E-ARK SIP

Specification for Submission Information Packages

Date: 09.09.2019
Version: 2.0.1

Executive Summary

This document constitutes a specification on how to produce and parse E-ARK Submission Information Packages (SIP). The main objectives of this specification are to define the general structure for a Submission Information Package format in a way that it is suitable for a wide variety of archival scenarios, e.g. document and image collections, databases or geographical data, etc.; enhance interoperability between Producers and Archives and recommend best practices regarding metadata, content and structure of Submission Information Packages. The target audience for this specification is records creators, archival institutions and software providers that are responsible with preparing, packaging, delivering and receiving packages of information to be archived in an Open Archival Information System Reference Model (OAIS), i.e. pre-ingest and ingest functional units.

Preface

I. Aim of the Specification

This specification is one of several related specifications. The single most important aim of all of these specifications is the provision of a common set of specifications for packaging digital information for archiving purposes. The specifications are based on common, international standards for transmitting, describing and preserving digital data. They have been produced to help data creators, software developers and digital archives to tackle the challenge of short-, medium- and long-term data management and reuse in a sustainable, authentic, cost-efficient, manageable and interoperable way.

The foundation upon which the specifications are built is the Reference model for an Open Archival Information System (OAIS) (OAIS Reference model) which has Information Packages as its basis. Familiarity with the core functional entities of OAIS is a prerequisite for understanding the specifications. A visualisation of the current specification network can be seen here:

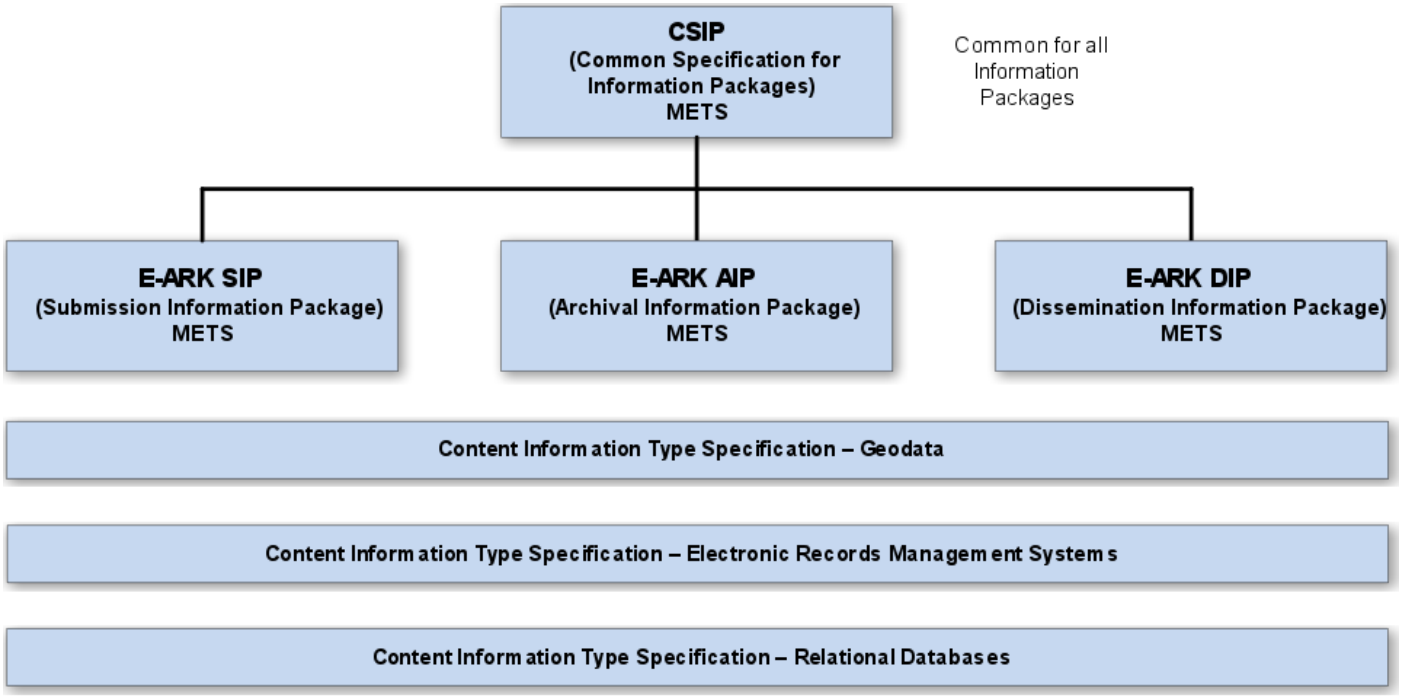

Figure I: Diagram showing E-ARK specification dependency hierarchy.

Overview of the E-ARK Specifications

Common Specification for Information Packages (E-ARK CSIP)

This document introduces the concept of a Common Specification for Information Packages (CSIP). Its three main purposes are to:

- Establish a common understanding of the requirements which need to be met in order to achieve interoperability of Information Packages.
- Establish a common base for the development of more specific Information Package definitions and tools within the digital preservation community.
- Propose the details of an XML-based implementation of the requirements using, to the largest possible extent, standards which are widely used in international digital preservation.
- Ultimately the goal of the Common Specification is to reach a level of interoperability between all Information Packages so that tools implementing the Common Specification can be adopted by institutions without the need for further modifications or adaptations.

Specification for Submission Information Packages (E-ARK SIP)

The main aims of this specification are to:

- Define a general structure for a Submission Information Package format suitable for a wide variety of archival scenarios, e.g. document and image collections, databases or geographical data.
- Enhance interoperability between Producers and Archives.
- Recommend best practices regarding metadata, content and structure of Submission Information Packages.

Specification for Archival Information Packages (E-ARK AIP)

The main aims of this specification are to:

- Define a generic structure of the AIP format suitable for a wide variety of data types, such as document and image collections, archival records, databases or geographical data.
- Recommend a set of metadata related to the structural and the preservation aspects of the AIP as implemented by the reference implementation (earkweb).
- Ensure the format is suitable to store large quantities of data.

Specification for Dissemination Information Packages (E-ARK DIP)

The main aims of this specification are to:

- Define a generic structure of the DIP format suitable for a wide variety of archival records, such as document and image collections, databases or geographical data.
- Recommend a set of metadata related to the structural and access aspects of the DIP.

Content Information Type Specifications (E-ARK CITS)

The main aims of a Content Information Type Specification are to:

- Define, in technical terms, how data and metadata must be formatted and placed within a CSIP Information Package in order to achieve interoperability in exchanging specific Content Information.
- The number of possible Content Information Type Specifications is unlimited. For at list of existing Content Information Type Specifications see, and read more about Content Information Type Specifications in the Common Specification for Information Packages.

II. Organisational support

This specification is maintained by the Digital Information LifeCycle Interoperability Standards Board (DILCIS Board, http://dilcis.eu/). The DILCIS Board was created to enhance and maintain the draft specifications developed in the European Archival Records and Knowledge Preservation Project (E-ARK project, http://eark-project.com/) which concluded in January 2017. The Board consists of eight members, but there is no restriction on the number of participants in the work. All Board documents and specifications are stored in GitHub

(https://github.com/DILCISBoard/) while published versions are made available on the Board webpage. Since 2018 the DILCIS Board has been responsible for the core specifications in the Connecting Europe Facility eArchiving Building Block https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eArchiving/.

III. Authors & Revision History

A full list of contributors to this specification, as well as the revision history can be found in the Postface material.

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1 Introduction

According to the Open Archival Information System Reference Model (OAIS) every submission of information to an archive occurs as one or more discrete transmissions of Submission Information Packages (SIP). Unfortunately, the OAIS itself does not specify how these information packages should look like.

The EU funded E-ARK project (2014-2017) first acknowledged this problem and started to develop a solution in the form of a package specification. This specification is now part of a set of specifications currently managed by an independent body named the Digital Information LifeCycle Interoperability Standards Board (DILCIS Board).

1.1 Scope and purpose

This document describes how to produce and parse E-ARK Submission Information Packages (SIP). The main objectives of this specification are to:

- Define the general structure for a Submission Information Package format in a way that it is suitable for a wide variety of archival scenarios, e.g. document and image collections, databases or geographical data;
- Enhance interoperability between Producers and Archives;
- Recommend best practices regarding metadata, content and structure of Submission Information Packages.

