ELACCO mid-term Review

Fellow: Barbara Beccati

Supervisor: Frans Meijers

14 November 2008
CERN, Geneva

I am...

EDUCATION

2002-2005

Bachelor in Electronic and Telecommunication Engineering

Department of Engineering, University of Ferrara, Italy

2005-2008

Master in Electronic and Telecommunications Engineering (23 July 2008)

THESIS: Development of the system test for the LHC tune measurement and abort gap monitoring.

Department of Engineering, University of Ferrara, Italy

CERN EXPERIENCE

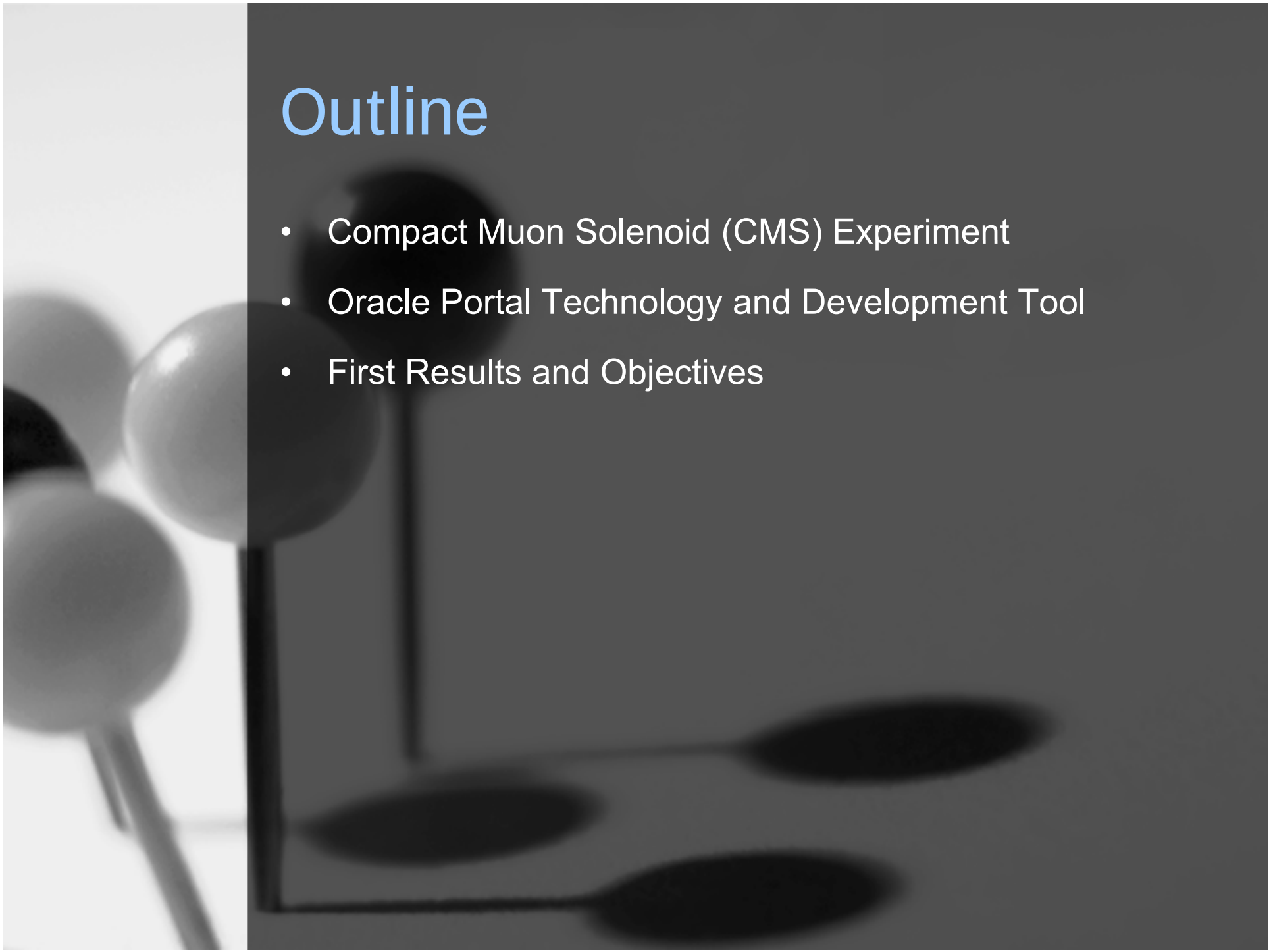
2007-2008

CERN Technical Programme In Engineering, Computing and Applied Science

- LHC project: development of a system test for the LHC tune measurement and abort gap monitoring;
- Design and development of the system and the SW (Labview) for signal processing

