

# Collaboration Applications

## Database Applications

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# Where we are

- Collaboration Tools- *Help collaborations run themselves*
  - ECL Suite: logbook, shift scheduler
  - DES Speakers Bureau, Publication Board
- Database Applications - *Collect, store, preserve and make data available*
  - IFBeam DB: NOvA, Minerva, MINOS, uBooNe, LBNE?
  - Conditions Databases: NOvA, Minerva, uBooNe?, LBNE?
- Infrastructure/frameworks
  - Common layer for application development and running
  - Redundant web services infrastructure

# Issues

- Lack of manpower
  - 3.2 FTEs to cover more than 12 applications, some are critical, in active development
  - LBNE and others are coming

# Issues: Collaboration Applications

- 30+ improvement requests in the queue for ECL (logbook, shift scheduler), and keep coming
- No accepted solution for maintaining the list of collaboration members
  - Common authentication and authorization, integrated with the rest of the Lab
  - Look at open identity AA mechanisms such as OAuth
- Integrate with HCM
  - See what HCM offers and when needs to be done on our side
    - Identity management, common authentication, authorization
    - Membership information

# Issues: Collaboration Applications

- Expand ECL Suite
  - Include discussion forums module (HyperNews)
- Mobile applications
  - We have iOS app for ECL Logbook
  - Android ?
  - Shift Scheduler, integration with calendar, reminders ?
  - Apps vs. mobile web GUI
- Our GUI is done using “old” technologies (HTML4, CSS)
  - Use HTML5, CSS3
    - Make GUI more intuitive, efficient, but not fancy for the sake of fancy

# Issues: Databases

- NOvA is starting using ConDB
  - So far so good, but they keep adding requirements
- LBNE is our target for ConDB and IFBeam DB
  - Collecting requirements, see if what we already have is good enough
- High availability database applications, work with DBAs, SSS
  - IFBeam DB and some ECLs
  - GPCF2 ? CCD Cluster ?
- Our main database product is PostgreSQL
  - SAM migrated from Oracle to PostgreSQL
  - What is its scalability limit ? 10TB – probably OK, 100TB, 1PB ?
  - Distributed databases

# Issues: Databases

- Big Data – why we store events in storage and not in database ?
  - Tools ? – what kind of databases do we need ?
  - Projects ? – small enough to fit available technologies, big enough to cause paradigm shift
- Mobile applications
  - Monitoring on your phone
  - Mobile friendly GUI
- How can we help other organizations in SCD ?
  - CMS

# Discussion

# Web Data Access Framework

- HTTP/REST Web Services as main data access architecture
- Redundant web application architecture
  - Redundancy for load spreading, high availability
  - Data caching
  - Resource management, monitoring
    - Data proxy
- AJAX + REST/HTTP web services
  - Decouple data management from representation