1.2 Target audience

The target audience for this specification is records creators, archival institutions and software providers that are responsible with preparing, packaging, delivering and receiving packages of information to be archived in an OAIS, i.e. pre-ingest and ingest functional units.

1.3 Definition of SIP

The OAIS reference model defines a Submission Information Package (SIP) as:

> An Information Package that is delivered by the Producer to the OAIS for use in the construction or update of one or more AIPs and/or the associated Descriptive Information.

The E-ARK SIP follows this definition and builds on the E-ARK Common Specification for Information Packages by extending it to support specific requirements related to the process of selecting, packaging, transmitting, receiving, validating and ingesting information originally maintained by a Producer.

In summary, the SIP constitutes a package of information that is ready to be sent by a Producer to an Archive in order to be ingested by the OAIS.

2 Structure

The SIP specification follows a structure that is common to all Information Packages in the E-ARK set of specifications. The common structure is fully described in the Common Specification for Information Packages (see Section 4. CSIP structure).

In its simplest form, an SIP consists of metadata and zero or more representations, also composed of `data` and `metadata`, as seen in Figure 2. A package with zero representations means that it only includes metadata. This is a special type of Information Package that enables Producers to deliver updates to the metadata to previously ingested packages.

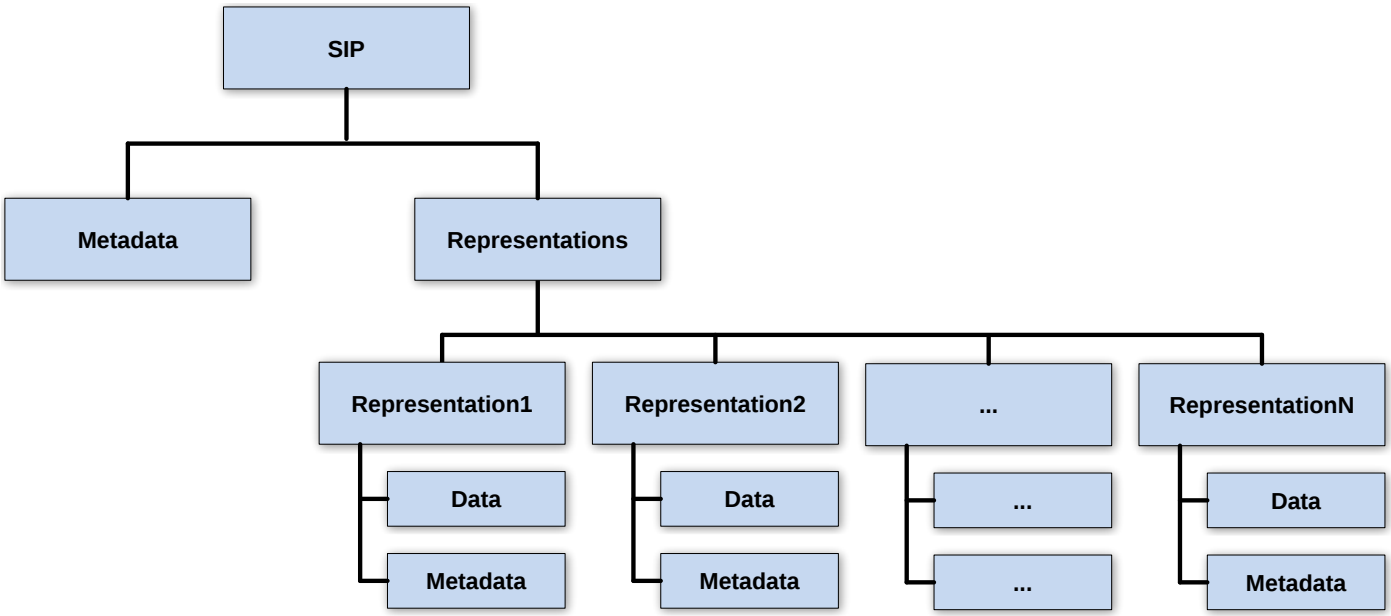

Figure 2: Simplified view of a package structure.

According to PREMIS Version 3.0:

> A representation is a set of files, including structural metadata, needed for a complete and reasonable rendition of an Intellectual Entity. For example, a journal article may be complete in one PDF file. This single file constitutes the representation. Another journal article may consist of one SGML file and two image files. These three files constitute the representation. A third article may be represented by one TIFF image for each of 12 pages plus an XML file of structural metadata showing the order of the pages. These 13 files constitute the representation.

As one SIP can contain more than one representation of the same intellectual entity, representations MUST be placed

within distinct folders (i.e., `rep-001`, `rep-002`, `rep-n` under the `representations` folder). In contrast, metadata may exist within each representation folder or at the root level (next to the `representations` folder). Metadata can serve multiple purposes, the most common one being the support for discoverability of resources within the OAIS (i.e. descriptive metadata).

If metadata is stored at the root level of the package, then there is generally no need to include a `metadata` folder at the representation level. In such cases, the `metadata` folder under representations is considered optional. The SIP also accounts for the following additional folders that can exist both at the root level or under the `representations` folder (Figure 3):

- `documentation` – for including additional documentation about the `data` included in the package (e.g. a data dictionary for a SIARD file);
- `schemas` – for storing schemas of XML files included in the data or metadata.

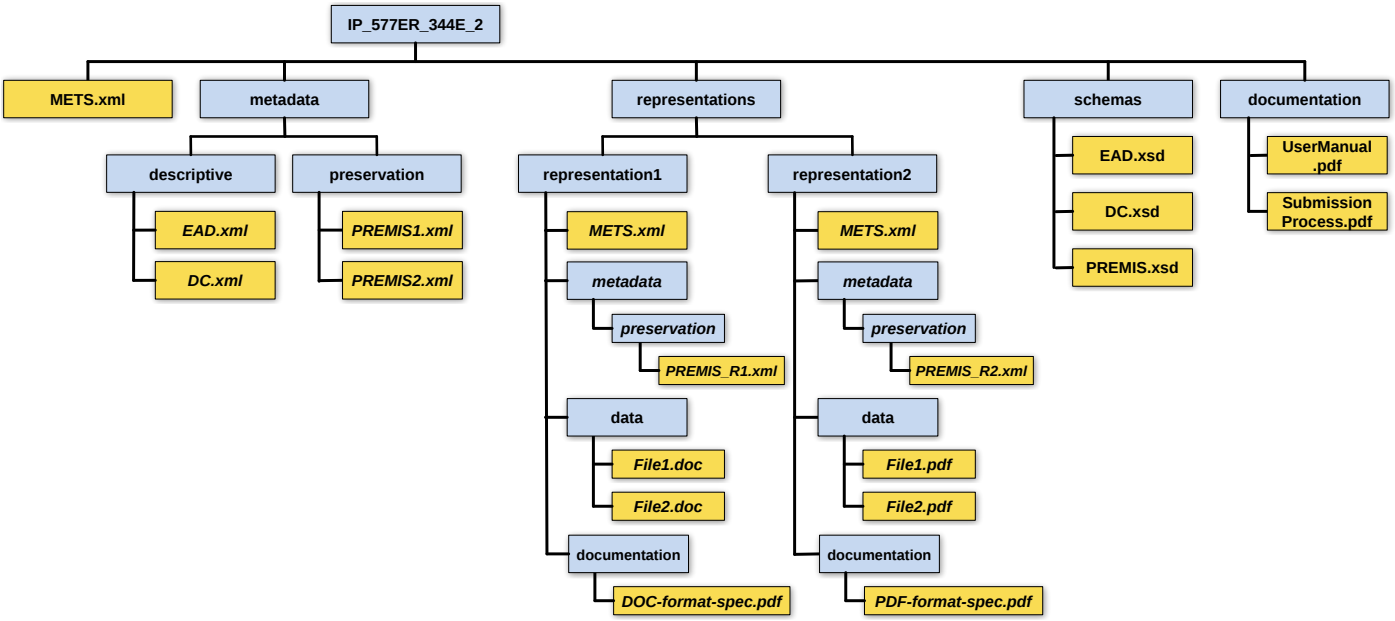

Figure 3: Example of the full use of the SIP structure

The details of the internal structure of an SIP including its `data` and `metadata` folders can be further specified by Submission Agreements. These can exist for a particular submission, a special collection or a specific Producer.

