

Latest development on CERIF Common European Research Information Systems

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UNIVERSITY OF BERGEN



euroCRIS
Current Research Information Systems

- **1991 the first CRIS conference hosted in Bergen**
- **Member of eurocris board since 2002**

- **UiB medium sized European university**
- **14 500 students**
- **3 200 staff**
- **Campus in the centre of Bergen**
- **Education and research institution**
- **six faculties and 40 institutes and research centers**
- **Established 1946 based on Bergen Museum from 1825**

- A step towards a Common European Peer Review and Information System
- Requirement of CERIF
- Latest developments
- Where and how used
- euroCRIS

A step towards a Common European Peer Review and Information System



Review requires:

- Application
- Referees
- Consensus decision
- Funding – including possibly using facilities, equipment
- Possible review in project progress or at end based on outputs – publications, patents, products

In all stages key elements are:

- Person(s)
- Research organisation (e.g. centre owned by 2 departments in a university)
- Title, abstract, keywords
- Body of proposal including references
- Possible request for facility / equipment access / time
- Request for funding

- The requirement for a common system is to be able to access information on projects, persons, organisations (both funders and research institutions) , publications, patents, products, etc
- Fortunately already existing is CERIF, an EU Recommendation to member states
- Requirement in recent tender for ERCF system
- Requirement in ESF system
- Used widely (therefore easy to access information on all these entities of interest to research process)

- Ideally a CRIS is an integrated system between all the elements in the research process
 - Project
 - Information about the funding organisation
 - CV and lists over Researchers or groups that are participating
 - Output (articles, books, data sets etc) from a project
 - Equipment
 - Events

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CERIF Requirement

What is a CRIS?

CRIS, Current Research Information System, is a tool to manage research and research output.

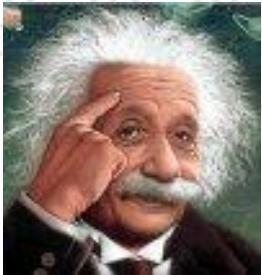
Handle the day-to-day information management for Research managers, administrators and researchers

A Current Research Information System consists of

- a data model and set of services for a research performing or research funding institution.
- Interoperation of multiple CRIS provides a CRIS for the community.

.....typical Research Objects

Person / CV



Publisher



Institution

Books



Research Group



Patent



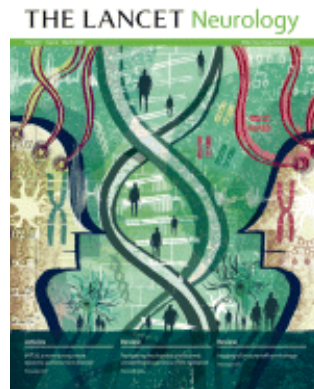
Event



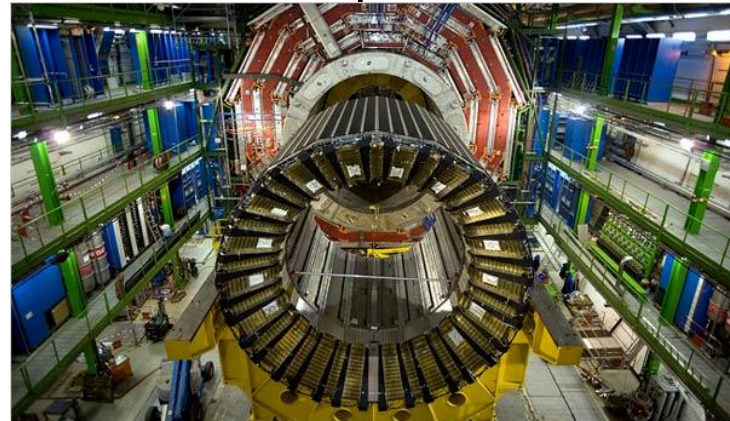
Equipment



Journal/article



Project



Latest development on CERIF

CERIF Requirement at Institution level



- a tool for policy making
- evaluation of research based on outputs
- document the research activities
- document research output
- a formal log of research in progress
- to assist project planning.

