„Fraunhofer-Publica“ – GoLive with DSpace-CRIS 7

Fraunhofer-Gesellschaft
Agenda

- Publica-Relaunch
- Dspace-CRIS 7
- New Publica
The Fraunhofer-Gesellschaft was founded in Munich on March 26, 1949, as part of a reorganization and expansion of German research infrastructure.

Joseph von Fraunhofer

It takes its name from the successful Munich scientist, inventor and entrepreneur Joseph von Fraunhofer (1787-1826).
Fraunhofer-Gesellschaft
The largest organization for applied research in Europe

- Application-oriented research for immediate benefit to the economy and to the benefit of society
- 76 institutes and research units
- 30,000 staff
- €2.9 billion annual research budget totaling. Of this sum, more than €2.5 billion is generated through contract research
  - More than 70 percent of this sum is generated through contract research on behalf of industry and publicly funded research projects
  - Almost 30 percent is contributed by the German federal and Countries governments in the form of base funding
Joseph von Fraunhofer and Fraunhofer-Gesellschaft

Joseph von Fraunhofer

- Discovery of the »Fraunhofer lines« in the solar spectrum
- New methods for processing lenses
- Director and partner in a glassworks

Fraunhofer-Gesellschaft

- Research and development on behalf of industry and state
- mp3 music format, white LED, high-resolution thermal camera
- Research volume: approx. €2.5 billion annually
Fraunhofer and the universities
Synergies through complementarity

University:
Research and education

Fraunhofer Institute:
Applied research and transfer

Professor

Director

Dual appointment
to Fraunhofer and university

understands the needs of industry

educates the next generation of scientists

scientific and entrepreneurial competence

Both partners are always at the cutting edge of technology
→ Collaboration accelerates the transfer of knowledge
Highlights

mp3
Development of audio compression

Care-O-Bot
Service robot capable of reliable human-machine interaction

Lab-on-a-Chip-System
Biological and microelectronic components and one chip

Surgery with Augmented Reality
Mobile image-based assistance for safety in complex surgery

Al-Speech Assistant
Data sovereignty with smart speaker Made in Germany

White light LED
For energy efficient and long-lasting lighting

Video compression
H.264/MPEG-4 AVC standards for multimedia

Bionic Handling Assistant
Robotic gripper inspired by an elephant trunk

Industrial Data Spaces
IT architecture for a secure and self-determined data exchange

CAR-T Cells for Cancer Therapy
Process for the complex production of the cell product

Rubber from Dandelion Plants
Doubling the rubber content in dandelion for industrial applications

World’s Smallest Pump
25 mm³ micro membrane pump

Highly Secure Quantum Net
German pilot network for interception- and tamper-proof data transmission

1990s

2000s

2010s

2020s
Fraunhofer-Gesellschaft
belongs to one of the most active applicants of patents and trademarks in Germany

Exploitation of intellectual property rights

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* Inventory of technical property rights and current patent applications at year-end

2020: Fraunhofer at Position 17 of the most active patent applicants (403 applications) and Position 7 of the most active applicants of trademarks (41 applications) at DPMA

2020: Fraunhofer among the Top 100 applicants at European Patent Office (Position 32, 557 applications)

2021: in report from the international company Clarivate, Fraunhofer belongs to »Top 100 Global Innovators«. (2 further German companies included: BASF, Bayer)
Fraunhofer-Gesellschaft
Locations in Germany

- 76 institutes and research units
- 30,000 staff
- € 2.9 bn research volume
Die „Fraunhofer-Publica“ dokumentiert seit über 30 Jahren erfolgreich die Forschungsergebnisse der Fraunhofer Gesellschaft. Die Plattform ermöglicht die kollaborative Verknüpfung forschungsrelevanter Objekte und Disseminate im Rahmen der internationalen Wissenschaftsgemeinschaft.

Die „Fraunhofer-Publica“ kommt damit der Verantwortung nach, den Transfer von Wissen sowie Know-how in Wirtschaft und Gesellschaft zu fördern.
The "Fraunhofer-Publica" has been successfully documenting the research results of the Fraunhofer-Gesellschaft for over 35 years.

- 250k Publications
- Patents
- 10k per Year
- 1 prior Data Migration
The new "Fraunhofer-Publica" shall enable the collaborative linking of research-relevant objects and disseminates within the international scientific community.

The "Fraunhofer-Publica" thus fulfils its responsibility to promote the transfer of knowledge and know-how to industry and society.
Publica-Relaunch
GoLive

Phase 1
- Early Adopter
- Migration – New Data Model
- Minimal Requirements

Phase 2
- Data Quality
- Additional Research Output
- DLT

GoLive
April 11, 2022
PUBLICA

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DSpace-CRIS 7
Decision 2019

Open Source
Promote Open Science and Open Source

Fraunhofer Specifications

Publica

DSpace CRIS 5

FIS
Fraunhofer internal FIS System

Open Source

DSpace 6

Data Model

Flexibel Data Model and CERIF standard

Fordatis
Research Data Repository

DSpace-CRIS 7

Early Adopter
Dspace-CRIS 7: 2019-2022

Early Adopter

- Sponsoring DSpace CRIS 7
- Cooperating with 4Science

„En attendant Godot“?

Agile IT Management

Workflow
DOI
Deposit Licence
Die „Fraunhofer-Publica“ dokumentiert seit über 30 Jahren erfolgreich die Forschungsergebnisse der Fraunhofer Gesellschaft. Die Plattform ermöglicht die kollaborative Verknüpfung forschungsrelevanter Objekte und Disseminate im Rahmen der internationalen Wissenschaftsgemeinschaft.

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New Publica
Infrastructure – Launch Configuration
New Publica

Lessons Learned – Key Lesson

How to present migrated and new data using the same layout?

- Heterogeneous Data Quality
- Change of Data Model
- User Habits
- Linking is not Facet Search
Thank you!
Fraunhofer-Publica – GoLive with DSpace-CRIS 7

Praxistreffen – 01.04.2022
Collaborating from 2019
  - Ongoing support
  - Continuous alignments to the main DSpace CRIS 7 code
  - Support for GoLive

Publica project contributions to DSpace CRIS 7
  - Matrix Layout
  - Correction request
  - Creation of related entities during the workflow
Rise to the challenge

- Large amount of data
- Focus on performance
  - DBMS import
  - SOLR indexes
- Custom functionalities:
  - Configurable Workflow
  - Reserve a DOI functionality
Configurable Workflow

Submitter → Institute Library

is there a library team?

Yes, user is affiliated with an Institute with a Library Team

Institute Library → Central Library

Approve

Central Library → Archive

Reject

LDAP / user profile

Submitter → Institute Library

Reject

No, user is affiliated with an Institute without a Library Team

Institute Library

Edit

Central Library

Edit

Publish

Submitter

Edit

Archive
Reserve a DOI functionality

User asks Library Team for a DOI

Library pre-generate and reserve a DOI for the submission

User can use the reserved DOI
Thank you for your attention