SINCE 2008, AUGUST 1st

Marie Curie Fellowship Programme, CMS group

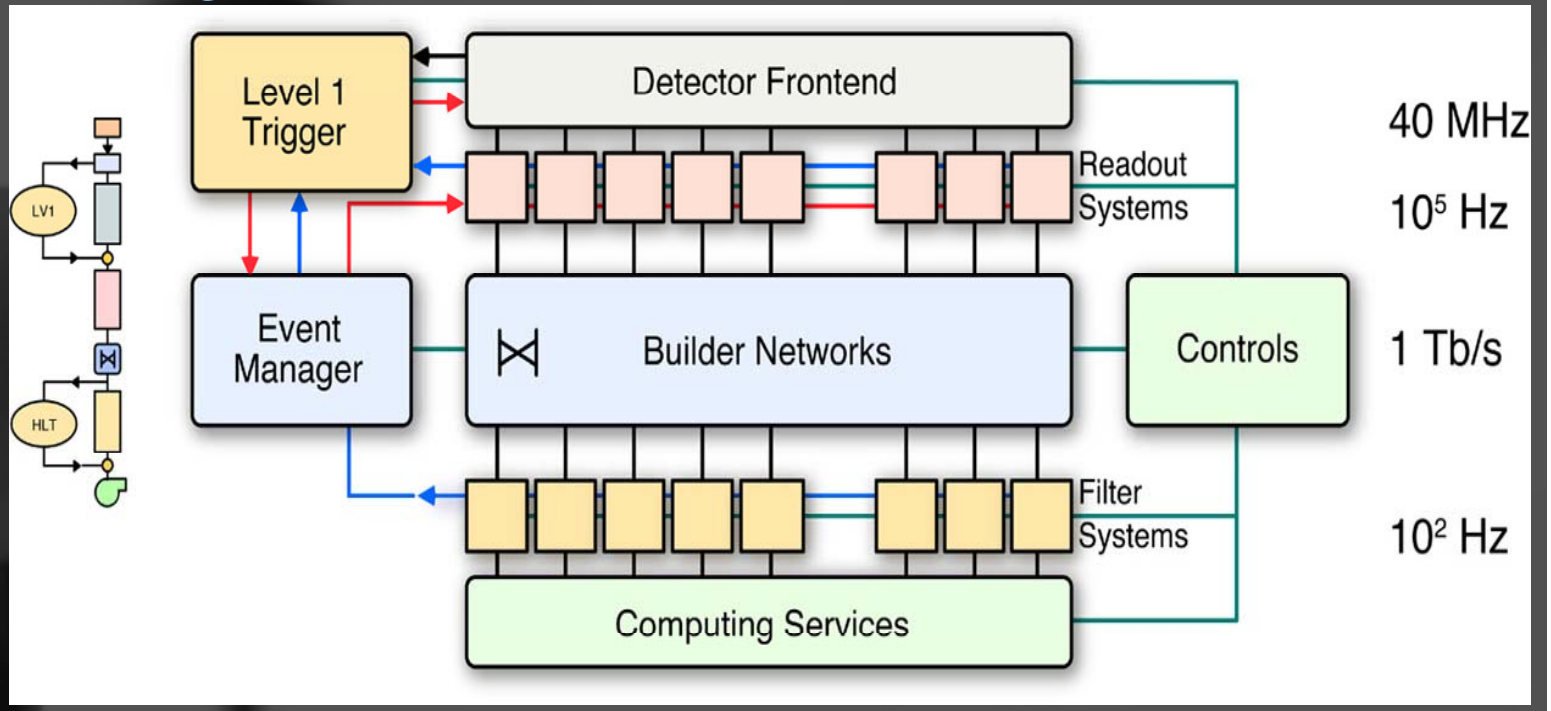


Outline

- Compact Muon Solenoid (CMS) Experiment
- Oracle Portal Technology and Development Tool
- First Results and Objectives

