

Visualizing the state of the Grid with GridMaps

Service Availability Monitoring (SAM) results

GridMaps are based on a novel use of Treemap visualizations in the context of the Grid. Each site of the Grid is represented by a **rectangle** of different **size** and **color** allowing 2 dimensions of data to be visualized simultaneously. For example:

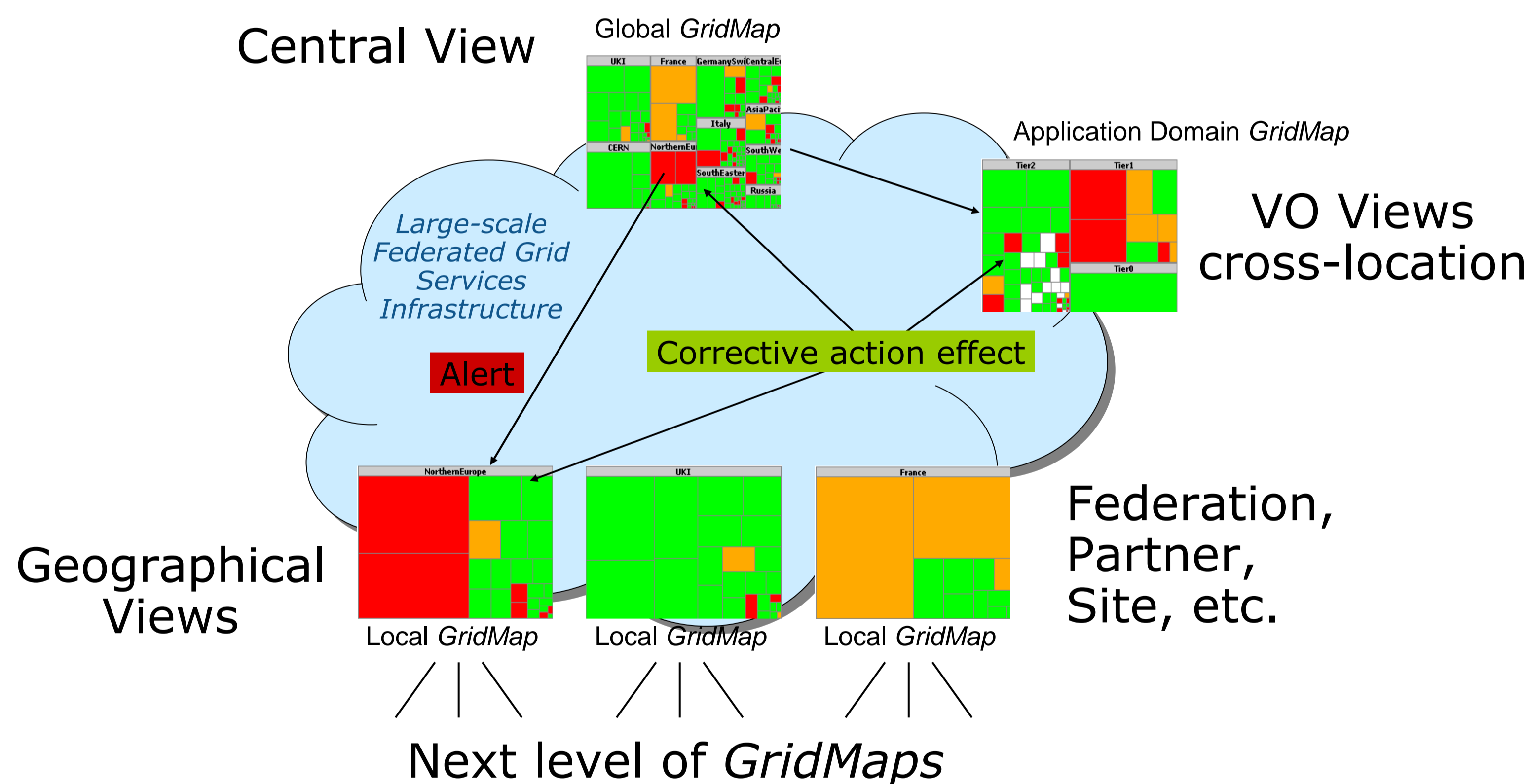
- size of rectangle = #CPUs
- color of rectangle = service availability

A failure of a site becomes immediately visually correlated to the size of the site and its potential impact.



