Jefferson Lab Electronic Logbook

Theo Larrieu

Theo Mcguckin

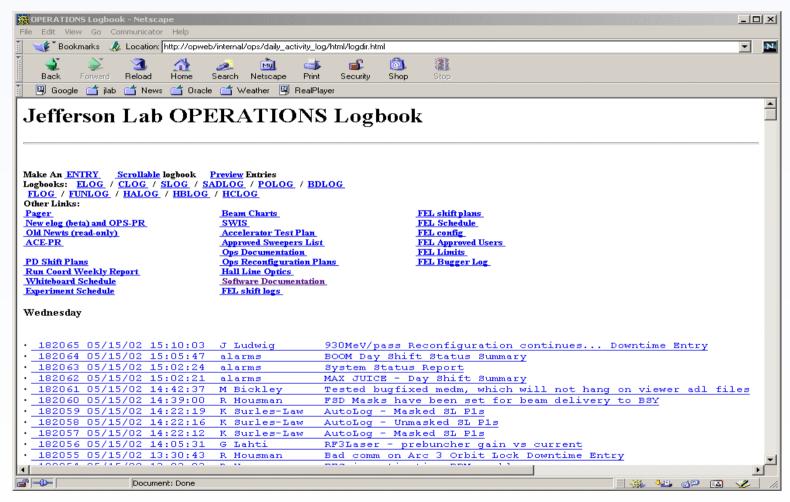## Michelle Joyce

May 22-24, 2002

EPICS Collaboration

Controls Group

History

➢ **First instituted at the lab in 1996.**

➢ **Variously used**

 ∗ **Official Record for DOE**

 ∗ **Knowledge repository**

 ∗ **Bulletin board to pass info among shifts**

➢ **Heavily Used**

 ∗ **~35,000 entries/year in main ops logbook**

 ∗ **400 MB/year in main ops logbook**
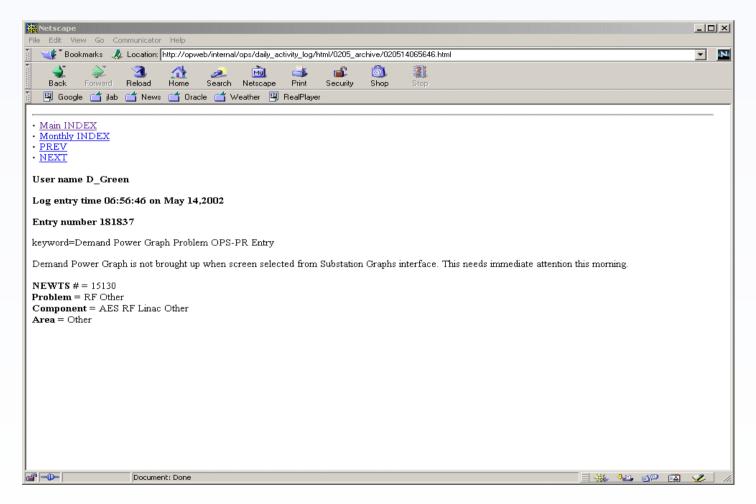
 ∗ **Other logbooks for Software, FEL, etc.**

Old logbook "home page"

Old log entry

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Shortcomings

➢ **Reliance on static html files – 100,000's**

  * **Sheer number a headache to manage**

  * **The html mingling of content and formatting makes data searching and extraction difficult**

➢ **Every program (60+ of them) responsible for number assignment, content formatting, not clobbering other entries. Little consistency.**

