CITS SIARD

E-ARK Content Information Type Specification for Relational Databases using SIARD

DILCIS BOARD

Date: 31.08.2021

Version: 1.0.0

1 Preface

1.1 Aim of the specification

This document is one of several related specifications which aim to provide a common set of usage descriptions of international standards for packaging digital information for archiving purposes. These specifications are based on common, international standards for transmitting, describing and preserving digital data. They also utilise the Reference Model for an Open Archival Information System (OAIS), which has Information Packages as its foundation. Familiarity with the core functional entities of OAIS is a prerequisite for understanding the specifications.

The specifications are designed 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. A visualisation of the current specification network can be seen here:

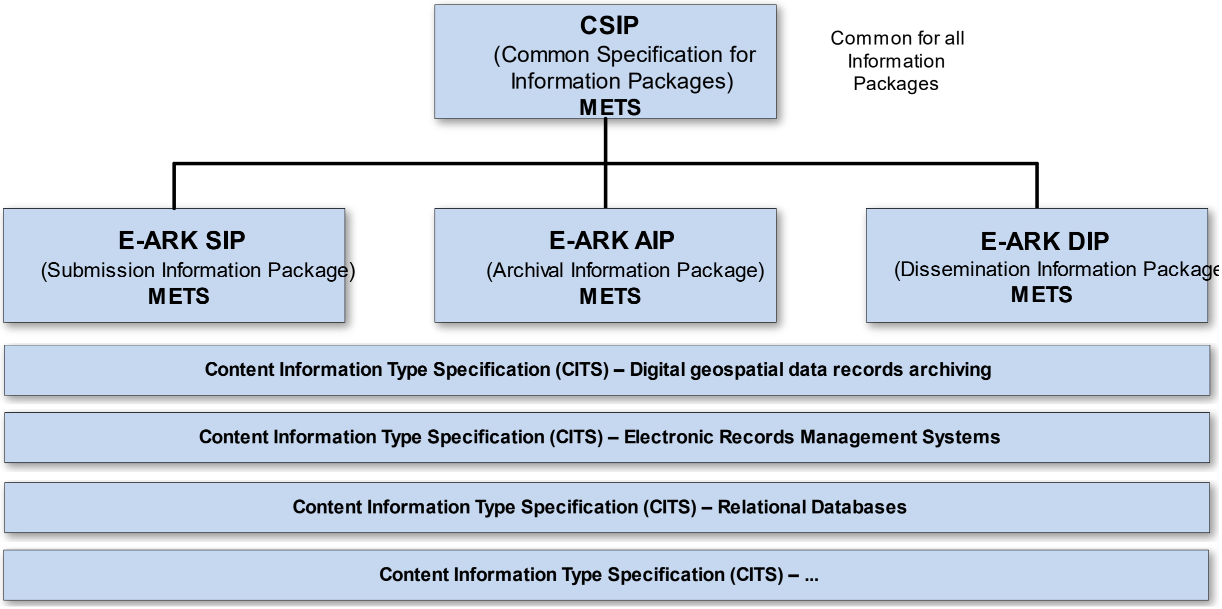
CSIP
(Common Specification for Information Packages)
METS
Common for all Information Packages
E-ARK SIP
(Submission Information Package)
METS
E-ARK AIP
(Archival Information Package)
METS
E-ARK DIP
(Dissemination Information Package
METS
Content Information Type Specification (CITS) – Digital geospatial data records archiving
Content Information Type Specification (CITS) – Electronic Records Management Systems
Content Information Type Specification (CITS) – Relational Databases
Content Information Type Specification (CITS) – ...

Figure I: Diagram showing E-ARK specification dependency hierarchy. Note that the image only shows a selection of the published CITS and isn't an exhaustive list.

Specification	Aim and Goals
Common Specification for Information Packages	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.

Specification	Aim and Goals
	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.
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.
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 eArchiving Reference Implementation (earkweb). ● Ensure the format is suitable to store large quantities of data.
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	The main aim and goal of a Content Information Type Specification is 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 a list of existing Content Information Type Specifications see the DILCIS Board webpage (DILCIS Board, http://dilcis.eu/).

1.2 Organisational support

This specification is maintained by the Digital Information LifeCycle Interoperability Standards Board (DILCIS Board, http://dilcis.eu/). The role of the DILCIS Board is 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 no restriction is placed on the number of participants taking part 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. The DILCIS Board have been responsible for providing the core specifications to the Connecting Europe Facility eArchiving Building Block https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eArchiving/.

