DRIVER Initiative
-SURF
-DARE
-DRIVER I & II
SURF is the Netherlands higher education and research partnership organisation for network services and information and communications technology (ICT).

The Mission of SURF is to exploit and improve a common advanced ICT infrastructure that will enable higher education institutions to better realize their own ambitions and improve the quality of learning, teaching and research.
Higher Education (HE) in the Netherlands

- Netherlands: 16½ million Inhabitants;
- 500,000 HE Students, 18-25 years old, FE growing
- 14 Universities
- 40 Universities for applied sciences
- Royal Library
- ~ 5 Very Large Public/Private Research Institutes

- **All** participate in SURF voluntarily
  - as a paying member
  - represented in SURF Board
SURF

Innovation for Education Research Organization

Gigabit Internet for Higher Education and Research

Legal software for an illegal price
has three platforms:

- ICT & Research
- ICT & Education
- ICT and Organisation
## Turnover 2006

<table>
<thead>
<tr>
<th>Organization</th>
<th>Turnover (M€)</th>
<th>FTE</th>
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<tr>
<td>SURFnet</td>
<td>35.8</td>
<td>~60</td>
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<td>SURFdiensten</td>
<td>7.3</td>
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<td>SURFFoundation</td>
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<td>~41</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>64.8</strong></td>
<td>~126</td>
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(fte = full time equivalent)
The Method

Provide vision in 4-year Strategic Plan
(Scientific Technical Council)

Commitment of the institutions for HE.
Membership fees, 12 M€ /4 yr

Executing the Strategic Plan,
Based on Policy Considerations the Government
invests their part: in 2003-6, 80 M€ /4 yr

Monitor and assess progress of innovation projects
(Project Monitoring Committee)
Strategic Plans of SURF:

1986-1990
- To a common network: SURFnet 1 - 9.6 Kbit/sec

1991-1994
- Communication services, Software Licences

1995-1998
- Administrative systems within institutions

1999-2002
- Innovation in Education

2003-2006
- Cooperation between institutions in administrative systems

2007-2010
- Service Oriented Approach
SURF international

All strategic areas are international by nature

• Development of the communication and information infrastructure
• Standardisation and interoperability
• Security and ID management
• Open Access
• Sharing Knowledge

Priority on international collaboration

• Increase impact in close collaboration with JISC
• Join forces with other national funding & policy organisations (KE)
• Be involved in international developments relevant to NL (a.o. standards)
• Support EU agenda in a self-conscious way
SURF is an official partner of

- JISC  
  Joint Information Systems Committee (UK)
- DFG  
  Deutsche Forschungsgemeinschaft (GER)
- DEFF  
  Denmark’s Electronic Research Library (DK)
- EDUCAUSE & ECAR  
  Educause & Educause Center for Applied Research (USA)
- CNI  
  Coalition for Networked Information (Worldwide)
- IMS  
  Global Learning Consortium (Worldwide)
- SAKAI  
  Open/Common Source initiative for MLVE (USA)
- EUNIS  
  European University Network Information Systems (EU)
Knowledge Exchange - partner organisations

- Denmark’s Electronic Research Library
- German Research Foundation
- Joint Information Systems Committee
- SURFfoundation
“Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society.”

Berlin Declaration, October 2003
(233 Uni’s and res. institutes and sponsors)
- **Approved:** 14 June 2002
- **Name:** DARE,
  Digital Academic Repositories
- **Period:** 1 Jan. 2003 – 31 Dec. 2006
- **Budget:** M€ 5.9
- **Standards:** OAI-PMH 2.0; Dublin Core
- **Partners:** All universities, KNAW, NOW and KB
Two layers: architecture

Services

- Society
  - Institutional windows, expertise, professional journals, personal Web sites, national windows, ...

- Harvesters

- Research
  - Subject repositories, refereed portals, databases, collaboratories, (Open Access) journals, ...

- Education
  - Virtual Learning Environments, Course Ware, Readers, ...

Institutional Repository

- UvA
- CWI
- TUDelft
- RUG
- VU
- CNRS
- MIT

Content

Grid
Two layers: architecture

Services

Society
Institutional windows, expertise, professional journals, personal Web sites, national windows, ...

Harvesters
Subject repositories, refereed portals, databases, collaboratories, (Open Access) journals, ...

Research

Education
Virtual Learning Environments, Course Ware, Readers, ...

Institutional Repositories

Two layers: architecture

Content

Libraries

Grid
## Two layers: business

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<th>Services</th>
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<td>- infrastructure</td>
<td>- end user services</td>
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<tr>
<td>- machine-machine</td>
<td>- machine-man</td>
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<td>- public domain</td>
<td>- self-supporting</td>
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<tr>
<td>- supply based</td>
<td>- demand driven</td>
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<tr>
<td>- international scale</td>
<td>- scalable</td>
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<tr>
<td>- standards/SOA</td>
<td>- customized</td>
</tr>
<tr>
<td>- cooperation</td>
<td>- competition</td>
</tr>
<tr>
<td>- enabling</td>
<td>- applying</td>
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</table>
27 January 2004

DAREnet

Nationwide (13 universities, KNAW, NWO)
Initially 17,000 publications (Today 130,000)

(OAIster: 850 OAI repositories)
Worldwide access to Dutch academic research results

DAREnet is a search service which gives free access to academic research output in the Netherlands. This is a broad collection which guarantees digital accessibility to the full text without any restrictions. DAREnet consists of 129,407 digital objects.