.....for Researchers /end users

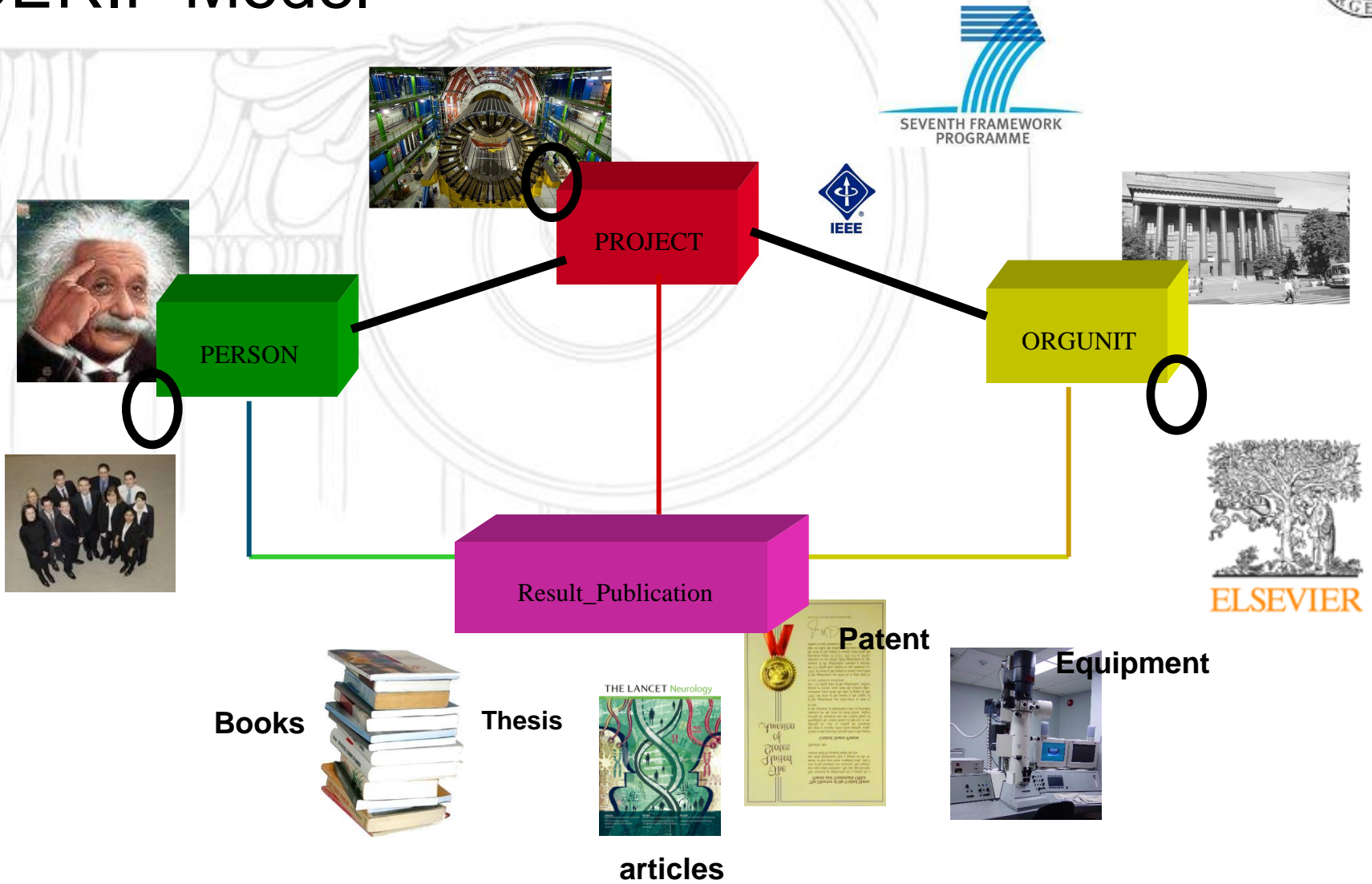
- avoid duplication of research activity
- to evaluate opportunities for research funding
- analyse research trends, locally, regionally and internationally
- references/links to full text
- locate new contacts/networks
- identify new markets for products of research



CERIF short history

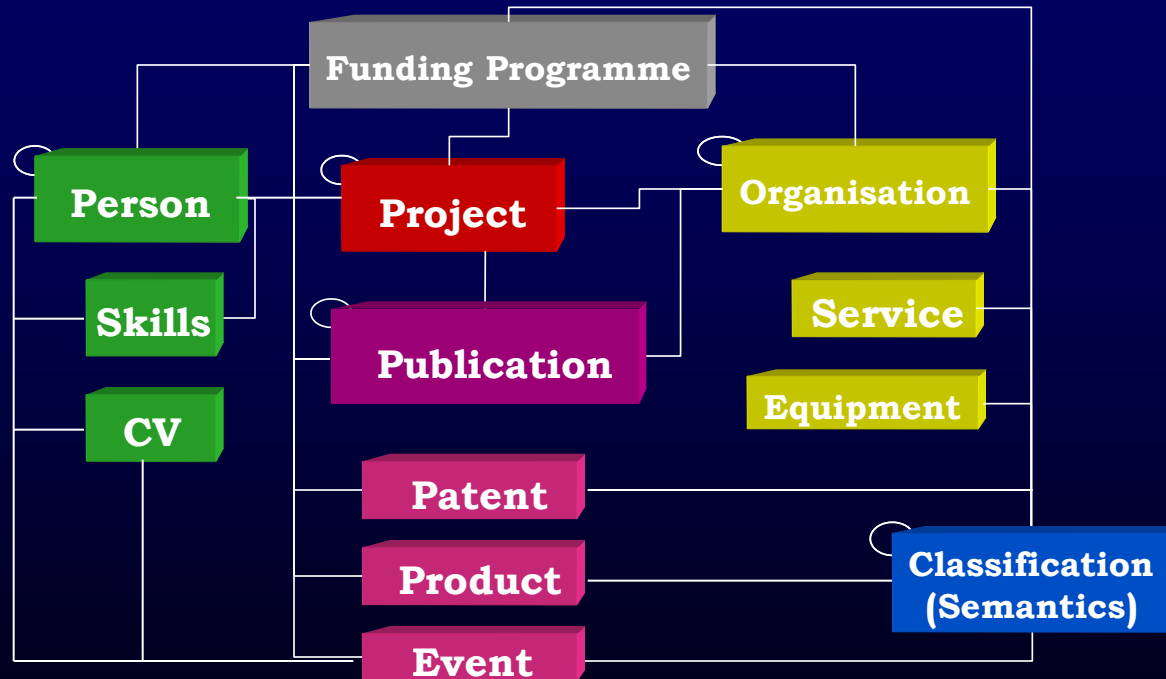
- 1987-90 European experts to define a Common European Research Information Format CERIF
- 1991 a single record format and a research classification scheme (not updated from 1988)
- Research documentation and CRIS more important
- 1997 ERGO (European Research Gateways Online) pilot – a single catalogue of projects from national databases, 20 countries 90.000 records
- 2000 CERIF model

