2Code>
      </language:LanguageCode>
    </language:OriginalLanguage>
  </common:OriginalLanguageList>
  <common:ReferenceCountryList>
    <country:ReferenceCountry>
      <country:Country>
        <country:CountryLabel>United States</country:CountryLabel>
        <country:CountryCode>
          <country:CodingSystem>ISO3166_1</country:CodingSystem>
          <country:ISO3166_1Code>US</country:ISO3166_1Code>
        </country:CountryCode>
      </country:Country>
      <country:RelatedAction>PRO</country:RelatedAction>
    </country:ReferenceCountry>
  </common:ReferenceCountryList>
</common:workMetadataType>
```



```

    </country:ReferenceCountry>
  </common:ReferenceCountryList>
  <common:ParticipantList>
    <participant:Participant>
      <participant:FirstName>Betty</participant:FirstName>
      <participant:LastName>Thomas</participant:LastName>
      <participant:RoleCode>DIR</participant:RoleCode>
    </participant:Participant>
    <participant:Participant>
      <participant:FirstName>Justin</participant:FirstName>
      <participant:LastName>Long</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
    <participant:Participant>
      <participant:FirstName>Jason</participant:FirstName>
      <participant:LastName>Lee</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
  </common:ParticipantList>
</common:workMetadataType>

```

#Response

HTTP/ 1.1 200 OK

Date: Mon, 10 Feb 2014 16:47:05 GMT

Content-Type: application/xml; charset=UTF-8

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:statusListType xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country">
  <common:Status>
    <common:Description>SUCCESS : WORK IS VALID AND CAN BE MATCHED
  </common:Description>
  </common:Status>
</common:statusListType>

```

Successful single work matching (JSON input)

#Request

POST /api/matchingworks?action=matching

Host: www.isan.org

Authorization: YXBpdXNlcjphcGlvYXNzd29yZA==

X-ISAN-Authorization: ISANUSER

aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=

Content-Type: application/json

```
{
  "@type": "WorkMetadataType",
  "type": "FF",
  "kind": "LA",
  "externalIdList": {
    "externalIds": [
      "java.util.ArrayList",
      [
        {
          "code": "PRIVATE_ID",
          "id": "TOKEN_0001"
        }
      ]
    ]
  },
  "titleList": {
    "titleDetails": [
      "java.util.ArrayList",
      [
        {
          "title": "Alvin and the Chipmunks: The Squekuel",
          "language": {
            "languageLabel": "English",
            "languageCode": {
              "codingSystem": "ISO_639_2",
              "iso6392Code": "ENG"
            }
          }
        }
      ],
      "titleKind": "ORIGINAL"
    ]
  ]
},
"yearOfReference": "2009",
"yearOfFirstPublication": "2009",
"duration": {
  "timeUnit": "MIN",
  "timeValue": 90
},
"colorKind": "COLOR",
"originalLanguageList": {
  "originalLanguages": [
    "java.util.ArrayList",
    [
      {
        "languageLabel": "English",
        "languageCode": {
          "codingSystem": "ISO_639_2",
          "iso6392Code": "ENG"
        }
      }
    ]
  ]
},
},
```

```

"referenceCountryList": {
  "referenceCountries": [
    "java.util.ArrayList",
    [
      {
        "country": {
          "countryLabel": "United States",
          "countryCode": {
            "codingSystem": "ISO_3166_1",
            "iso31661Code": "US"
          }
        },
        "relatedAction": "PRO"
      }
    ]
  ]
},
"participantList": {
  "participants": [
    "java.util.ArrayList",
    [
      {
        "firstName": "Betty",
        "lastName": "Thomas",
        "roleCode": "DIR"
      },
      {
        "firstName": "Justin",
        "lastName": "Long",
        "roleCode": "ACT"
      },
      {
        "firstName": "Jason",
        "lastName": "Lee",
        "roleCode": "ACT"
      }
    ]
  ]
}

```

#Response

HTTP/ 1.1 202 Accepted

Date: Mon, 10 Feb 2014 16:47:05 GMT

Location: http://isan.org/api/works/TOKEN_0001/status?idtype=PRIVATE_ID

No Content

Invalid episode work validation before registration (XML input)

#Request

POST /api/works?action=validation

Host: www.isan.org

Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==

X-ISAN-Authorization: ISANUSER

aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=

Content-Type: application/xml

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<serial:episodeWorkMetadataType xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"
  xmlns:country="http://www.isan.org/schema/v1.11/common/country">
  <common:Type>SE</common:Type>
  <common:Kind>L</common:Kind>
  <common:ExternalIdList>
    <externalid:ExternalId>
      <externalid:Code>PRIVATE_ID</externalid:Code>
      <externalid:Id>REG_002</externalid:Id>
    </externalid:ExternalId>
  </common:ExternalIdList>
  <common:TitleList>
    <title:TitleDetail>
      <title:Title>The Smile</title:Title>
      <title:Language>
        <language:LanguageLabel>English</language:LanguageLabel>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>ENG</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
      <title:TitleKind>ALTERNATE</title:TitleKind>
    </title:TitleDetail>
  </common:TitleList>

