# Update on Grid Monitoring Solutions

5th openlab Major Review Meeting
18 Sep 2008

Max Böhm
EDS / CERN openlab

max.boehm@eds.com

*EDS*
an HP company

- **Messaging System for the Grid activity**
  (Daniel Rodrigues) → slides

- **Monitoring visualization activity (GridMap)**

- **Conclusions**

# GridMap Monitoring Visualization

- ## New release (V1.0, Feb 2008)
  - ### In productive use

  http://gridmap.cern.ch

  

- ## Package with documentation and source code available



### New features



size by CPU performance



displays more services



shows reliability and maintenance
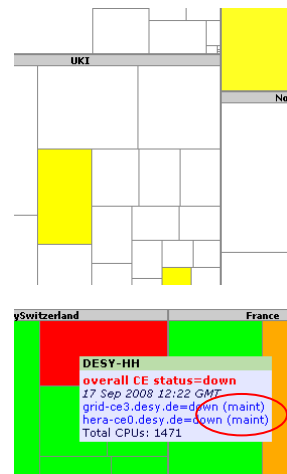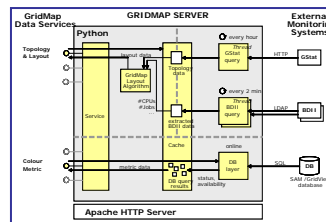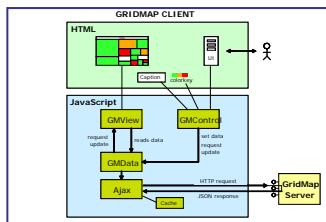
- ~4.500 unique visitors (Jan-Sep 2008)



**Pages** include AJAX refresh call sent automatically every 5 minutes

- # CERN Open Day

  - ## Demo

  - ## Covered by iSGTW

    iSGTW Images of the week, 16 April 2008
    http://www.isgtw.org/?pid=1001019
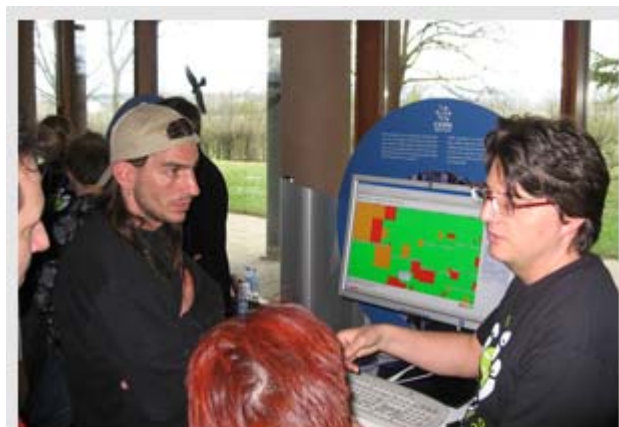


Volunteers showcased emerging technologies including GridMap (CERN openlab/EDS), a visualization that shows the status of different sites in the Worldwide Large Hadron Collider Computing Grid. Green indicates the site is "OK," orange indicates degraded service and red indicates that the site is down.
*Image courtesy of Anton Topurov*

- WLCG Critical Services Map

- Generic GridMaps (prototype)