3 METS

The Metadata Encoding and Transmission Standard (METS) is a standard for encoding descriptive, administrative, and structural metadata expressed using the XML Schema Language.

The METS Schema for an E-ARK SIP is the same as for an E-ARK AIP or an E-ARK DIP. The actual requirements of the METS used in the E-ARK SIP are defined in the CSIP on section “5.3 Use of METS”. However, there are some small

differences between a METS instance of an E-ARK SIP and an E-ARK CSIP. Most of the differences consist of setting values of particular attributes, defining controlled vocabularies or making optional elements mandatory.

These differences are manifested by means of a METS profile. The SIP METS profile extends the CSIP METS profile. As stated before, in this document only the differences between the SIP METS and the CSIP METS are highlighted. In order to fully understand how to create or interpret the METS file included within an SIP, it is necessary to read the CSIP.

3.1 Extended use of the METS root element (element `mets`)

The root of a METS document can contain a number of optional attributes, namespaces (`xmlns:`), locations for external schemas (`xsi:`) and a number of other elements.

The following table describes the differences in the `mets` element between the E-ARK SIP and the CSIP.

ID	Name, Location & Description	Card & Level
SIP1	Package name `mets/@LABEL` An optional short text describing the contents of the package, e.g. “Accounting records of 2017”.	0..1 MAY
SIP2	METS Profile `mets/@PROFILE` The value is set to “https://earksip.dilcis.eu/profile/E-ARK-SIP.xml”.	1..1 MUST

Example: METS root element example with values from E-ARK-SIP as well as CS IP.

```
<mets:mets OBJID="uuid-4422c185-5407-4918-83b1-7abfa77de182" LABEL="Accounting records
    of 2017" TYPE="OTHER" OTHERTYPE="Accounting" PROFILE="https://earksip.dilcis.eu/
   profile/E-ARK-SIP.xml" schemaLocation="http://www.loc.gov/METS/ http://www.loc.gov/
   standards/mets/mets.xsd http://www.w3.org/1999/xlink http://www.loc.gov/standards/
   mets/xlink.xsd https://dilcis.eu/XML/METS/CSIPExtensionMETS https://dilcis.eu/XML/
   METS/CSIPExtensionMETS/DILCISExtensionMETS.xsd">
</mets:mets>
```

Example: METS example of altrecordID’s, and SIP agents following the SIP profile as well as CS IP.

```
<mets:metsHdr CREATEDATE="2018-04-24T14:37:49.602+01:00" LASTMODDATE="2018-04-24T14
   :37:49.602+01:00" RECORDSTATUS="NEW" OAISPACKAGETYPE="SIP">
  <mets:agent ROLE="ARCHIVIST" TYPE="ORGANIZATION">
    <mets:name>The Swedish health agency</mets:name>
    <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE201345098701</mets:note>
  </mets:agent>
  <mets:agent ROLE="CREATOR" TYPE="ORGANIZATION">
    <mets:name>The agency, Personnel</mets:name>
```

```
    <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE2098109810-AF87</mets:note>
  </mets:agent>
  <mets:agent ROLE="OTHER" TYPE="INDIVIDUAL" OTHERROLE="SUBMITTER">
    <mets:name>Sven Svensson</mets:name>
    <mets:note>Phone: 08-123456, Email: sven.svensson@mail.mail</mets:note>
  </mets:agent>
  <mets:agent ROLE="PRESERVATION" TYPE="ORGANIZATION">
    <mets:name>The archives</mets:name>
    <mets:note NOTETYPE="IDENTIFICATIONCODE">ID:1234567</mets:note>
  </mets:agent>
  <mets:altrecordID TYPE="SUBMISSIONAGREEMENT">http://submissionagreement.kb.se/dnr331
     -1144-2011/20120711/</mets:altrecordID>
  <mets:altrecordID TYPE="PREVIOUSSUBMISSIONAGREEMENT">FM 12-2387/12726, 2007-09-19</
     mets:altrecordID>
  <mets:altrecordID TYPE="REFERENCECODE">SE/RA/123456/24/P</mets:altrecordID>
  <mets:altrecordID TYPE="PREVIOUSREFERENCECODE">SE/FM/123/123.1/123.1.3</mets:
     altrecordID>
</mets:metsHdr>
```

3.2 Extended use of the METS header (element `metsHdr`)

The METS header element <metsHdr> includes information about the creator of the submission package, the original creator of the data, contact information of the person delivering the SIP, among other actors. These entities are typically called “agents” (see element `metsHdr/agent`).

The `metsHdr` is also used to indicate the type of behaviour to be expected from the OAIS when processing a particular SIP. For example, one might indicate that an SIP should be used to “replace” a particular AIP in the repository or that an SIP is meant for “testing” purposes and therefore it should not create an AIP at the end of the ingest process (see attribute `metsHdr/@RECORDSTATUS`).

It is also in the `metsHdr` that the Submission Agreement to which a particular SIP conforms can be identified (see `metsHdr/altrecordID/@TYPE=”SUBMISSIONAGREEMENT`).

The following table describes the differences in the `metsHdr` between an E-ARK SIP and the CSIP.

ID	Name, Location & Description	Card & Level
SIP3	Package status `metsHdr/@RECORDSTATUS` A way of indicating the status of the package and to instruct the OAIS on how to properly handle the package. If not set, the expected behaviour is equal to NEW. See also: Package status	0..1 MAY

ID	Name, Location & Description	Card & Level
SIP4	OAIS Package type information `metsHdr/@csip:OAISPACKAGETYPE` `@csip:OAISPACKAGETYPE` is used with the value “SIP”. See also: OAIS Package type	1..1 MUST
SIP5	Submission agreement `metsHdr/altrecordID` A reference to the Submission Agreement associated with the package. `@TYPE` is used with the value “SUBMISSIONAGREEMENT”. Example: RA 13-2011/5329; 2012-04-12 Example: http://submissionagreement.kb.se/dnr331-1144-2011/20120711/ Note: It is recommended to use a machine-readable format for a better description of a submission agreement. For example, the submission agreement developed by Docuteam GmbH http://www.loc.gov/standards/mets/profiles/00000041.xml See also: Alternative record ID’s	0..1 MAY
SIP6	Previous Submission agreement `metsHdr/altrecordID` An optional reference to a previous submission agreement(s) which the information may have belonged to. `@TYPE` is used with the value “PREVIOUSSUBMISSIONAGREEMENT”. Example: FM 12-2387/12726, 2007-09-19 Example: http://submissionagreement.kb.se/dnr331-1144-2011/20120711/ Note: It is recommended to use a machine-readable format for a better description of a submission agreement. For example, the submission agreement developed by Docuteam GmbH http://www.loc.gov/standards/mets/profiles/00000041.xml See also: Alternative record ID’s	0..* MAY
SIP7	Archival reference code `metsHdr/altrecordID` An optional reference code indicating where in the archival hierarchy the package shall be placed in the OAIS. `@TYPE` is used with the value “REFERENCECODE”. Example: FM 12-2387/12726, 2007-09-19 See also: Alternative record ID’s	0..1 MAY

ID	Name, Location & Description	Card & Level
SIP8	Previous archival reference code `metsHdr/altrecordID` In cases where the SIP originates from other institutions maintaining a reference code structure, this element can be used to record these reference codes and therefore support the provenance of the package when a whole archival description is not submitted with the submission. `@TYPE` is used with the value “PREVIOUSREFERENCECODE”. Example: SE/FM/123/123.1/123.1.3 See also: Alternative record ID’s	0..* MAY
SIP9	Archival creator agent `metsHdr/agent` A wrapper element that enables to encode the name of the organisation or person that originally created the data being transferred. Please note that this might be different from the organisation which has been charged with preparing and sending the SIP to the archives.	0..1 MAY
SIP10	Archival creator agent role `metsHdr/agent/@ROLE` The role of the person(s) or institution(s) responsible for the document/collection.	1..1 MUST
SIP11	Archival creator agent type `metsHdr/agent/@TYPE` The type of the archival creator agent is “ORGANIZATION” or “INDIVIDUAL”.	1..1 MUST
SIP12	Archival creator agent name `metsHdr/agent/name` The name of the organisation(s) that originally created the data being transferred. Please note that this might be different from the organisation which has been charged with preparing and sending the SIP to the archives.	0..* MAY
SIP13	Archival creator agent additional information `metsHdr/agent/note` The archival creator agent has a note providing a unique identification code for the archival creator.	0..1 MAY
SIP14	Classification of the archival creator agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The archival creator agent note is typed with the value of “IDENTIFICATIONCODE”. See also: Note type	1..1 MUST