  <common:Duration>
    <common:TimeUnit>MIN</common:TimeUnit>
    <common:TimeValue>60</common:TimeValue>
  </common:Duration>
  <common:ColorKind>COLOR</common:ColorKind>
  <common:OriginalLanguageList>
    <language:OriginalLanguage>
      <language:LanguageLabel>English</language:LanguageLabel>
      <language:LanguageCode>
        <language:CodingSystem>ISO639_2</language:CodingSystem>
        <language:ISO639_2Code>ENG</language:ISO639_2Code>
      </language:LanguageCode>
    </language:OriginalLanguage>
  </common:OriginalLanguageList>
</serial:episodeWorkMetadataType>
```

```

    </language:OriginalLanguage>
  </common:OriginalLanguageList>
  <common:ReferenceCountryList>
    <country:ReferenceCountry>
      <country:Country>
        <country:CountryLabel>United States</country:CountryLabel>
        <country:CountryCode>
          <country:CodingSystem>ISO3166_1</country:CodingSystem>
          <country:ISO3166_1Code>US</country:ISO3166_1Code>
        </country:CountryCode>
      </country:Country>
      <country:RelatedAction>PROC</country:RelatedAction>
    </country:ReferenceCountry>
  </common:ReferenceCountryList>
  <common:ParticipantList>
    <participant:Participant>
      <participant:FirstName>Damian</participant:FirstName>
      <participant:LastName>Lewis</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
    <participant:Participant>
      <participant:FirstName>Claire</participant:FirstName>
      <participant:LastName>Danes</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
    <participant:Participant>
      <participant:FirstName>Morena</participant:FirstName>
      <participant:LastName>Baccarin</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
  </common:ParticipantList>
  <common:CompanyList>
    <common:Company>
      <common:CompanyKind>PRO</common:CompanyKind>
      <common:CompanyName>TWENTIETH CENTURY FOX </common:CompanyName>
    </common:Company>
  </common:CompanyList>
  <serial:EpisodeDetails>
    <serial:SerialHeaderId root="0000-0003-37"/>
    <serial:Season>2</serial:Season>
    <serial:Episode>1</serial:Episode>
  </serial:EpisodeDetails>
</serial:episodeWorkMetadataType>

```

#Response

```

HTTP/ 1.1 400 Bad Request
Date: Mon, 10 Feb 2014 16:47:05 GMT
Content-Type:application/xml; charset=UTF-8

```

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:statusListType xmlns:isan="http://www.isan.org/ISAN/isan"
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"

```

```
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">
<common:Status>
  <common:Description>ERROR: YEAR OF REFERENCE SHOULD BE GREATER THAN
1897 AND LOWER THAN 2015</common:Description>
</common:Status>
<common:Status>
  <common:Description>ERROR: DIRECTOR IS MISSING</common:Description>
</common:Status>
<common:Status>
  <common:Description>ERROR: AT LEAST ONE ORIGINAL TITLE IS
REQUIRED</common:Description>
</common:Status>
<common:Status>
  <common:Description>ERROR: SH (0000-0003-37) HAS NOT BEEN
FOUND</common:Description>
</common:Status>
</common:statusListType>
```

6. ISAN AND V-ISAN UPDATE SERVICE

6.1. Description

This service allows users to update metadata of a work or a version of work by issuing HTTP PUT requests.

For all update requests, users must authenticate by using their ISAN API user account in addition to their ISAN System user account.

This requires the HTTP `Authorization` header and the custom `X-ISAN-Authorization` header.

For more information on authentication, see [API AUTHENTICATION](#).

The update procedures are asynchronous, therefore after a successful request; the user will receive a “202-ACCEPTED” response indicating that the request will be processed.

Users are invited to check for the status at a later time⁶, the “*Location*” HTTP header field of the server response indicates the address for checking the status. Note that the status of a request can also be checked with the Lookup service by performing a resolution of the private identifier (or registration token) provided as “External Identifier” in the registration or matching request.

In case of an unsuccessful update request (bad requests, invalid data ...) users should check the response message body to get the causes before submitting other requests.

Note that only the registrant of a work or version is authorized to update the metadata of the work or version.