The Compact Muon Solenoid DAQ Baseline Structure

CMS



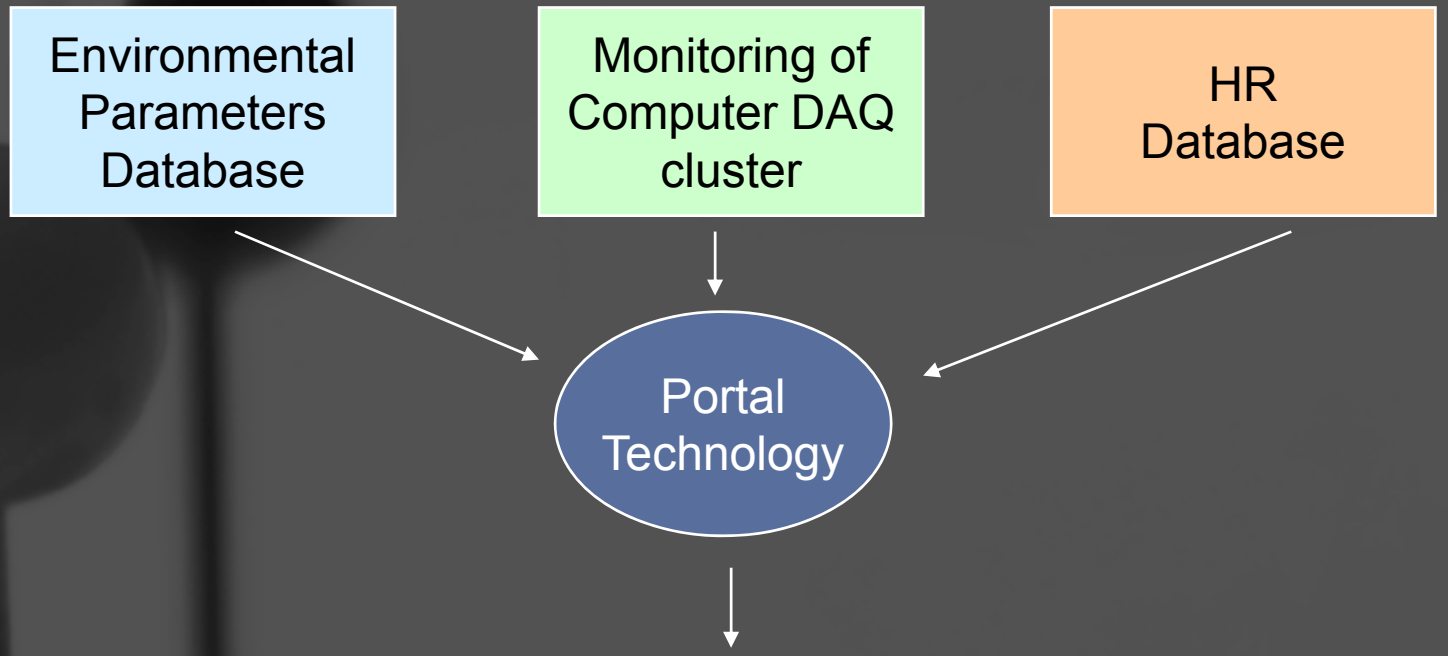
Collision rate	40 MHz
Level-1 Maximum trigger rate	**100 kHz**
Average event size ≈	**1 Mbyte**
Event Flow Control≈ Mssg/s	10^6

No. of In-Out units	**512**
Readout network bandwidth	**≈1 Terabit/s**
Event filter computing power	**≈10^6 SI95**
Data production	≈Tbyte/day
No. of PC motherboards	≈Thousands