You can search with:
- DAREnet containing 129,407 scientific publications and research output from all Dutch universities, scientific institutes, KNAW and NWO.
- Cream of Science containing 47,665 scientific publications written by more than 200 prominent scientists in the Netherlands.
- Promise of Science with 16,051 doctoral e-theses from all Dutch universities.

You can search in all institutions, or you can select 'Advanced Search' to search by institution, search by year, and/or search for a specific author.

DAREnet is the result of the DARE programme, funded by SURF. All Dutch universities, the National Library of the Netherlands, the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO) participate.

From 1 January 2007 KNAYW Research Information has taken over responsibility for the DAREnet website.
1. **Integration of stochastic generation in power systems**
2007-06-13 Papastamoulis, D.
Stochastic generation is the electrical power production by the use of an uncontrollable prime energy mover, corresponding mainly to renewable energy sources. For the large-scale integration of stochastic generation in power systems, methods are necessary for the modeling of power generation uncertainty. In this thesis, new tools for the...

2. **Modelling Rainforest Canopy Photosynthesis across the Amazon Basin**
2007-06-11 Meriadeque, L.M.
The Amazon forest, the largest example of tropical rainforest in the world (Laurnace 2000), is an important component of the global carbon cycle. This is due to its capacity to assimilate and store large amounts of carbon (Catson et al. 1994), and the potential for this ecosystem to release carbon and become a significant future source...

3. **Magnetic core-shell silica particles**
2007-08-11 Claesson, E.M.
This thesis deals with magnetic silica core-shell colloids and related functionalized silica structures. Synthesis routes have been developed and optimized. The physical properties of these colloids have been investigated, such as the magnetic dipole moment, dipolar structure formation and rotational dynamics of the magnetic silica...

4. **Charge injection and transport in quantum confined and disordered systems**
2007-06-06 Houssap, A.J.
Quantum dots and quantum well structures are modern semiconductors with a high potential for applications such as lasers, LEDs, displays, solar cells etc. These applications require the controlled addition of charge carriers into the material and knowledge of the details of charge transport. This thesis describes research into the...

5. **Oceanic variability around Madagascar: connections to the large-scale Indian Ocean circulation and its forcing**
2007-08-04 Falastang, V.
The connection between the mesoscale eddy activity around Madagascar and the large-scale interannual variability in the Indian Ocean is investigated. We use the combined TOPEX/Poseidon-ERS sea surface height (SSH) data for the period 1993-2003. The SSH-fields in the Mozambique Channel and east of Madagascar exhibit a significant...
<table>
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<td>Jan ’03 - Dec ’06</td>
<td>nl</td>
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<td>OAI-PMH//DC/DIDL</td>
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<td>7 studies: standards, IR inventory, ltp txt, ltp data, population, business models, ipr</td>
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<td>DRIVER Support</td>
<td>DRIVER Search, Guidelines + validator</td>
<td>simple documents</td>
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<td>OAI-ORE//(MODS?)</td>
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<td>enhanced publications</td>
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DRIVER: Digital Repository Infrastructure Vision for European Research

Building a sustainable infrastructure of European Scientific Repositories

A project funded by the European Commission, “Research Infrastructure” Unit
General Information

- Duration: 18 months
- Budget: € 2.7M (Contr. EC € 1.8M)
- Timeplan: 06/’06 -11/’07
- Main Deliverables:
  - DRIVER Public Test-bed
  - European Awareness Repository Point
- Website:
  http://www.driver-repository.eu/

- Partners
  - Univ. of Athens (GR)
  - Univ. of Bielefeld (GE)
  - CNR-ISTI (IT)
  - STICHTING SURF (NL)
  - Univ. of Nottingham (UK)
  - CNRS-CCSD (FR)
  - Univ. of Bath (UK)
  - Univ. of Warszawski (PO)
  - Univ. of Gent (BE)
  - Univ. of Gottingen (GE)
DRIVER

« The first step towards a pan-European Infrastructure for digital Repositories »

Network of “Content-Providers”
- Institutional, national, European, thematic networking
- Currently documents, second phase primary data etc.

