HEPi-X-Perience

HELMHOLTZ ASSOCIATION

HEPiX

DESY

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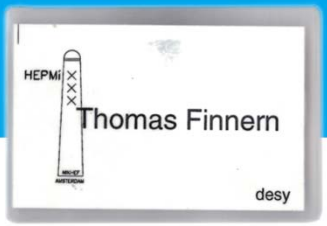
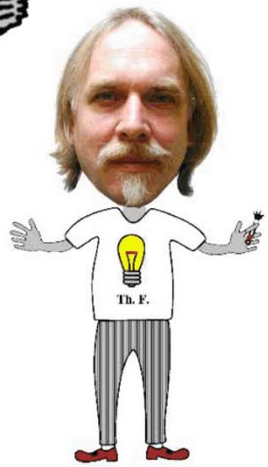
About Me



> Private

- 1 House
- 1 Wife
- 1 Daughter
- 2 Cars
- 3 Bikes



> Secret

- Music
- Don’t document so much

> System Engineer

- Automate and be redundant to keep the weekend free

- Have Project Logos
- Balance Loads/Apps

- Keep scripts (methods)

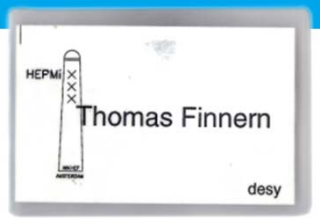
  self contained
  idempotent
  self documenting

- Manage Installation

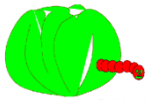
- Manage Configuration
- Like Noiseless Workplaces

DESY

From Junior to Senior

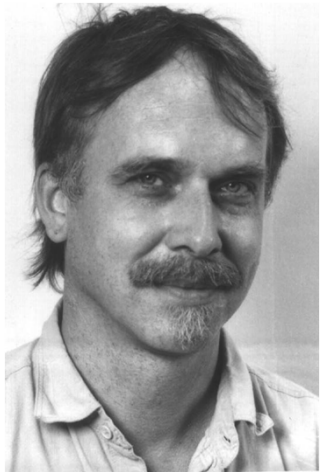


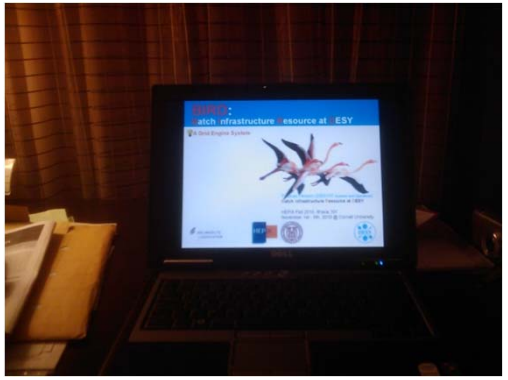
- 1st Amsterdam in 1993
- Alan Silverman's Meeting Reports
  - To be mentioned in it
  - Salad and X-Terminals
  - Reuse it for own report



- From 5 days to 30 minutes
  - Knowing (short) names of …
  - .. sites, people, projects, techniques, …

- Meetings (24 / 42 > 50 % Visited)
  - This is the 25th Meeting
  - Must be ~ 25 Talks
- Nightly Preparation of an "non-native" Speaker

