Outline

- Recent activities
- Current development
- Summary
<table>
<thead>
<tr>
<th>Task</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions DB redesign</td>
<td>June’02</td>
</tr>
<tr>
<td>Deployment of Objy analysis at Tier-C sites</td>
<td>Dec’02</td>
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<tr>
<td>Bridge fd phase II deployment and development</td>
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<td>Reducing size of the ESD in Objy</td>
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Condition DB Redesign

- Originally scheduled for June 15
- Going well, almost done
  - Lack of manpower to migrate proxies
    - Extra burden on the core CondDB developer
  - Current plan:
    - Production ready by Aug 15
    - Introducing in Padova ~ Sep 1st
Analysis @ Tier C

- **Deadline: Dec’02**
- **Two main components**
  - Bridge fd phase III (extracts collections into export federation)
    - Due June 30 ’02
    - Project completed, delivered June 13
  - BdbServer ++
    - Most components in place
    - Need to piece them together, test and release
- **Found out how to share skim data between tier C sites**
  - Will test and announce soon
Bridge Federation Phase II

- Finished
  - Lock collisions finally solved, confirmed by several people, works
    - A bit too late to really help skims

- Bridge federation project is now completed
  - all 3 phases
Load Balancing

- AMS redirection/automatic load balance
  - Work in progress
  - Original deadline 2ndQ’02 extended, now 3rdQ’02
## Event Size

<table>
<thead>
<tr>
<th>Navigational components (evshdr, tag, col, evt)</th>
<th>default</th>
<th>ootidied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nav + micro</td>
<td>6904</td>
<td>6048</td>
</tr>
<tr>
<td>Nav + mini</td>
<td>14539</td>
<td>12544</td>
</tr>
<tr>
<td>Nav + micro + mini</td>
<td>17902</td>
<td>15520</td>
</tr>
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</table>

See Bdb website for more details
Hiding Persistence to Allow Event Store Evolution

- Transient world
  - `BdbAbsCollectionT<BdbEventT>`
  - `BdbEventT`
  - `BdbTagT`
  - `BdbTagDescrT`

- Old Collection
  - Old Event
  - Old Tag
  - Old Tag Descr

- New Collection
  - New Event
  - New Tag
  - New Tag Descr
Event Store Redesign

- Reducing event size
  - Navigational components (evt, evshdr, tag, col)
  - Introducing “common objects” – data common for many events stored once

- Making performance improvements

- Adding features
  - Mapping: collection → files
    Will take ~sec (compare to hours)
  - Tag descriptor stored with tag, not collection, ability to have different tags for the same collection

- Cleaning up code
Event Size Reduction Project

♦ Navigational components
  – Yemi, and myself, June-Dec

♦ ESD (micro)
  – Visitor from Novosibirsk, Aug-Nov

♦ Target date: Dec 2002, in release 13

♦ Feedback welcome
  – Will consult with you
  – Hypernews enough? Mini-workshop?
Padova

- Assisting - significant Bdb effort
  - From SLAC
  - 2nd Bdb visit to Padova pending

- All bdb-related problems solved
  - AMS on Linux
  - pud daemon easily reconfigurable now
  - Many issues due to different configuration
    - continuously create new problems
Misc. 1

- RW migration in Bdb code
  - Done by Anders (thank you!)
  - Successful, in 12.2.0
- Server-side compression
  - Ready for use, not in production, requires new AMS server, do not want to disrupt now
- Working on persisting stateID
- Few small problems
  - Like the one with tag descriptor – fully solved
Objy 7.1 coming
- 1st week of August
- Large file support on Linux, code helping to deal with lock collisions, few other features

Client CPU usage
- Current setup not helping
  - Very fast clients, ‘ancient’ servers
  - Percheron (lots of data, many CPUs, only 4 AMSes – AMS often a bottleneck)
    - Problem eliminated
Don’t Compare Apples w/ Oranges

◆ Client CPU usage
  – CPU burnt by Kanga to decompress

◆ Event Size
  – Objy data contains more information, e.g. metadata used by data distribution, event headers for all components
  – Extracted (deep-copy) micro-level data (with navigation): 4.1 kB/event
    ▪ ootidied: 3.8 kB/event
    ▪ gziped: 3.3 kB/event
Manpower

- Development
  - Simon 0% on BaBar starting July 1st
  - New position at SLAC opened
    - Expected to fill ~Jan 03
    - Conditions: Igor
    - Event Store: Yemi, myself

- No changes in BdbOps
### Computing Review (Apr’02)

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Summary

- Event Store Redesign. Expect:
  - Event size (micro) well below 5kB
    - Now ~7 kB, or ~4 kB if extracted
  - Significant performance improvements
- Padova effort
- Good progress with all main projects
- The group got smaller
  - Do not worry, we can manage 😊