HIGH COMPLEXITY AND LARGE NUMBER OF COMPONENTS

Oracle Portal Technology

SEVERAL DATA SOURCES

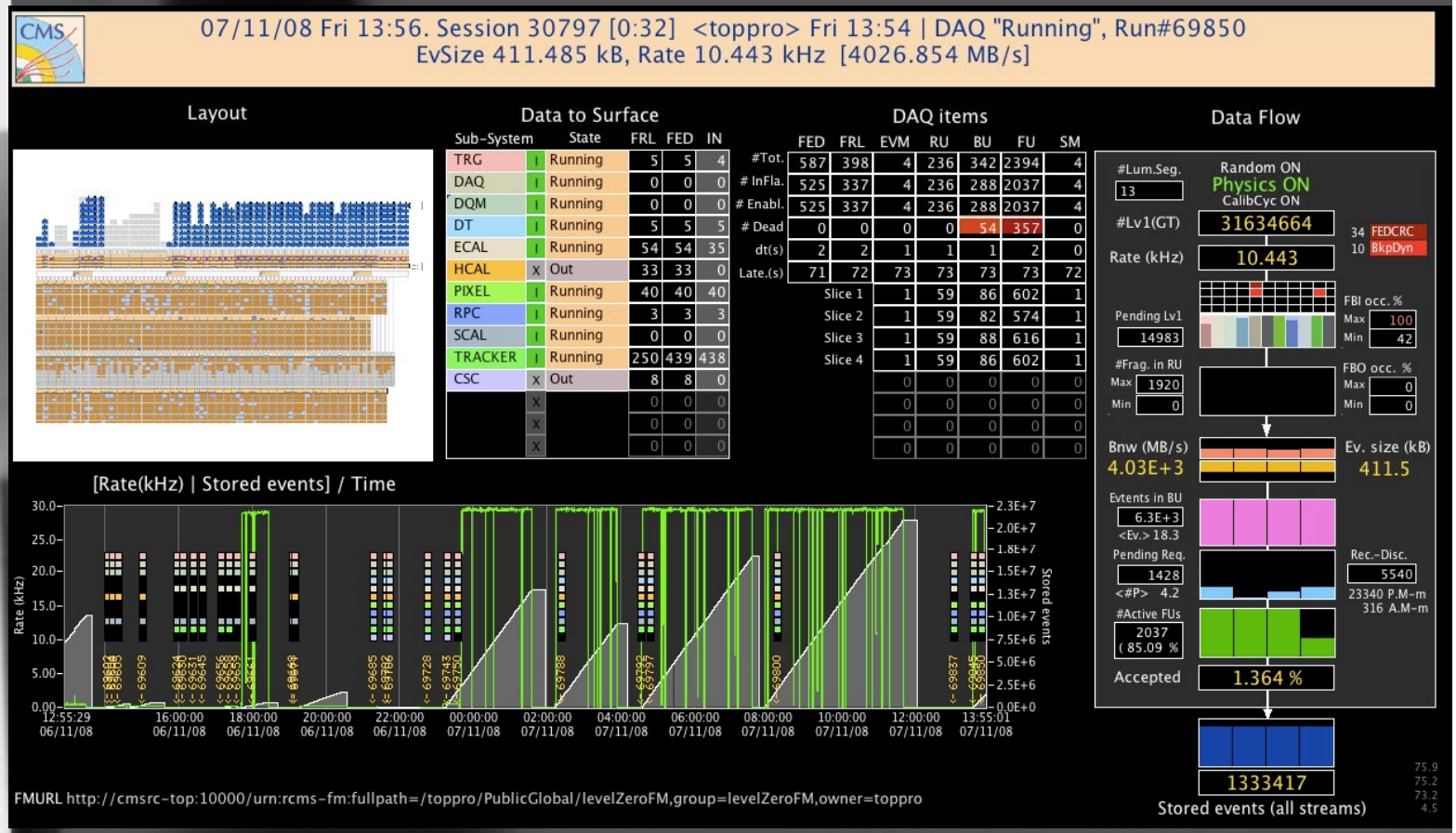


WHY ORACLE PORTAL

- Quickly build, administer, and deploy portals
- Standards driven, scalable, secure, and dynamic

