

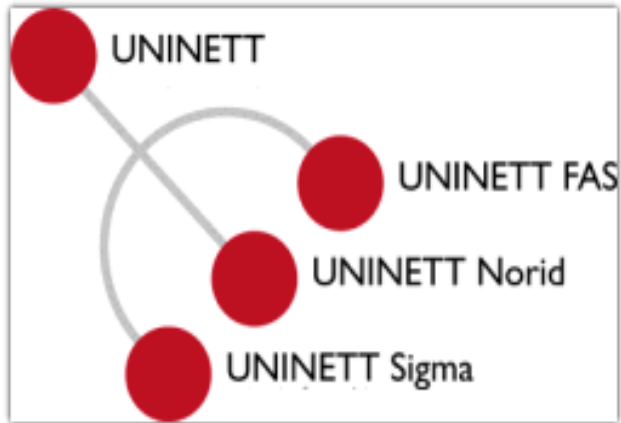


UNINETT and why (e)Campus matters

Joint TF-CPR and TF-Media meeting, Trondheim 07.10.2010

Ingrid Melve, CTO, UNINETT

UNINETT: the Norwegian research and education network



- The research network
 - ◆ Internet
 - ◆ @campus services
 - ◆ eCampus
- FAS: shared administrative systems
- Sigma: advanced scientific computing
- Norid: .no domains

UNINETT figures

- Connecting 200+ institutions
- Connecting 300 000+ users
- NORDUnet is upstream provider
- Total of 75 employees, half in the research network
- Turnover in 2009: 213 MNOK

Where is this place?



- Norway
- < 5 million persons
- Long country with fjords
- Distributed higher education, distributed population
- Extensive university collaboration



Arctic Ocean

Arctic Ocean

Greenland

Canada

United States

Iceland

C

Suomi
Finland

Sverige
Sweden

Norge
Norway

United Kingdom

Polska
Poland

Deutschland
Germany

Україна
Ukraine

France

A
Italia
Italy

España
Spain

Türkiye
Turkey

North Atlantic Ocean

Arctic Internet

- Norway is a long country with harsh weather: network challenge!
- Mainland Norway is as long as the distance from Rome to Oslo...
- Fiber is the answer
- Deployment is the route

UNINETT on campus

- 1980s-1992: Internet to higher education
 - ◆ Internet= router + server (Samson)
- 1994-1998: Multi-campus college (KOMPAKT)
 - ◆ Internet= routers + infrastructure
- 1999- : Administrative systems
 - ◆ Deploying shared systems
- 2006-2009: Campus networks (GigaCampus)
 - ◆ Internet = routers + campus network, BCP
- 2010- : eCampus in research and learning

UNINETT on campus

- Campus infrastructure matters
 - ◆ Best practice cabling and power supply
 - ◆ Measurements (measure stick servers), network monitoring
 - ◆ Systematic eduroam deployment
 - ◆ SIP and voice over IP
 - ◆ Audio-visual requirement
 - ◆ Security policies and audits
- Procurement: software licenses, PC/Macs, switches, routers, printers, telephony ...

Service deployment

- Open transparent processes
- You need to work in a certain way:
share, share, share
- Iterative processes
 - understand existing work flows
 - use social media, exploit relationships
- Prove all things; hold fast that which is good (Paul in 1 Thess 5, 21)

eCampus: infrastructure for learning

- eCampus aims to improve learning and research in higher education by collaboration on
 - ◆ Mobile services
 - ◆ Lecture capture
 - ◆ Videoconferencing and web meetings
- Organized by UNINETT

Why do Uninett eCampus?

- We were asked to by universities
- Our job to ensure
 - things work across network
 - standardization and national collaboration
 - sharing of best practice
 - cost efficiency
- Connecting campuses to the world



eCampus program

- First tasks focus on lectures
 - Lecture capture
 - Web meeting (and video conferences)
 - Sharing best practices
 - ICT architecture
- Goal: better learning experience
 - Lectures shared (in group or open)
 - Distance collaboration
 - Mobile solutions

Web meetings to the people!

- Web meetings available everywhere
- Report on web conferencing
 - ◆ Meetings
 - ◆ Lectures
 - ◆ Ad-hoc collaboration
- Roadmap
 - ◆ Federated solution: October 2010
 - ◆ Call for tender early 2011
 - ◆ Operational solution: June 2011

UNINETT technical specifications

The specifications include

- ◆ Functional description of AV equipment in lecture halls and meeting rooms, May 2010 (UFSI 16, Norway)
- ◆ Technical and functional requirements for AV equipment, May 2010 (UFSI 19, Norway)
- Specification are developed in the community
 - ◆ Working groups (with a secretary from UNINETT)
 - ◆ Formal hearing rounds and reviews
- GEANT3 campus best practice activity

Learning environment

Pedagogic support
Classes, courses, student groups



Lecturer

Media production



- auditorium, video conference
- capture
- editing
- meta data markup

Media management

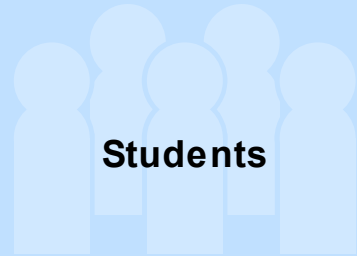


- conversion
- storage and archive
- licensing
- support for search and retrieval

Distribution



- LMS, VLE
- podcast, RSS
- streaming
- mobile
- iTunes, YouTube



Students

Digital competence

Technological foundation

Standards, data formats, meta data formats
Equipment, work flow

Digital competence

Organizational foundation

Ownership and usage
Access everywhere

Spør advokaten om opphavsrett



Hva er opphavsrett?

Opphavsrett er de rettighetene den som har skapt noe (opphavsmannen) har til det han/hun har skapt (verket). Opphavsretten beskytter en [Les mer](#)



Hva vil det si å klarere opphavsrett?

Å klarere opphavsrettigheter innebærer at det gjøres en avtale om bruk av et verk. Det kan avtales med opphavsmannen til verket direkte, eller med en [Les mer](#)



Hva en rettighetshaverorganisasjon?

En rettighetshaverorganisasjon representerer opphavsmenn og andre rettighetshavere og inngår avtaler på vegne av dem om tillatelse til bruk av verk [Les mer](#)

Flere spørsmål og svar

Send inn ditt spørsmål

Hva har jeg lov til?



Tekst

Kan jeg fritt kopiere og bruke tekster fra internett?

[Les mer](#)



Bilde

Kan jeg legge inn bilder av kunstverk i presentasjonen min?

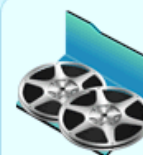
[Les mer](#)



Lyd

Kan jeg legge ut et musikkstykke i læringsplattformen?

[Les mer](#)



Film

Kan jeg vise spillefilm for studentene mine?

[Les mer](#)

Nyttige tips



Undervisningsressurser du fritt kan benytte.



Personvernskolen.no din kilde til informasjon om personvern i skolen



www.clara.no – informasjonssentral opphavsrett og klarering. Her finner du info fra organisasjoner som forvalter opphavsrettigheter for blant annet forfattere, billedkunstnere og musikere.



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Contact eCampus?

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