GRIA 5 is nearing the end of an extensive Beta testing programme and is scheduled for release on 3 July 2006.

GRIA is the first Grid middleware designed specifically to support dynamic B2B collaborations across organisational boundaries. This requires an infrastructure that can unite customers and suppliers, with commercial-strength security and with explicit trust and value exchange points. The infrastructure must be cost-effective to operate, and manual authorisation and administration decisions need to be minimised. It must be firewall and network friendly, dealing seamlessly with operational constraints including restrictive firewalls, network bandwidth limitations and standard security policies (ISO/IEC 17799:2005).

GRIA 4.x provides a robust and hardened Grid infrastructure, based on e-Commerce principles, supporting an explicit business process for the procurement and billing of computational resources. GRIA 4 has been very successful, and the accounting/QoS model has proven reasonably well-matched to end-user requirements, but the model is imperfect, and the compromises made in its implementation are unacceptable in the longer term. Users find it hard to predict the QoS requirements for jobs and data storage. They often overstate the true requirements to avoid premature termination. Service providers have to assume that QoS demands are realistic, and often decide that they cannot meet (user-inflated) requests, so that no services are provided. The resource model used is specific to job execution and data services, and has proved difficult to extend to other types of service, including OGSA-DAI and workflow services.

GRIA 5 addresses the lessons learnt from GRIA 4 by providing a modular and flexible management infrastructure. The accounting model has been extended to allow clients to manage users locally, within their organisations. Such users can access service provider accounts and service level agreements, removing the requirement to replicate access control lists at each service provider. The fixed-term QoS service has been replaced by an SLA management service that can be configured to monitor, constrain and bill against usage metrics defined by the service provider and depending upon the business needs. For example, a data provider may have metrics for transfer, storage or subscription to a specific data set, whereas an application service provider may have metrics for CPU time and concurrent application license usage. SLAs allow customers and service providers to negotiate commitments with soft constraints on resources and time periods, so users can give realistic estimates of their needs and won't lose everything if these are overrun. The GRIA services have been decoupled from one another, allowing IT vendors to integrate GRIA management capabilities with their applications to support inter-domain collaboration using a well-defined standards-based API. Key Web Service and Grid standards have been adopted, including WS-I Basic Profile, WS-I Basic Security Profile, secure WS-Addressing, a basic WSRF profile, WS-Federation and WS-Notification. Even with all this additional functionality, GRIA 5 still retains the market-leading portability and usability of GRIA 4. Service providers can be up and running in hours on a variety of operating systems, whilst clients can be accessing services in a matter of minutes.

GRIA 5 moves the game forward...commercial Grid deployment supporting business partnerships across the Internet is now a reality.