



The Swiss Education & Research Network

Grid Activities at SWITCH

Christoph Witzig

witzig@switch.ch

EGEE - 06

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- **Overview of SWITCH**
- **Grid Strategy of SWITCH**
- **Activities within EGEE-II**
- **Other grid-related activities**
- **SWITCH's Ideas about the Structure of the Swiss Grid Initiative**

Internet Identifiers

- Domain name registration
- .ch and .li

Network

- [illegible]

- **SWITCHaai** - a national Shibboleth-based Authentication and Authorization Infrastructure that SWITCH built with its partners in the higher education sector



- **Shibboleth**
 - is a browser-based single sign-on system using SAML, where the user authenticates him/herself once at his home institution
 - Provides attributes to the resource for authorization decisions
 - Developed by internet2
 - SWITCH was one of the very first adopters of Shibboleth
 - Attracted significant interest world-wide (deployments in US, Australia, Finland, UK,)
- **Current Status:**
 - Approx. 160'000 members of the Swiss higher education sector have AAI-enabled accounts
 - In particular every Swiss university supports SWITCHaai
 - Approx. 12'000 use SWITCHaai on a regular basis to access about 100 resources

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- **SWITCH decided to add grid activities to its portfolio in 2004**
 - Evaluation of possible activities in 2004 (SWITCH journal 2004)
- **Establishment of grid project(s) in the Middleware group in 2005**
- **Decision to join EGEE-II**
 - Partner in JRA1: Interoperability Shibboleth - gLite
 - **Goals**
 - **International:**
 - Involvement in EU-supported project with ties to Switzerland
 - Large international interest in interoperability of campus infrastructures and grid
 - **National:**
 - Exploit synergies between SWITCHaai and grid
 - Combine grid activity with existing strengths of SWITCH (security, SWITCHpki)

Build a “support infrastructure for grids” in Switzerland by

- operating central services
- carrying out **co-operative** projects with our partners
- participating in international projects