“Test Bed” for Repository-Services
- Open Service-Architecture with core functionalities
- Fundament for a pan-European repository infrastructure

“Focussed Studies”
- Ex. Most comprehensive study on digital repositories in Europe

“Advocacy and Awareness Raising”
- A European point of information
- Information- and training activities

Content
Infrastructure
Planning
Outreach
DRIVER Technical Architecture

Presentation Layer

OAI – Publisher Service

User Interface Service

User Communities Service

Recommendation Service

Profiling Service

User Management

Information Management

Search and Browse Service

Index Service

Collection Service

MDStore Service

Aggregator Service

Repository Services

Collective Layer

Community Specific Services

Data Provision Services

Data Management Services

System Services

Internet
1. An organisational framework for repository providers
2. An established network of repository providers from 5 countries
3. Praxis guidelines to make your local repository fit for the European Network
4. A harmonised data index of more than 51 institutional repositories for open re-use
5. Content: multidisciplinary documents, all open access, various categories (technical papers, pre-/postprints, dissertations etc.)
6. A core set of software to aggregate, manage, distribute repository data, open-source, for re-use
7. A production quality testbed which combines and runs the software modules
8. A website to support the building of local, regional, national repository infrastructures
9. An updated, comprehensive overview of the repository situation in Europe (study)
10. Further studies (incl., „how to populate repositories“, technical standards, business cases, )
Driver - Digital Repository Infrastructure Vision for European Research

Welcome to the DRIVER website, supporting repository development across Europe.

Digital repositories can help make research information more widely available, more widely used, and improve the process of research itself. There is a world-wide movement to open up access to research information in this way. DRIVER is working to create a European network of repositories to disseminate and use research information.

Use this site to access information, support and services relating to Open Access and digital repositories and to become part of this growing community.

There is information available for different interested parties - researchers, research funders, administrators and others. There is general information relating to the ideology and practical implementation of repositories.

The site holds details on the state of development in different European countries and how you can join the growing international network.

You may also want to suggest events or announce news on this site that other visitors may find useful.
Why is DRIVER an infrastructure project?

Characteristics DRIVER:
- Designed for open, comprehensive re-use of data and software
- DRIVER ≠ OAIster, BASE but DRIVER data or software can also be deployed by systems like OAIster or BASE
- Success not measured by the number of users searching the DRIVER index but by the number of service providers re-using/deploying DRIVER data and/or software
- DRIVER Search interface is a demonstrator, not a primary goal
- Facilitates and secures trans-national interoperability of digital repositories and the commitment of content providers
DRIVER success factors as infrastructure project

- Service Providers deploying the data index (or portions of it), like SUMMA, Digital Library System, SB Aarhus, DK, ....
- National, regional repository aggregators re-using DRIVER software
- Countries, regions, building repository networks facilitated by DRIVER (like Belgium)
Outlook: DRIVER II Products (Planning)

1. An organisation (?) of repository providers
2. An established network of repository providers from 15 (= 5+10) countries
3. A harmonised data index of more than 150 (50+100) institutional repositories for open re-use
4. Content: multidisciplinary documents + other data/objects
5. An expanded set of software to aggregate, manage, distribute repository data, open-source, for re-use
6. A production quality infrastructure which runs the software modules
7. An expanded website to support the building of local, regional, national repository infrastructures
8. Further studies (e.g. primary data in repositories)
DRIVER is liaising with...

- National, regional organisations of digital repositories providers
- International repository projects and initiatives
- Research organisations and research funders
- National and international university organisations
- Open Access „activists“
  - one example: OA Information Platform for German speaking countries
    (www.open-access.net), online May 2007
DRIVER Consortium Contacts:

+ Project website: www.driver-repository.eu
+ DRIVER Support website: www.driver-support.eu
+ DRIVER Search Interface www.thisweek.eu 😊

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waaijers@surf.nl
Publication cycle

Publication cycle:
- Funding
- Research
- Composition of (enhanced) publication
- Registration & dynamic archiving
- Review
- Curation
- Dissemination
- Impact
- Funding

Actors:
- Researchers
- Institutional library
- Publisher, open review service
- Trusted third party
- Service provider
- Funding agency
- Scholarly workbench
- Interoperable repositories
- Quality control systems
- Perennial access systems
- Browse and reuse facilities
- Citations & usage analysis
- Money

Infrastructure:
- Information infrastructure based on service oriented architecture standards
- Technical infrastructure

Legend:
- Orange = financing
- Purple = production
- Dark purple = content infrastructure
- Orange = content based services
DARE2SHARE

Publication cycle

FUNDING → RESEARCH → COMPOSITION OF (ENHANCED) PUBLICATION → REGISTRATION & DYNAMIC ARCHIVING → REVIEW → CURATION → DISSEMINATION → IMPACT → FUNDING

Actors

RESEARCHERS
INSTITUTIONAL LIBRARY
PUBLISHER, OPEN REVIEW SERVICE
TRUSTED THIRD PARTY
SERVICE PROVIDER
FUNDING AGENCY

SCHOLARLY WORKBENCH
INTEROPERABLE REPOSITORIES
QUALITY CONTROL SYSTEMS
PERENNIAL ACCESS SYSTEMS
BROWSE AND REUSE FACILITIES
CITATIONS & USAGE ANALYSIS
MONEY

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