⁶ Requests are queued on an ESB and are processed sequentially according to their priorities and the load of the matching engine. The processing time depends therefore on the kind of request and the system load. In most of the cases users can expect that their request is processed in a couple of seconds and less than a minute. Note that registration requests have the priority on matching request. It is also possible that a matching requests is processed after a large bulk registration.

6.2. Request

6.2.1. Syntax

#Update Request

```
PUT /api/works/{id}
```

6.2.2. Parameters

Name	Description
<u><i>id</i></u>	<i>Identifier of the work to be updated</i> Required: Yes Path Parameter (String) The provided identifier parameter should be a <u>root ISAN, an ISAN or V-ISAN number</u>. It should represent an existing work (episodic, non episodic, series or version) The metadata to update will be provided in the content body of the request depending of the type of the work to be updated: - In case of non episodic work: a <code>WorkMetadataType</code> description will be required. - In case of episodic work: an <code>EpisodeWorkMetadataType</code> description will be required <u>Note:</u> Updating the root of an episodic work is not allowed; <code>SerialHeaderId</code> and <code>SerialHeaderRegistrantId</code> information are not editable - In case of series: a <code>SerialHeaderType</code> description will be required <u>Notes:</u> Only titles and external identifiers are editable - And in case of version work: a <code>VersionType</code> description will be required <u>Notes:</u> It's not allowed to change the parent work of a version; <code>ParentWork</code> is not editable. <u>In all cases, not-editable fields will be ignored if provided in the body of the request.</u>

6.2.3. Request Headers

Same as [Registration Request Headers](#).

6.3. Response

6.3.1. Response Headers

Same as [Registration Response Headers](#).

6.3.2. Response Elements

Same as [Registration Response Elements](#).

6.4. Errors

Same as [Registration Errors](#).

6.5. Examples of use

Update work kind, year and participants of non episodic ISAN 0000-0002-E6D0-0000-H-0000-0000-N (XML input)

```
#Request
PUT /api/works/0000-0002-E6D0-0000-H-0000-0000-N
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:workMetadataType
xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
```

```

xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">
  <common:Kind>LA</common:Kind>
  <common:YearOfReference>2009</common:YearOfReference>
  <common:ParticipantList>
    <participant:Participant>
      <participant:FirstName>Damiane</participant:FirstName>
      <participant:LastName>Lewis</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
    <participant:Participant>
      <participant:FirstName>Claire</participant:FirstName>
      <participant:LastName>Danes</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
  </common:ParticipantList>
</common:workMetadataType>

#Response
HTTP/ 1.1 202 Accepted
Date: Mon, 10 Feb 2014 16:47:05 GMT

No content

```

Update titles of series root ISAN 0000-0002-E6D0 (XML input)

```

#Request
PUT /api/works/0000-0001-5FD9
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Content-Type: application/xml

<serial:serialHeaderType
  xmlns:title="http://www.isan.org/schema/v1.11/common/title"
  xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
  xmlns:common="http://www.isan.org/schema/v1.11/common/common"
  xmlns:language="http://www.isan.org/schema/v1.11/common/language"

  <serial:MainTitles>
    <title:TitleDetail>
      <title:Title>Murder She wrote</title:Title>
      <title:Language>
        <language:LanguageLabel>French</language:LanguageLabel>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>ENG</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
    </title:TitleDetail>
  </serial:MainTitles>
</serial:serialHeaderType>

```

```
</language:LanguageCode>
</title:Language>
<title:TitleKind>ORIGINAL</title:TitleKind>
</title:TitleDetail>
</serial:MainTitles>

</serial:serialHeaderType>
```

#Response

```
HTTP/ 1.1 202 Accepted
Date: Mon, 10 Feb 2014 16:47:05 GMT

No content
```

Update duration, season and episode number of episodic ISAN 0000-0001-1766-01D4-W-0000-0000-F (JSON input)

#Request

```
PUT /api/works/0000-0001-1766-01D4-W-0000-0000-F
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Content-Type: application/json
{
  "@type": "EpisodeWorkMetadataType",
  "duration": {
    "timeUnit": "MIN",
    "timeValue": 94
  },
  "episodeDetails": {
    "season": "4",
    "episode": "1"
  }
}
```

#Response

```
HTTP/ 1.1 202 Accepted
Date: Mon, 10 Feb 2014 16:47:05 GMT

No content
```

Update descriptive name, subtitle languages, distribution channel and platform of version
ISAN 0000-0003-C1EE-0000-Y-0000-0001-7 (JSON input)

#Request

```
PUT /api/works/0000-0003-C1EE-0000-Y-0000-0001-7
Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Content-Type: application/json
{
  "@type": "VersionType",
  "descriptiveName": "Rental Blu-ray disc for Japanese market",
  "subtitleLanguages": {
    [
      "java.util.ArrayList",
      [
        {
          "languageCode": {
            "codingSystem": "ISO_639_2",
            "iso6392Code": "JPN"
          }
        }
      ]
    ]
  },
  "distributionChannel": "HOMEVIDEO",
  "distributionPlatform": "RENTAL"
}
```

#Response

```
HTTP/ 1.1 202 Accepted
Date: Mon, 10 Feb 2014 16:47:05 GMT

No content
```

7. ISAN SEARCH SERVICE

7.1. Description

The search service allows users to retrieve a subset of data in the ISAN registry by issuing an HTTP GET request.