CERIF Model



CERIF Model

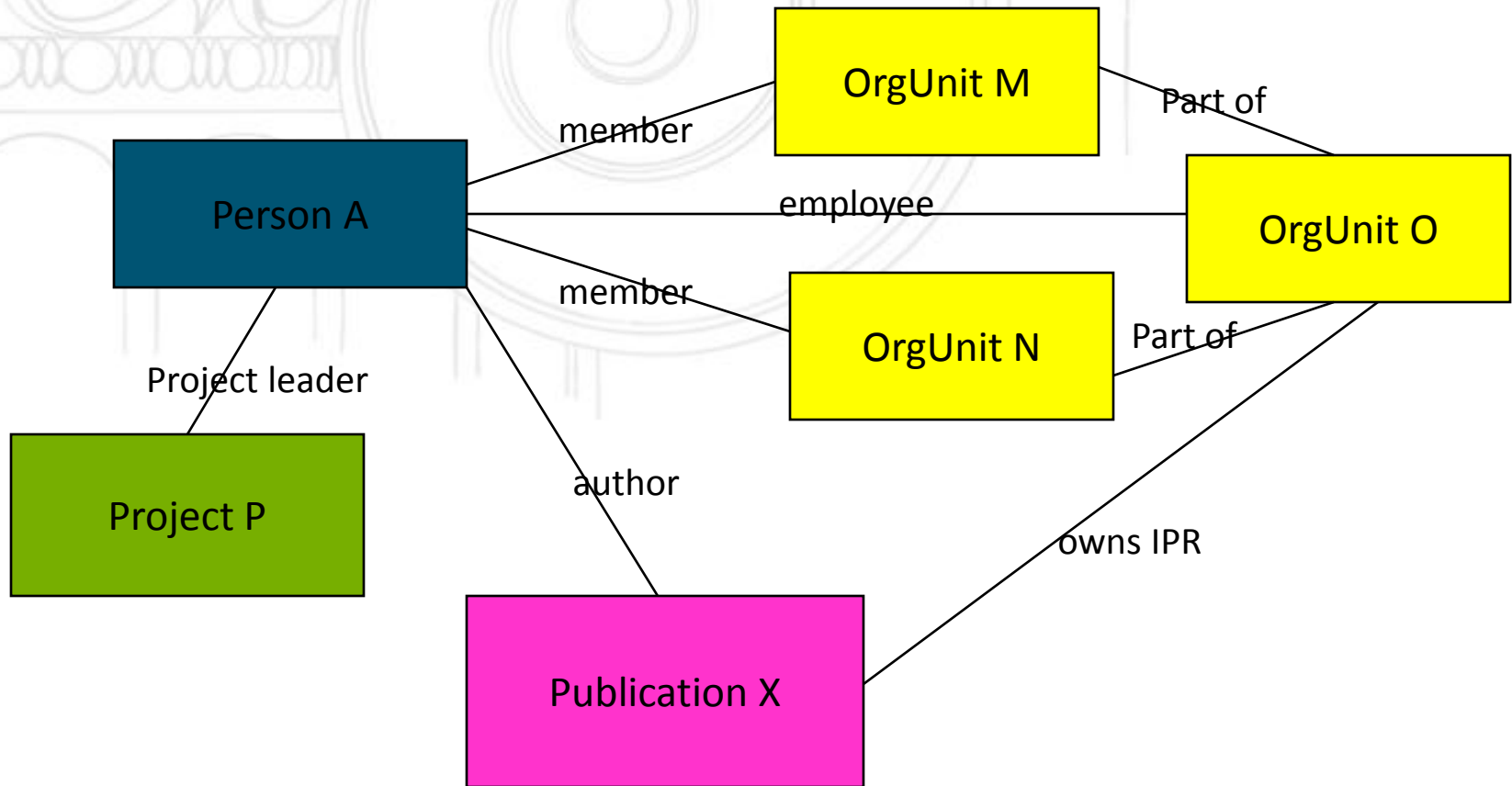
Common European Research Information Format