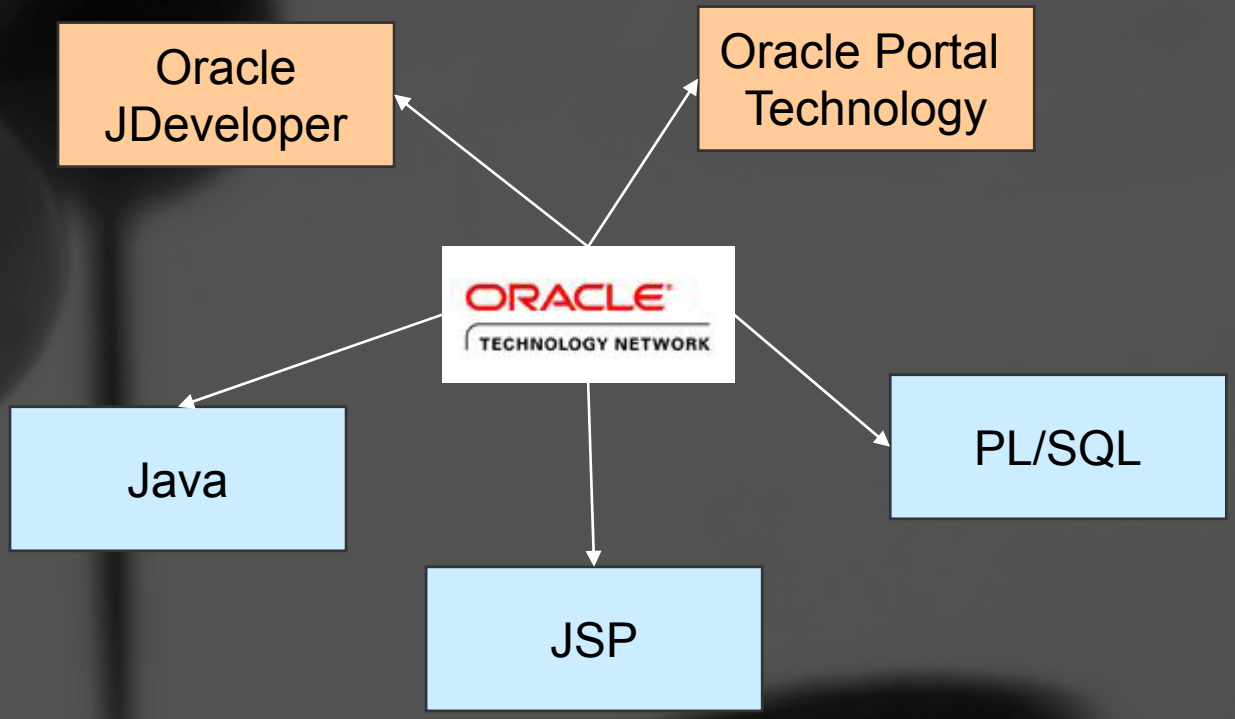
Oracle Portal and Portlets

WHAT IS A PORTLET



A portlet is a reusable, pluggable Web component that can draw content from many different sources.

Oracle Java Developer Tool



First Results

Since 1st August until November

Acquisition of a global view of the Oracle Portal Technology

- Training with the Oracle JDeveloper Tool
- Java, HTML and SQL concepts review
- JSP, JavaScript, PL\SQL studying

In practice

- Portlet Development for the Shiftlist Database

CERN Training

Java5 course: new language features

Main focus on the addition introduced with Java version 5

(24 hours, 15 – 17 October 2008)

Further Objectives

Until March 2009

Introduction to the project and to the Oracle Portal Technologies

Further CERN Training

- J2EE Web Application course: JSP developing and new standard libraries
- Oracle courses: development and management in Oracle environment

2009-2010

- Mastering the Oracle JDeveloper tool
- Development of complex web components for portal pages in order to allow a quick and easy management of the CMS monitoring data

Other training courses

- CERN Training: Management and Communication courses
- CERN Training: Language courses - French (general and professional)

