APARSEN

- structured list of services for digital preservation -

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E-infrastructures and services for data preservation and curation @ EGI CF 2014, Helsinki

- Located in Dortmund, Germany

- active for nearly 10 years in RTD of Digital Preservation. Among others:

  – **PARS.Insight**

  – **SHAMAN**

  – **APARSEN**

  – **SCIDIP-ES**

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APARSEN is a *Network of Excellence*

– partners from industry, cultural heritage organizations, research bodies and membership organizations (30 participants).

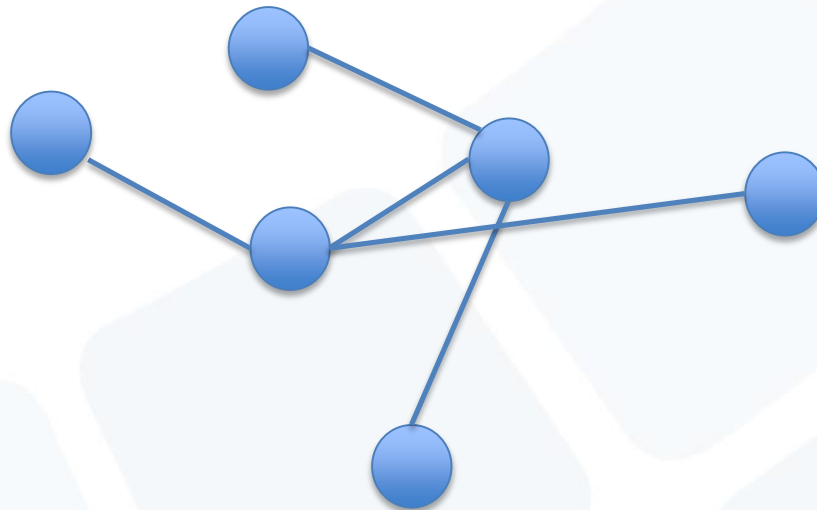– create a common vision of European expertise in digital preservation.

- Various Registries exist, among others:
  - *COPTR*
  - *DCH-RP tool-registry*
  - *APARSEN*

- Differ in: methodology, provided information

- APARSEN Evidence-Based DP Tools Registry/Repository.

  - Provision of information, where the software has been found effective in preservation.

  - Besides links and description to S&T
    - Description and links to applied testbeds
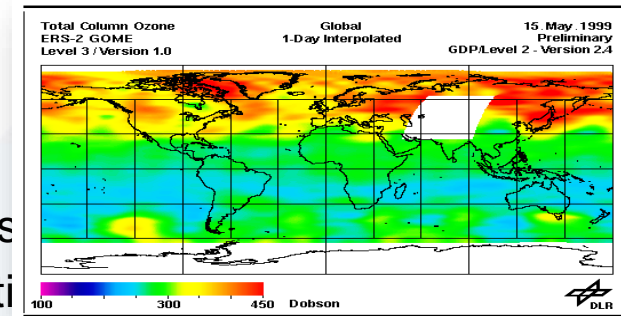   - Description of scenarios
    - User ratings

Knowledge base

Tools

Home ▶ Knowledge base ▶ Tools

Evidence-based Digital Preservation Tools Repository
The APARSEN tools repository is the central access point for finding software related to digital preservation. The edited lists allow you to find appropriate tools meeting your requirements. Tools are organized according to the data type they handle and their role in digital preservation systems. Evidence from research and application as well as user rating and comments support you in assessing the tools. Read more on background and concepts of the evidence-based tool repository.

- List by data type
- List by tool

Tools
- External Reports about Preservation Tools
- Digital Rights and Access Management
- External Tool Registries
- Common Testing Environments
- Evidence-based Digital Preservation Tools Repository

- In terms of OAIS, this evidence information is **Representation Information** (*the information that maps a Data Object Into more meaningful concepts* [CCSDS]).

- **Representation Information Network**: The set of Representation Information, that fully describes the meaning of a Data Object.
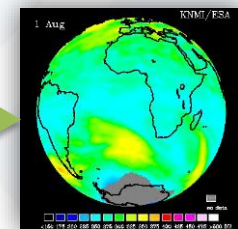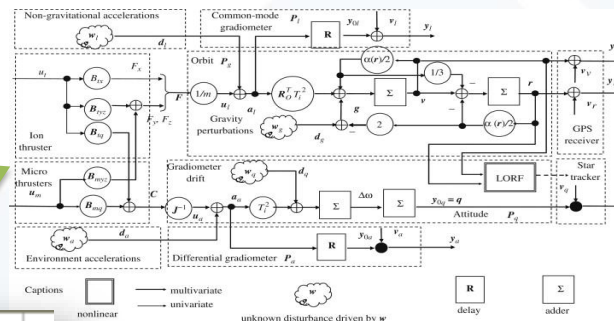
- SCIDIP-ES project: building an e-infrastructure for Earth Observation Data. Several joint activities between APARSEN and SCIDIP-ES.

