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Interfacing with Sun Utility Computing, experience with on demand physics simulations on SunGrid

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The simulation program for the STAR experiment at Relativistic Heavy Ion Collider at Brookhaven National Laboratory is growing in scope and responsiveness to the needs of the research conducted by the Physics
Working Groups. In addition, there is a significant ongoing R&D activity aimed at future upgrades of the STAR detector, which also requires extensive simulations support. The principal computing facility used by STAR to conduct the simulations studies is a farm containing 400 nodes, with a total of 1000 CPUs.

OpenScience Grid (OSG) resources have been successfully used in the past and routinely used in STAR. However, the explosive growth of the computing power and the rapid evolution of the distributed computing landscape demand for the STAR Collaboration to dictate that all available options are considered, from Open source to commercial grids using a thin modular layer interfacing with the many "grids". Sun Grid from Sun Microsystems aims to deliver enterprise computing power and resources over the Internet, enabling developers, researchers, scientists and businesses to optimize performance, speed time to results, and accelerate innovation without investment in IT infrastructure.

We have successfully run a part of our production jobs on the SunGrid facility and will present our experience with its interface, performance and related issues and discuss ongoing efforts and development to interface it with the STAR Unified Meta-schedule (or SUMS).

Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

STAR

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