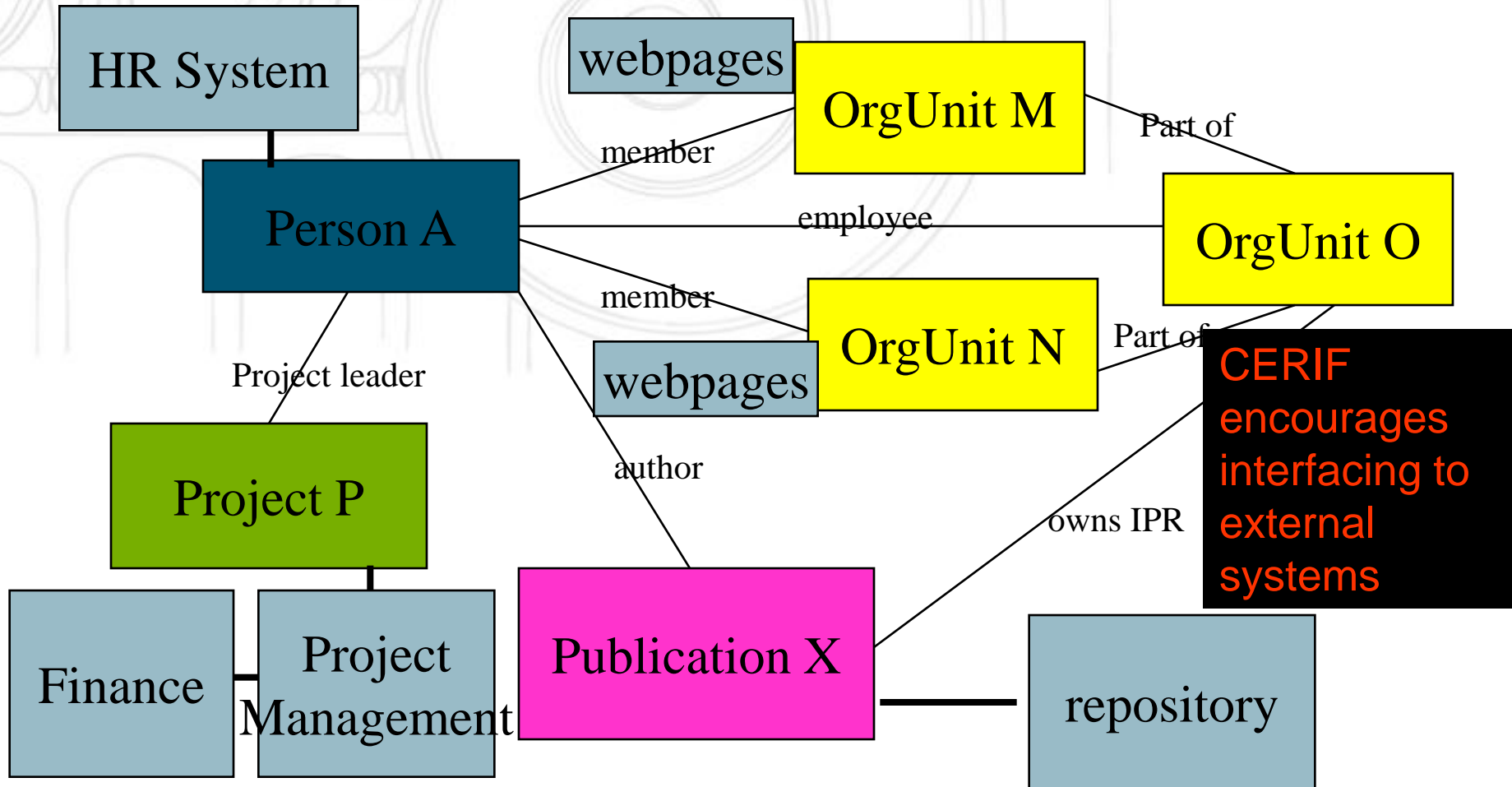


CERIF Model

Result_Publication Instance Diagram



CERIF Model



CERIF encourages interfacing to external systems

Advantages of CERIF

- Research Information Management, including decision support and research evaluation requires:
- Data represented in multiple character sets and languages
- Data structured as information – formal syntax
- Information with meaning – declared semantics
- Flexible data structure to express relationships between entities
- Extensible data model to allow for evolution
- Linking data model to allow interoperation with other systems in one institution
- Linking data model to allow interoperation with other systems in other institutions