1.3 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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2 Context

2.1 Purpose

The purpose of this document is to describe the Content Information Type Specification for Relational Databases (RDB) using the format Software Independent Archiving of Relational Databases (SIARD). The specification is designed to be used for the transfer to and from archives.

2.2 Layered data model

This section introduces the data model structure, which is based on a layered approach for information package definitions (Figure 1). The Common Specification for Information Packages (CSIP) forms the outermost layer. The general SIP, AIP and DIP specifications add submission, archiving and dissemination information to the CSIP specification. The third layer of the model represents specific content information type specifications, such as this CITS SIARD specification. Additional layers for business-specific specifications and local variant implementations of any specification can be added.

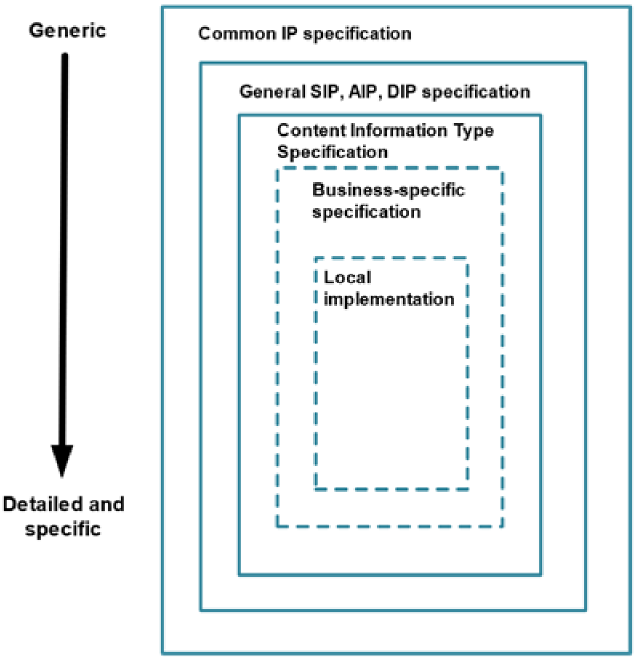

Generic
Detailed and specific
Common IP specification
General SIP, AIP, DIP specification
Content Information Type Specification
Business-specific specification
Local implementation

Figure 1: Data Model Structure

Every level in the data model structure inherits metadata entities and elements from the higher levels. In order to increase adoption, a flexible schema has been developed. This will allow for extension points where the schema in each layer can be extended to accommodate additional information on the next specific layer until, finally, the local implementation can add specific entities or metadata elements to satisfy particular local needs. Extension points can be implemented by:

- Embedding foreign extension schemas (in the same way as supported by METS [http://www.loc.gov/standards/mets/] and PREMIS [http://www.loc.gov/standards/premis/]). These schemas support both increasing the granularity of existing metadata elements by using more detailed data structures as well as adding new types of metadata.

- Substituting metadata schemas for standards more appropriate for the local implementation.

The structure allows the addition of more detailed requirements for metadata entities, for example, by:

- Increasing the granularity of metadata elements by using more detailed data structures, or
- Adding local controlled vocabularies.

For consistency, design principles are reused between layers as much as possible.

2.3 The boundaries of this specification and the SIARD-specification

SIARD is an independent format for archiving relational databases and hence has its own specification (https://github.com/DILCISBoard/SIARD), but there are areas where the SIARD specification deliberately states that packaging of the SIARD-file among other aspect is outside the scope of the SIARD specification:

> *"It should be noted that the SIARD format is only the long-term storage format for a specific type of digital documents (relational databases) and is therefore designed entirely independently of package structures such as the SIP (Submission Information Package), AIP (Archival Information Package) and DIP (Dissemination Information Package) in the OAIS model.*
> *It is assumed that a database in SIARD format is archived as part of such an information package together with other documents (externalized large object files, translation maps for external file names, database documentation, business documents relevant to the understanding of the database, etc.)."*