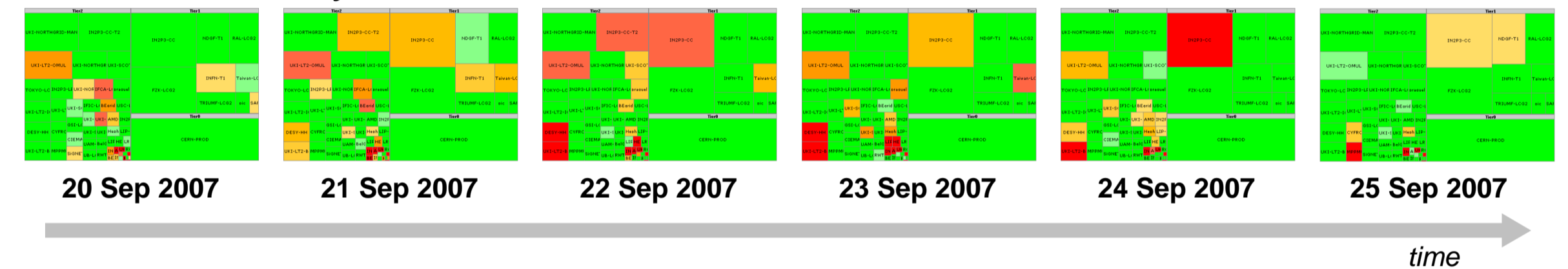
Same Tool for Different Views

The same type of visualization can be used from different VO and geographical perspectives.