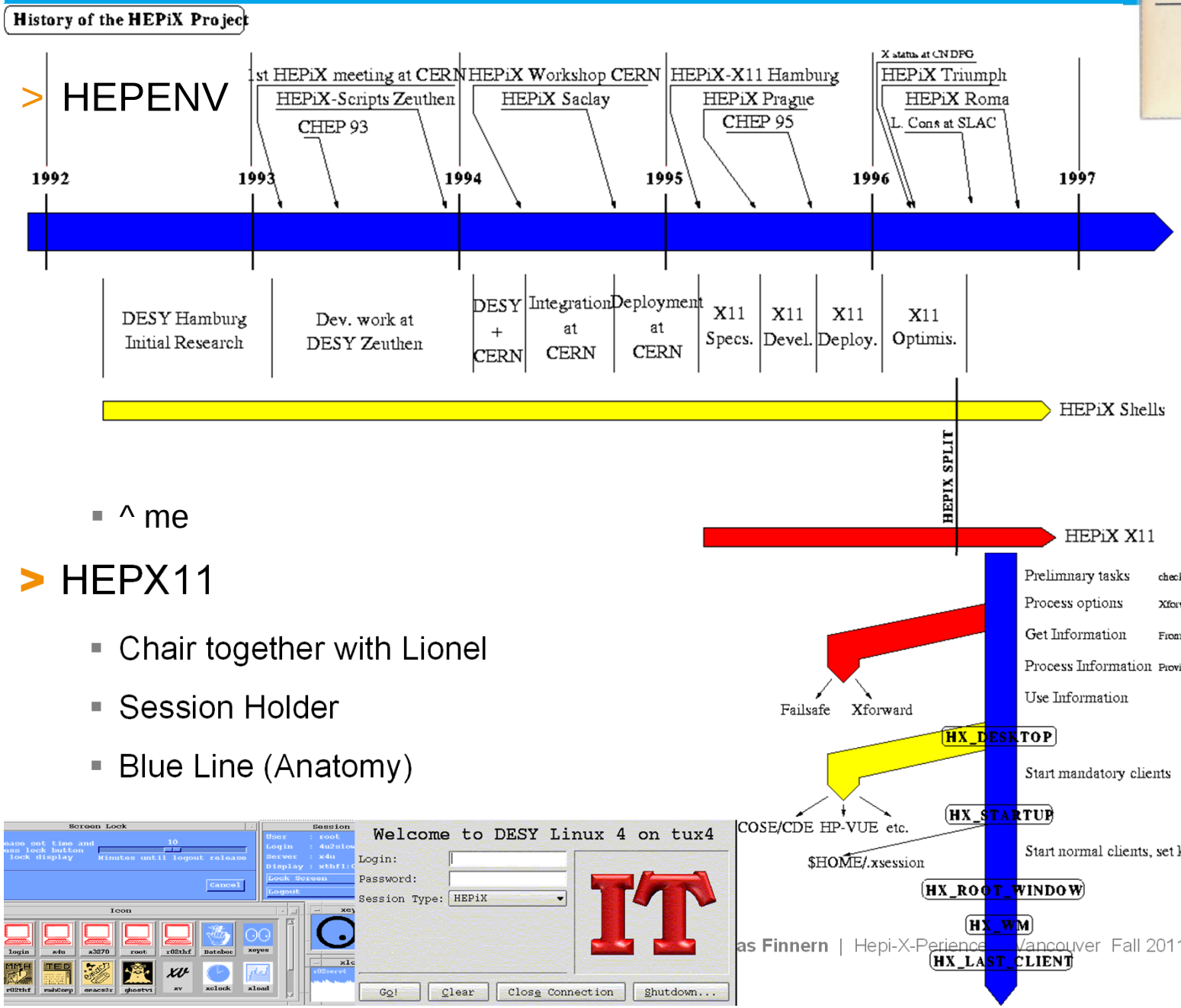




Old HEPiX Activities

HEPiX
April 28-29, 1994

Thomas Finnern
DESY



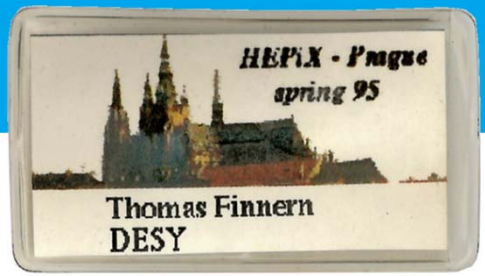
- ^ me

> HEPENV

> HEPX11

- Chair together with Lionel
- Session Holder
- Blue Line (Anatomy)

Recent HEPiX Activities



> Virtualization Kick Off

- 2007 “Owens” Virtualization Workshop

  The Early Bird

- 2007 1st VM-Talk

  Highly Available Central Services III: A Virtualization Approach

- 2008 Session Convener

  Half Day Virtualization Taipei

- 2009 Session Convener

  Full Day Virtualization Umea
  Chairmen’s Statement:
  “Virtualization on the Track”