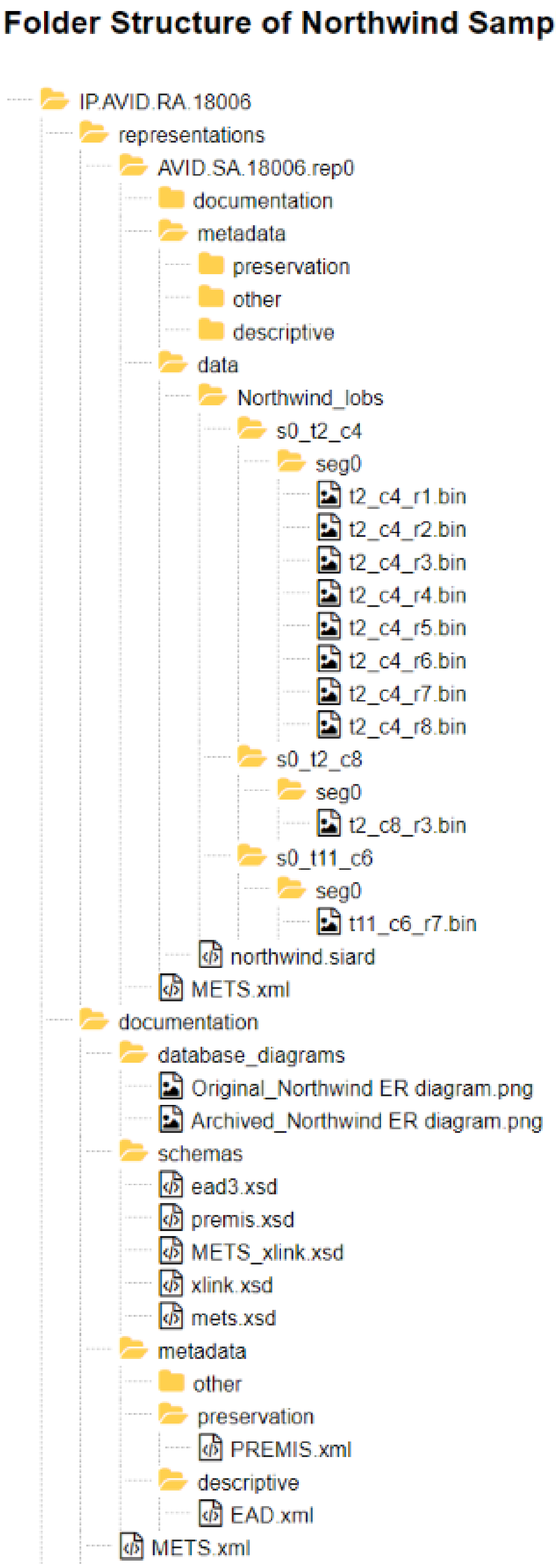
This CITS SIARD specification describes how to package SIARD-files and any accompanying external LOBs in CSIP package(s). This specification also explains how to package extra metadata and context documentation so that long-term preservation and dissemination can take place.

As in all classification issues, it is important to have collectively exhaustive and mutually exclusive categories, and even though the SIARD specification deliberately states that package structures are not part of the specification, then there are circumstances and scenarios where it is not clear whether an issue falls under the scope of a specification like this one or under the scope of the SIARD specification itself.

3 CITS SIARD Requirements

3.1 Folder structure and example

A visualisation of an example of a valid CITS SIARD-package is illustrated in Figure 2. The example and other examples can also be found as downloadable packages at this link: https://github.com/DILCISBoard/CITS-SIARD/tree/master/examples . The example is an information package where a database has LOBs that resides outside the .siard-file. See LOB details under section 3.7 {SIARD_lobs} – requirements.



Folder Structure of Northwind Sample Database

```
IP.AVID.RA.18006
    representations
        AVID.SA.18006.rep0
            documentation
            metadata
                preservation
                other
                descriptive
            data
                Northwind_lobs
                    s0_t2_c4
                        seg0
                            t2_c4_r1.bin
                            t2_c4_r2.bin
                            t2_c4_r3.bin
                            t2_c4_r4.bin
                            t2_c4_r5.bin
                            t2_c4_r6.bin
                            t2_c4_r7.bin
                            t2_c4_r8.bin
                    s0_t2_c8
                        seg0
                            t2_c8_r3.bin
                    s0_t11_c6
                        seg0
                            t11_c6_r7.bin
                northwind.siard
            METS.xml
    documentation
        database_diagrams
            Original_Northwind ER diagram.png
            Archived_Northwind ER diagram.png
        schemas
            ead3.xsd
            premis.xsd
            METS_xlink.xsd
            xlink.xsd
            mets.xsd
        metadata
            other
            preservation
                PREMIS.xml
            descriptive
                EAD.xml
        METS.xml
```

Figure 2: Information Package folder structure

3.2 Package and Representation METS

A CSIP can consist of zero to many representations, and this is an important feature that needs to be taken into consideration when packing SIARD files within CSIPs.

