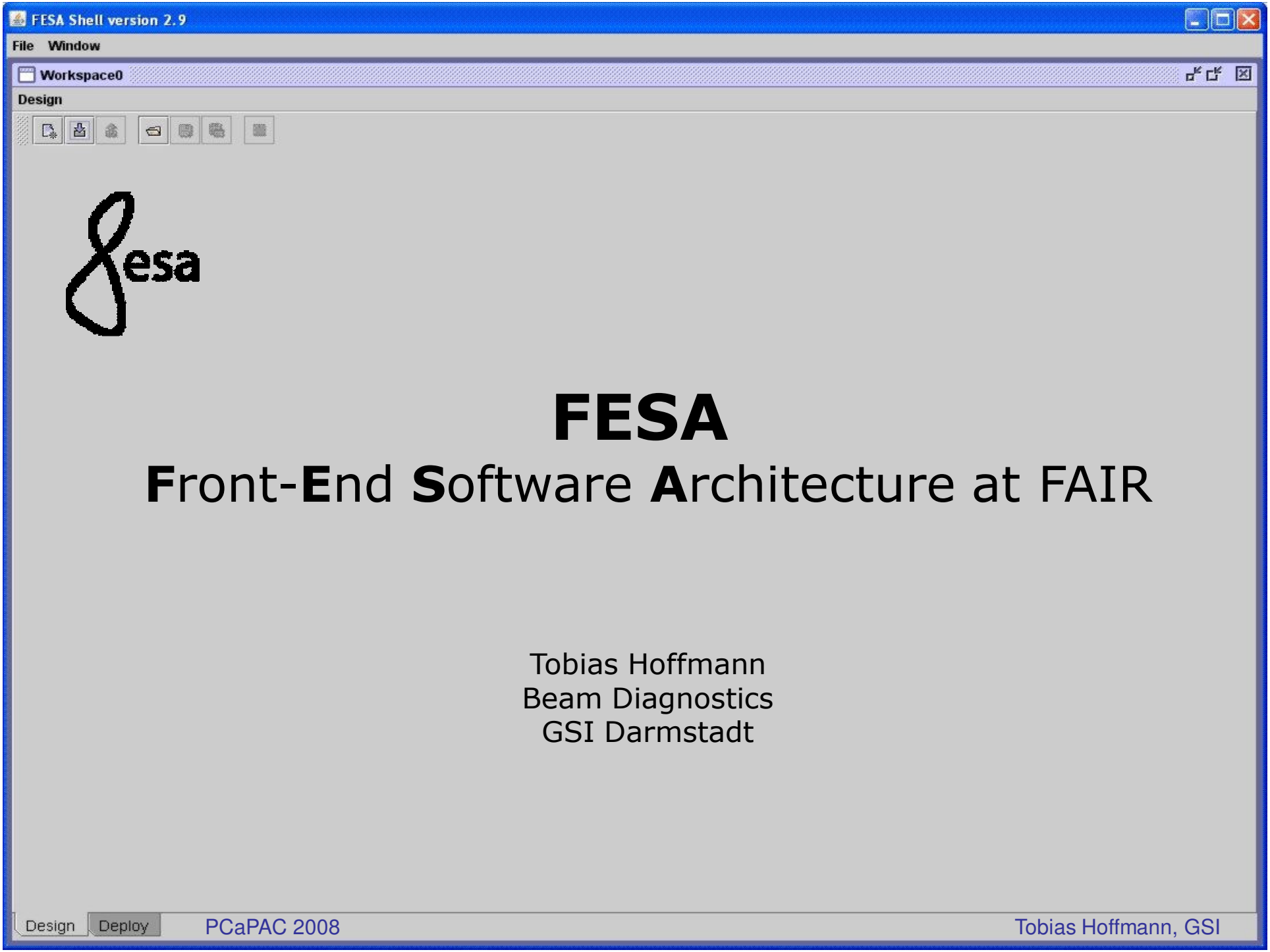


FESA

Front-**E**nd **S**oftware **A**rchitecture at FAIR

Tobias Hoffmann
Beam Diagnostics
GSI Darmstadt

FESA Shell version 2.9

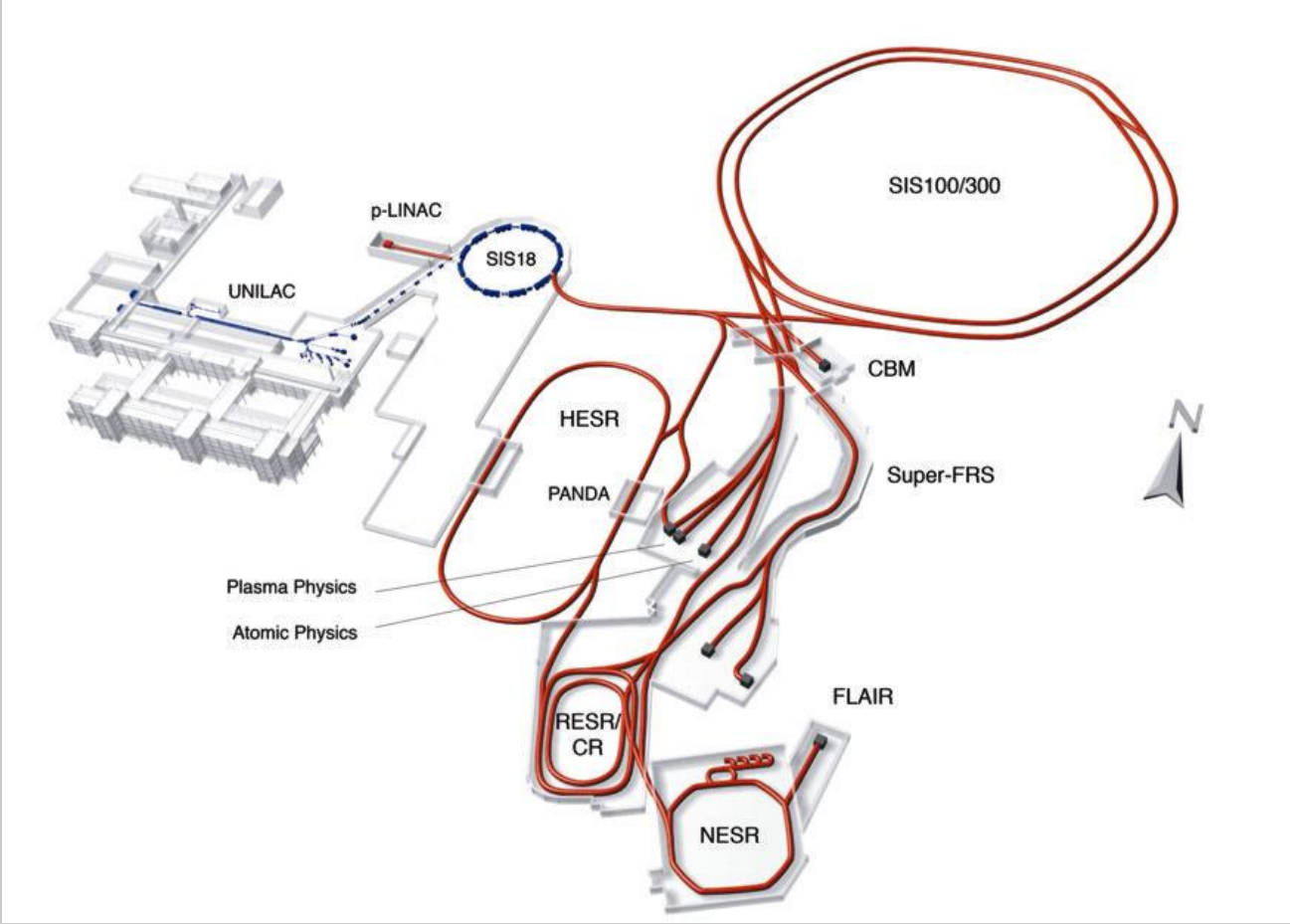
File Window

Workspace0

Design

FAIR

