Open Encyclopedia System

Open Source Platform for Open Access Encyclopedias
Outline

Prologue

Open Encyclopedia System

Cooperation

a. General Information
   - Freie Universität Berlin
   - Bavarian State Library
   - Center for Digital Systems
b. From print to online encyclopedias
c. Key aspects
d. Constraints & Challenges
Outline

- Prologue

Open Encyclopedia System

- Cooperation

a. OES software & architecture
b. OES features: Participation
c. OES features: Publication workflow
d. OES interfaces
e. OES project
   - facts
   - achievements
   - objectives
Outline

- Prologue
- Open Encyclopedia System
- Cooperation
Prologue

General information: Freie Universität Berlin, Bayerische Staatsbibliothek, Center for Digital Systems
Freie Universität Berlin

- **11** academic departments
- **178** bachelor’s and master’s degree programs
- **50** doctoral degree programs
- **35,000** students
- **4,350** employees
- **318m** Euro annual operating budget
- **131m** Euro annual funding
Bavarian State Library

- **10,500,000** books and journal volumes
- **1,200,000** digitized bibliographic items
- **73,000** active users
- Munich Digitization Center and Center for Electronic Publishing

- National and international information supplier for historical research
- Open access publication platforms
- **54m€** annual operating budget
- **8.6m€** annual funding
Center for Digital Systems (CeDiS)

- Excellent (E-) University
From print to online encyclopedias

The evolution of encyclopedias
The evolution of encyclopedias

First online encyclopedias:
- Academic American Encyclopedia
- Microsoft Encarta
- Encyclopedia Britannica

Print era

1980s 1990s 2000s 2010s

Picture credits: https://plato.stanford.edu/symbols/sep-man-red.png
www.1914-1918-online.net
1914-1918-online. International Encyclopedia of the First World War

https://encyclopedia.1914-1918-online.net/
1914-1918-online. International Encyclopedia of the First World War

- Launch date: October, 8 2014
- >3 million unique visitors // 150,000 per month
- Open Access (1,200 articles)
- Peer Review
- Fully citable content
- Largest network of WWI researchers (1,000 contributors)
- Global and multiperspective view on WWI
- Uses Semantic MediaWiki as software for the editorial system

https://encyclopedia.1914-1918-online.net/
The evolution of encyclopedias

First online encyclopedias:
- Academic American Encyclopedia
- Microsoft Encarta
- Encyclopedia Britannica

Print era

1980s 1990s 2000s 2010s

What comes next…?

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www.1914-1918-online.net
Key aspects

In publishing academic online encyclopedias
Key aspects

- Publication Workflow
- Participation Model
- Peer Review Model
- Community

Models & workflows are subject to change and need to be configurable!
Online Encyclopedia: Stakeholders

Example: 1914-1918-online 1.0

- General Editors
- Section Editors
- Librarians
- Editorial Office
- Authors
- External Referees
- Users/Researchers

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Constraints & Challenges
Constraints

– Predominantly proprietary or singular solutions
– Huge effort: cost and time intensive developments
– No existing open source software that can adapt to various
  ▪ Participation models,
  ▪ Publication workflows,
  ▪ Peer review models,
  ▪ forms of community engagement.
1914-1918-online: lessons learned

– Highly-standardised, efficient workflows and workflow management tool necessary

– Semantic MediaWiki:
  • very transparent publication workflow
  • Participation model not configurable
  • Customizing layout and design very time-consuming

– Evolvement and upgrades are too cost-intensive
Challenge: Upgrading 1914-1918-online

Main objectives

– Evolving from an unidirectional publication platform to an interactive publication and research environment
– Evolution of the former participation and publishing model
– Living encyclopedia

Basic requirement:
– A configurable, adaptable and extendible framework
Challenge: Upgrading 1914-1918-online

Current publication workflow & participation model

General Editors
Authors
External Referees
Section Editors
Editorial Office
Librarians
Users/Researchers
Challenge: Upgrading 1914-1918-online

Extended publication workflow & participation model
What is the next evolutionary step?

Developing the Open Encyclopedia System
What is the Open Encyclopedia System?

OES is a highly configurable online platform that can meet the challenges and requirements of the key aspects in academic online publishing of reference works.
OES: Open Source Platform for Online Encyclopedias

Software

– web based
– modular / configurable
– open source licence
– reusable
OES basic architecture

- Metadata Repository
- Encyclopedia Website
- Editorial Management System

- User & Machine Interfaces
  - User Interaction

- Configuration & Management

- Application Logic
  - User Interaction

- Data Access & Persistence
  - Remote Data Providers
  - Full-text Search Provider
  - Relational Database

- OES
  - Content
  - Publication
  - Workflow
  - Community
  - User Rights
  - User Interface
  - Articles
  - Versioning
  - Indexing
  - Export
  - Annotations
  - Crowdsourcing
  - Comments
  - Personalization

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OES basic architecture

Basic Software Components & Service Providers

- Wordpress
- DSpace
- MySQL
- Apache Solr
- Zotero / WorldCat
OES features: Participation

– Community Engagement & Management

– Crowdsourcing
  ▪ Bibliography
  ▪ External links
  ▪ Images
OES features: Participation

Community building

Opinions

Online Encyclopedia

Ideas

Expertise
OES features: Publication workflow

– Individual workflows for editors, authors, referees and interpreters
– Online and offline submission
– Article versioning
Article versioning: a step forward

– The versioning module is a flexible option of the component Content Manager
– Article versioning with OES is configurable by authorized users
– For each version, particular publication workflows are applicable
– This module feature may initiate a more open participation model
Open Encyclopedia System

Project: facts, reference works, achievements, challenges
OES quick facts

• Duration: 2016 – 2019

• Funding:
  DFG (German Research Foundation): ~ 1,000,000 Euro
  Own funds (FU Berlin): ~ 600,000 Euro

• Publication type(s): Open Access

• Partners

Associated partner:
OES projects

- Functional Upgrade
- 1914-1918-online (extended)
- Online Encyclopedia on German-Greek entanglements
- Compendium Heroicum
- Further Online Encyclopedia projects

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OES achievements

✓ Requirement analysis and software design complete
✓ Implementation of the system’s architecture (OES)
✓ Development of prototypes (OES encyclopedias)
✓ Article versioning
OES objectives

– Releasing OES 1.0 (open source licenced)
– Completing all current projects (1914-1918-online, CeMoG, Compendium heroicum)
– Developing semantic search tools
– Facilitating the process of setting up an online encyclopedia
– Establishing an open source developer community
Cooperation welcome!

– Partners / developers interested in using / developing the OES software
– Institutions or funded projects planning to create an online reference work in the humanities and the social sciences
Thank You for Your Attention!

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