There can easily be different representations of the same database located within one CSIP. For example, one package could consist of:

- one representation where the native proprietary dump is located;
- one representation with SIARD-file that conforms only to an older version of the SIARD specification;
- one representation with the newest version of the SIARD specification;
- one representation where database normalisation and/or other dissemination tasks have taken place.

There can be several DIP representations. There can also be other databases and, for example, geodata within the same package.

As for this specification, there always needs to be a minimum of one representation and therefore a minimum of two METS.xml. The Package METS.xml has to be a general METS.xml describing if the package itself is mainly a CITS_SIARD package, and then the single representations needs to describe what specific SIARD versions they consist of.

ID	Name and Location	Description and Usage	Card & Level
SIARD_1		There **MUST** be a minimum of one representation and therefore exactly one Package METS.xml and a minimum of one Representation METS.xml in a CITS SIARD package.	1..n MUST

2.3 Package METS requirements

ID	Name and Location	Description and Usage	Card & Level
SIARD_2 Ref CSIP2	Type mets/@TYPE	For information packages that primarily contain relational databases the value in Package mets/@TYPE **MUST** be "Databases" as taken from the CSIP Vocabulary for Content Category. See also: Content Category	1..1 MUST
SIARD_3 Ref CSIP4	Content Information Type Specification mets/@csip: CONTENTINF	For information packages that primarily contain relational databases, the value in Package mets/@csip:CONTENTINFORMATIONTYPE **MUST** be "citssiard_v1_0" as taken from the CSIP Vocabulary for Content Information Type.	1..1 MUST

	ORMATIONTYPE	See also: Content information type specification	
SIARD_4 Ref CSIP5	Other Content Information Type Specification mets/@csip:OTHERCONTENTINFORMATIONTYPE	For information packages that primarily contain relational databases the Package METS **MUST NOT** have a mets/@csip:OTHERCONTENTINFORMATIONTYPE	0..0 MUST NOT
SIARD_5 Ref CSIP6, SIP2	METS Profile mets/@PROFILE	For information packages that primarily contain relational databases the value in the @PROFILE **MUST** be "https://citssiard.dilcis.eu/profile/E-ARK-SIARD-ROOT.xml"	1..1 MUST
SIARD_6 Ref CSIP62	fileSec Representation Content Information Type Specification mets/fileSec/fileGrp[@USE='Representations']/@csip:CONTENTINFORMATIONTYPE	There **MUST** be a minimum of one mets/fileSec/fileGrp[@USE='Representations']/@csip:CONTENTINFORMATIONTYPE with the value “citssiard_v1_0” as taken from the CSIP Vocabulary for Content Information Type that direct to the representation METS.xml in the representation containing a relational database. **See also:** Content information type specification	1..n MUST
SIARD_7 Ref CSIP63	fileSec Other Content Information Type Specification mets/fileSec/fileGrp[@csip:CONTENTINFORMATIONTYPE='citssiard_v1_0']/@csip:OTHERCONTENTINFORMATIONTYPE	For any mets/fileSec/fileGrp[@csip:CONTENTINFORMATIONTYPE that has the value “citssiard_v1_0”, there **MUST** be a @csip:OTHERCONTENTINFORMATIONTYPE attribute with a value taken from the vocabulary {SIARD_1.0; SIARD_2.0, SIARD_2.1, SIARD_2.2, Database_dump}.	1..1 MUST

SIARD_8 Ref CSIP105-CSIP112	StructMap METS pointer	For any fileGrp/@csip:CONTENTINFORMATIONTYPE with the value “citssiard_v1_0” there **MUST** be a corresponding @div-representation in the StructMap-element	1..1 MUST

