SURFnet, grensverleggend netwerk voor hoger onderwijs en onderzoek
Service provider

Netwerkinfrastructure
*Foundation for collaboration*

Authentication & autorisation
*Secure access based on trust*

Online multimediale samenwerking
*Working in teams, interactivity in high quality*
Network infrastructure

- One of the most advanced networks in the world
- More than 8,000 km of dark fiber, connecting all institutes
- Own photonic network
- Hybrid network: IP connectivity and lightpaths
- Target group 160 institutes, 1 million users
Governance model

Target group

Universities
Academic Hospitals
Research institutes
Research departments of companies
Public Libraries
SURFnet missie

Motor for Innovation
Functionalities
- Videoconferencing with groups
- Sharing data and applications
- Live streaming and recording
- Videoconferencing through the firewall

Standaarden
- Transport = IP
- Protocol = H323/SIP/H460
- Quality = HD
- Numberplan = GDS/E.164

http://www.surfcontact.nl
Multipoint conferencing

40 ports HD MCU
SURFcontact Infra
Support & Maintenance

Support
- Certification
- Telephony support (7:00 - 19:00)
- E-mail support
- Knowledgebase

Maintenance
- 24/7
- 99.5% availability
- Redundant
- Secure
Use case cancer treatment

Nominated for ICT business case of the year 2009!!
Use case cancer treatment

8 cancer coordination centres
300 employee’s
400 medical consultants

97 hospitals
radio therapeutic institutes
home care organizations
family doctors
Use case cancer treatment

Drivers for videoconferencing in cancer treatment

1. Less need for generic consults
2. More need for consultants with specific expertise
3. More need for multidisciplinary consults
4. More cancer patients (72,000 > 95,000)
5. More virtual organizations
6. More traffic jams
7. A need for more efficiency: reducing costs and higher quality of care
Use case cancer treatment

Timeline
- Dec 2006: start first experiments
- Apr 2009: start of SURFcontact

Status
- Netherlands (± 96 hospitals)
  - 70% online
- IKMN+IKA+IKNO (48 hospitals)
  - 92% online
  - 83 endpoints
Use case cancer treatment

A view at the supply-chain
Use case for cancer treatment

- Problems
  - Convincing specialists to use videoconferencing
  - Problems with quality (packet loss, latency)
  - Sometimes chaotic meetings

- Solutions
  - Certification of new hospitals
  - Courses for the chairman
  - A reusable script (preparation, do’s and don'ts)
Use case on-line surgery
Use case on-line surgery

http://www.lion-web.org
Use case for on-line surgery
Demographic view

Leeftijdsoopbouw Nederland 2009

Figure 1.
Population by Single Year of Age and Sex: 2005

Source: U.S. Census Bureau, Population Estimates Program, June 1, 2005.
Conclusions

- Challenges for the future in health care:
  - Higher demands from patients
  - Growth of the amount of elderly people
  - Less people to provide health care
- Challenges with mobility:
  - Traffic jams
  - Reducing CO2 emissions
- Technology to increase efficiency while lowering costs:
  - Fast internet access everywhere
  - High quality videoconferencing end-points
  - Videoconferencing service providers