ID	Name, Location & Description	Card & Level
SIP15	Submitting agent `metsHdr/agent` The name of the organisation or person that submitting the package to the archive.	1..1 MUST
SIP16	Submitting agent role `metsHdr/agent/@ROLE` The role of the person(s) or institution(s) responsible for creating and/or submitting the package.	1..1 MUST
SIP17	Submitting agent type `metsHdr/agent/@TYPE` The type of the submitting agent is “ORGANIZATION” or “INDIVIDUAL”.	1..1 MUST
SIP18	Submitting agent name `metsHdr/agent/name` Name of the organisation submitting the package to the archive.	1..1 MAY
SIP19	Submitting agent additional information `metsHdr/agent/note` The submitting agent has a note providing a unique identification code for the archival creator.	0..1 MAY
SIP20	Classification of the submitting agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The submitting agent note is typed with the value of “IDENTIFICATIONCODE”. See also: Note type	1..1 MUST
SIP21	Contact person agent `metsHdr/agent` Contact person for the submission.	0..* MAY
SIP22	Contact person agent role `metsHdr/agent/@ROLE` The role of the contact person is “CREATOR”.	1..1 MUST
SIP23	Contact person agent type `metsHdr/agent/@TYPE` The type of the contact person agent is “INDIVIDUAL”.	1..1 MUST
SIP24	Contact person agent name `metsHdr/agent/name` Name of the contact person.	1..1 MUST
SIP25	Contact person agent additional information `metsHdr/agent/note` The submitting agent has one or more notes giving the contact information.	0..* MAY
SIP26	Preservation agent `metsHdr/agent` The organisation or person that preserves the package.	0..1 MAY
SIP27	Preservation agent role `metsHdr/agent/@ROLE` The role of the preservation agent is “PRESERVATION”.	1..1 MUST

ID	Name, Location & Description	Card & Level
SIP28	Preservation agent type `metsHdr/agent/@TYPE` The type of the submitting agent is “ORGANIZATION”.	1..1 MUST
SIP29	Preservation agent name `metsHdr/agent/name` Name of the organisation preserving the package.	1..1 MAY
SIP30	Preservation agent additional information `metsHdr/agent/note` The preservation agent has a note providing a unique identification code for the archival creator.	0..1 MAY
SIP31	Classification of the preservation agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The preservation agent note is typed with the value of “IDENTIFICATIONCODE”. See also: Note type	1..1 MUST

Example: METS example of altrecordID’s, and SIP agents following the SIP profile as well as CS IP.

```
<mets:metsHdr CREATEDATE="2018-04-24T14:37:49.602+01:00" LASTMODDATE="2018-04-24T14
   :37:49.602+01:00" RECORDSTATUS="NEW" OAISPACKAGETYPE="SIP">
  <mets:agent ROLE="ARCHIVIST" TYPE="ORGANIZATION">
    <mets:name>The Swedish health agency</mets:name>
    <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE201345098701</mets:note>
  </mets:agent>
  <mets:agent ROLE="CREATOR" TYPE="ORGANIZATION">
    <mets:name>The agency, Personnel</mets:name>
    <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE2098109810-AF87</mets:note>
  </mets:agent>
  <mets:agent ROLE="OTHER" TYPE="INDIVIDUAL" OTHERROLE="SUBMITTER">
    <mets:name>Sven Svensson</mets:name>
    <mets:note>Phone: 08-123456, Email: sven.svensson@mail.mail</mets:note>
  </mets:agent>
  <mets:agent ROLE="PRESERVATION" TYPE="ORGANIZATION">
    <mets:name>The archives</mets:name>
    <mets:note NOTETYPE="IDENTIFICATIONCODE">ID:1234567</mets:note>
  </mets:agent>
  <mets:altrecordID TYPE="SUBMISSIONAGREEMENT">http://submissionagreement.kb.se/dnr331
     -1144-2011/20120711/</mets:altrecordID>
  <mets:altrecordID TYPE="PREVIOUSSUBMISSIONAGREEMENT">FM 12-2387/12726, 2007-09-19</
     mets:altrecordID>
  <mets:altrecordID TYPE="REFERENCECODE">SE/RA/123456/24/P</mets:altrecordID>
  <mets:altrecordID TYPE="PREVIOUSREFERENCECODE">SE/FM/123/123.1/123.1.3</mets:
```

```
      altrecordID>
</mets:metsHdr>
```

3.3 Extended use of the METS descriptive metadata section (element dmdSec)

The METS descriptive metadata section <dmdSec> is responsible for recording descriptive metadata for all the data items included in the package.

The SIP specification itself does not prescribe of any particular metadata format. It is a role of the OAIS together with the Producer to set the rules in terms of descriptive metadata. These rules should be set and agreed on in the Submission Agreement.

In this regard, the SIP specification does not change or extend any of the requirements already defined by the Common Specification for Information Packages (for more information see section 5.3.3 of the CSIP).

3.4 Extended use of METS administrative metadata section (element amdSec)

The METS administrative metadata section <amdSec> is used to include or reference technical and preservation metadata.

Although seldom used, preservation metadata can be included in an SIP. The guide on Using PREMIS with METS provides recommendations on how to use the <amdSec> element to reference PREMIS metadata. Preservation metadata is typically used to record the history of preservation events that influence the state of the information package. Normally, these take place after the package has been ingested into a digital repository, however an example of preservation event that can occur prior to the ingest process is the digitization of analogue material. This event takes place before the information is ingested and can be included in an SIP.

The SIP specification does not change or extend any of the requirements already defined by the Common Specification for Information Packages (for more information see section 5.3.4. of the CSIP).

3.5 Extended use of the METS file section (element fileSec)

The METS file section element <fileSec> is used to describe all the components included in the information package which have not been already included in the amdSec and dmdSec elements.

The main purpose of the METS file section is to serve as a “table of contents” or “manifest” for all the files included in the package, thus allowing the OAIS to validate the integrity and completeness of the files included in the package. This means that for all the files included in the package, their location and checksum need to be available and described in the fileSec element. That includes files in the data, schemas and in the documentation folders.

The following table describes the differences in the `fileSec` between an E-ARK SIP and the CSIP.

ID	Name, Location & Description	Card & Level
SIP32	File format name `fileSec/fileGrp/file/@sip:FILEFORMATNAME` An optional attribute may be used if the MIMETYPE is not sufficient for the purposes of processing the information package. Example: “Extensible Markup Language” Example: “PDF/A” Example: “ISO/IEC 26300:2006”	0..1 MAY
SIP33	File format version `fileSec/fileGrp/file/@sip:FILEFORMATVERSION` The version of the file format when the use of PREMIS has not been agreed upon in the submission agreement. Example: “1.0”	0..1 MAY
SIP34	File format registry `fileSec/fileGrp/file/@sip:FILEFORMATREGISTRY` The name of the format registry used to identify the file format when the use of PREMIS has not been agreed upon in the submission agreement. Example: “PRONOM”	0..1 MAY
SIP35	File format registry key `fileSec/fileGrp/file/@sip:FILEFORMATKEY` Key of the file format in the registry when use of PREMIS has not been agreed upon in the submission agreement. Example: “fmt/101”	0..1 MAY

Example: METS example of an SIP with file information together with the info from CS IP.

```
<mets:file ID="uuid-0C0049CA-6DE0-4A6D-8699-7975E4046A81" MIMETYPE="application/vnd.
   openxmlformats-officedocument.wordprocessingml.document" SIZE="2554366" CREATED="
   2012-08-15T12:08:15.432+01:00" CHECKSUM="91
   B7A2C0A1614AA8F3DAF11DB4A1C981F14BAA25E6A0336F715B7C513E7A1557" CHECKSUMTYPE="SHA
   -256" FILEFORMATNAME="Microsoft Word for Windows" FILEFORMATVERSION="2007 onwards"
   FORMATREGISTRY="PRONOM" FORMATREGISTRYKEY="fmt/412">
  <mets:FLocat LOCTYPE="URL" type="simple" href="documentation/File.docx">
  </mets:FLocat>
</mets:file>
```

3.6 Extended use of the METS structural map (element `structMap`)

The mandatory METS structural map element <structMap> is intended to provide an overview of the components included in the package. It can also link elements of that structure to associated content files and metadata. In the CSIP the structMap describes the higher-level structure of all the content in the root and may link to existing representations.