Example 1: Package METS element example.

```
<mets:mets
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:mets="http://www.loc.gov/METS/"
        xmlns:xlink="http://www.w3.org/1999/xlink"
        xmlns:csip="https://DILCIS.eu/XML/METS/CSIPExtensionMETS"
        xmlns:sip="https://DILCIS.eu/XML/METS/SIPExtensionMETS"
        OBJID="IP_18006_SARD2_2Rep_externallobs"
        TYPE="Databases"
        csip:CONTENTINFORMATIONTYPE="citssiard_v1_0"
        PROFILE="https://citssiard.dilcis.eu/profile/E-ARK-SIARD-ROOT.xml"
        xsi: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://earkcsip.dilcis.eu/schema/DILCISExtensionMETS.xsd
        https://DILCIS.eu/XML/METS/SIPExtensionMETS
        https://earksip.dilcis.eu/schema/DILCISExtensionSIPMETS.xsd">
```

3.4 Representation METS requirements

ID	Name and Location	Description and Usage	Card & Level
SIARD_9 Ref CSIP2	Type mets/@TYPE	For representations that primarily contain relational databases the value in Package mets/@TYPE **MUST** be “Databases” as taken from the CSIP Vocabulary for Content Category. **See also:** Content Category	1..1 MUST
SIARD_10 Ref CSIP4	Content Information Type Specification mets/@csip:CONTENTINFORMATIONTYPE	For representations that primarily contain relational databases and conform to CITS SIARD, the value in Package mets/@csip:CONTENTINFORMATIONTYPE **MUST** be “citssiard_v1_0” as taken from the CSIP Vocabulary for Content Information Type.	1..1 MUST
SIARD_11	Other Content Information	For representations where mets/@csip:CONTENTINFORMATIONTYPE has the value	1..1

Ref CSIP5	Type Specification mets/@csip: OTHERCONTENTINFORMATIONTYPE	“citssiard_v1_0” then mets/@csip:OTHERCONTENTINFORMATIONTYPE **MUST** have a value taken from the vocabulary {SIARD_1.0; SIARD_2.0, SIARD_2.1, SIARD_2.2, Database_dump}	MUST
SIARD_12 Ref CSIP6, SIP2	METS Profile mets/@PROFILE	For information packages that primarily contain relational databases the value in the @PROFILE **MUST** be "https://citssiard.dilcis.eu/profile/E-ARK-SIARD-REPRESENTATION.xml"	1..1 MUST
SIARD_13 Ref CSIP64-CSIP79	File Pointer fileSec/fileGrp/file@csip: OTHERCONTENTINFORMATIONTYPE	If the value in mets/@csip:OTHERCONTENTINFORMATIONTYPE is {SIARD_1.0, SIARD_2.0, SIARD_2.1, SIARD_2.2, Database_dump} then there **MUST** exist one and only one file in the fileGrp with @USE = “data” with an identical value in fileSec/fileGrp/file@csip:OTHERCONTENTINFORMATIONTYPE that is used to locate the relevant database file.	1..1 MUST

3.5 METS requirements between Package and Representation

ID	Name and Location	Description and Usage	Card & Level
SIARD_14	Type mets/@TYPE	If the value in representation mets/@csip:OTHERCONTENTINFORMATIONTYPE is {SIARD_1.0, SIARD_2.0, SIARD_2.1, SIARD_2.2, Database_dump} then the Package METS.xml fileGrp who refers to the Package METS.xml **MUST** have the same value.	1..1 MUST

3.6 {SIARD_1.0, SIARD_2.0, SIARD_2.1., SIARD_2.2} – requirements

ID	Name and Location	Description and Usage	Card & Level
SIARD_15		If the value in mets/@csip:OTHERCONTENTINFORMATIONTYPE is {SIARD_1.0, SIARD_2.0, SIARD_2.1, SIARD_2.2} then a file	1..1 MUST

	named [databaseName].siard **MUST** exist in representations/[RepresentationName]/data.	
SIARD_16	The SIARD version of the SIARD-file **MUST** be the same as the version provided in mets/@csip:OTHERCONTENTINFORMATIONTYPE and fileSec/fileGrp/file@csip:OTHERCONTENTINFORMATIONTYPE.	1..1 MUST
SIARD_17	The representations/[RepresentationName]/data/[databaseName]. siard **SHOULD** be a valid SIARD file.	0..1 SHOULD
SIARD_18	There **SHOULD** be a minimum of one validation report in the documentation folder for the validation of the SIARD file.	1..n SHOULD
SIARD_19	The file name of the SIARD file representations/[RepresentationName]/data/[databaseName]. siard **MAY** be the short database identifier of the database as specified in the <dbname> element of the metadata.xml file in the SIARD file, but it is not recommended.	0..n MAY
SIARD_19a	From SIARD2.2 and onwards, if a .siard file is larger than a desired or imposed implementation limit, then it **MAY** be physically split into file parts which are then placed in the same location that the .siard file would have been. Each file part must have the suffix _part[nnn] with nnn beginning with 001. In this case, SIARD_15, SIARD_16, SIARD_17, SIARD_18 and SIARD_19 refer to the complete SIARD file as if it was re-assembled from the constituent parts.	0..n MAY
SIARD19b	From SIARD_2.2 and onwards, if a mapping file is used to describe the physical location of segments, then a file mapping.txt **MUST** be provided at the same location as the .siard file. See SIARD2.2 section S_8.1.2.0 for further information regarding its format.	1..1 MUST

