ATLAS Distributed computing Tier3 activities have significant overlap with some of the new directions discussed in Amsterdam (Daam 16-18/June/2010).

The most important areas are:
- Definition and operations of analysis computing facilities:
  ◦ These facilities should act as caches (this applies not only to events data but also to condition/calibration and experiments software).
  ◦ As a consequence they have no "custodial" responsibility (data are handles by DQ2 in existing sites (essentially the Tier1s)
- Emphasis on user analysis (IO bound activities, interactive access to data)
- Absence (considerable refocusing) of central catalogues
- Cooperative operations (data sharing, data publishing)
- Sustainable mode for operating and supporting such facilities (minimal central team, extremely reduced effort for running each facility)

In Amsterdam the possibility to reuse some of the ATLAS infrastructure to perform testing (also together with CMS) has been discussed.
We consider this very interesting and we are looking forward for volunteering sites (from the Tier3 area or new sites).

At present we are contacting our colleagues and the goal is to aggregate at least 5 test sites (ideally 2 in Europe, 2 in NA and 1 in the AP region) using different technologies. The main interest for ATLAS is xrootd, Lustre/GPFS and dCache for now since this is coherent with the technologies used in the Tier3 but other solutions can be accommodated.

Several sites are considering to join, notably SLAC (global redirector), ANL (xrootd farm), Valencia (Lustre), KIT (xootd cache in front of dCache).

The goal is to federate these sites (plus some CMS sites as well) having xroot providing the "data location" infrastructure (location of data missing at a site but available in the federation) and on-demand data transfer.
This "federation" is natural for xroot sites (needs an additional redirector level, initially one global redirector) but requires some development for federating sites with different technologies. "Local" access (from user jobs) will always proceed via the "native" protocols (file for GPFS/Lustre, rfio for DPM, etc...).

For testing we will reuse the same tools and metrics used for all the other ATLAS sites (HammerCloud) executing realistic ATLAS analysis jobs. Other workloads will also be tested (user-submitted payload at the site, PROOF, etc...).
In addition we will monitor the behaviors of caching and generated network traffic (data recall due to cache misses).

The initial time scale is to have some sites by the end of summer (possibly validated as "standard" Tier3) and then start the integration. The time scale for having some sites operating (also with real users) is the end of 2010.