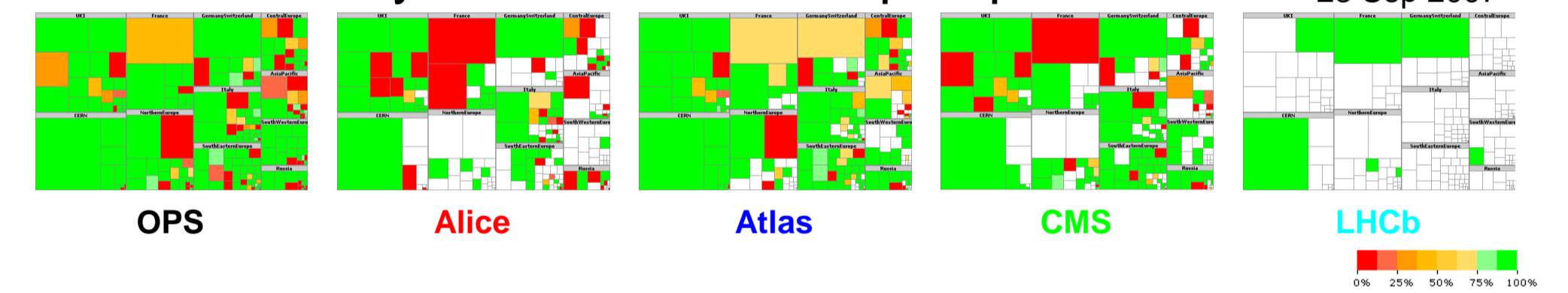


Discover Trends & Correlations

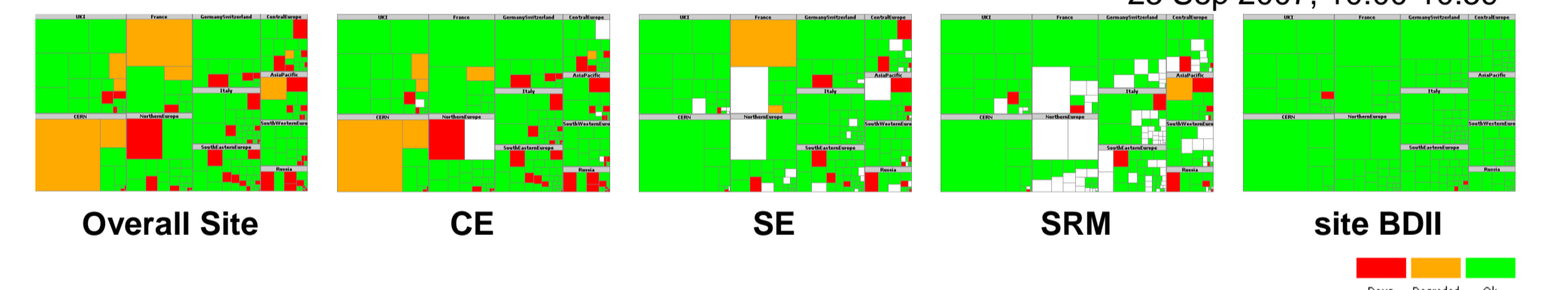
Site Availability over time:



Site Availability from different VO perspectives:

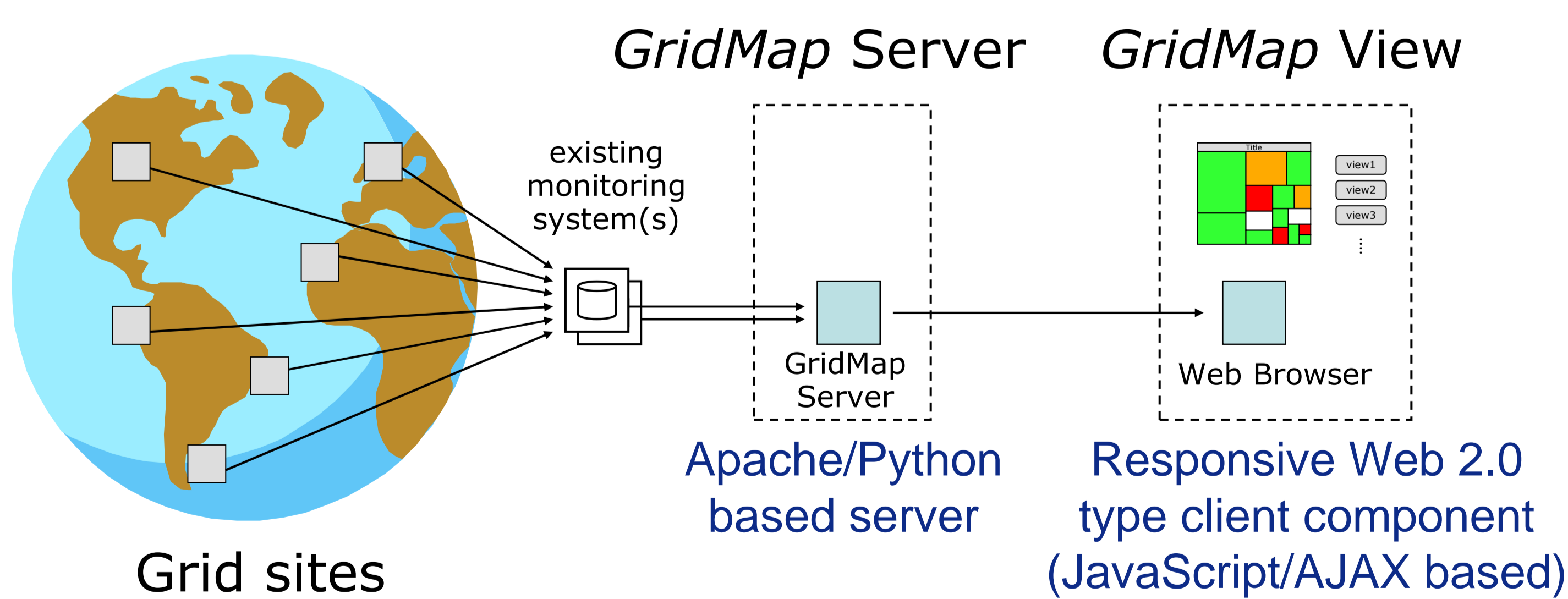


Status of different Site Services:



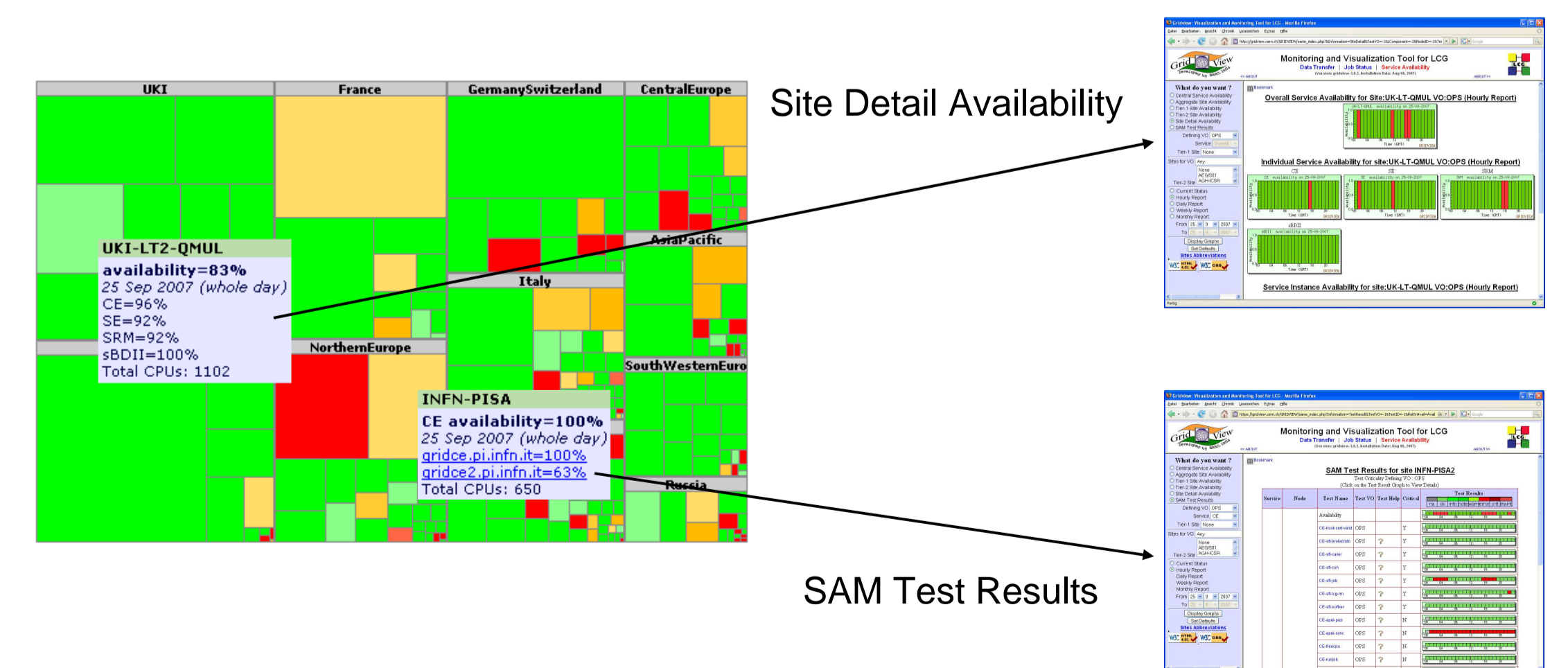
By quickly switching between different metrics or paging through different points in time and correlating the associated patterns, unprecedented insight into failure mechanisms and issues is achieved.

GridMap Prototype Architecture



Integration with other Tools

Clicking on a site opens a link to GridView/SAM



EDS is a contributor to the CERN openlab

The purpose of the joint project between CERN and EDS is to carry out research and development in the field of *monitoring, management and operation of Grid services*.

This research is part of the CERN openlab / EDS collaboration and has taken place within the CERN-IT Grid Deployment group, managed by Dr. Ian Bird.