Silk Project
An example of regional cooperation

Zita Wenzel   Robert Janz

Keio University   University Groningen

Tokyo , Japan   Groningen, Netherlands

Summary

› Have same or compatible (similar or complementary) views of what an NREN is and what it can do

› See the same or compatible trajectory and goals

› "Optimal" network for research and education

 • To have a network at all for some

 • Increased bandwidth for others

 • Increased RREN and GREN connections

› Working as a community for the benefit of all

NRENs, RRENs, and the GREN, oh why?

Increase optimal Internet connectivity, and effective technical and administrative expertise, to utilize the network for the benefit of research and education

The whole is greater than the sum of its parts

› *Credibility*

› **Purchasing power**

› **Leverage grants and lobbying**

› **Allows single point of contact for connections**

› **Technical exchange**

Resource sharing and exchange?

› Not just wires – need someone to use the tools

› Need local, on the ground, native expertise

› Train the trainers

› AfNOG provides this along with a technical human network (not enough staff in each location)

- Call "Joe" in Ghana for BGP/CSIRT help

- Like the early days of the Internet

› Turn weaknesses into strengths

Regional cooperation

› *Pro*
  - Critical mass is reached more quickly
  - Strong countries help the weaker ones
  - Efficient use of central facilities
  - Sharing of technical expertise
  - More visible for funders
› *Con*
  - Actually none!
  - Needs trust ☺

Silk Project

> History
> - 2000: first thoughts
> - 2004: first dishes operational
>   - Contract with EurasiaSat
> - 2007: second phase (Silk-2)
>   - Contract with Vizada
> - 2008: first countries go to fiber optic
> - 2009: termination satellite contract

Silk Project

› Location of Silk nodes:

The Caucasus and Central Asia

Silk Project

› **Stages in cooperation**
  - *NATO* Science programme forced first alliance
    - (no further funding unless …)
  - *EU* first facilitated "informal" cooperation
  - EU is now enforcing *governmental* commitment (20% matching of fiber optic project)
  - *Silk* will (probably) fall into
    - Black Sea Initiative (Caucasus)
    - Central Asian TEIN project
    - What to do with Mongolia/Afghanistan?

Silk Project

› **Requisites**

- There must be an (and only one) NREN
- NREN represents science and higher education
- The NREN has the necessary licences
- The NREN signs for operation management
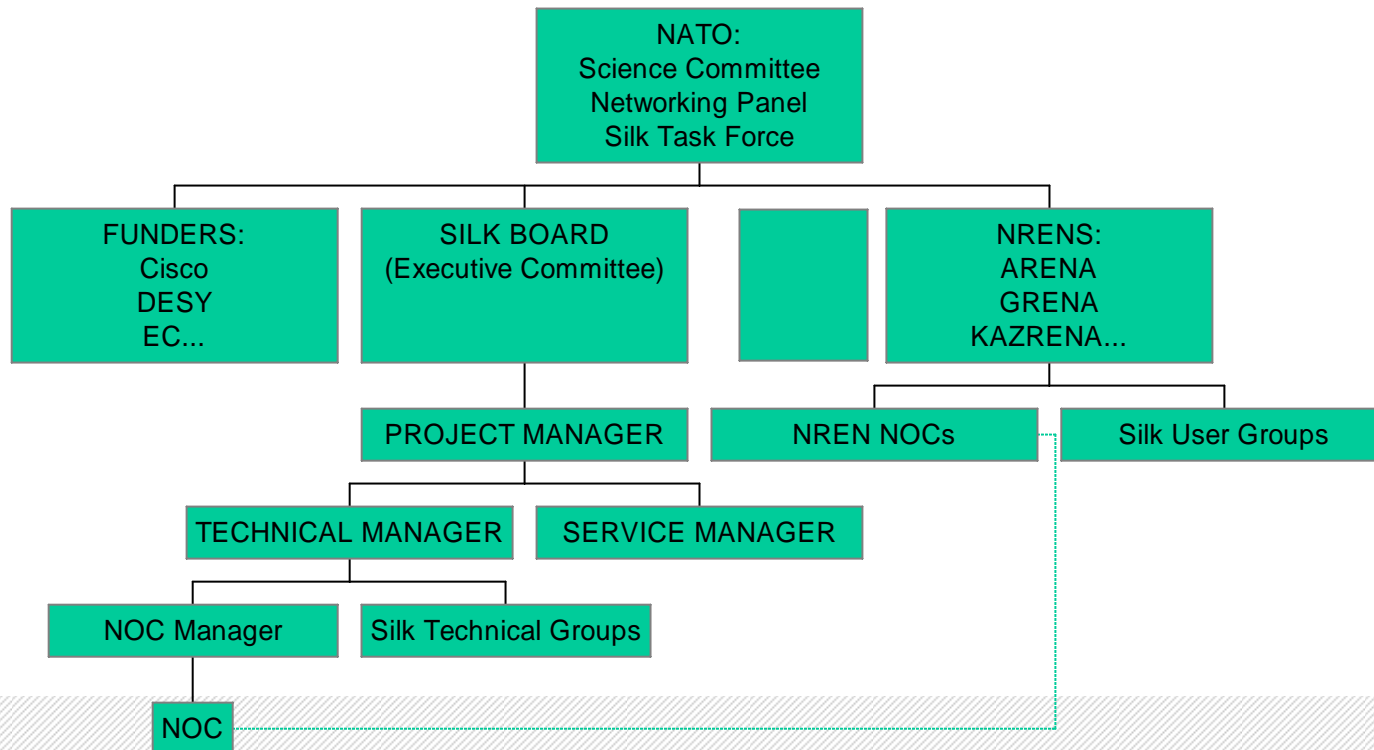- The NREN considers sustainability

Silk Project

› **Western partners**
- Funders:
  - *NATO* Science Programme
  - *EU* Research Infrastructures
    - SPONGE and OCCASION projects
  - *Cisco*
- Project management (Silk ExCo)
  - *UCL, DESY, University of Groningen*
  - *Regional representatives*

Silk Project

› *Project management*

NATO:
Science Committee
Networking Panel
Silk Task Force

FUNDERS:
Cisco
DESY
EC...

SILK BOARD
(Executive Committee)

NRENS:
ARENA
GRENA
KAZRENA...

PROJECT MANAGER

NREN NOCs

Silk User Groups

TECHNICAL MANAGER

SERVICE MANAGER

NOC Manager

Silk Technical Groups

NOC

Silk Project

› *Technical management*

- DESY (3 staff)
  - Satellite dish operations (including local nodes)
  - Silk routers (including local nodes)
  - Central services (monitoring, VoIP system, Video Conferencing, Cisco Meeting Place)
- Silk NOCs
  - NOC operations
  - National monitoring
  - User administration and support

Silk Project

› *Financial management*
  - *NATO*: contract owner
  - *DESY*: contract executer
    - SLA negotiations
    - Billing to NRENs
  - *NRENs*
    - Tariffs from connected institutes
    - Matching contribution to DESY (50% of 50%)
  - Matching fund
    - Meant for connectivity after termination of grant

Summary

› Have same or compatible (similar or complementary) views of what an NREN is and what it can do
› See the same or compatible trajectory and goals
› "Optimal" network for research and education
  • Have a network at all for some
  • Increased bandwidth for others
  • Increased RREN and GREN connections
› Working as a community for the benefit of all

The mayor difference between Africa and Silk