For all search requests, users must authenticate by using their ISAN API user account in addition to their ISAN System user account.

This requires the HTTP `Authorization` header and the custom `X-ISAN-Authorization` header.

For more information on authentication, see [API AUTHENTICATION](#).

The query contains 3 kind of information:

1. Filter : search criteria via query-string parameter
2. Sorting : order criteria via query-string parameter
3. Pagination details to delimit results by page and limit via query-string parameters to manage the amount of data to retrieve per requests.

Note that the search for text (titles, participants...) is NOT case sensitive.

7.2. Request

7.2.1. Syntax

#Request

```
GET /api/works?filter=string&sorting=string&limit=n&page=i
```

7.2.2. Parameters

Name	Description
<u>filter</u>	<i>The search criteria string</i> Composed of a valid list of one or many search properties and values to perform a multi criteria search.

The double colon (":") delimiter separates the property name from the comparison value, enabling the comparison value to contain spaces.
 The vertical line ("|") delimiter separates the property name/value couples.
 All free text in the search criteria are handled as a "CONTAINS".

filter=property1::value|property2::value|property3::value....

Required: Yes

Type: *Query Parameter (String)*

List of valid property names :

⇒ **wktype** : work types selection

- All applicable work types are defined in the following schema
<http://www.isan.org/schema/v1.11/common/common.xsd> (refer to WokTypeType definition)
- To search multiple work types, add the comma character between each value

Example to retrieve all works that are either Feature Film or TV Entertainment
wktype::FF,TE

- To exclude a work type from the results, add the underscore character before the value to be excluded

Example to search works that are not Feature Films
wktype::_FF

Example to search works that are neither Feature Films nor TV Entertainment
wktype::_FF,_TE

Note: If no wktype is submitted the search will apply on all work types

⇒ **setype** : serial type selection

Possible values are SH (to search only Serial Headers), SE (Episodic works), or SW (non episodic works)

Example to search in Serial Headers or Episodic works:
setype::SH,SE

If no setype are submitted the search will apply on all serial types.

⇒ **title** : title to search

Only one title property is allowed.

Example to search works where titles contain "Ice Age" :

title::Ice Age

- ⇒ ***shtitle***: *title of a serial to search*
Only one shtitle property is allowed.

Example to search within all serials where titles contain "Dexter"
shtitle::dexter

- ⇒ ***yor***: *year of reference or range of year of reference selection*
yor::aYear or yor::[minYear-maxYear]
Only one year or range or year is allowed; min and max year are included in the search

Example to search works released in 2013
yor::2013
Example to search works released between 2010 and 2013
yor::[2010-2013]

- ⇒ ***duration***: *duration or range of duration in minutes selection.*
duration::aDuration or duration::[minDuration-maxDuration]
Only one duration or range of duration is allowed; min and max duration value are included in the search

Example to search works that have a duration of 60 minutes
duration::60
Example to search works that have a duration between 50 and 60 minutes.
duration::[50-60]

- ⇒ ***shid***: *Serial header ID selection (= root ISAN shared by all episodes of a serial)*
Only one shid property is allowed

Example to search within the serial 0001-2AF4-3305
shid:: 0001-2AF4-3305

- ⇒ ***Participant's roles selection*** :
All applicable participant's roles are defined in the following schema
<http://www.isan.org/schema/v1.11/common/participant.xsd> (See ParticipantRoleCodeType)

Example to retrieve all works where Angelina Jolie has participated as an actor
act::angelina jolie

Example to retrieve all works directed by Pedro Almodovar
dir::pedro almodovar

Note : To search a participant without specifying any roles, use the “any” code

Example to retrieve all works where Clint Eatswood has participated no matter what was his role:
any::clint eastwood

Maximum 3 participants properties are allowed

Examples:

To retrieve all feature films released on 2013
filter="setype::SW/wktype::FF/yor::2013"

To retrieve all documentaries or films where Clint Eastwood has participated
filter="any::Clint Eastwood/wktype::DO,FF"

sorting

Sort criteria: order in which items in the payload are returned

Required: No

Default: Default order is year descending (sorting=-yor)

Type: *Query Parameter (String)*

Valid values: [See search criteria properties](#) excluding participant's roles, setype and shid properties.