CERIF has these characteristics

Frida - Windows Internet Explorer

File Edit View Favorites Tools Help

http://wo.uio.no/as/WebObjects/frida.woa/wa/personVis?type=PERSON&pnr=364421&lz

English version

Anne Gams Steine
Asserson
UiB

- Logg ut
- Hovedside
- Forskningsresultater
- Forskere
 - Min forskerprofil
 - Søk
 - Hjelp
- Prosjekter
- Forskningsenheter
- Årsrapportering
- Tilgang
- Rapporter
- Autoritetsdata
- Administrasjon

Bodil Holst

Institutt for fysikk og teknologi (Professor) - [Universitetet i Bergen](#)

Vitenskapsdisipliner	Emner
Fysikk	Instrumentering
Matematikk og naturvitenskap	Måleteknikk
	Nanoteknologi
	Overfladefysikk
	Sensorer

Land	Region
------	--------


Prosjekter

Forskningsresultater i Frida

[Forskningsresultater i Frida \(63\)](#)

[Registretne forskningsresultater for 2010 \(4\)](#)

[Rapporterbare forskningsresultater for 2010 \(2\)](#)



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<<Nettside ikke angitt>>

Screen shot from CRIStin



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[Vis fuld personprofil »](#)



AALBORG UNIVERSITET

[Vis graf over relationer](#)

Publikationer (219)

[On Approximate Analytical Solutions of Nonlinear Vibrations of Inextensible Beams using Parameter-Expansion Method](#) Udgivet
Forskning - peer review > Artikel

[Thermomechanical Interaction Effects in Composite Sandwich Structures - Initial Experimental Analysis and Derivation of Mechanical Properties](#) Udgivet
Forskning - peer review > Konferenceartikel

[Non-Linear Thermo-mechanical Behaviour of Delaminated Curved Sandwich Panels with a Compliant Core](#) Udgivet
Forskning - peer review > Konferenceartikel

[Vis alle »](#)

Aktiviteter (4)

[International Workshop on Wind Energy](#)
Organisation og deltagelse i konferencer, workshops, kurser, seminarer > Forelæsning og mundtligt bidrag

[International Workshop on Wind Energy](#)
Organisation og deltagelse i konferencer

Forskningsprojekter (33)

[Pålideligheds-baseret analyse anvendt til reduktion af energi omkostning for offshore vindmøller](#)
Projekt

[Master in Wind Energy](#)
Projekt

[Structural design and analysis of VEGA launcher skirt](#) Afsluttet
Projekt

[Vis alle »](#)

Presse (7)

[Fiberline udvikler superisolerende vindue](#)
Presseklip

[Wind turbine blades: the bigger, the better?](#)
Presseklip

[Revner i sandwich-konstruktioner kan stoppes](#)
Presseklip

[Vis alle »](#)

FORSIDE

FORSKERE

PUBLIKATIONER

FORSKNINGSPROJEKTER

AKTIVITETER

PRESSE

FORSKNINGSENHEDER

STATISTIK

OM VBN

- A step towards a Common European Peer Review and Information System
- Requirement of CERIF
- **Latest developments**
- Where and how used
- euroCRIS

Latest developments on CERIF

- **Interchange** format XML
- Linkage to the **Open Access repository**
(planning services to facilitate this)
- The formalization of a CERIF **Semantics** for Publication-related entities was a first step towards formalizing a CORE CERIF Semantics for the Research Domain. The CORE is considered a minimum set of formalized entity, attribute and relationship
- Development of services