Facility for Antiproton and Ion Research



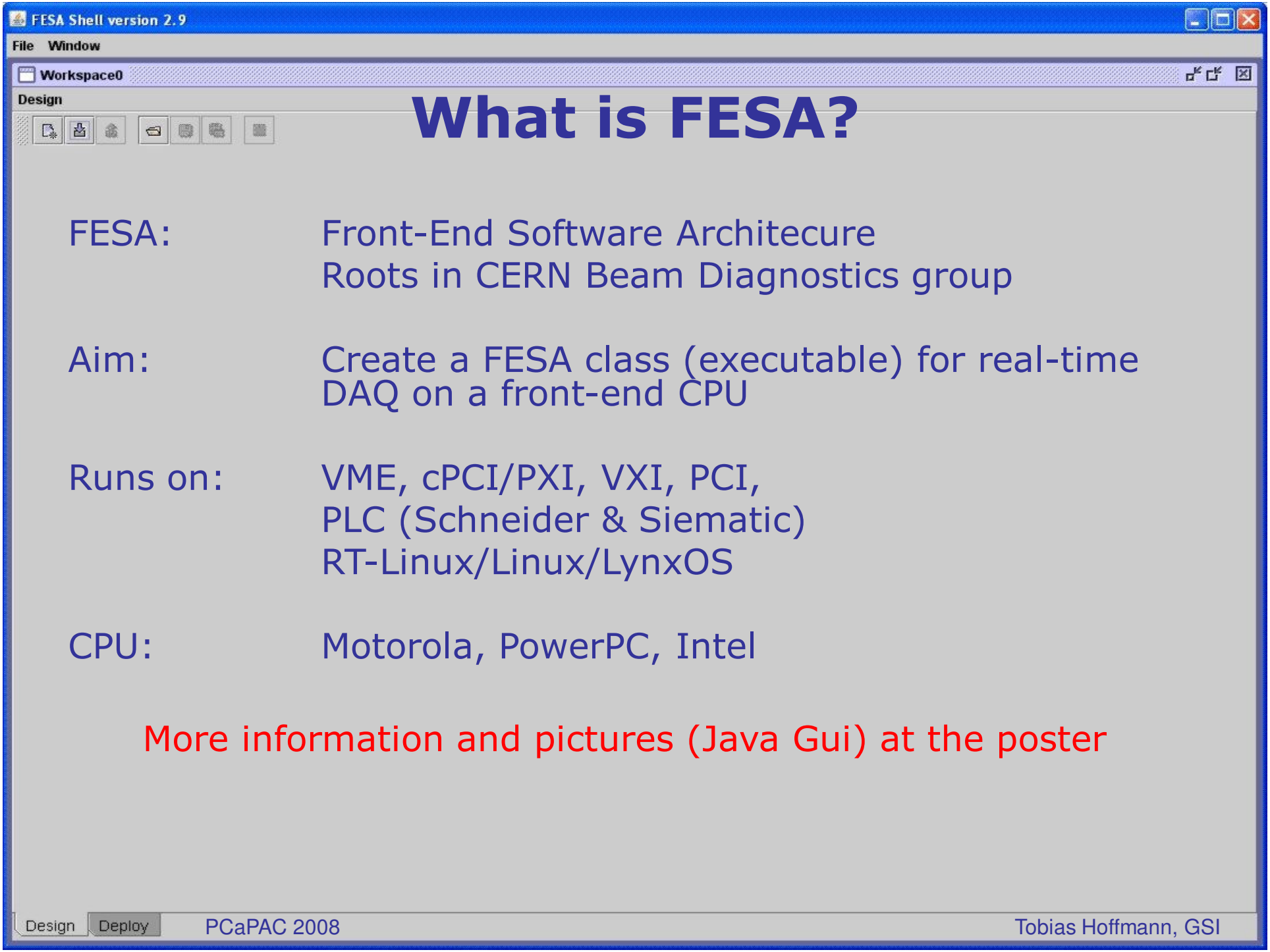
International Project

Min. 14 members

9 new accelerators

1.2 x 10^9 € Costs


FESA Shell version 2.9
File Window
Workspace0
Design
Why a new control system ?
Change from control system to a control- and data acquisition system
New hardware and technologies for high performance (e.g. Imaging)
Standardization due to:
external partners (in-kind contributions)
many many distributed devices
maintenance
Design
Deploy
PCaPAC 2008
Tobias Hoffmann, GSI



What is FESA?