3.7 {Database_dump} – requirements

For authenticity and possible dissemination purposes, the OAIS might want to have a representation with a proprietary database dump from the original database management system.

ID	Name and Location	Description and Usage	Card & Level
SIARD_20		If the value in mets/@csip:OTHERCONTENTINFORMATIONTYPE is "Database_dump" then there **MUST** exist a proprietary database dump in representations/[RepresentationName]/data	1..1 MUST
SIARD_21		There **SHOULD** be preservation metadata describing the proprietary database dump.	1..n SHOULD

3.8 {SIARD_lobs} – requirements

A relational database can consist solely of table data, but it can easily have large objects (LOBs). Large object (LOB) is the common description for large character content (CLOB) or large binary (BLOB) content – such as video, sound, images, word processing documents, etc.

These LOBs can be stored inside a relational database as CLOBs or BLOBs within cells or outside as external files – also called external LOBs (SQL/MED).

In the SIARD specification from SIARD2.0 and onwards, the external LOBs can be placed outside the table data within the folder structure in the .siard-file, or they can be placed outside the .siard-file.

Although some of these specifications are given in SIARD2.2 then since they lie outside a SIARD file and under the realm of CITS_SIARD then they are also given here in the CITS_SIARD specification.

ID	Name and Location	Description and Usage	Card & Level
SIARD_22		If a database has LOBs outside the .siard-file then these **MUST** be stored in the same representation as the .siard-file in the directory "representations/[RepresentationName]/data".	1..n MUST

SIARD22a	From SIARD2.2 and onwards, a manifest file **MAY** be used to increase interoperability to document LOBS stored outside the .siard file. In this case, a file manifest.txt **MAY** be provided next to the .siard file. See SIARD2.2 section S_8.1.3-0 for further information.	0..n MAY
SIARD22b	LOBS that are located as per SIARD2.2 **MUST** conform to a defined structure. • A main LOB folder named [databaseName]_lobs • A LOB folder for each column named after the schema no. i, table no. j, column no. k; i. e.: s[i]_t[j]_c[k] • A folder named seg_0 • A LOB file named after the table no. j, column no. k and row no. l of the LOB i.e. t[j]_c[k]_r[l] A LOB file name suffix named bin (or a file extension associated with the MIME type of the lob file in case this is known (see restrictions under SIARD22 section P_4.2-6).) See SIARD2.2 section L_7.1.0 for further information.	1..1 MUST
SIARD22c	The [databaseName]_lobs/seg_[]/ folders **MAY** be packaged as ZIP files, named with the suffix .zip. See SIARD2.2 section L_7.1-1 for further information.	0..1 MAY

4 SIP requirements

4.1 Submission Agreement requirements

There should be a submission agreement in the SIP representation that has been tailored to handle the preservation of relational databases. Since no standard for submission agreements for databases exist yet, the following requirements cannot yet be automatically validated at this specification level. It is up to the business-specific specification layer or local implementation layer (see 1.2 Layered Data Model) to set up requirements that can be automatically validated.

ID	Name and Location	Description and Usage	Card & Level
SIARD_23		There SHOULD be a submission agreement in the SIP representation that has been tailored to handle the preservation of relational databases.	1..1 SHOULD
SIARD_24		The submission agreement SHOULD describe how many representations of the database that the Producer has to submit.	0..1 SHOULD
SIARD_25		The submission agreement SHOULD describe whether the submitted representations of a database is 1:1 with the running database (Full SIARD export) or if any alterations have been made (only a subset of tables).	0..1 SHOULD
SIARD_26		The submission agreement SHOULD list the tables that are required to be submitted to the archive and to be preserved.	0..1 SHOULD
SIARD_27		The submission agreement SHOULD list a set of SQL queries that are decided to be submitted to the archive and are to be preserved under the <views>-element in metadata.xml. The SQL queries SHOULD provide the most useful queries in the database for designated communities.	0..1 SHOULD
SIARD_28		The submission agreement SHOULD list the documentation that is decided to be submitted to the archive. See 7 Documentation requirements.	0..1 SHOULD

5 AIP requirements

No specific requirements have been created for the AIP in this version of the specification.