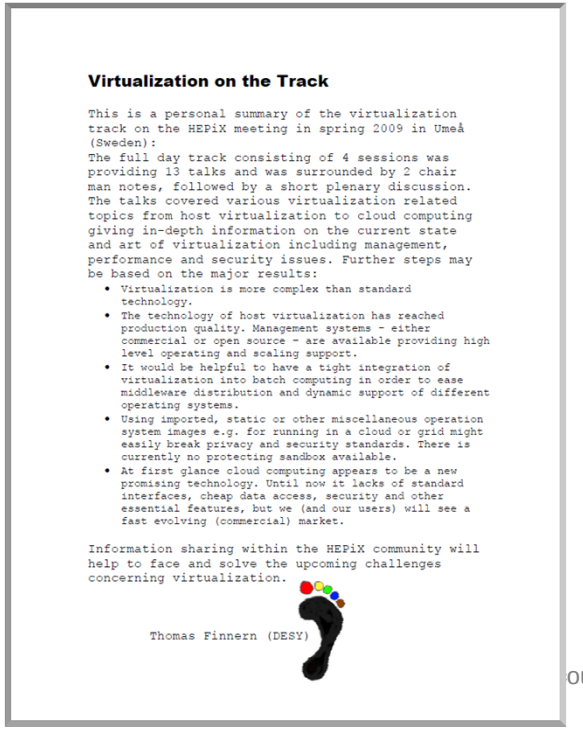
- 2010 VM Working Group

  Member of

> IPv6 Working Group

- Member of
- Install Management

- IPv4/6 Gateways



Virtualization on the Track

This is a personal summary of the virtualization track on the HEPiX meeting in spring 2009 in Umeå (Sweden):
The full day track consisting of 4 sessions was providing 13 talks and was surrounded by 2 chair man notes, followed by a short plenary discussion. The talks covered various virtualization related topics from host virtualization to cloud computing giving in-depth information on the current state and art of virtualization including management, performance and security issues. Further steps may be based on the major results:

- Virtualization is more complex than standard technology.
- The technology of host virtualization has reached production quality. Management systems - either commercial or open source - are available providing high level operating and scaling support.
- It would be helpful to have a tight integration of virtualization into batch computing in order to ease middleware distribution and dynamic support of different operating systems.
- Using imported, static or other miscellaneous operation system images e.g. for running in a cloud or grid might easily break privacy and security standards. There is currently no protecting sandbox available.
- At first glance cloud computing appears to be a new promising technology. Until now it lacks of standard interfaces, cheap data access, security and other essential features, but we (and our users) will see a fast evolving (commercial) market.

Information sharing within the HEPiX community will help to face and solve the upcoming challenges concerning virtualization.

Thomas Finnern (DESY)

Some Notes

- 1st DESY Webserver during X11 Workshop @ CERN

http://www.desy.de/~finnern:

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<!-- Changed by: Thomas Finnern, see bottom line -->
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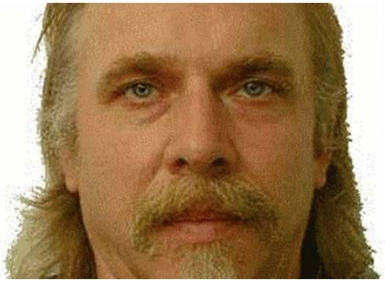
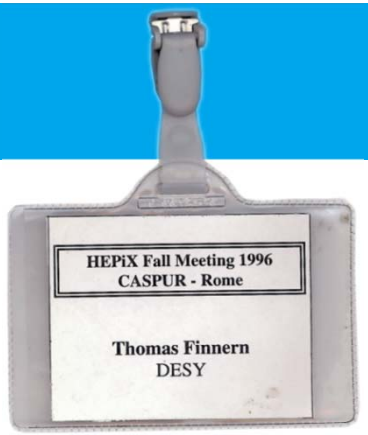


- Always/Mostly 1st talk after social event
  - Why ?
- CERN = 5 * DESY
  - Money + People
- Relation to users changed
  - Personal -> Roles and Devices

HEPiX Meetings (24 / 43 > 50 % Visited)



- 2011, GSI, Germany
- Nov 1-5, 2010 Cornell
- (April 2010 LIP - Lisbon, Portugal)
- ~~October 2009 NERSC, Berkeley, California~~
- May 2009 Umeå, Sweden
- October 2008 Taipei
- ~~May 2008 CERN~~
- ~~November 2007 Genome Sequencing Center, Washington University, St Louis, Missouri~~
- April 2007 DESY Hamburg
- ~~October 2006 JLab~~
- April 2006 Caspur
- ~~October 2005 SLAC~~
- ~~May 2005 FZK, Karlsruhe~~
- October 2004 BNL
- ~~May 2004 Edinburgh~~
- ~~October 2003 TRIUMF~~
- May 2003 NIKHEF
- ~~October 2002 Fermilab~~
- April 2002 INFN, Catania
- October 2001 LBL, Berkeley
- April 2001 LAL, Orsay
- ~~October/November 2000 Jefferson Lab~~
- April 2000 Braunschweig
- October 1999 SLAC
- ~~April 1999 RAL~~
- ~~August 1998 Fermilab~~
- April 1998 CCIN2P3, Lyon
- ~~October 1997 Jefferson Lab (CEBAF)~~
- April 1997 Zeuthen
- October 1996 Rome
- ~~April 1996 Vancouver~~
- September 1995 Rio de Janeiro
- May/June 1995 Prague
- October 1994 Saclay
- ~~October 1994 Fermilab~~
- April 1994 LBL, Berkeley
- March 1994 Workshop at CERN on HEPiX scripts
- October 1993 Pisa
- ~~October 1993 SLAC~~
- April 1993 NIKHEF
- ~~March 1993 HEPiX-US meeting at CEBAF~~
- ~~September 1992 CERN~~
- ~~September 1991 Fermilab~~