The SIP specification does not change or extend any of the requirements already defined by the Common Specification for Information Packages (for more information see section 5.3.6 of the CSIP)

4 Content Information Type Specifications

The concept of a Content Information Type Specification is essentially an extension method which allows for widening the interoperability scope of the E-ARK IPs into a content specific level.

A Content Information Type can be understood as a category of Content Information, for example, relational databases, scientific data or digitised maps. A Content Information Type Specification defines in technical terms how data and metadata (mainly in regard to the Information Object) should be formatted and placed within an Information Package in order to achieve interoperability in exchanging specific Content Information.

The SIP presents no extensions or exceptions to the concept of Content Information Type as it is formalised in the Common Specification for Information Packages. More information on this subject can be found in sections 1.2, 1.3 and 6.1 of the CSIP.

4.1 Submission Agreement

Interactions between Producers and the OAIS are often guided by a Submission Agreement, which establishes specific details about how these interactions should take place, e.g. the type of information expected to be exchanged, the metadata the Producer is expected to deliver, the logistics of the actual transfer, statements regarding access restrictions on the submitted material, etc.

Given the importance of the Submission Agreement, the E-ARK SIP specification provides a way of referring to it regardless of its form. A submission agreement can be delivered in digital (e.g. PDF or XML file) or in analogue forms (i.e. paper document). More information about how to reference the Submission Agreement within the SIP can be found in the section dedicated to the metsHdr element.

According to the PAIMAS, 2004 standard a Submission Agreement should include a complete and precise definition of:

- Information to be transferred (e.g. SIP contents, SIP packaging, data models, identification of the designated community, legal and contractual aspects);
- Transfer definition (e.g. specification of the OAIS Data Submission Sessions);

- Validation definition;
- Change management (e.g. conditions for modification of the agreement, for breaking the agreement);
- Schedule (submission timetable).

This specification includes a list of semantic elements that should be present in a standard Submission Agreement (see Appendix A). The E-ARK SIP specification does not require the use of any of these semantic elements or in any way forbids the use of any other Submission Agreement formats. The list of semantic elements provided simply serves as a baseline recommendation.

The recommended list of semantic elements is inspired by the PAIMAS requirements and the Submission Agreement template provided by the National Oceanic and Atmospheric Administration (NOAA).

5 Appendices

This section includes supplementary information that may help the reader to better understand this specification.

5.1 Appendix A: Submission Agreement semantic elements

The following list of semantic elements provide a starting point for anyone willing to prepare a Submission Agreement. This list is not prescriptive, or by any means complete. It merely serves the purpose of outlining the most relevant semantic elements that should be present in a Submission Agreement.

5.1.1 Project information

- Project - Elements of a transfer project.
  - Project Name - Name of the transfer project (e.g. Transfer I, 2016).
  - Project ID - Identification code of the transfer project (e.g. 201601122044).

5.1.2 Change management

- Version/Revision - Elements for tracking the changes in versions of the submission agreement.
  - Release date - The date of the version.
  - Change authority - The information about the person who changed the submission agreement (e.g. John Smith (The National Archives of Estonia)).
  - Change description - A short textual description of the change.
  - Section(s) affected - This element is meant for recording more detailed information about changes.

5.1.3 Producer, Archive and Designated Community

- Producer Organization - Elements describing the Producer.
  - Organization name - Elements describing the organisation
  - Main Contact - Elements describing the main contact of the transfer project.
    * Address - The address of the main contact.
    * Telephone - The telephone number of the main contact.
    * E-mail - The e-mail of the main contact.
    * Additional Information - Meant for recording any additional information needed to describe the contact.
  - Individual Contacts - Elements describing other individual contacts of the organisation.
    * Name - The full name of the contact person.
    * Role - The role of the contact person.
    * Telephone - The telephone number of the contact person.
    * E-mail - The e-mail of the contact person.
    * Additional Information - Meant for recording any additional information needed to describe the contact.
- Archive Organization - Elements describing the Archive.
  - Organization name - The official name of the organisation.
  - Main Contact - Elements describing the main contact of the transfer project.
    * Address - The address of the main contact.
    * Telephone - The telephone number of the main contact.
    * E-mail - The e-mail of the main contact.
    * Additional Information - Meant for recording any additional information needed to describe the contact.
  - Individual Contacts - Elements describing other individual contacts of the organisation.
    * Name - The full name of the contact person.
    * Role - The role of the contact person.
    * Telephone - The telephone number of the contact person.
    * E-mail - The e-mail of the contact person.
    * Additional Information - Element for recording any additional information needed to describe the contact.
- Designated Community - Elements describing the Designated Community.
  - Description - The textual description of the skills and knowledge base of the designated community.
  - Individual Contacts - Elements describing the individual contacts of the designated community.
    * Name - The full name of the contact person.
    * Role - The role of the contact person.
    * Telephone - The telephone number of the contact person.

    * E-mail - The e-mail of the contact person.
    * Additional Information - Meant for recording any additional information needed to describe the contact.

5.1.4 Submission Information Package (SIP)

- Content and metadata - Elements describing the content and metadata of the submission information package.
  - Description - A description of data origination, content and coverage.
  - Platform Information - A short description of the source system.
  - Representation Information - A description of the means to represent the data content (e.g. referencing to data dictionaries, decoding software, etc.).
  - Preservation Descriptive Information - A description for keeping data independently understandable (e.g. processing history, platform documentation, algorithm information, technical reports, user manuals, etc.).
  - Supplemental Information - Meant for recording any additional information needed to describe the content or metadata of the SIP.
  - Access Constraints - A description of access restrictions and other legal or contractual access aspects.
- Data Model - Elements describing the agreements for the SIP data model.
  - Content Type - A short description of the content type (e.g. ERMS content).
  - Reference - A reference to the full agreed data model description.
  - Additional Information - A description of any other additional information (e.g. description of the physical folder structure of the SIP) related to the data model.

5.1.5 Submission Session Information

- Submission Session - Elements describing the agreements for the submission session.
  - Submission Method - The description of the submission method (e.g. through a digital interface, a physical transfer).
  - Delivery Schedule - A description of a delivery schedule (a submission session may have a routine or a complex schedule).
  - Data Submission Inventory - A description of the complete inventory of data objects (and other items) in the submission session.

5.1.6 Ingest

- Submission Reception - Elements describing the agreements for the ingest.
  - Validation - A description of procedures for the quality assurance.

  - Error Handling - A description of procedures for the error handling.
  - Receipt Confirmation - A description of the receipt confirmation.

5.1.7 Submission risks

- Risks - Elements describing the risks and mitigation options of the submission.
  - Risk Factor - Meant for listing all risk factors (e.g. the designated community is not properly defined) of the submission.
  - Mitigation Option - Meant for listing all mitigation options (e.g. define the designated community together with producers) for the risks.

