What to expect in TB 2.0

ATF

WP1

- New resource broker architecture
  - Big potato → French ("Belgian") fries
  - No interface changes; just internal
  - Jdl changed for data management
  - Integration with WP2 query optimization
- Fixes for Condor-G 512 job limit (new 6.5.1 version of Condor)
- Fixes for myproxy server problems
- Support for job checkpointing
  - User will have to provide space for checkpoint data (saved by job)
  - User will have to manage checkpoint data
  - I think program will require some instrumentation
- MPI job-submission
- Interactive jobs
- Accounting infrastructure (but not fully integrated with scheduling mechanism; but usage records will be kept) – interfaces to WP4
- Java and C++ APIs
- GUI for job submission and monitoring
- User defined attributes in L&B (user tags)

WP2

- New replica manager program
  - New system
  - uses RLS
  - CLI changed; API as well; functionality of 1.4 is preserved and extended:
    - Optimization (uses WP7 network info to find "best replica")
  - Promised to be more robust, better error handling
- Replica Location Service
  - Entirely different "replica catalog"
  - Only LRC component available (single LRC per Vo)
  - Wildcard searches
- Basic Metadata Facilities
  - Can add user-defined attributes
  - Can't directly search for "all files with given attribute" yet from CLI (available via C++ and Java API)

WP3

- GLUE schema is available
- R-GMA deployed on 'J-day' and changed at 'J+30'
  - New producers: stream, resilientStream, canonical, latest
  - Archiver is able to archive to any kind of producer (allows merging of streams)
  - GIN and GOUT for interoperability with MDS (used by resource broker)
  - Single registry
  - No authentication

WP4

- LCFGng (Local ConFiGuration Next Generation)
  - 26 components written for it
- LCAS (Local Community Authorization System):
  - Can now load arbitrary number of authorization plug-ins (still existing plug-ins are used, no new ones have been written).
  - Allows banned-users and policies depending on time-slots.
- RMS (Resource management system):
  - Gives higher level scheduling functionality to the local batch systems
  - Replaces the local scheduler; works only with PBS.
  - Allows Maui-type policies to be used.
  - Accounting infrastructure integrated

WP5

- SE v 1.0
- Supports disc-only SEs, rfio based MSS (Castor, HPSS), and ADS (Atlas Data Store, RAL).
- Files can be written using local user/group ids (depends on WP2 java security plug-in).
- Web service interface (used by WP2); CLI
- Supports core SRM functionality:
  - 'Get' and 'put' commands
- Data access via standard mechanisms (gridFTP, NFS, rfio)
- Space reservation not really there – there is an API and it checks space but doesn't really reserve it

WP6

- Not sure what will be different
- Cal: "Everything will work beautifully"

WP7

- Network costs (used by replica manager optimization)
- Needs some more details from WP7.

SCG

- VOMS functional (CLI and Java & C++ API)
- Java security (tomcat plug-in providing external APIs to services)
- LCAS (see WP4)