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## Monitoring CMS Tracker construction and data quality using a grid/web service based on a visualization tool

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The complexity of the CMS Tracker (more than 50 million channels to monitor) now in construction in ten laboratories worldwide with hundreds of interested people, will require new tools for monitoring both the hardware and the software. In our approach we use both visualization tools and Grid services to make this monitoring possible. The use of visualization enables us to represent in a single computer screen all those million channels at once. The Grid will make it possible to get enough data and computing power in order to check every channel and also to reach the experts everywhere in the world allowing the early discovery of problems.

We report here on a first prototype developed using the Grid environment already available now in CMS i.e. LCG2. This prototype consists on a Java client which implements the GUI for Tracker Visualization and a few data servers connected to the tracker construction database, to Grid catalogs of event datasets or directly to test beam setups data acquisition. All the communication between client and servers is done using data encoded in xml and standard Internet protocols.

We will report on the experience acquired developing this prototype and on possible future developments in the framework of an interactive Grid and a virtual counting room allowing complete detector control from everywhere in the world.

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