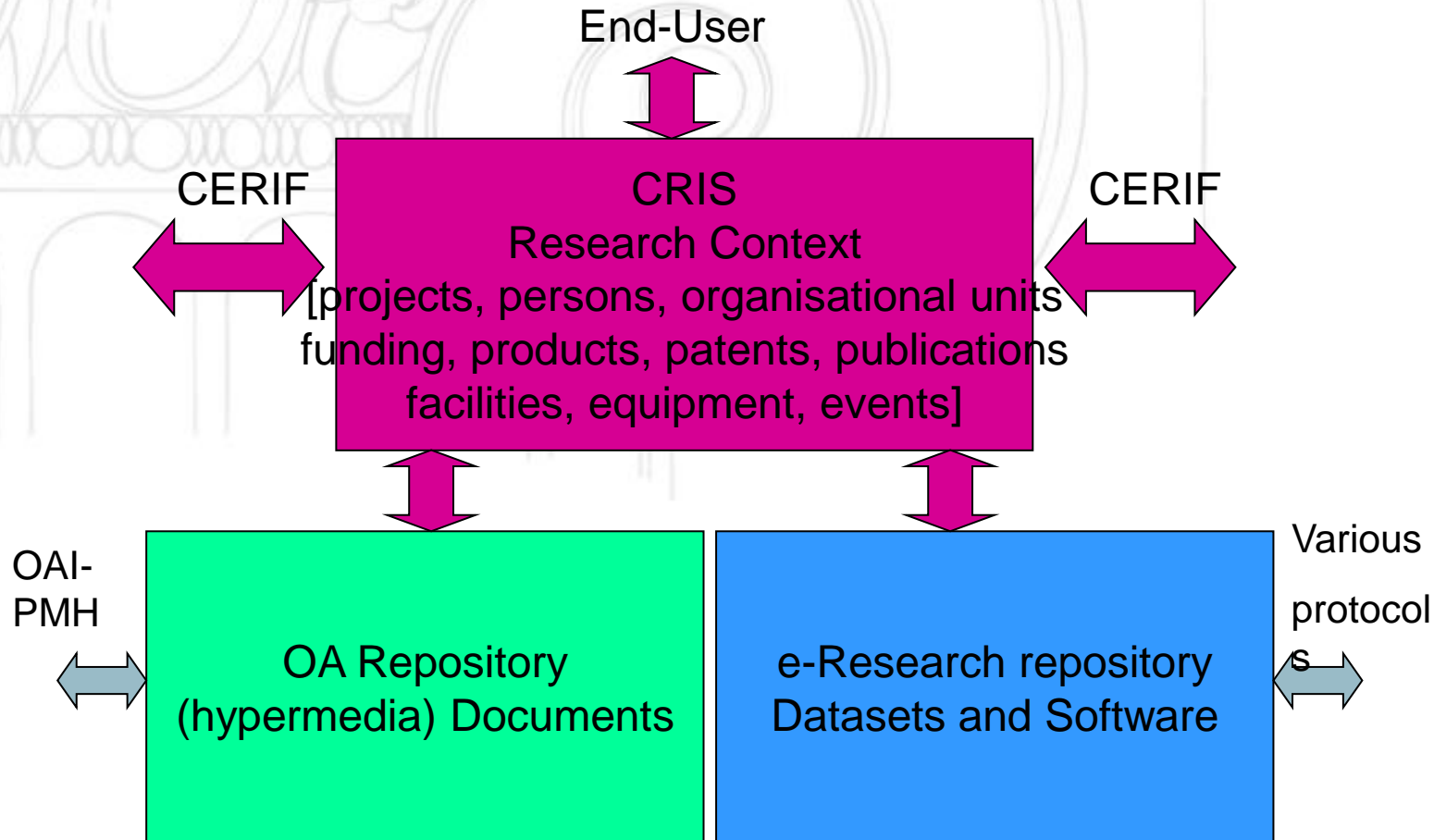
Latest developments

- Interchange format XML
- Linkage to the Open Access repository
- The formalization of a CERIF

Semantics for Publication-related entities was a first step towards formalizing a CORE CERIF Semantics for the Research Domain.

The CORE is considered a minimum set of formalized entity, attribute and relationship (work in progress)