5.2 Appendix B: E-ARK Information Package METS example

Example 1: Example of a whole METS document describing an submission information package with no representations.

```
<mets:mets OBJID="uuid-4422c185-5407-4918-83b1-7abfa77de182" LABEL="Accounting records
    of 2017" TYPE="OTHER" OTHERTYPE="Accounting" PROFILE="https://earksip.dilcis.eu/
   profile/E-ARK-SIP.xml" schemaLocation="http://www.loc.gov/METS/ http://www.loc.gov/
   standards/mets/mets.xsd http://www.w3.org/1999/xlink http://www.loc.gov/standards/
   mets/xlink.xsd https://dilcis.eu/XML/METS/CSIPExtensionMETS https://dilcis.eu/XML/
   METS/CSIPExtensionMETS/DILCISExtensionMETS.xsd https://dilcis.eu/XML/METS/
   SIPExtensionMETS https://dilcis.eu/XML/METS/SIPExtensionMETS/DILCISExtensionSIPMETS
   .xsd">
  <mets:metsHdr CREATEDATE="2018-04-24T14:37:49.602+01:00" LASTMODDATE="2018-04-24T14
     :37:49.602+01:00" RECORDSTATUS="NEW" OAISPACKAGETYPE="SIP">
    <mets:agent ROLE="CREATOR" TYPE="OTHER" OTHERTYPE="SOFTWARE">
      <mets:name>RODA-in</mets:name>
      <mets:note NOTETYPE="SOFTWARE VERSION">2.1.0-beta.7</mets:note>
    </mets:agent>
    <mets:agent ROLE="ARCHIVIST" TYPE="ORGANIZATION">
      <mets:name>The Swedish health agency</mets:name>
      <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE201345098701</mets:note>
    </mets:agent>
    <mets:agent ROLE="CREATOR" TYPE="ORGANIZATION">
      <mets:name>The agency, Personnel</mets:name>
      <mets:note NOTETYPE="IDENTIFICATIONCODE">VAT:SE2098109810-AF87</mets:note>
    </mets:agent>
    <mets:agent ROLE="CREATOR" TYPE="INDIVIDUAL">
      <mets:name>Sven Svensson</mets:name>
      <mets:note>Phone: 08-123456, Email: sven.svensson@mail.mail</mets:note>
    </mets:agent>
```

```
    <mets:agent ROLE="PRESERVATION" TYPE="ORGANIZATION">
      <mets:name>The archives</mets:name>
      <mets:note NOTETYPE="IDENTIFICATIONCODE">ID:1234567</mets:note>
    </mets:agent>
    <mets:altrecordID TYPE="SUBMISSIONAGREEMENT">http://submissionagreement.kb.se/
       dnr331-1144-2011/20120711/</mets:altrecordID>
    <mets:altrecordID TYPE="PREVIOUSSUBMISSIONAGREEMENT">FM 12-2387/12726,
       2007-09-19</mets:altrecordID>
    <mets:altrecordID TYPE="REFERENCECODE">SE/RA/123456/24/P</mets:altrecordID>
    <mets:altrecordID TYPE="PREVIOUSREFERENCECODE">SE/FM/123/123.1/123.1.3</mets:
       altrecordID>
  </mets:metsHdr>
  <mets:dmdSec ID="uuid-906F4F12-BA52-4779-AE2C-178F9206111F" CREATED="2018-04-24T14
     :37:49.609+01:00">
    <mets:mdRef LOCTYPE="URL" MDTYPE="EAD" MDTYPEVERSION="2002" type="simple" href="
       metadata/descriptive/ead2002.xml" SIZE="903" CREATED="2018-04-24T14
       :37:49.609+01:00" CHECKSUM="
       F24263BF09994749F335E1664DCE0086DB6DCA323FDB6996938BCD28EA9E8153" CHECKSUMTYPE=
       "SHA-256">
    </mets:mdRef>
  </mets:dmdSec>
  <mets:amdSec>
    <mets:digiprovMD ID="uuid-9124DA4D-3736-4F69-8355-EB79A22E943F" CREATED="
   2018-04-24T14:37:52.783+01:00">
      <mets:mdRef LOCTYPE="URL" type="simple" href="metadata/preservation/premis1.xml"
          MDTYPE="PREMIS" MDTYPEVERSION="3.0" MIMETYPE="text/xml" SIZE="1211" CREATED=
         "2018-04-24T14:37:52.783+01:00" CHECKSUM="8
         aa278038dbad54bbf142e7d72b493e2598a94946ea1304dc82a79c6b4bac3d5" CHECKSUMTYPE
         ="SHA-256" LABEL="premis1.xml">
      </mets:mdRef>
    </mets:digiprovMD>
    <mets:digiprovMD ID="uuid-48C18DD8-2561-4315-AC39-F941CBB138B3" CREATED="
       2018-04-24T14:47:52.783+01:00">
      <mets:mdRef LOCTYPE="URL" type="simple" href="metadata/preservation/premis2.xml"
          MDTYPE="PREMIS" MDTYPEVERSION="3.0" MIMETYPE="text/xml" SIZE="2854" CREATED=
         "2018-04-24T14:37:52.783+01:00" CHECKSUM="
         d1dfa585dcc9d87268069dc58d5e47956434ec3db4087a75a3885d287f15126f"
         CHECKSUMTYPE="SHA-256" LABEL="premis2.xml">
      </mets:mdRef>
    </mets:digiprovMD>
  </mets:amdSec>
  <mets:fileSec ID="uuid-CA580D47-8C8B-4E91-ABD5-142EBBE15B84">
    <mets:fileGrp ID="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86H" USE="Documentation">
```

```
      <mets:file ID="uuid-0C0049CA-6DE0-4A6D-8699-7975E4046A81" MIMETYPE="application/
         vnd.openxmlformats-officedocument.wordprocessingml.document" SIZE="2554366"
         CREATED="2012-08-15T12:08:15.432+01:00" CHECKSUM="91
         B7A2C0A1614AA8F3DAF11DB4A1C981F14BAA25E6A0336F715B7C513E7A1557" CHECKSUMTYPE=
         "SHA-256" FILEFORMATNAME="Microsoft Word for Windows" FILEFORMATVERSION="2007
          onwards" FORMATREGISTRY="PRONOM" FORMATREGISTRYKEY="fmt/412">
        <mets:FLocat LOCTYPE="URL" type="simple" href="documentation/File.docx">
        </mets:FLocat>
      </mets:file>
      <mets:file ID="uuid-0C0049CA-6DE0-4A6D-8699-7975E4046A82" MIMETYPE="application/
         vnd.openxmlformats-officedocument.wordprocessingml.document" SIZE="2554366"
         CREATED="2012-08-15T12:08:15.432+01:00" CHECKSUM="91
         B7A2C0A1614AA8F3DAF11DB4A1C981F14BAA25E6A0336F715B7C513E7A1557" CHECKSUMTYPE=
         "SHA-256" FILEFORMATNAME="Microsoft Word for Windows" FILEFORMATVERSION="2007
          onwards" FORMATREGISTRY="PRONOM" FORMATREGISTRYKEY="fmt/412">
        <mets:FLocat LOCTYPE="URL" type="simple" href="documentation/File2.docx">
        </mets:FLocat>
      </mets:file>
    </mets:fileGrp>
    <mets:fileGrp ID="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86F" USE="Schemas">
      <mets:file ID="uuid-A1B7B0DA-E129-48EF-B431-E553F2977FD6" MIMETYPE="application/
         xml" SIZE="123917" CREATED="2018-04-24T14:37:49.617+01:00" CHECKSUM="0
         BF9E16ADE296EF277C7B8E5D249D300F1E1EB59F2DCBD89644B676D66F72DCC" CHECKSUMTYPE
         ="SHA-256" FILEFORMATNAME="XML Schema Definition" FORMATREGISTRY="PRONOM"
         FORMATREGISTRYKEY="x-fmt/280">
        <mets:FLocat LOCTYPE="URL" type="simple" href="schemas/ead2002.xsd">
        </mets:FLocat>
      </mets:file>
    </mets:fileGrp>
    <mets:fileGrp ID="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86G" USE="Representations/
       Submission/Data" CONTENTINFORMATIONTYPE="SIARDDK">
      <mets:file ID="uuid-EE23344D-4F64-40C1-8E18-75839EF661FD" MIMETYPE="application/
         xml" SIZE="1338744" CREATED="2018-04-24T14:37:49.617+01:00" CHECKSUM="7176
         A627870CFA3854468EC43C5A56F9BD8B30B50A983B8162BF56298A707667" CHECKSUMTYPE="
         SHA-256" ADMID="uuid-48C18DD8-2561-4315-AC39-F941CBB138B3 uuid-9124DA4D
         -3736-4F69-8355-EB79A22E943F" FILEFORMATNAME="Extensible Markup Language"
         FILEFORMATVERSION="1.0" FORMATREGISTRY="PRONOM" FORMATREGISTRYKEY="fmt/101">
        <mets:FLocat LOCTYPE="URL" type="simple" href="representations/submission/data
           /SIARD.xml">
        </mets:FLocat>
      </mets:file>
    </mets:fileGrp>
  </mets:fileSec>
```

```
  <mets:structMap ID="uuid-1465D250-0A24-4714-9555-5C1211722FB8" TYPE="PHYSICAL" LABEL
     ="CSIP">
    <mets:div ID="uuid-638362BC-65D9-4DA7-9457-5156B3965A18" LABEL="uuid-4422c185
       -5407-4918-83b1-7abfa77de182">
      <mets:div ID="uuid-A4E1C5B6-CD9B-43EF-8F0C-3FD3AB688F81" LABEL="Metadata" ADMID=
         "uuid-9124DA4D-3736-4F69-8355-EB79A22E943F uuid-48C18DD8-2561-4315-AC39-
         F941CBB138B3" DMDID="uuid-906F4F12-BA52-4779-AE2C-178F9206111F">
      </mets:div>
      <mets:div ID="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86I" LABEL="Documentation"
         CONTENTIDS="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86H">
      </mets:div>
      <mets:div ID="uuid-26757DC2-4C0F-4431-85B5-5943D1AB5CA3" LABEL="Schemas"
         CONTENTIDS="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86F">
      </mets:div>
      <mets:div ID="uuid-35CB3341-D731-4AC3-9622-DB8901CD6736" LABEL="Representations"
          CONTENTIDS="uuid-4ACDC6F3-8A36-4A00-A85F-84A56415E86G">
      </mets:div>
    </mets:div>
  </mets:structMap>
</mets:mets>
```

5.3 Appendix C: External Schema

5.3.1 E-ARK SIP METS Extension

Location: http://earksip.dilcis.eu/schema/DILCISExtensionSIPMETS.xsd

Context: XML-schema for the attributes added by SIP

Note:

An extension schema with the added attributes for use in this profile. The schema is used with a namespace prefix of sip.