while exploiting SWITCH’s core competences in

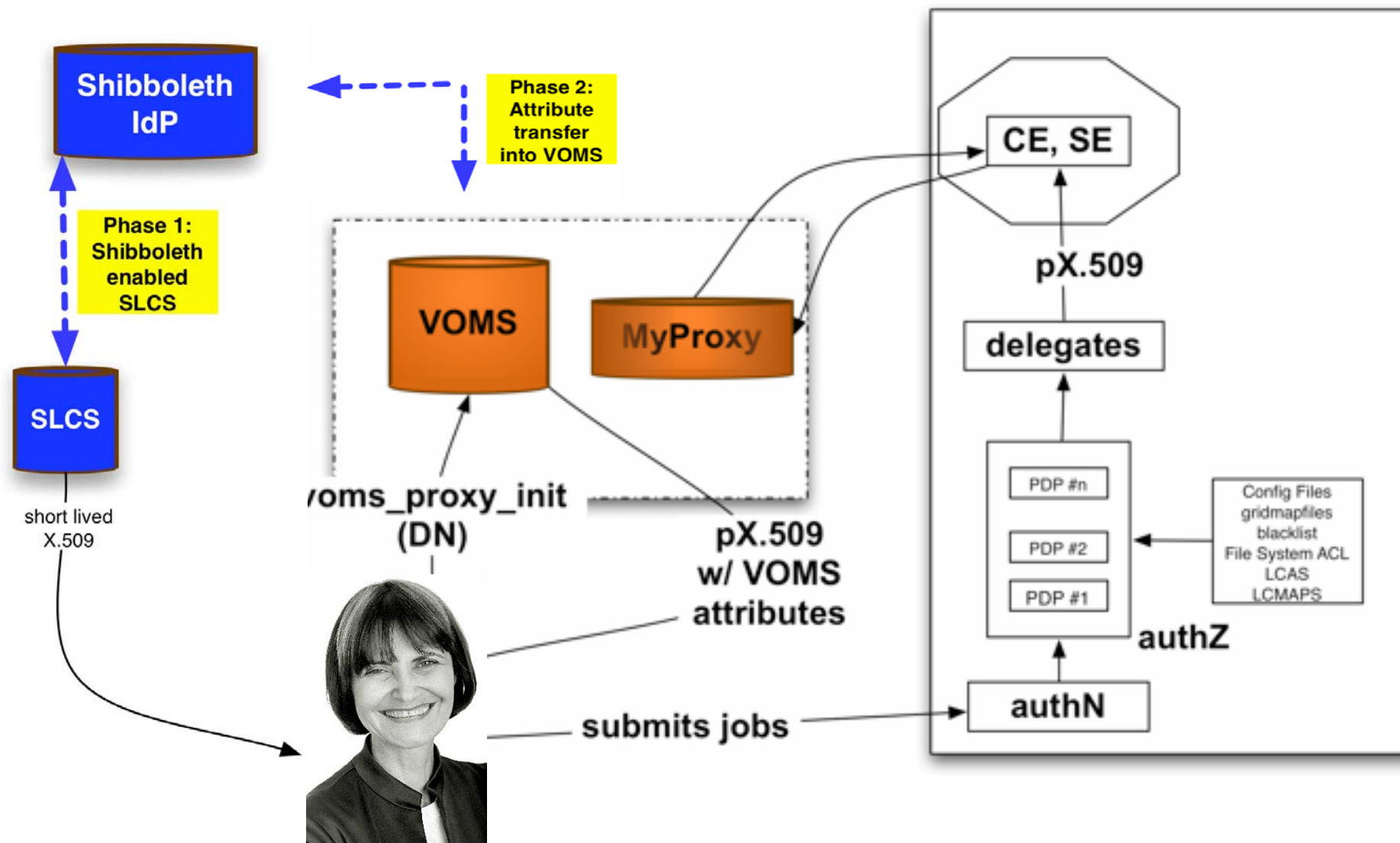
- Security
- Middleware
- Network

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Our plan consists of three phases

- Two initial, shorter phases with the goal
 - Start small and hook up Shibboleth AAI to a gLite grid with minimum amount of changes (in particular no change at the CE)
 - Build up knowledge and expertise
 - April 06 --> fall/winter
- A longer third phase
 - SAML support at the resource end
 - Design during phase 1 and 2
 - Implementation in 2007

Overview Phase 1 and 2



- **From the user's perspective:**
 - obtains a short-lived certificates (<11 days) upon execution of a shell command
 - no need to worry about the private key
 - no need to copy private key and certificate to every host he/she uses
 - no need to re-new certificate once it is about to expire
 - free of charge
 - independent of grid middleware
- **Prerequisites:**
 - User has to have an SWITCHaai account
 - Registration step at his home organization
- **Schedule:**
 - Operates in test mode starting in November
 - EUGRIDPMA accreditation in early 2007
- **Contact:** grid@switch.ch

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- **Offers X.509 certificates**
 - SwissSign: server and user certificates
 - SCS (GlobalSign): only server certificates
- **SwissSign certificates are EUGRIDPMA accredited**
 - Automatically recognized by grid software that supports IGTF
 - Support for user certificates only recently
- **Mode of operation based on partnership with universities whereby the university acts as RA (registration authority)**
- **Contact: pki@switch.ch**

- **Co-operative project with university of Berne**
 - Support for Sun Grid Engine in gLite CE
 - Aim to build a test-bed with SWITCH
- **Interested in further co-operative project with other “griddies”**
- **Contact: grid@switch.ch**

SWITCH aims to be a valuable partner in co-operative projects with other grid parties in the Swiss research and higher education sector