- CMS GridMaps

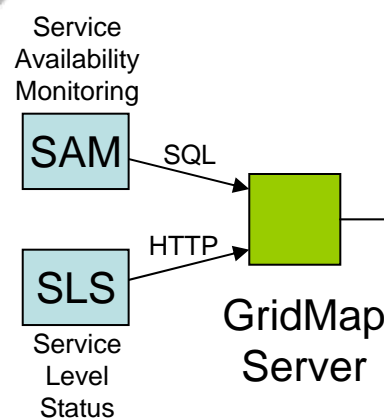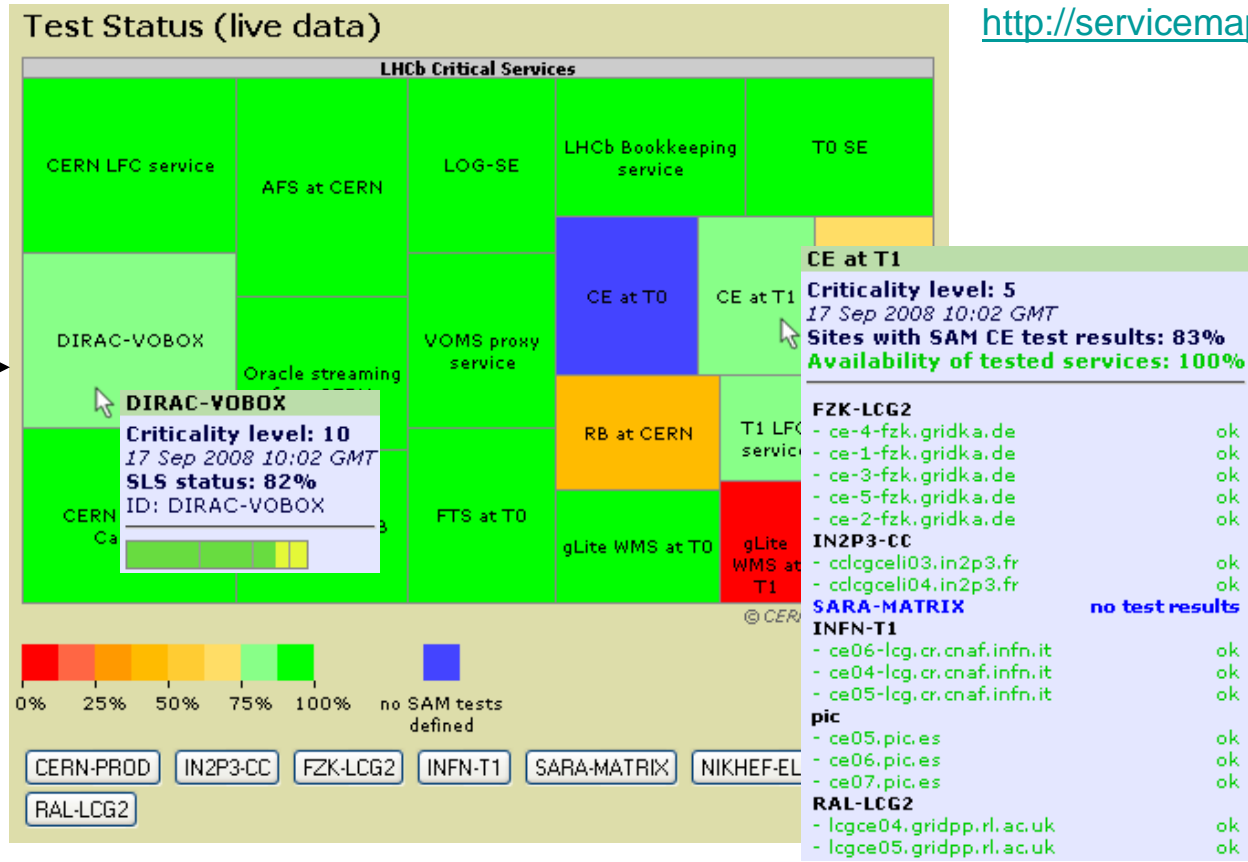All of the above are based on the *GridMap System* architecture and reuse the software framework.

- ## Shows "Critical Services" of LHC experiments
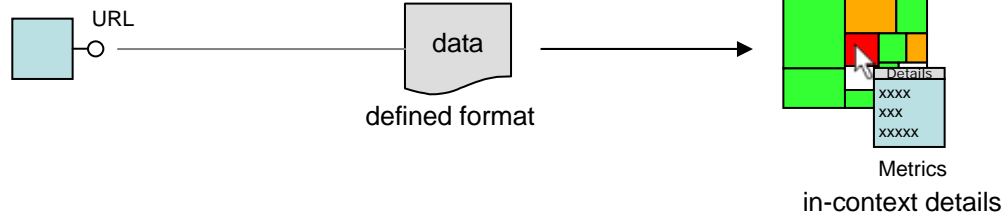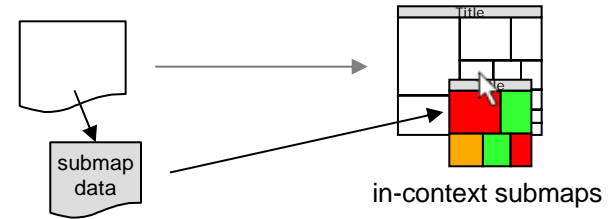