Shifts in Paradigm

> Begin

- Local Admin Kingdoms
- Admin-Gurus, very personal
- No Standards
- High Performance “hand-made”

> Then

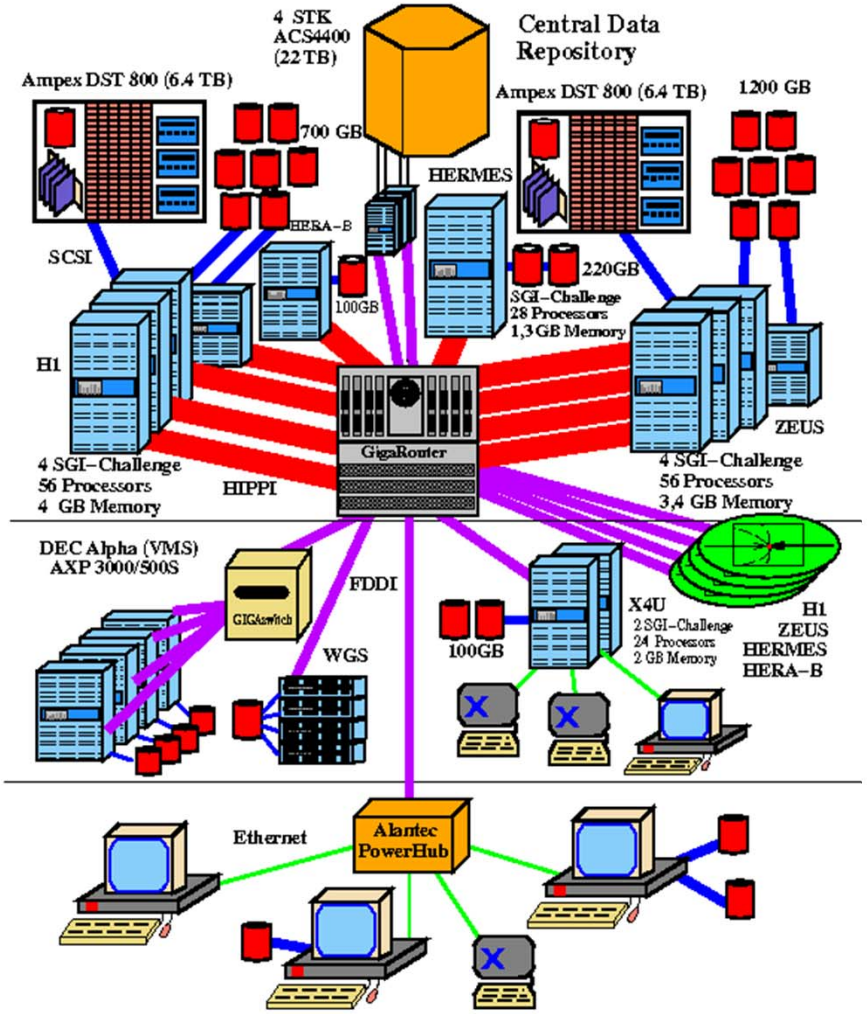
- „CERN Rule“: Take central support when it hurts less than doing it by yourself
- Commodity Hardware
- High Performance “on the desktop”
- Security allowed us to stop/help others.

