Grids Today, Clouds on the Horizon

By the time of CCP 2008, the world's largest scientific machine – the Large Hadron Collider – should have been cooled down to its operational temperature of below 2^0K and injection tests should have started. Collisions of proton beams at 5 + 5 TeV are expected within one to two months of the initial tests, with data taking at design energy (7 + 7 TeV) now foreseen for 2009.

In order to process the data from this world machine, we have put our "Higgs in one basket" – that of Grid computing.

After many years of preparation, 2008 has seen a final "Common Computing Readiness Challenge" (CCRC'08) – aimed at demonstrating full readiness for 2008 data taking, processing and analysis. By definition, this relies on a world-wide production Grid infrastructure.

But change – as always – is on the horizon. The current funding model for Grids – which in Europe has been through 3 generations of EGEE projects, together with related projects in other parts of the world, including South America – is evolving towards a long-term, sustainable e-infrastructure, like the European Grid Initiative (EGI). At the same time, (potentially?) new paradigms, such as that of "Cloud Computing" are emerging.

This talk summarizes the (successful) results of CCRC'08 and discusses the potential impact of future Grid funding on both regional and international application communities. It contrasts Grid and Cloud computing models from both technical and sociological points of view. Finally, it discusses the requirements from production application communities, in terms of stability and continuity in the medium to long term.