http://servicemap.cern.ch

# Generic GridMaps (Work in Progress)

- GridMap description data format
- Mash-up of distributed data sources



Description
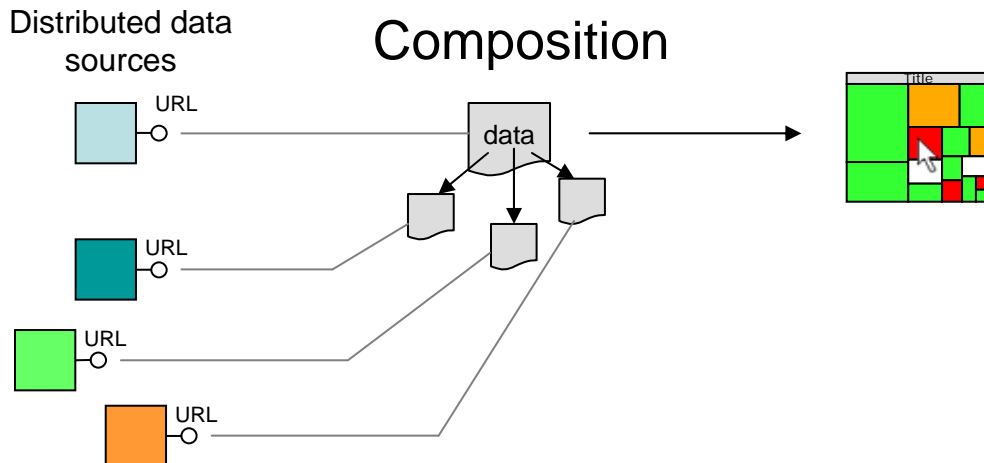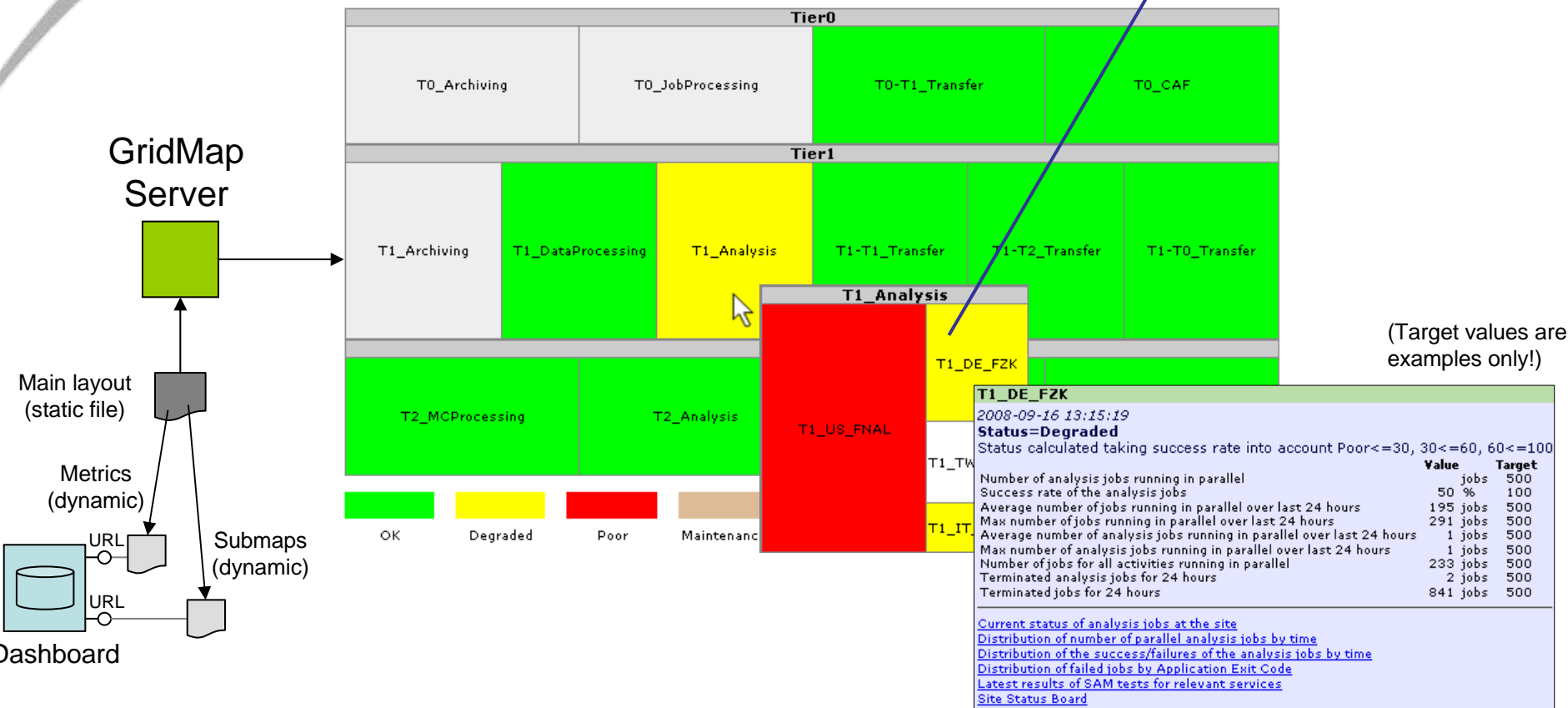(topology, metrics)