Contact: grid@switch.ch

SWITCH's Ideas about the Structure of the Swiss Grid Initiative

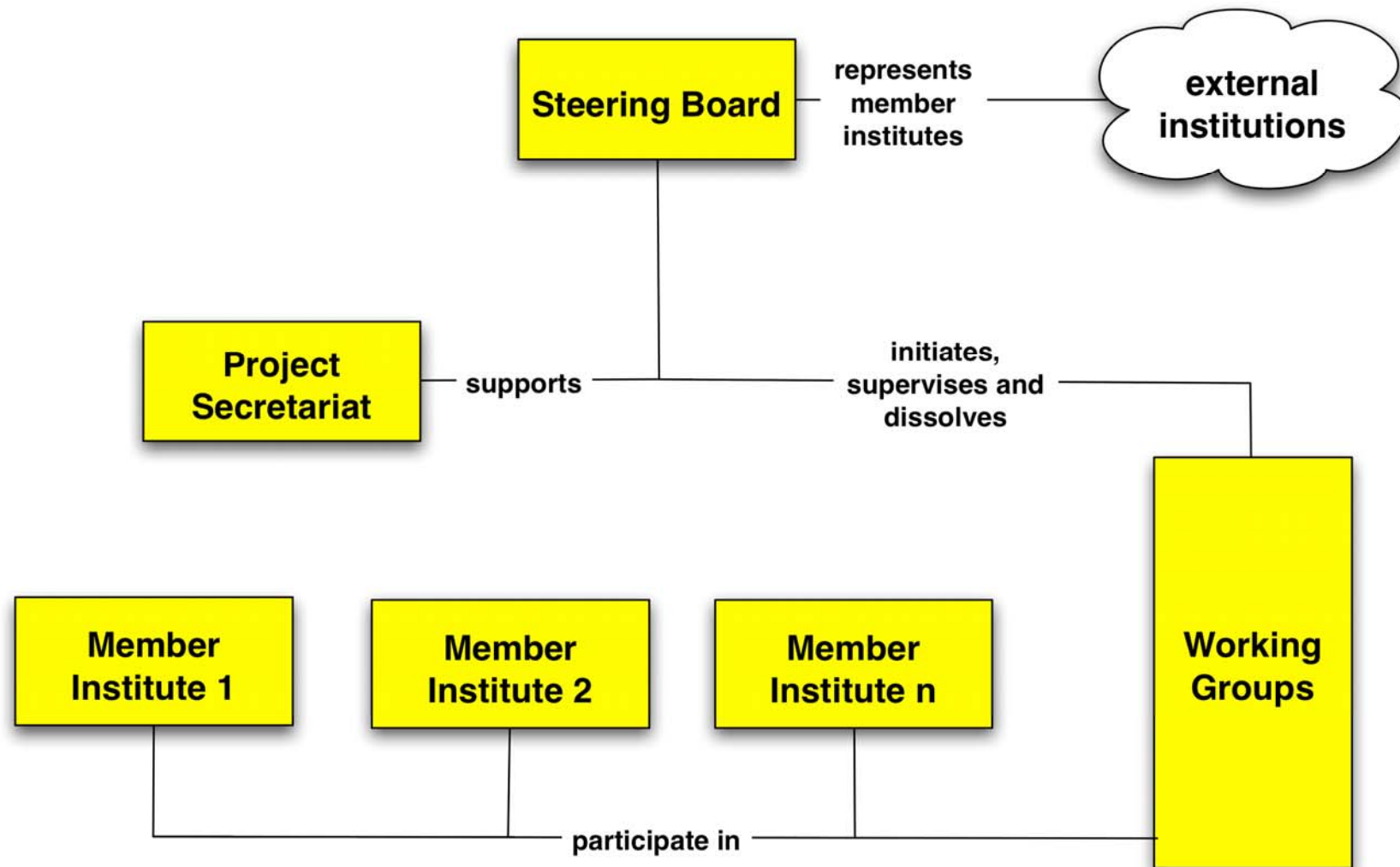
SWITCH is convinced that the key to success in our environment lies in co-operative projects between equal partners

This requires at this *exciting* time of starting a Swiss Grid Initiative

A mandate from the existing organizations

A federalist structure of the initiative

Structure of the Initiative (1)



Structure of the Initiative (2)

- **Steering Board (SB):** is nominated by existing institutions
- **Chairperson of SB:**
 - ❑ Is elected by SB for a one year term (only one consecutive re-election possible)
 - ❑ Should be a member of the grid **user** community (and not infrastructure provider)
 - ❑ Main point of contact for the initiative
 - ❑ Represents the Initiative towards external institutions (Swiss and EU)
 - ❑ Receives mandate from SB
- **Working Groups:**
 - ❑ This is where the work is being done
 - ❑ Participants work as members of their institutions (not as employee of the Initiative)
- **Initiative has no hired staff (except project secretariat) (may change in the future)**
- **Initial funding comes from existing institutions**
- **Detailed charter has to be formulated and approved by the SB**

Why a mandate (from the existing institutions) ?

- **In order to ensure longevity of the SGI**
 - Projects come and go
 - Research groups change their focus
 - Non-permanent staff changeswhereas the institutions remain
- **Co-operative projects in Switzerland are based on the principle of “matching funds”**
 - Where the “matched” fund comes from the institution
- **EU funding is tied to institutions**
- **a myriad of legal issues require the involvement of legal institutions**

We offer to coordinate writing a letter to the presidents of the Swiss universities

- **informing them about the need to initiate a Swiss Grid Initiative**
- **asking them to nominate a representative of their institution in the Steering Board of the initiative**
- **asking their support in getting the IT departments of their institution involved**

and have this letter co-signed by all interested grid parties in Switzerland (regardless whether they are present today or not)