- ESA Preserved Data Set Content
  - Data Records (from raw data to high level products
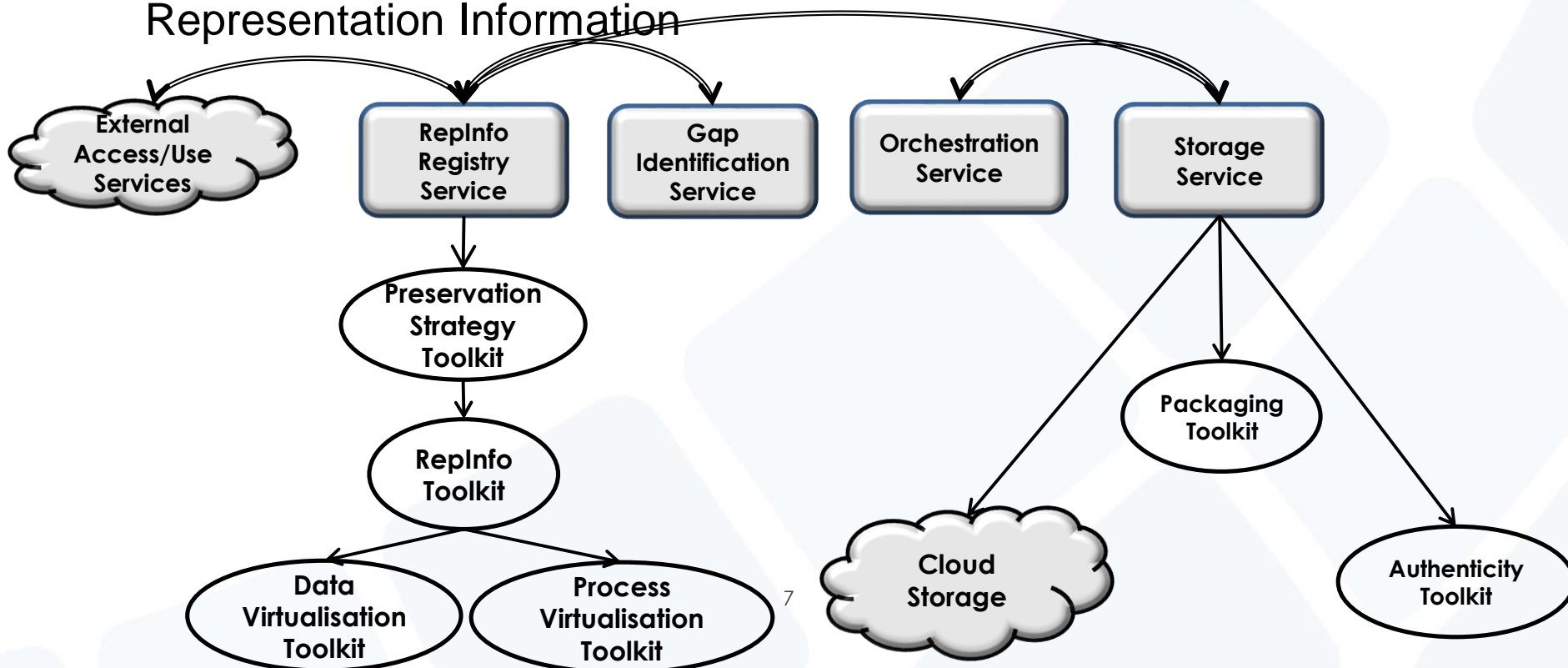 - Processing software (e.g. processors for visualizati
  - Mission Documentation

- Through complex
   processing schemes

latitude	longitude	Ozone	Time
132	50	34.9	12/03/1999
178	50	45	12/03/1999
190	50	78	12/03/1999

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- The preservation of EO data (the "bytes") is useless without the preservation of the knowledge associated with the data (e.g. the "quality"
- SCIDIP-ES provides Tool and Services for managing Representation Information

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- **Repinfo Registry Service:** A container of knowledge
- store, query, retrieve and manage the Representation Information needed to enable access, understand and (re-)use of a digital object over the long-term. Provides information about
  - Structure: headers, footers, instrument measures, annotations, fixed parts, variable parts
  - Semantic:
    - Basic information (The so-called "metadata": acquisition time, lat/lon, etc.)
    - Auxiliary Information, such as Sensor Description, physical parameters measured by the sensor, etc.
    - Usage Information: how this digital object can be exploited by different user communities
  - Others: describing what additional software can be used to display/process/edit the digital object.