defined format

Topology
Title
Details
xxxx
xxx
xxxxx
Metrics
in-context details

Linkage of submaps

Title

submap data

in-context submaps

Distributed data sources

Composition

data

Title

## CMS workflow view

# CMS GridMaps (Work in Progress)

- Shows <u>experiment specific</u> top-level view
- Linkage to existing views

http://gridmap-cms.cern.ch
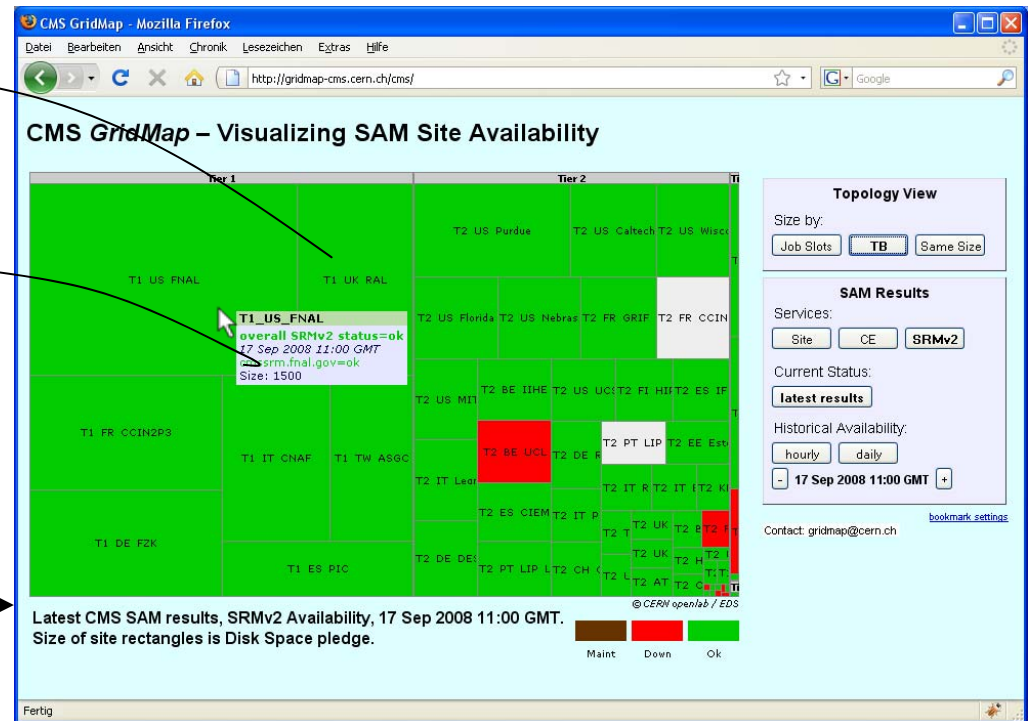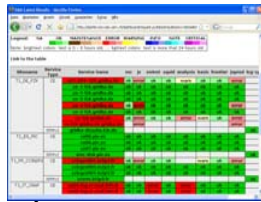
http://dashb-ssb.cern.ch/cms/gridmap.html

Existing Monitoring Systems
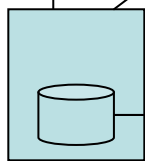
Site Status Board

(P. Saiz)

CMS SAM Visualization
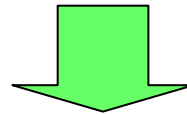
Data Sources

SAM

CMS SiteDB

CMS Dashboard

GridMap Server

- The LHC has been started...
  - New Grid usage patterns will be seen
  - Grid reliability is mission critical for LHC

- Monitoring is more important than before

- Increasing need for experiment specific (E2E) views

- Better visualizations help improve reliability

- Reliable messaging is the foundation for credible monitoring