5.4 Appendix D: External Vocabularies

5.4.1 Package status

Maintained By: DILCIS Board

Location: http://earksip.dilcis.eu/schema/SIPVocabularyRecordStatus.xml

Context: Used in `@RECORDSTATUS`

Description:

Describes the status of the package.

5.4.2 Alternative record ID's

Maintained By: DILCIS Board

Location: http://earksip.dilcis.eu/schema/SIPVocabularyRecordIDType.xml

Context: Used in `altrecordID/@TYPE`

Description:

Describes the type of the alternative record ID.

5.4.3 Note type

Maintained By: DILCIS Board

Location: http://earksip.dilcis.eu/schema/SIPVocabularyNoteType.xml

Context: Used in `@csip:NOTETYPE`

Description:

Describes the type of a note for an agent.

5.4.4 OAIS Package type

Maintained By: DILCIS Board

Location: http://earkcsip.dilcis.eu/schema/CSIPVocabularyOAISPackageType.xml

Context: Used in `@csip:OAISPACKAGETYPE`

Description:

Describes the OAIS type the package belongs to in the OAIS reference model.

5.5 Appendix E: A Full List of E-ARK SIP Requirements

ID	Name, Location & Description	Card & Level
SIP1	Package name `mets/@LABEL` An optional short text describing the contents of the package, e.g. “Accounting records of 2017”.	0..1 MAY
SIP2	METS Profile `mets/@PROFILE` The value is set to “https://earksip.dilcis.eu/profile/E-ARK-SIP.xml”.	1..1 MUST
SIP3	Package status `metsHdr/@RECORDSTATUS` A way of indicating the status of the package and to instruct the OAIS on how to properly handle the package. If not set, the expected behaviour is equal to NEW. See also: Package status	0..1 MAY
SIP4	OAIS Package type information `metsHdr/@csip:OAISPACKAGETYPE` `@csip:OAISPACKAGETYPE` is used with the value “SIP”. See also: OAIS Package type	1..1 MUST
SIP5	Submission agreement `metsHdr/altrecordID` A reference to the Submission Agreement associated with the package. `@TYPE` is used with the value “SUBMISSIONAGREEMENT”. Example: RA 13-2011/5329; 2012-04-12 Example: http://submissionagreement.kb.se/dnr331-1144-2011/20120711/ Note: It is recommended to use a machine-readable format for a better description of a submission agreement. For example, the submission agreement developed by Docuteam GmbH http://www.loc.gov/standards/mets/profiles/00000041.xml See also: Alternative record ID’s	0..1 MAY
SIP6	Previous Submission agreement `metsHdr/altrecordID` An optional reference to a previous submission agreement(s) which the information may have belonged to. `@TYPE` is used with the value “PREVIOUSSUBMISSIONAGREEMENT”. Example: FM 12-2387/12726, 2007-09-19 Example: http://submissionagreement.kb.se/dnr331-1144-2011/20120711/ Note: It is recommended to use a machine-readable format for a better description of a submission agreement. For example, the submission agreement developed by Docuteam GmbH http://www.loc.gov/standards/mets/profiles/00000041.xml See also: Alternative record ID’s	0..* MAY

ID	Name, Location & Description	Card & Level
SIP7	Archival reference code `metsHdr/altrecordID` An optional reference code indicating where in the archival hierarchy the package shall be placed in the OAIS. `@TYPE` is used with the value “REFERENCECODE”. Example: FM 12-2387/12726, 2007-09-19 See also: Alternative record ID’s	0..1 MAY
SIP8	Previous archival reference code `metsHdr/altrecordID` In cases where the SIP originates from other institutions maintaining a reference code structure, this element can be used to record these reference codes and therefore support the provenance of the package when a whole archival description is not submitted with the submission. `@TYPE` is used with the value “PREVIOUSREFERENCECODE”. Example: SE/FM/123/123.1/123.1.3 See also: Alternative record ID’s	0..* MAY
SIP9	Archival creator agent `metsHdr/agent` A wrapper element that enables to encode the name of the organisation or person that originally created the data being transferred. Please note that this might be different from the organisation which has been charged with preparing and sending the SIP to the archives.	0..1 MAY
SIP10	Archival creator agent role `metsHdr/agent/@ROLE` The role of the person(s) or institution(s) responsible for the document/collection.	1..1 MUST
SIP11	Archival creator agent type `metsHdr/agent/@TYPE` The type of the archival creator agent is “ORGANIZATION” or “INDIVIDUAL”.	1..1 MUST
SIP12	Archival creator agent name `metsHdr/agent/name` The name of the organisation(s) that originally created the data being transferred. Please note that this might be different from the organisation which has been charged with preparing and sending the SIP to the archives.	0..* MAY
SIP13	Archival creator agent additional information `metsHdr/agent/note` The archival creator agent has a note providing a unique identification code for the archival creator.	0..1 MAY

ID	Name, Location & Description	Card & Level
SIP14	Classification of the archival creator agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The archival creator agent note is typed with the value of "IDENTIFICATIONCODE". See also: Note type	1..1 MUST
SIP15	Submitting agent `metsHdr/agent` The name of the organisation or person that submitting the package to the archive.	1..1 MUST
SIP16	Submitting agent role `metsHdr/agent/@ROLE` The role of the person(s) or institution(s) responsible for creating and/or submitting the package.	1..1 MUST
SIP17	Submitting agent type `metsHdr/agent/@TYPE` The type of the submitting agent is "ORGANIZATION" or "INDIVIDUAL".	1..1 MUST
SIP18	Submitting agent name `metsHdr/agent/name` Name of the organisation submitting the package to the archive.	1..1 MAY
SIP19	Submitting agent additional information `metsHdr/agent/note` The submitting agent has a note providing a unique identification code for the archival creator.	0..1 MAY
SIP20	Classification of the submitting agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The submitting agent note is typed with the value of "IDENTIFICATIONCODE". See also: Note type	1..1 MUST
SIP21	Contact person agent `metsHdr/agent` Contact person for the submission.	0..* MAY
SIP22	Contact person agent role `metsHdr/agent/@ROLE` The role of the contact person is "CREATOR".	1..1 MUST
SIP23	Contact person agent type `metsHdr/agent/@TYPE` The type of the contact person agent is "INDIVIDUAL".	1..1 MUST
SIP24	Contact person agent name `metsHdr/agent/name` Name of the contact person.	1..1 MUST
SIP25	Contact person agent additional information `metsHdr/agent/note` The submitting agent has one or more notes giving the contact information.	0..* MAY