6 DIP requirements

No specific requirements have been created for the DIP in this version of the specification.

7 Documentation requirements

There should be documentation in the representations and/or in the information package. It is up to the business specific specification layer or local implementation layer (see 1.2 Layered Data Model) to set up requirements that can be automatically validated for many of the requirements.

ID	Name and Location	Description and Usage	Card & Level
SIARD_29	.siard-file Documentation folder	Tables, columns/fields, keys, coded values SHOULD be explained, preferably in the metadata.xml and via code tables or the SIARD file or in the Documentation folder.	1..n SHOULD
SIARD_29a	metadata.xml	Tables and columns that did not exist in the original database layer (such as code tables created for archiving purposes) **SHOULD** be named with the prefix "Arch_" in metadata.xml	1..n SHOULD
SIARD_30	Documentation folder	There **SHOULD** be system diagrams in the Documentation folder showing diagrams of the original database and the archived version. Preferably Entity/Relationship Diagrams. See SIARD_30a-d for further details.	1..n SHOULD
SIARD_30a	Documentation \database_diagrams	The system diagrams **SHOULD** be located in a subfolder called database_diagrams	1..1 SHOULD
SIARD_30b	Documentation \database _diagrams	System diagrams **MAY** be archived as PNG files.	0..1 MAY

SIARD_30c	Documentation \database _diagrams	System diagrams visualising the original database **SHOULD** be named with the prefix “Original_”.	1..n SHOULD
SIARD_30d	Documentation \ database _diagrams	System diagrams visualising the archived database **SHOULD** be named with the prefix “Archived_”.	1..n SHOULD
SIARD_31	.siard-file Documentation folder	The (main) system-user dialogues **SHOULD** be documented, down to the identification of the database columns/fields involved in the dialogues, documented as a combination of: · Screenshots, annotated with column/field descriptions, stored in the Documentation folder. · User documentation describing the system-user dialogue, stored in the Documentation folder. · Views, if available, as part of the SIARD file. · If views are not present, additional descriptions of the system (application) logic, stored in the Documentation folder.	1..n SHOULD
SIARD_32	Documentation folder	Documentation of the legal context of the database and associated system **SHOULD** be provided in the Documentation folder.	1..n SHOULD
SIARD_33	Documentation folder	There **MAY** be videos or screen dumps from the system as seen from the user’s perspective in the Documentation folder.	1..n MAY

Glossary

Table 2: Glossary

Name	Description
Content Information Type (CIT)	A type of a set of information that is the original target of preservation or that includes part or all of that information. It is an Information Object composed of its Content Data Object and its Representation Information.
DBMS	Database Management System.
OAIS	Open Archival Information System.
RDBMS	Relational Database Management System.
SIARD	Software Independent Archival of Relational Databases.

Post face

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Project co-funded by the European Commission within the ICT Policy Support Programme Dissemination Level		
P	**Public**	x
C	**Confidential, only for members of the Consortium and the Commission Services**	

REVISION HISTORY AND STATEMENT OF ORIGINALITY

Submitted Revisions History

Revision No.	Date	Authors(s)	Organisation	Description
[Version]	[Date]	[Who]	[Affiliation]	[What]
0.1.0	14-08-2020	Phillip Aasvang Tømmerholt	The Danish National Archives	DRAFT version for internal review
0.1.1	31-08-2020	Phillip Aasvang Tømmerholt	The Danish National Archives	DRAFT version with changes based on internal review
0.1.2	29-09-2020	Phillip Aasvang Tømmerholt	The Danish National Archives	Included Layered Data Model and Documentation requirements
0.1.3	21-07-2021	Martin Dew-Hattens Anders Bo Nielsen Phillip Aasvang Tømmerholt	The Danish National Archives	Included updates to align with SIARD2.2
1.0.0	31-08-2021	Various	Various	Publication of version 1.0.0

Statement of originality:
This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.