

National Presentation at
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1. Personal Presentation

- Professor for Computer Science at Heinrich-Heine-Universität Düsseldorf
- Responsibility for the Information Technology in the university
- Director of Computing Center & MM-Center
- Co-Founder of EUNIS
- Member of several national & international IT-organisations
- Member of IT-Security Board AXIS of German Federal Government

Heinrich-Heine-Universität Düsseldorf

- 25.000 students
- 5 Faculties
- Computing Center /Multimedia Center:
about 45 staff
- Focus on Networking, High Performance
Computing, Multimedia, Chipcards Projects

Focus I: Networking

- Networking:
 - Local Area Network (LAN) with about 6.000 PC's/ Workstations
 - Fiber-Backbone: Fast Ethernet (planned: Giga-Ethernet); some special connections with ATM
 - Floor-level: 10/100 Mbit/s, Coax, Twisted Pair (TP), in new buildings: fiber
 - Investments: about 1 Mio DM /year for replacing coax with TP, new switches/routers etc.
 - Next Generation Network (Gigabit-Network)

Equipment:

1.Parallel-Compute-Server

- Origin 2000
- Intel-Cluster

2.Skalare Compute-Server

- Sun E4000
- Sun S1000

3.Internet-Server (Netz-Server): 2x SUN E4500

4.File-, Archiv- und Backup-Server: Auspex

Focus III: Multimedia

- Supporting faculties, institutes and scientists in preparing MM –based teaching & learning materials
- Details:
www.mmz.uni-duesseldorf.de

Focus IV: Project ChipCard

- Problems:
without or with Krypto
- If with Krypto:
Public Key Infrastructure:
 - Insourcing or Outsourcing
 - According to very strong German „Signaturgesetz“ or not according
(matter of financial means)
- The new ChipCard for Heinrich-Heine-Universität
Düsseldorf will include:
 - A card body with a reprintable area for time dependent data
 - A contacting chip with a cryptographic coprocessor
 - Non-contacting chip for access control and electronic purse

Equipment in Computing Center

1. Parallel-Compute-Server
 - Origin 2000
 - Intel-Cluster
2. Scalar Compute-Server
 - Sun E4000
 - Sun S1000
3. Internet-Server: 2x SUN A3500
4. File-, Archiv- and Backup-Server (Auspex)
5. About 30 Servers with NT, Linux, Novell

National Organization: ZKI

- Zentren für Kommunikation und Informationsverarbeitung in Lehre und Forschung: about 150 member institutions
- Details:
www.zki.de

How IT-Strategy is decided

- Plans are made locally and are coordinated by the Computing Center
- Coordination within the state is made by state-ministry
- Investments > 250.000 DM are co-financed by the federal government (50%), state government (30%) and the University (20%)
- IT-plans > 250 kDM are rendered to expert opinion by DFG (Deutsche Forschungsgemeinschaft)

Existence of national initiatives for hardware and software

- Some Coordination is made by DFG and German „Wissenschaftsrat“ in form of recommendation
- In a federal system like Germany there are only restricted possibilities

Budget Management

- University gets funds from:
state ministry, partly from industry (especially Technical Universities): third-party funds
- Rector & Administration gives money to faculties and institutes and institutions like Library and Computing Center
- Investment Projects normally have to be approved by „Rektorat“
- In some cases –i.e. Networking – financial planning is possible for more than one year
- Computing Center can recommend a vendor but most investment projects are subject to tendering

3 Key IT Development Issues

- High Performance Computing
- Extending the local and national network infrastructure
- ChipCard systems with Public Key Infrastructure (PKI) and 24/7-Service

Financial Volume (IT)

- Heinrich-Heine-Universität Düsseldorf (medium sized university):
 - Central IT-Budget: 5.5 Mio DM/year
 - Decentral IT-Budget: 3.5 Mio DM/year
 - Staff /Personal: 3.5 Mio DM/year
- In Germany: about 380 Universities (universities for applied sciences included); number of students varies from 2,000 to 60,000
- Estimation: 1 Billion DM/year for IT in Germany's universities