ID	Name, Location & Description	Card & Level
SIP26	Preservation agent `metsHdr/agent` The organisation or person that preserves the package.	0..1 MAY
SIP27	Preservation agent role `metsHdr/agent/@ROLE` The role of the preservation agent is “PRESERVATION”.	1..1 MUST
SIP28	Preservation agent type `metsHdr/agent/@TYPE` The type of the submitting agent is “ORGANIZATION”.	1..1 MUST
SIP29	Preservation agent name `metsHdr/agent/name` Name of the organisation preserving the package.	1..1 MAY
SIP30	Preservation agent additional information `metsHdr/agent/note` The preservation agent has a note providing a unique identification code for the archival creator.	0..1 MAY
SIP31	Classification of the preservation agent additional information `metsHdr/agent/note/@csip:NOTETYPE` The preservation agent note is typed with the value of “IDENTIFICATIONCODE”. See also: Note type	1..1 MUST
REF_CSIP_1	Descriptive metadata The DIP dmdSec element should comply with dmdSec requirements in the CSIP profile.	SHOULD
REF_CSIP_2	Administrative metadata The DIP amdSec element should comply with amdSec requirements in the CSIP profile.	SHOULD
SIP32	File format name `fileSec/fileGrp/file/@sip:FILEFORMATNAME` An optional attribute may be used if the MIMETYPE is not sufficient for the purposes of processing the information package. Example: “Extensible Markup Language” Example: “PDF/A” Example: “ISO/IEC 26300:2006”	0..1 MAY
SIP33	File format version `fileSec/fileGrp/file/@sip:FILEFORMATVERSION` The version of the file format when the use of PREMIS has not been agreed upon in the submission agreement. Example: “1.0”	0..1 MAY

ID	Name, Location & Description	Card & Level
SIP34	File format registry `fileSec/fileGrp/file/@sip:FILEFORMATREGISTRY` The name of the format registry used to identify the file format when the use of PREMIS has not been agreed upon in the submission agreement. Example: “PRONOM”	0..1 MAY
SIP35	File format registry key `fileSec/fileGrp/file/@sip:FILEFORMATKEY` Key of the file format in the registry when use of PREMIS has not been agreed upon in the submission agreement. Example: “fmt/101”	0..1 MAY
REF_CSIP_3	Structural description of the package The DIP structMap element should comply with structMap requirements in the CSIP profile.	SHOULD
REF_METS_1	structLink Section not defined or used in CSIP, additional own uses may occur. Information regarding the structural links is found in the METS Primer Information regarding the structural links is found in the METS Primer	MAY
REF_METS_2	behaviorSec Section not defined or used in CSIP, additional own uses may occur. Information regarding the behavior section is found in the METS Primer Information regarding the behavior section is found in the METS Primer	MAY

6 Glossary

Term	Definition
Archival creator	Organisation unit or individual that creates records and/or manages records during their active use.
Archive	An organisation that intends to preserve information for Access and (re)use by a Designated Community.
Delivering organisation	The organisation delivering an information package to the archive. For stating and extending the information use of the “Producer organisation name” and “Submitting organisation name” elements is recommended.

Term	Definition
ERMS	A type of content management software known as an Electronic Records Management System.
Information Package	A logical container composed of optional Content Information and optional associated Preservation Description Information. Associated with this Information Package is Packaging Information used to delimit and identify the Content Information and Package Description information used to facilitate searches for the Content Information.
Ingest	The OAIS functional entity that contains the services and functions that accept Submission Information Packages from Producers, prepares Archival Information Packages for storage, and ensures that Archival Information Packages and their supporting Descriptive Information become established within the OAIS.
OAIS	The Open Archival Information System is an archive (and a standard: ISO 14721:2003), consisting of an organisation of people and systems that has accepted the responsibility to preserve information and make it available for a Designated Community.
Producing organisation	The organisational unit or individual that has the authority to transfer records to an archive. Usually the producer is also the records creator but this is not always the case, sometimes the producer is different from the records creator. For example: An author dies and her literary executor gains the authority to transfer her papers to an archive. The author is the records creator and the literary executor is the producer. For example: Department X gets reorganised out of existence and Department Y, which takes over the functional responsibilities of Department X, gains the authority to transfer the records of Department X to the archive. Department X is the records creator and Department Y is the producer. Counter example: The Department of Widget Science transfers some of its own records to the archive. The Department of Widget Science is the records creator and the producer.

Term	Definition
Submission Information Package (SIP)	An Information Package that is delivered by the Producer to the OAIS for use in the construction or update of one or more AIPs and/or the associated Descriptive Information.
Submitting organisation	Name of the organisation submitting the package to the archive. Extends the delivery information since it may be the case that the content of a creator is held by another part of the organisation.

Postface

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II Revision History

Revision	Date	Authors(s)	Organisation	Description
0.1	20.10.2014	Tarvo Kärberg	NAE	First draft.
0.2	13.11.2014	Tarvo Kärberg	NAE	Updating content.
0.3	02.12.2014	Tarvo Kärberg	NAE	Updating content.
0.4	17.01.2015	Tarvo Kärberg	NAE	Updating content.
0.6	23.01.2015	Anders Bo Nielsen	DNA	Updating content.
0.5	21.01.2015	Karin Bredenberg	ESS	Updating content.
0.7	23.01.2015	Kathrine Hougaard Edsen	DNA	Updating content.
0.71	26.01.2015	Björn Skog	ESS	Updating content.
0.72	27.01.2015	Hélder Silva	KEEPS	Updating content.
0.8	27.01.2015	Angela Dappert	DLM/ UPHEC	Quality assurance and proof-reading.
0.9	29.01.2017	Kuldar Aas	NAE	Quality assurance and proof-reading.
0.91	30.01.2015	David Anderson	UPHEC	Quality assurance and proof-reading.
1.0	30.01.2015	Tarvo Kärberg	NAE	Final version (D3.2).
0.1	11.05.2015	Karin Bredenberg	ESS NAS	Updating content.

Revision	Date	Authors(s)	Organisation	Description
0.3	27.07.2015	Tarvo Kärberg	NAE	Updating content.
0.2	30.06.2015	Tarvo Kärberg	NAE	Updating content.
0.4	23.10.2015	Tarvo Kärberg	NAE	Updating content, synchronising with the SMURF profile.
0.41	17.11.2015	Tarvo Kärberg	NAE	Integrating the feedback.
0.41	17.11.2015	Tarvo Kärberg	NAE	Integrating the feedback.
0.42	07.12.2015	Tarvo Kärberg	NAE	Updating content.
0.5	12.01.2016	Tarvo Kärberg	NAE	Updating content, synchronising with the Common Specification.
0.6	15.01.2016	Anders Bo Nielsen	DNA	Updating content.
0.61	15.01.2016	Gregor Zavrsnik	SNA	Updating content.
0.62	18.01.2016	Tarvo Kärberg	NAE	Updating content.
0.63	20.01.2016	Phillip Mike Tømmerholt	DNA	Updating content.
0.64	25.01.2016	Phillip Mike Tømmerholt	DNA	Updating content.
0.7	26.01.2016	Sven Schlarb	AIT	Quality assurance and proof-reading.
0.8	27.01.2016	Kuldar Aas	NAE	Quality assurance and proof-reading.
0.9	29.01.2016	Andrew Wilson David Anderson	Uni. Brgtn	Quality assurance and proof-reading.
1.0	29.01.2016	Tarvo Kärberg	NAE	Final version (general paart of D3.3)
1.1	14.07.2016	Tarvo Kärberg	NAE	Incorporating agreements made in the Common Specification work group.
1.2	12.12.2016	Tarvo Kärberg	NAE	Incorporating agreements made in the Common Specification work group.
1.3	13.01.2017	Tarvo Kärberg	NAE	Small updates.
1.4	31.01.2017	Tarvo Kärberg	NAE	Finalising the specification.
2.0.0	15.03.2019	Miguel Ferreira	KEEP	Updated to v2.0 with CSIP
2.0.1	09.09.2019	Karin Bredenberg	SNA	Correction @LABEL and @USE attributes, typos, layout and PDF formatting.

Revision	Date	Authors(s)	Organisation	Description

III Acknowledgements

The Common Specification for Information Packages was first developed within the E-ARK project in 2014 – 2017. E-ARK was an EC-funded pilot action project in the Competiveness and Innovation Programme 2007- 2013, Grant Agreement no. 620998 under the Policy Support Programme.

We would like to thank the National Archives of Sweden and Karin Bredenberg for their support and the availability of the Swedish national Common Specifications, upon which most of this document has been built.

The authors of this deliverable would like to thank all national archives, tool developers and other stakeholders who provided valuable knowledge about their requirements for information packages and feedback to this specification!

IV Contact & Feedback

The Common Specification for Information Packages is maintained by the Digital Information LifeCycle Interoperability Standard Board (DILCIS Board). For further information about the DILCIS Board or feedback on the current document please consult the website http://www.dilcis.eu/ or contact us at mailto:info@dilcis.eu.