

# UNDERSTANDING AND IMPLEMENTING PREMIS

## *A tutorial*

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**Abstract** – This half day tutorial will provide participants with an short introduction to the PREMIS Data Dictionary [1]. There after the focus is implementation. It will give a basic overview of the standard and explore different models of implementation.

**Keywords** – Preservation strategies and workflows; systems, and tools; Case studies, best practices and novel challenges; Training and education

**Conference Topics** – 2. Designing and Delivering Sustainable Digital Preservation: 5. The Cutting Edge: Technical Infrastructure and Implementation

#### I. INTRODUCTION

The PREMIS Data Dictionary for Preservation Metadata is a specification that provides a key piece of infrastructure for digital preservation activities, playing a vital role in enabling the effective management, discovery, and re-usability of digital information. Preservation metadata provides provenance information, documents preservation activity, identifies technical features, and aids in verifying the authenticity of digital objects. PREMIS is a core set of metadata elements (called “semantic units”) recommended for use in all preservation repositories regardless of the type of materials archived, the type of institution, and the preservation strategies employed.

#### II. SUMMARY OF TUTORIAL

The PREMIS Data Dictionary was originally developed by the Preservation Metadata: Implementation Strategies (PREMIS) Working Group in 2005 and revised in 2008 and 2015. It is maintained by the PREMIS Editorial Committee and the PREMIS Maintenance Activity is managed by the Library of Congress [2].

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We have seen a constant call for PREMIS to undertake tutorials, such as this, as more and more organizations come to grips with digital preservation. This tutorial provides in its first part an introduction to PREMIS and its data model and an examination of the semantic units in the Data Dictionary organized by the entities in the PREMIS data model, objects, events, agents and rights.

As the second part, it presents how the preservation community can use PREMIS metadata support tools for the implementation of software, repository systems and data management practices.

As the third part, it presents examples and case studies of PREMIS implementation, using PREMIS in XML and PREMIS in RDF, in relation to the PREMIS Ontology.

It will include examples of implementation experiences through the institutional experience of the tutors as well as invited speakers.

The tutorial aims at developing and spreading awareness and knowledge about metadata to support the long-term preservation of digital objects.

#### III. CONTENT OUTLINE

The draft outline for the tutorial is outlined below.

##### A. Introduction to PREMIS

- Background (brief history and rationale of PREMIS)
- Benefits of implementing PREMIS
- Outline of main Entities

*B. Implementation community support tools*

- Data Dictionary
- Ontology
- Website, PIG, id.loc.gov

*C. Implementation case studies*

- PREMIS in METS
- PREMIS and Semantic Web Technology
- PREMIS Conformance and repository interoperability

*D. Wrap up*

#### IV. INTENDED AUDIENCE

The tutorial will benefit individuals and institutions interested in implementing PREMIS metadata for the long-term management and preservation of their digital information but who have limited experience in implementation. Potential audience includes cultural heritage operators, researchers and technology developers, professional educators, and others involved in management and preservation of digital resources.

#### V. EXPECTED LEARNING OUTCOMES

*A. Participants will understand:*

- What PREMIS is and why it exists;
- The benefits of implementing PREMIS;
- The nature of the existing PREMIS community;
- The critical role PREMIS plays in the digital preservation community.

*B. In addition, participants will get insight into:*

- How PREMIS may be used in conjunction with METS;
- How different organisations implement PREMIS within their own repositories;
- How PREMIS, deals with Semantic Web Technology, and how it impacts on the data interoperability of repository systems.

#### VI. SHORT BIOGRAPHIES OF ORGANIZERS

**Karin Bredenberg** is a Senior Technical Advisor on metadata at the Swedish National Archives. She currently serves as the chair of PREMIS EC, co-chair of TS EAS, chair of the DILCIS Board as well as a member of the METS Board. Currently Bredenberg is the activity

lead for specifications in the project E-ARK4ALL and the eArchiving Building block.

**Eld Zierau** is member of the PREMIS Editorial Committee, since 2013. She is a digital preservation researcher and specialist, with a PhD from 2011 within digital preservation. Originally, she is a computer scientist, and has worked with almost all aspects of IT in private industries for 18 years, before starting in digital preservation in 2007. She has been working with many aspects of digital preservation, and she is involved as an architect or a consultant on major initiatives such a new digital repository including data modelling of metadata for preservation.

**Angela Di Iorio** is a PhD in engineering computer science, and she is responsible for the Digital Library - Repository System of the Sapienza University of Rome. She was involved in digital preservation projects as an expert since 2007, and is a member of the PREMIS Editorial Committee, since 2009.

#### REFERENCES

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