...as an interchange model

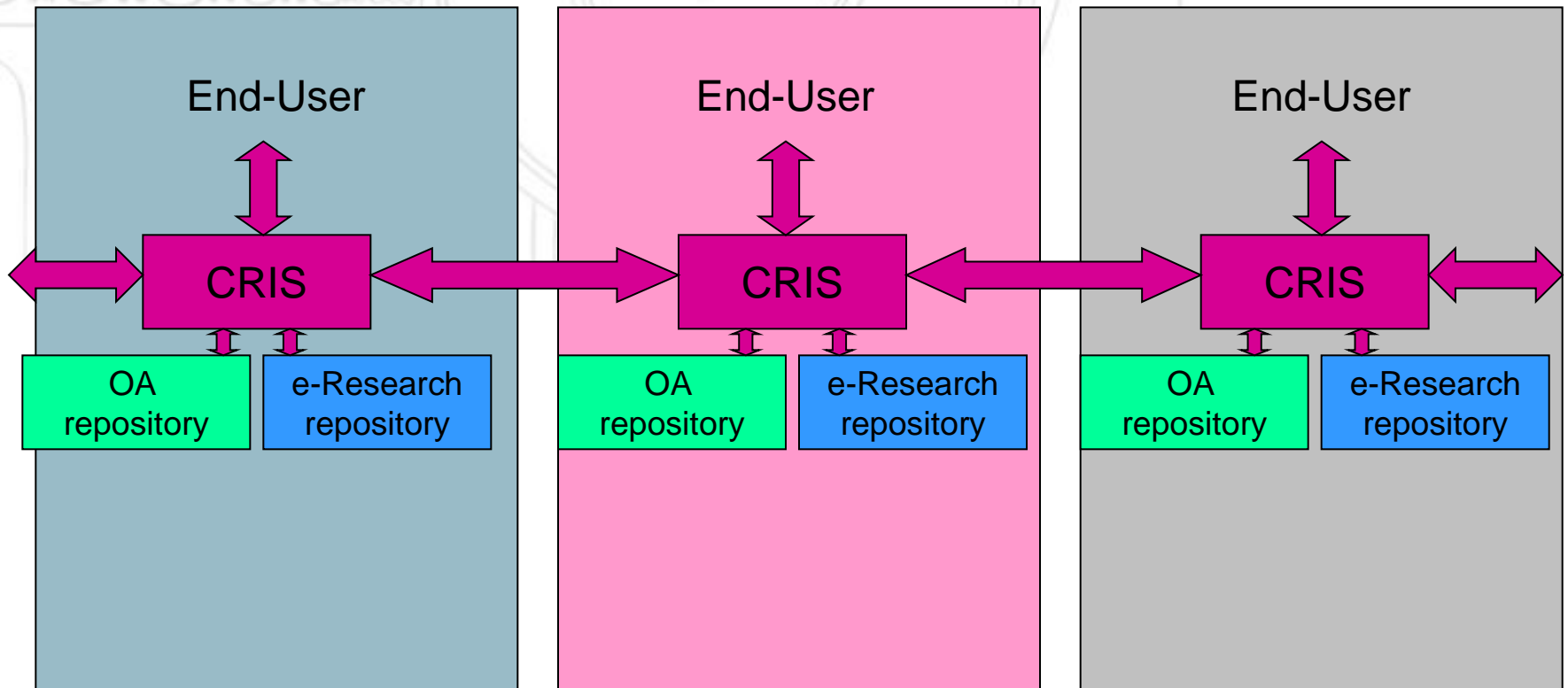


....multiple institutions

Institution A

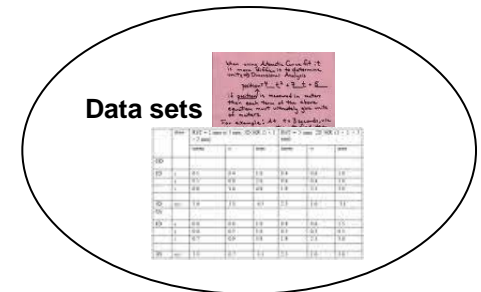
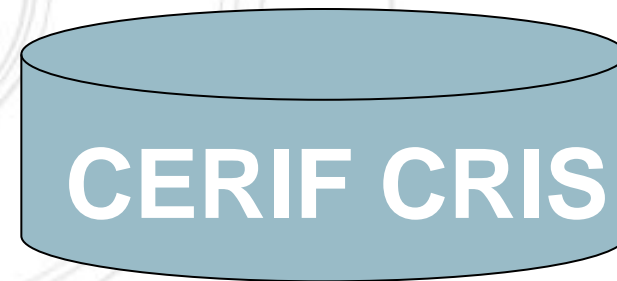
Institution B

Institution C



CERIF CRIS

holds the contextual
metadata to the Open
Access Repository



Semantics for a person

C Data				Semantic Layer (CERIF Semantics)	
	Attribute	Table	Type	Classification (ClassIds)	Classification Scheme
person-brigitte-joerg	cfPersId	cfPers	core		
f	cfSex	cfPers	core		
http://www.dfki.de/~brigitte/	cfURI	cfPers	core		
person-brigitte-joerg	cfPersId	cfPersName	add		
Joerg	cfFamilyNames	cfPersName	add		
Brigitte	cfFirstNames	cfPersName	add		
Brigitte is interested in Research Information and CRISs.	cfResInt	cfPersResInt	lang		
Information Systems, RI, ...	cfKeyw	cfProjKeyw	lang		
Brigitte Jörg	cfPersNameVar	cfPersName_Pers	link		
person-brigitte-joerg	cfPersId2	cfPersName_Pers	link	spelling variant	PERS_PERS_NAME
classification-MA	cfClassId	cfPers_Class	link	M.A.	ACADEMIC-TITLES
publication-analyzing-european-...	cfResPublId	cfPers_ResPubl	link	is author of	PERS-PUBL
publication-analytic-services-for-era	cfResPublId	cfPers_ResPubl	link	is author of	PERS-PUBL
organisation-dfki	cfOrgUnitId	cfPers_OrgUnit	link	is affiliated with	PERS_ORGUNIT
organisation-lt-lab	cfOrgUnitId	cfPers_OrgUnit	link	is subaffiliated with	PERS_ORGUNIT
organisation-euroCRIS	cfOrgUnitId	cfPers_OrgUnit	link	is member of board	PERS_ORGUNIT
organisation-CERIF-TG	cfOrgUnitId	cfPers_OrgUnit	link	is tg-leader of	PERS_ORGUNIT
project-ist-world	cfProjId	cfProj_Pers	link	is coordinated by	PROJ_PERS
project-lt-world	cfProjId	cfProj_Pers	link	has participant	PROJ_PERS

Current work on services for a CERIF environment

- provide an atomic function at the scale of interest of processing (e.g. at the scale of the relational algebra operators);
- Have appropriate metadata to permit autonomic and dynamic discovery, composition, re-composition and execution including assuring functional and non-functional requirements are satisfied;

Have CERIF as at least one of the input and / or output interfaces;

- Services for
- Data management
- Data interchange
- Data analysis / display
- Data simulation / modelling

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Where and how is a CERIF CRIS used



CERIF: An EU recommendation to Member States

Commission Recommendation concerning the harmonisation within the Community of research and technological development databases (1991-05-06)