Components of an Entry

➢ **Required**

　 ＊ **Keywords/Title, Timestamps (create, commit), Logbook(s), Entry-type**

➢ **Optional**

　 ＊ **Attachment(s) (screenshots, documents, etc.)**

　 ＊ **Downtime information**

　 ＊ **References to other logs (backward/forward)**

　 ＊ **Problem-Tracking History**

New Version

➢ **Summer 2002.**

➢ **Addresses shortcomings**

  ∗ **RDMS replaces files.**

  ∗ **Dynamic Scripting replaces static HTML**

  ∗ **APIs shield apps from entry-making details**

➢ **New Features**

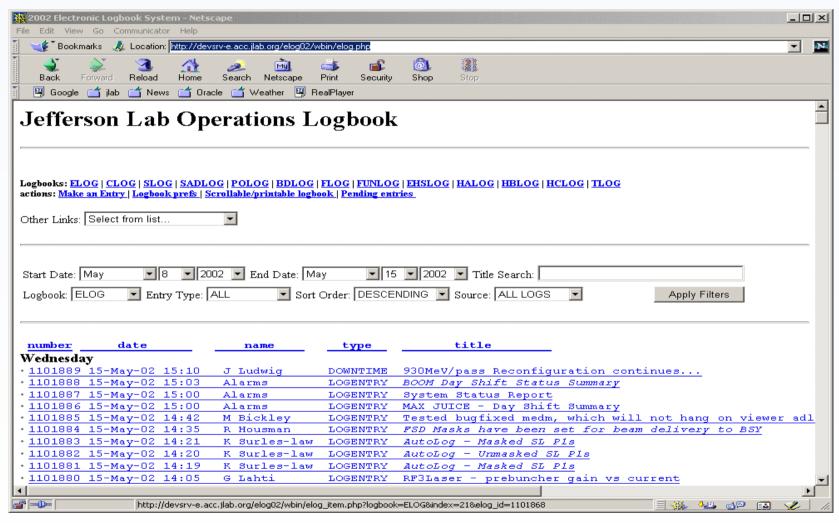 ∗ **Integrated problem tracking**

  ∗ **Threaded/linked entries**

Underpinnings

➢ **Relational Database (Oracle)**

➢ **Web Application Server (Apache + PHP)**

➢ **Libraries for programs that make entries**

* **Tcl Package**
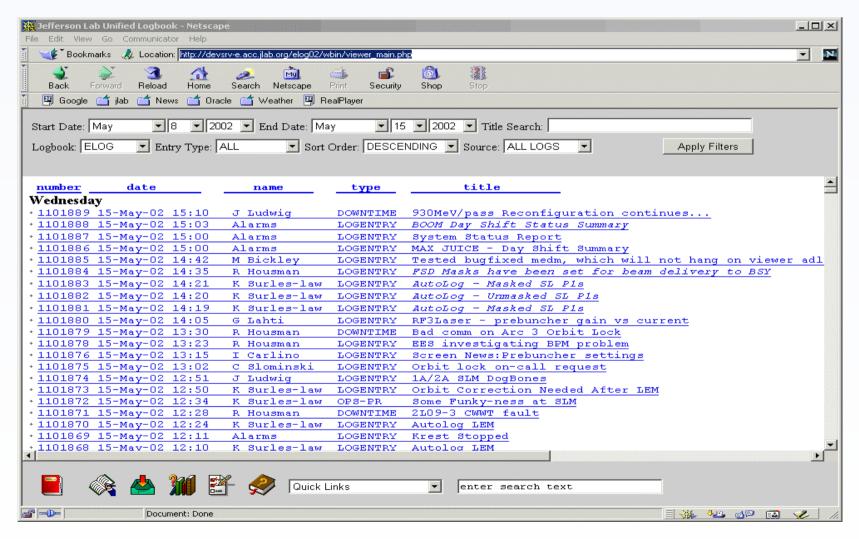
* **Perl Module**

* **C++ Library**

* **HTTP API**

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New logbook "home page"

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Alternative Look

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New trouble report entry

Logs can be queried

Browser is not only interface

Logbook Comparison

Old Logbook	New Logbook
Files (one per record)	RDBMS (Oracle)
Separate downtime & problem tracking	Integrated downtime & problem tracking
Unauthenticated entries	Authenticated entries
Web browser only interface	Accessible from scripts, browsers,spreadsheets.

Future Direction

➢ **Enhance Problem-Tracking**

  ∗ **Track problems with specific hardware in addition to general hardware types.**

  ∗ **Integrate with future Plant Engineering Work Order system**

➢ **Enhance Query/Search Tools**

  ∗ **Oracle Intermedia to search attachments such as PDF, Word documents.**