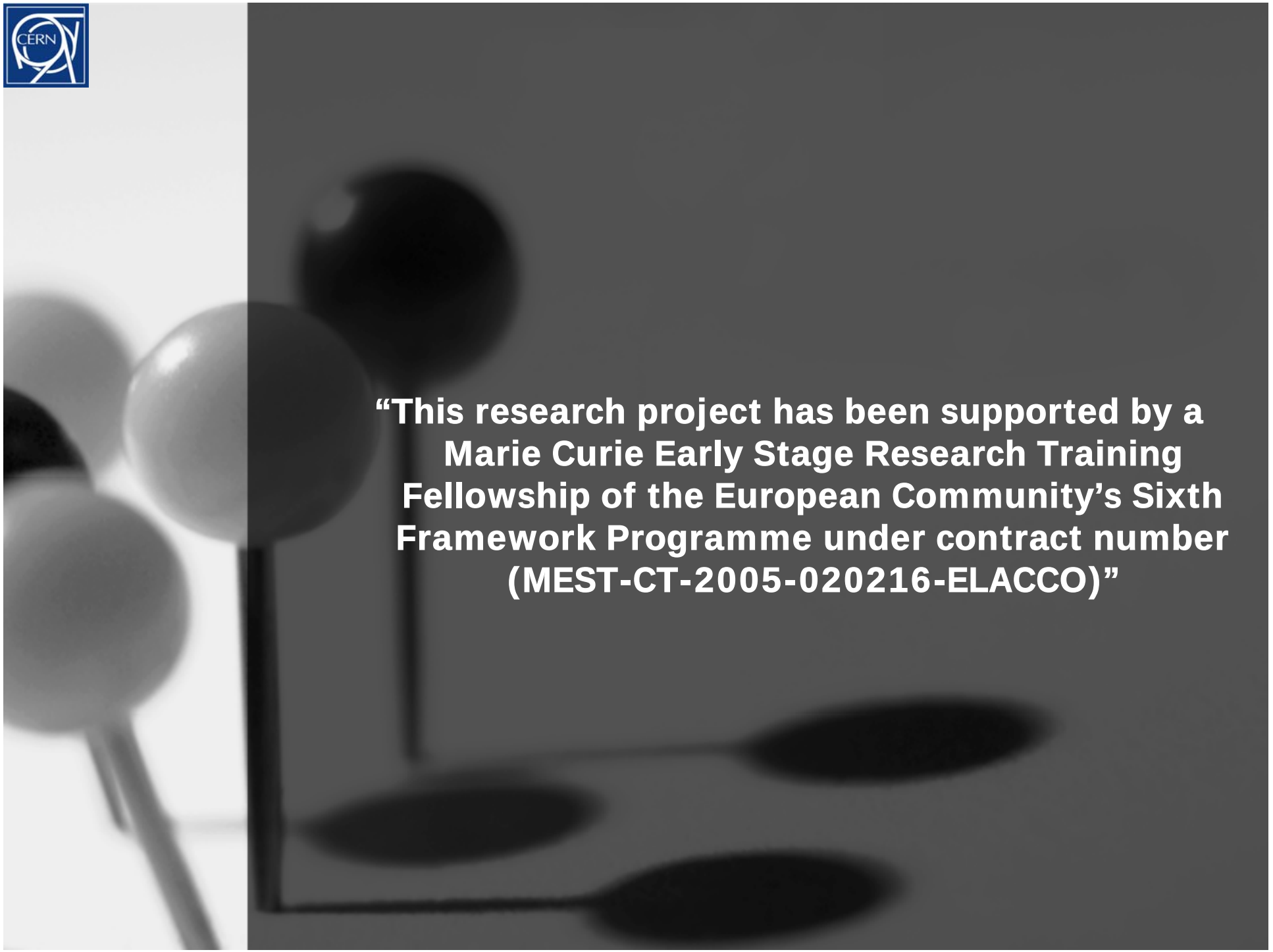
Training Resume

Technical

- Java5 course: new language features (CERN, 15 – 17 October 2008)

Languages

- General and Professional French Course – Intermediate Level (CERN, 06/10/2008 – 12/12/2008)



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