FESA:	Front-End Software Architecure Roots in CERN Beam Diagnostics group
Aim:	Create a FESA class (executable) for real-time DAQ on a front-end CPU
Runs on:	VME, cPCI/PXI, VXI, PCI, PLC (Schneider & Siematic) RT-Linux/Linux/LynxOS
CPU:	Motorola, PowerPC, Intel

More information and pictures (Java Gui) at the poster

FESA Shell version 2.9

File Window

Workspace0

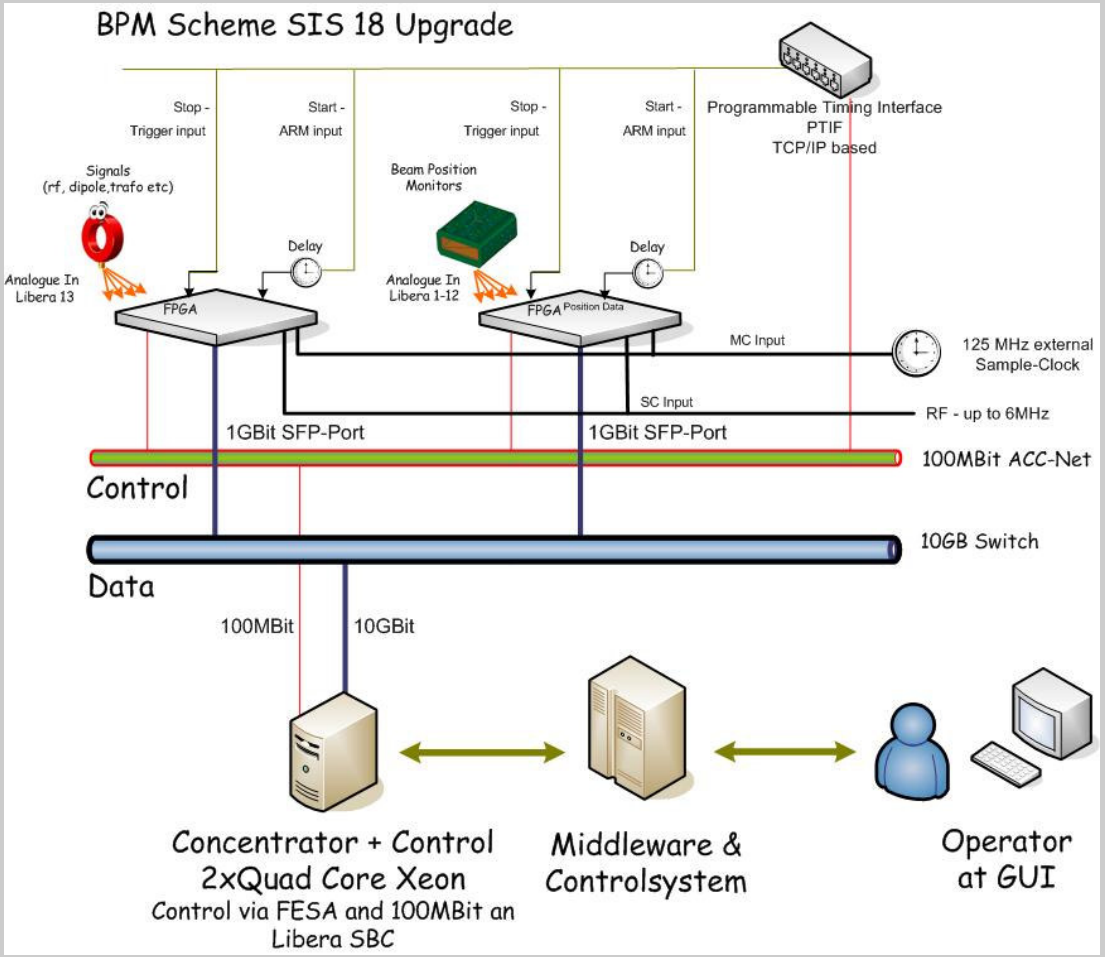
Design

FESA Test Project

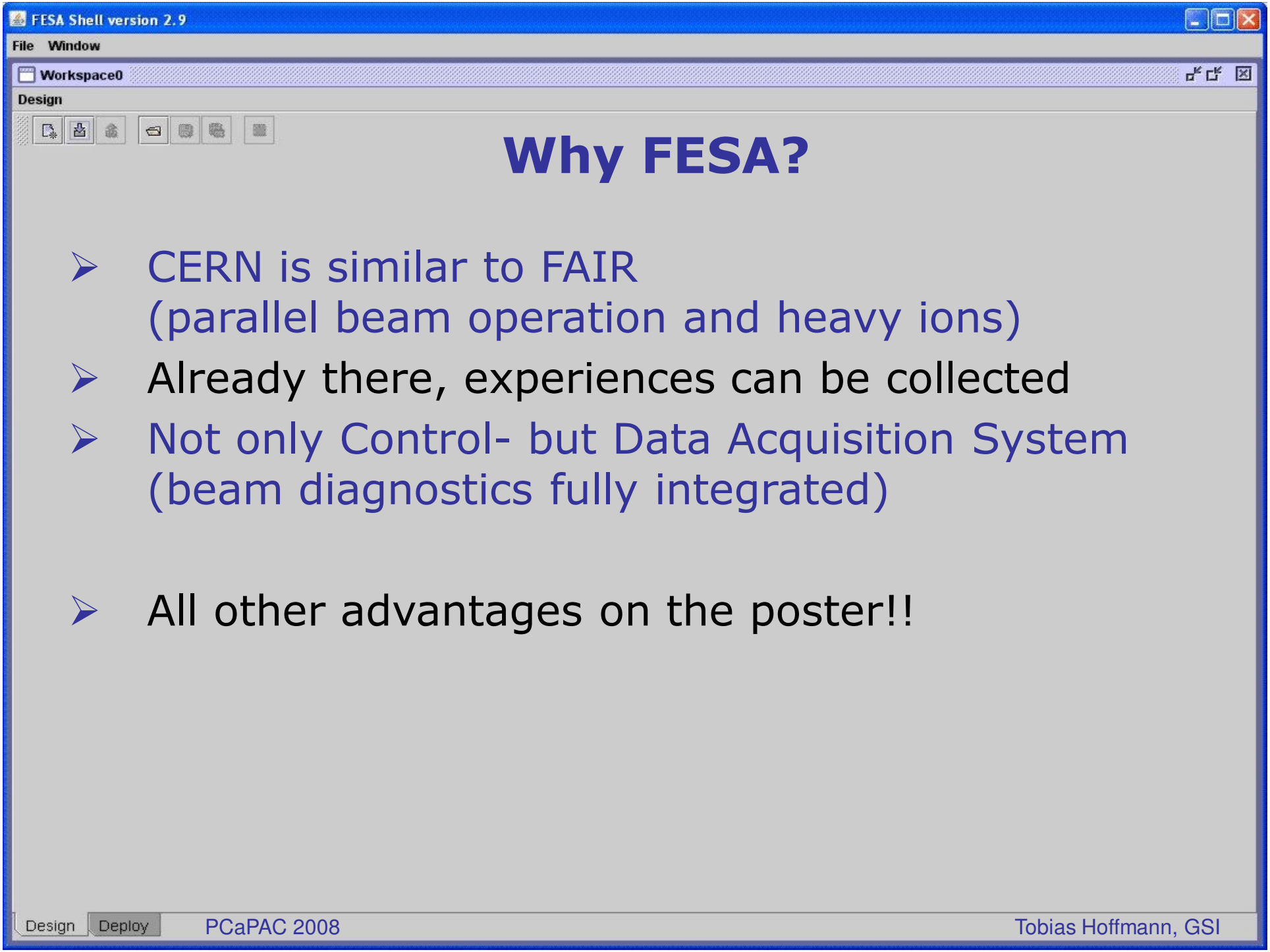
SIS18 Bunch-to-bunch BPM system

Objective:
Check complete FESA at GSI

- 12 Libera Hadron (I-Tech)
- 10GBit network
- Installation of application level (Java-GUI)
- Functional and performance checks of complete hierachy
- Porting FESA and Timing Receiver Library to 64Bit