- Know that a change has happened
  - Hardware, software, environment, tacit knowledge
- Understand the implications – is there a "gap in understandability"
- Decide on the "best" course of action for preservation
- Representation Information will be required to fill the gap or for new format
  - See if it has been created by someone else or
  - Create it
- If Transformed – how to maintain authenticity
- Alternatively hand it on to another repository
  - As "Archival Information Packages"
- Make sure that data is usable

Orchestration Service

Gap Identification Service

Preservation Strategy Toolkit

RepInfo Registry Service

Authenticity Toolkit
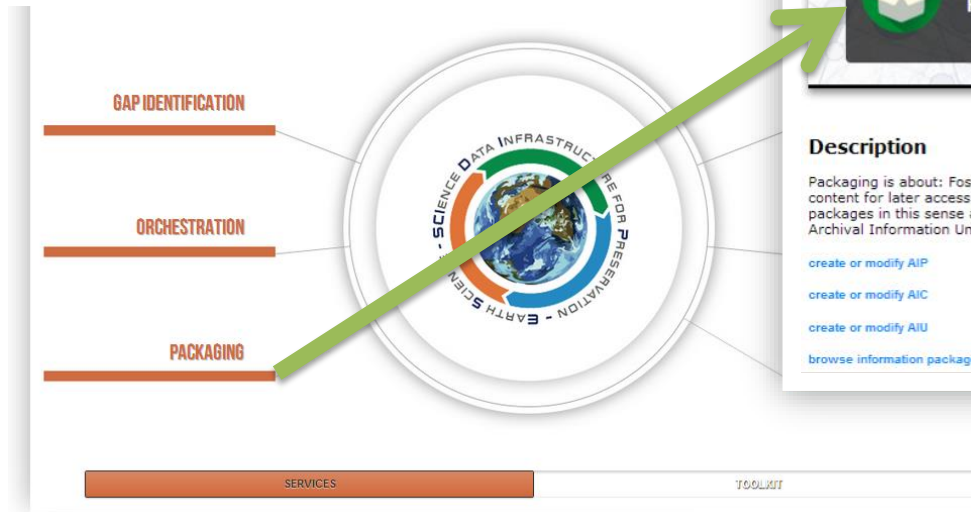
Storage Service

RepInfo Toolkit

Data Virtualisation Toolkit

Process Virtualisation Toolkit

- Select S&T through Dashboard:

SCIenceData Infrastructure for Preservation - Earth Science (SCIDIP-ES)

Packaging Toolkit

Packaging supports the creation and manipulation of Archival Information Packages.

GAP IDENTIFICATION

ORCHESTRATION

PACKAGING

Description

Packaging is about: Foster reuse of preserved material is a key motivation for the preservation of digital objects. Provision of sufficient content for later access and comprehension of preserved material is a critical task. The packaging toolkit supports the creation and mar packages in this sense as defined by the OAIS reference model. This includes functions for handling Archival Information Packages, Arc Archival Information Units. Furthermore the toolkit enables the integration of representation information from various SCIDIP-ES regist

create or modify AIP

create or modify AIC

create or modify AIU

browse information packages

SERVICES | TOOLKIT

USE CASES

- Select S&T by Use Cases:

ARCHIVE SETUP

Follow this link to discover how to configure the SCIDIP-ES preservation services. ...

DATA ACCESS

See how SCIDIP-ES services provide added value to users, while preserving data in the long term ...

ARCHIVE EVOLUTION

See how services and toolkits prevent data loss when things change in the archive ...

- APARSEN: *Evidence based Tools Registry/Repository*
  - Provision of information, where the software has been found effective in preservation.
  - Representation Information: *the information that maps a Data Object Into more meaningful concepts* [CCSDS].

- Preservation of Representation Information ensure that Digital Objects are understandable and usable in the long term.

- SCIDIP-ES *RepInfo Registry Service* for management of Representation Information
  - development of Services and Toolkits around RepInfo Registry Service.
  - validation and use of them in the Earth Science Domain.

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Thanks!

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- [CCSDS]: CCSDS. 2002. Reference Model for an Open Archival Information System (OAIS). Recommendation for Space Data Systems Standard, Consultative Committee for Space Data Systems (CCSDS) Blue Book, 2002, or later URL: http://public.ccsds.org/publications/archive/650x0b1.pdf

- Some of the provided information are part of various presentation that has been presented in context of SCIDIP-ES.

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