Notes :

For each property prefixed with a dash ("-") sort in descending order otherwise sort in ascending order.

Example to sort by year descending and title ascending
sort=-yor/title

page

To indicate witch page of results to retrieve. The page number is zero-based

Required: No

Default: 0 (to retrieve the first page of results).

Type:	Query Parameter (Positive integer)
<u>limit</u>	To indicate the number of results per page. Required: No Default: 50 Type: Query Parameter (Positive integer) Notes : The maximum number of results per page allowed is 100 Example to retrieve the 10th page of results with 100 results per page: <i>offset=10&limit=100</i>

7.2.3. Response

7.2.3.1. Response Headers

Headers	Description
<i>Date</i>	Server response date-time *
<i>Content-Range</i>	Indicate how many items are being returned and how many total items exist. Content-Range: items <FIRST>-<LAST>/<TOTAL> The total number of items is sent only for the first page of results otherwise an asterisk. <i>Content-Range: items 1-50/3954 or items 51-100/*</i>
<i>Content-Type</i>	Type of representation and character set : <i>application/xml; charset=UTF-8 or application/json; charset=UTF-8</i>
<i>Cache-Control</i>	Expiration life-time (7200 seconds)
<i>Expires</i>	Expiration date-time value

Content-Length Size in bytes of the body of the representation

*All dates are formatting as follow: Fri, 07 Jun 2013 09:14:19 GMT

7.2.3.2. Response Elements

Name	Description
<i>ISANDataListType</i> (array of <i>ISANData</i>)	Subset of data retrieved
	#XML Example: <pre><common:isanDataListType> <common:ISANData></common:ISANData> <common:ISANData></common:ISANData> ... </common:isanDataListType></pre> #JSONExample <pre>{ "isandatas": ["java.util.ArrayList", [{ }, { }, ...]]}</pre>

The following table lists the descriptive metadata returned for each *ISANData*Type retrieved:

Headers	Description	Occurrence
<i>ISAN</i>	ISAN number of the retrieved work	1
<i>Titles</i>	Matching titles if <i>title</i> property or <i>shtitle</i> property has been specified in the filtering parameter, original titles otherwise	1
<i>Year of reference</i>	Year of reference of the retrieved work or year of oldest episode in case of serial header	1
<i>Duration</i>	Duration of the retrieved work. Not available for Serial headers.	0 or 1

	Applies only if duration property has been submitted in filtering parameter or in sorting parameter	
WorkType	Work type's code Not available for Serial headers. Applies only if wktype property has been submitted in filtering parameter or in sorting parameter	0 or 1
Participants	Matching participants Not available for Serial headers. Applies only if at least one participant's roles property has been submitted in filtering parameter	0 or 1

To obtain detailed information about a work, users will use the [lookup service](#).

7.2.4. Errors

When an error is caused, the body response will contain an error status.
For all encountered errors, API implementers should check this error status description to get further details on possible causes.

The following table lists the possible errors that can be generated.

HTTP CODE	Description
401, UNAUTHORIZED	ERROR: THIS OPERATION REQUIRES AUTHENTICATION Applies if no Authorization header have been submitted or If X-ISAN-Authorization header is missing
401, UNAUTHORIZED	ERROR: USER IS BLOCKED OR CLIENT ACCOUNT IS INACTIVE Applies for X-ISAN-Authorization header verification, if the user account is blocked
400, BAD REQUEST	ERROR: THE NUMBER OF RESULTS PER PAGE CAN'T BE GREATER THAN %s
400, BAD REQUEST	ERROR: SEARCH CRITERIA CAN'T BE EMPTY - AT LEAST ONE FILTER IS REQUIRED
400, BAD REQUEST	ERROR: PARAMETER %s IN SEARCH CRITERIA IS INVALID
400, BAD REQUEST	ERROR: PARAMETER %s IN SORT CRITERIA IS INVALID
400, BAD REQUEST	ERROR: THE PAGE NUMBER SHOULD BE GREATER THAN 0
400, BAD REQUEST	ERROR: SH (%s) HAS NOT BEEN FOUND

404, NOT FOUND	ERROR: NO WORKS FOUND
500, INTERNAL SERVER ERROR	ERROR: AN UNEXPECTED ERROR OCCURED - PLEASE CONTACT sysadmin@isan.org Applies for any other different reasons than previously listed