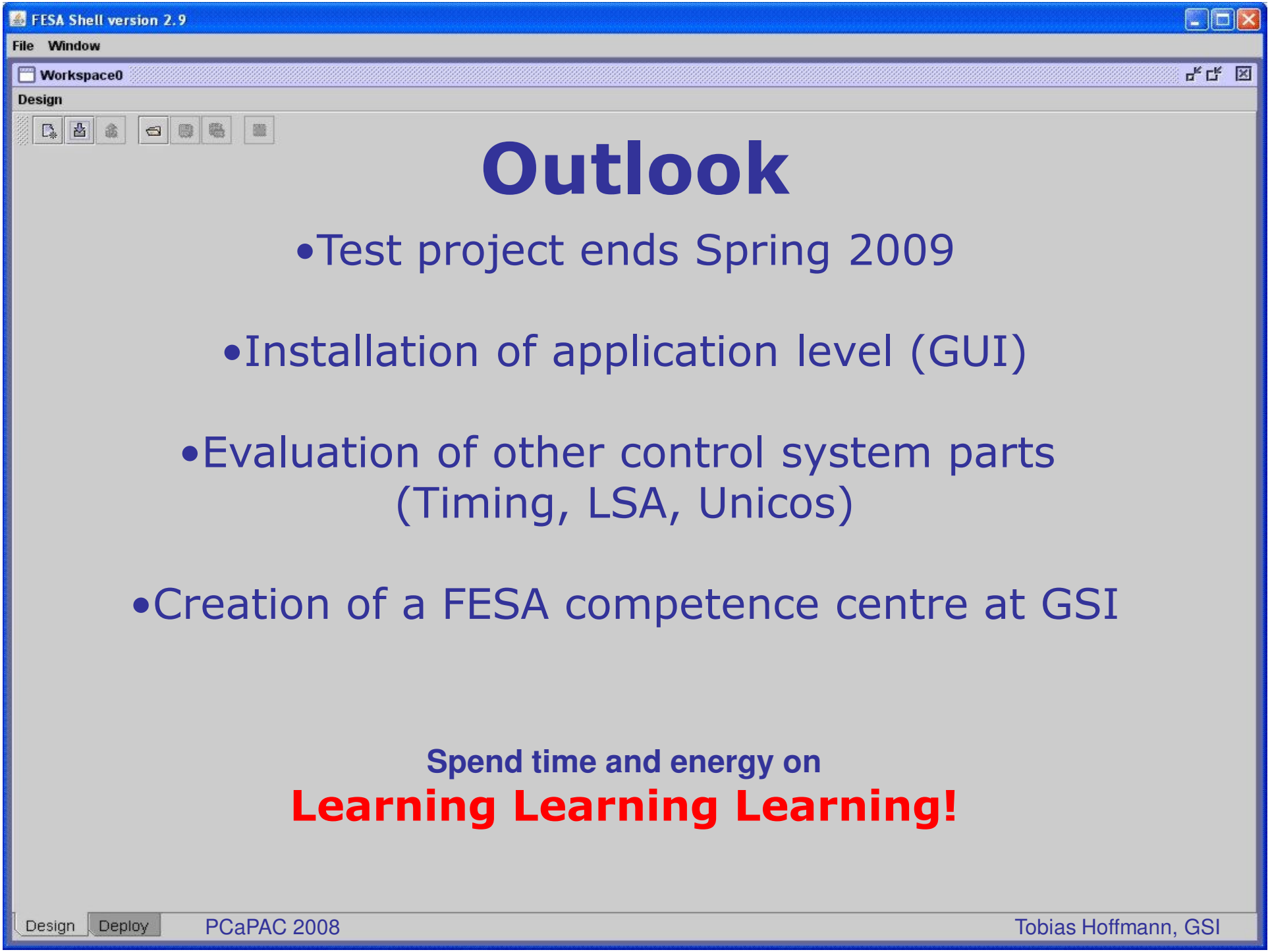
Design Deploy

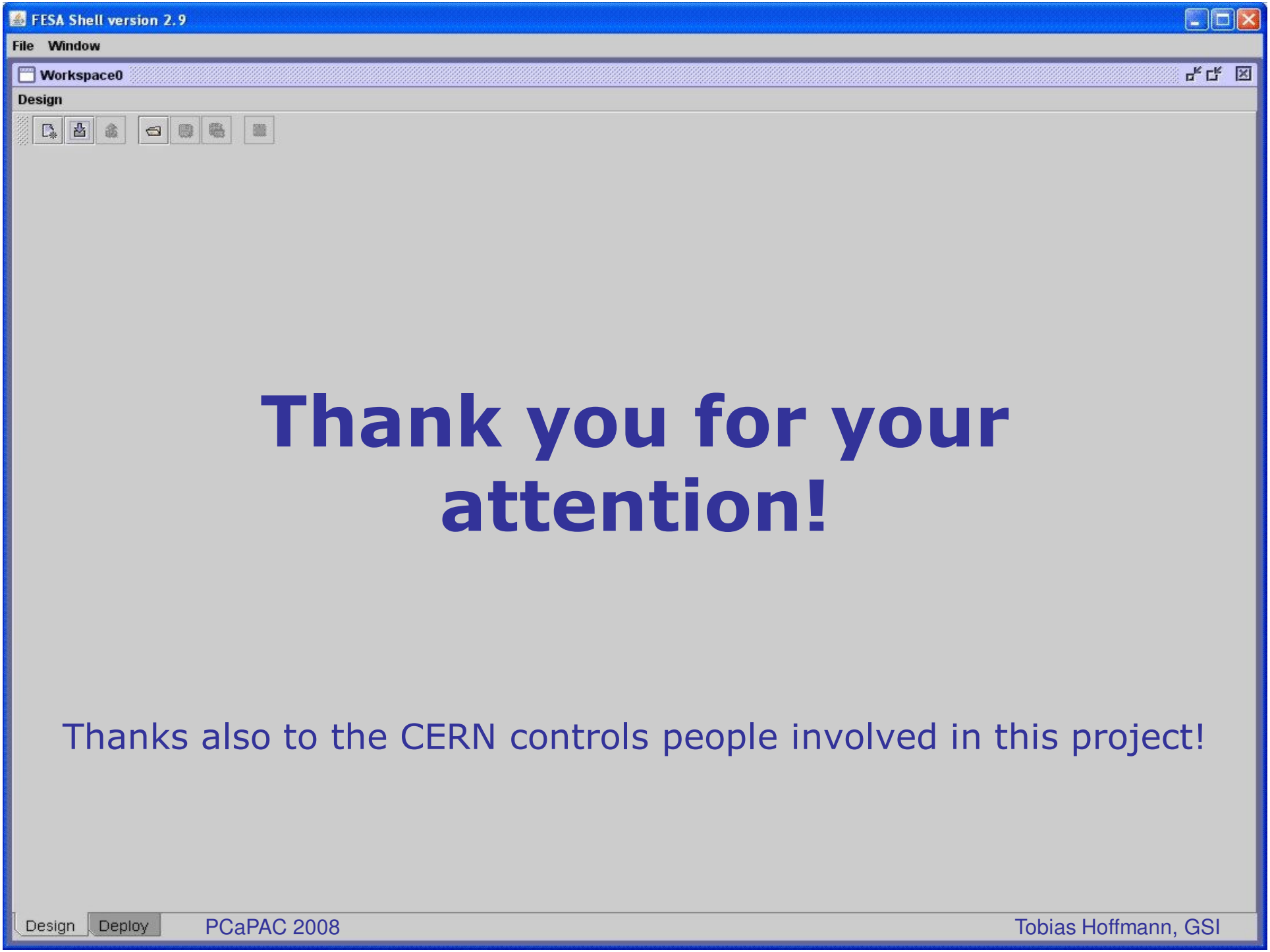


Why FESA?

- CERN is similar to FAIR
  (parallel beam operation and heavy ions)
- Already there, experiences can be collected
- Not only Control- but Data Acquisition System
  (beam diagnostics fully integrated)

- All other advantages on the poster!!


FESA Shell version 2.9
File Window
Workspace0
Design
Outlook
•Test project ends Spring 2009
•Installation of application level (GUI)
•Evaluation of other control system parts
(Timing, LSA, Unicos)
•Creation of a FESA competence centre at GSI
Spend time and energy on
Learning Learning Learning!
Design
Deploy
PCaPAC 2008
Tobias Hoffmann, GSI


FESA Shell version 2.9
File Window
Workspace0
Design
Thank you for your attention!
Thanks also to the CERN controls people involved in this project!
Design
Deploy
PCaPAC 2008
Tobias Hoffmann, GSI