Official Journal L 189 , 1991-07-13 p. 0001 - 0034

<ftp://ftp.cordis.europa.eu/pub/cerif/docs/cerif1991.htm>

euroCRIS are the custodian of the CERIFmodel

CERIF CRIS is used widely (therefore easy to access information on all these entities of interest to research process)

- Belgium: FRIS
- Denmark: PURE
- Germany: Different systems
- Netherlands: METIS, NARCIS
- Norway: CRISin
- Sweden: Converis implementations
- Slovenia: SiCRIS

CERIF used in Research institutions

- FRIS in Flanders collect all projects from Flemish universities
- All Danish Universities are using same system PURE
- CRIStin in Norway used for evaluation of all research performance institutions
- In UK there is a lot going on
- UK: various systems either CERIF-compatible or evolving to compatibility
 - ROP: Research outcomes project
 - HEFCE REF: Research Excellence Framework



CERIF recommended by Organisations

- Russia Academy decided to go CERIF, negotiation on national level
- Greece EKT use CERIF Cris in local project
- Slovakia is establishing a national CERIF CRIS
- euroHORCS recommended convergence to CERIF
- ESF specified CERIF for new system
- Plans in
 - Italy, CINECA are interested in CERIF on national level
 - Germany individual institutions are using CRIS
- EC: intension to move to a CERIF-based system
- CASRAI (Canada) a committee of the government working on research information (and talking to NSF (National Science Foundation) in USA about CERIF)
- Korea: working on CERIF and sending a person to discuss with euroCRIS

CERIF and commercial CRIS



Emerging market of commercial solutions

- Atira/PURE covering all Danish Universities and some UK, some Finnish
- Avedas/Converis Germany and UK/Scotland
- UniCRIS

CERIF recommended in Projects



EC Projects using CERIF

Funded:

- APARSEN (digital preservation network of excellence)
- SCAPE (digital preservation integrated research project)
- Proposed:
- SCIDIP (digital preservation of research information)
- OpenAIRE+ (euroCRIS as advisors)
- POSE (EOS (European Open Scholarship) with euroCRIS, open access to research information)
- VIREC open access interoperation across repositories of scholarly material
- Interest expressed by VOA3R project
- Requirement in recent tender for ERC system

Contracting authority: **European Research Council Executive Agency (ERCEA)**

....Link bibliographic data to internal data (on projects, principal investigators and their institutions) to facilitate data-exchange and benchmarking exercise with other national and international research organisations, the **solution should comply with Common European Research Information Format (CERIF)**

Tender Specifications pg 8

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euroCRIS identity/role

- The Recognized European Organisation for International Research Information
- Professional association of CRIS experts
- Custodian of CERIF: Common European Research Information Format
- Formal not-for profit association with legal status since June 2002

euroCRIS role

Vision:

- Open access to all European Research Information

Mission:

- Ensure all research institutions provide a capability for interoperation. euroCRIS is dedicated to the development of an architecture to facilitate this.

Realisation:

- Provide a canonical data model and services for homogeneous access over heterogeneous information sources in the European Research Area. euroCRIS maintains and develops the EU Recommendation to Member States – CERIF - to be used for this purpose.

Utilisation:

- Research managers, evaluators, researchers, innovators, media, citizens

euroCRIS activities

Biannual members meetings

The **purpose** of the members meeting is to inspire the local communities that are planning to or using a CRIS. Members meetings are an opportunity to talk inside the euroCRIS community.

Annual strategic seminar.

The **purpose** of the seminars is to talk to strategic partners and to form policies.

Biennial CRIS conference (even years)

The **purpose** of the conferences is to talk to communities outside euroCRIS

- *Task Group meetings* as required
- *Board meetings* 4 times per year



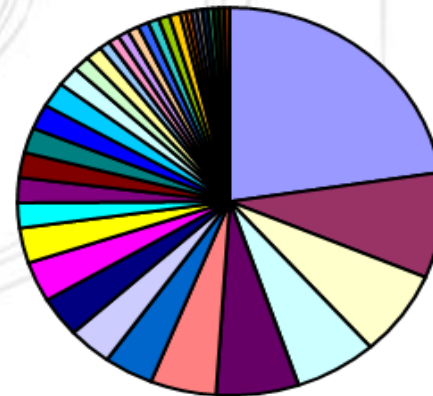
euroCRIS membership

Membership 2010:

238 delegates from 37 countries

84 institutional

36 personal and 16 affiliate



United Kingdom	Germany	The Netherlands
Norway	Finland	Slovenia
Belgium	Denmark	Serbia
Iran	Italy	Switzerland
Spain	Czech Republic	Greece
France	Austria	Portugal
Slovak Republic	South Korea	Hungary
Sweden	Ireland	Estonia
Romania	Canada	United States
Australia	Russia	Luxemburg

Our ultimate aim:

to implement all relevant CRIS (related) systems progressively on a GRIDs platform in order to gain maximum advantage for (European) research at all levels