7.2.5. Examples of use

Retrieve all documentaries or films where Clint Eastwood has participated and order results from newest to oldest (XML Output)

```
#Request
get /api/works?
filter=any::Clint Eastwood|wktype::DO,FF&sorting=-yor&page=0&limit=50

Host: www.isan.org
Authorization: YXBpdXNlcjphcGlwYXNzd29yZA==
X-ISAN-Authorization: ISANUSER
aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=
Accept: application/xml

#Response
HTTP/ 1.1 200 OK
Date: Mon, 10 Feb 2014 16:47:05 GMT
Content-Type: application/xml; charset=UTF-8
Content-Range: items 1-50/65
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<common:isanDataListType xmlns:isan="http://www.isan.org/ISAN/isan"
xmlns:serial="http://www.isan.org/schema/v1.21/common/serial"
xmlns:title="http://www.isan.org/schema/v1.11/common/title"
xmlns:externalid="http://www.isan.org/schema/v1.11/common/externalid"
xmlns:common="http://www.isan.org/schema/v1.11/common/common"
xmlns:participant="http://www.isan.org/schema/v1.11/common/participant"
xmlns:language="http://www.isan.org/schema/v1.11/common/language"
xmlns:country="http://www.isan.org/schema/v1.11/common/country">
  <common:ISANData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="common:WorkMetadataType">
    <common:ISAN check2="J" version="0000-0000" check1="6"
episodeOrPart="0000" root="0000-0000-D1AA"/>
    <common:Type>FF</common:Type>
    <common:TitleList>
      <title:TitleDetail>
        <title:Title>Ambush At Cimarron Pass</title:Title>
        <title:Language>
          <language:LanguageLabel>English</language:LanguageLabel>
          <language:LanguageCode>
            <language:CodingSystem>ISO639_2</language:CodingSystem>
            <language:ISO639_2Code>ENG</language:ISO639_2Code>
          </language:LanguageCode>
        </title:Language>
      </title:TitleDetail>
    </common:TitleList>
  </common:ISANData>
</common:isanDataListType>
```

```

    <title:TitleKind>ORIGINAL</title:TitleKind>
  </title:TitleDetail>
</common:TitleList>
<common:YearOfReference>1958</common:YearOfReference>
<common:ParticipantList>
  <participant:Participant>
    <participant:FirstName>Clint</participant:FirstName>
    <participant:LastName>Eastwood</participant:LastName>
    <participant:RoleCode>ACT</participant:RoleCode>
  </participant:Participant>
</common:ParticipantList>
</common:ISANData>
<common:ISANData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="common:WorkMetadataType">
  <common:ISAN check2="M" version="0000-0000" check1="5"
episodeOrPart="0000" root="0000-0000-37CB"/>
  <common:Type>FF</common:Type>
  <common:TitleList>
    <title:TitleDetail>
      <title:Title>Hell bent for glory</title:Title>
      <title:Language>
        <language:LanguageLabel>English</language:LanguageLabel>
        <language:LanguageCode>
          <language:CodingSystem>ISO639_2</language:CodingSystem>
          <language:ISO639_2Code>ENG</language:ISO639_2Code>
        </language:LanguageCode>
      </title:Language>
      <title:TitleKind>ORIGINAL</title:TitleKind>
    </title:TitleDetail>
  </common:TitleList>
  <common:YearOfReference>1958</common:YearOfReference>
  <common:ParticipantList>
    <participant:Participant>
      <participant:FirstName>Clint</participant:FirstName>
      <participant:LastName>Eastwood</participant:LastName>
      <participant:RoleCode>ACT</participant:RoleCode>
    </participant:Participant>
  </common:ParticipantList>
</common:ISANData>
...
...
</common:isanDataListType>

```

Retrieve all works where title contains “ice age” and order results by year of reference (JSON Output)