> Now

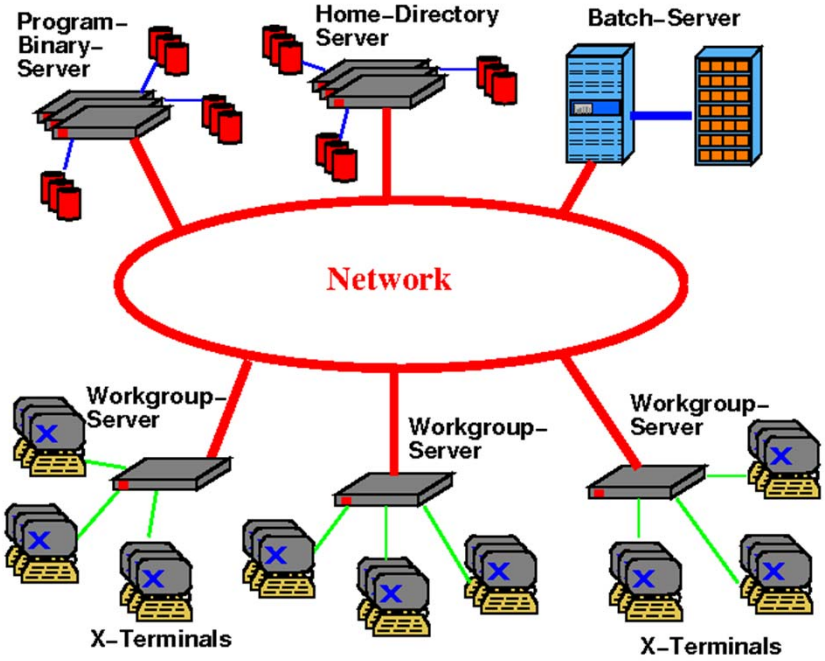
- Things are so complex, that real experts and big/excellent hardware and communication is needed
- Towards Mainframe Like Structures
- High Performance with Money
- Virtualization changes Administration

DESY Infrastructure 1996+

> Network View

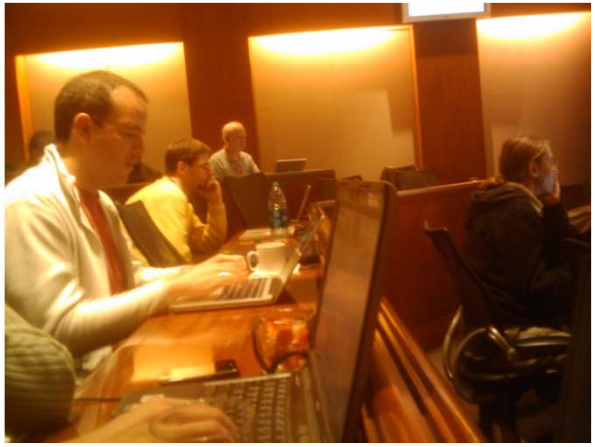


> Functional View

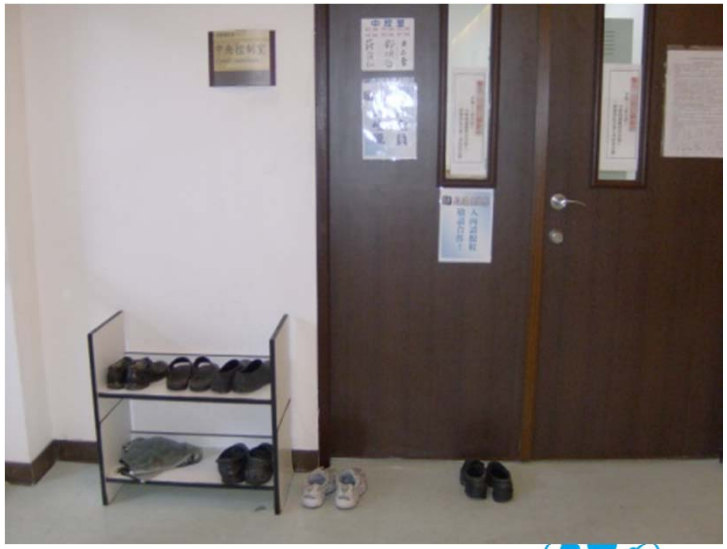


Miscellaneous Pictures

- Alpine (Ithaca, DESY)

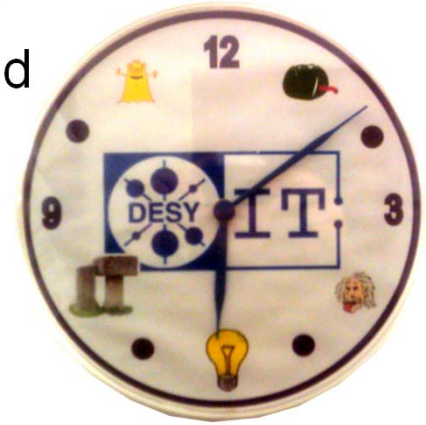


- Men at Work (Ithaca)
- SeKUHrity (Umea)
- No “Sneaker Network” (Taipeh)



Conclusion

- HEPiX is helpful
  - Exchange of ideas, plans, knowledge, …
- HEPiX is fun
  - Rich mixture of pleasant people
- HEPiX is worthwhile to attend
  - To be continued



HEPiX is System Time !