Annex 3.3. Tier-2 Services

Tier2 services shall be provided by centres or federations of centres as provided for in this MoU. In this Annex the term Tier2 Centre refers to a single centre or to the federation of centres forming the distributed Tier2 facility. As a guideline, individual Tier2 Centres or federations are each expected to be capable of fulfilling at least a few percent of the resource requirements of the LHC Experiments that they serve.

The following services shall be provided by each of the Tier2 Centres in respect of the LHC Experiments that they serve, according to policies agreed with these Experiments. These services also apply to the CERN analysis facility:

i. provision of managed disk storage providing permanent and/or temporary data storage for files and databases;
ii. provision of access to the stored data by other centres of the WLCG and by named AF's as defined in paragraph 1.4 of this MoU;
iii. operation of an end-user analysis facility;
iv. provision of other services, e.g. simulation, according to agreed Experiment requirements;
v. ensure network bandwidth and services for data exchange with Tier1 Centres, as part of an overall plan agreed between the Experiments and the Tier1 Centres concerned.

All storage and computational services shall be "grid enabled" according to standards agreed between the LHC Experiments and the regional centres.

The following parameters define the minimum levels of service. They will be reviewed by the operational boards of the WLCG Collaboration.

Service	*Maximum delay in responding to operational problems*		*Average availability[6] measured on an annual basis*
	Prime time	*Other periods*	
End-user analysis facility	2 hours	72 hours	95%
Other services[7]	12 hours	72 hours	95%

Annex 3.4. Grid Operations Services

This section lists services required for the operation and management of the grid for LHC computing.

This section reflects the current (September 2005) state of experience with operating grids for high energy physics. It will be refined as experience is gained.

- ***Grid Operations Centres*** – Responsible for maintaining configuration databases, operating the monitoring infrastructure, pro-active fault and performance monitoring, provision of accounting information, and other services that may be agreed. Each Grid Operations Centre shall be responsible for providing a defined