#Request

get /api/works?filter=title::ice age&sorting=yor&page=0&limit=50

Host: www.isan.org

Authorization: YXBpdXNlcjphcGlvYXNzd29yZA==

X-ISAN-Authorization: ISANUSER

aXNhbnVzZXI6ZDk3ZTg0MGQ4NGQ4MmU4YWYxY2MwNzExYTEzYjBkZWU=

Accept: application/json

#Response

HTTP/ 1.1 200 OK

Date: Mon, 10 Feb 2014 16:47:05 GMT

Content-Type: application/json; charset=UTF-8

Content-Range: items 1-22/22

```
{
  "isandatas": [
    "java.util.ArrayList",
    [
      {
        "@type": "WorkMetadataType",
        "isan": {
          "root": "0000-0000-24FD",
          "episodeOrPart": "0000",
          "check1": "0",
          "version": "0000-0000",
          "check2": "2"
        },
        "type": "FF",
        "titleList": {
          "titleDetails": [
            "java.util.ArrayList",
            [
              {
                "title": "Ice age",
                "language": {
                  "languageLabel": "English",
                  "languageCode": {
                    "codingSystem": "ISO_639_2",
                    "iso6392Code": "ENG"
                  }
                },
                "titleKind": "ORIGINAL"
              }
            ]
          ]
        },
        "yearOfReference": "2002"
      }
    ]
  ]
}
```

```

"@type": "WorkMetadataType",
"isana": {
  "root": "0000-0001-8320",
  "episodeOrPart": "0000",
  "check1": "8",
  "version": "0000-0000",
  "check2": "D"
},
"type": "FF",
"titleList": {
  "titleDetails": [
    "java.util.ArrayList",
    [
      {
        "title": "ICE AGE THE MELTDOWN",
        "language": {
          "languageLabel": "English",
          "languageCode": {
            "codingSystem": "ISO_639_2",
            "iso6392Code": "ENG"
          }
        }
      },
      "titleKind": "ORIGINAL"
    ]
  ]
},
"yearOfReference": "2006"
},
{
  "@type": "WorkMetadataType",
"isana": {
    "root": "0000-0001-E564",
    "episodeOrPart": "0000",
    "check1": "K",
    "version": "0000-0000",
    "check2": "E"
  },
  "type": "FF",
  "titleList": {
    "titleDetails": [
      "java.util.ArrayList",
      [
        {
          "title": "ICE AGE: DAWN OF THE DINOSAURS",
          "language": {
            "languageLabel": "English",
            "languageCode": {
              "codingSystem": "ISO_639_2",
              "iso6392Code": "ENG"
            }
          }
        },
        "titleKind": "ORIGINAL"
      ]
    ]
  }
}

```

```

    }
  ]
},
"yearOfReference": "2009"
},
{
  "@type": "WorkMetadataType",
  "isan": {
    "root": "0000-0003-3BFE",
    "episodeOrPart": "0000",
    "check1": "A",
    "version": "0000-0000",
    "check2": "7"
  },
  "type": "FF",
  "titleList": {
    "titleDetails": [
      "java.util.ArrayList",
      [
        {
          "title": "Ice Age 4: La formación de los continentes",
          "language": {
            "languageLabel": "Spanish",
            "languageCode": {
              "codingSystem": "ISO_639_2",
              "iso6392Code": "SPA"
            }
          }
        }
      ],
      "titleKind": "ORIGINAL"
    ]
  ]
},
"yearOfReference": "2012"
}
]
}

```

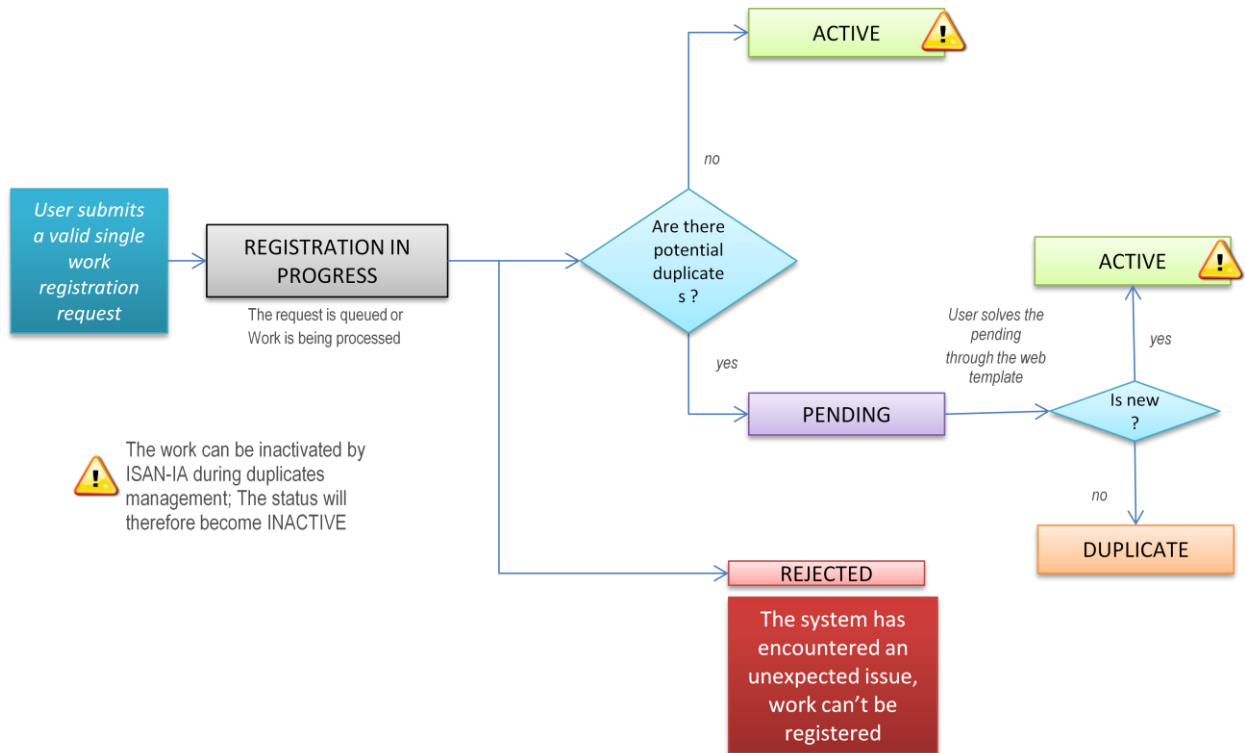

8 Appendix: Work Status lifecycle

This appendix aims at describing the different status of a work during the registration process.

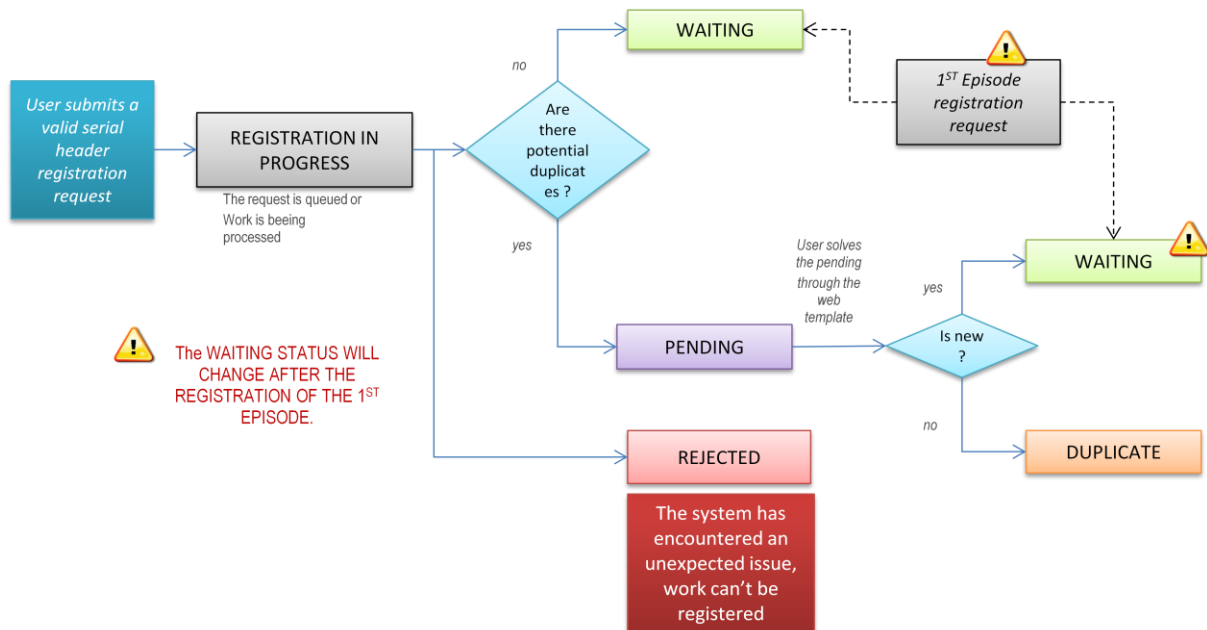
8.1 Possible Statutes

- **REGISTRATION IN PROGRESS** : when a valid registration request has been submitted and accepted: indicates that the request is queued or is being processed.
- **PENDING** : indicates that the request has been processed but the corresponding work is potentially already registered in the ISAN registry (i.e. it has at least one match within the ISAN registry). *In this case, a manual confirmation (pending resolution) is required, this can only be done through the web user interface (web template) at the moment.*
- **DUPLICATE** : Indicates that the pending resolution (see PENDING status above) has been performed and the work has been marked as a duplicate. The work is rejected and the existing ISAN is to be used.
- **ACTIVE** : Indicates that the request has been processed: no potential duplicates registration have been found or the pending resolution (see PENDING status above) has been performed and the work has been marked as a new work.
- **WAITING** (Applies only to Serial Headers): indicates that the work has been processed but no episodes have been registered yet.
- **REJECTED**: Indicates that an unexpected error has occurred
- **INACTIVE**: Indicates that the work was a duplicate registration (duplicate ISAN) and it has been inactivated by ISAN-IA.

8.2 Non-episodic (single) works status lifecycle



8.3 Serial header status lifecycle



8.4 Serial episode status lifecycle

