

FDS

The Faculty Database System A Proven Enterprise Solution

Department of Mathematics
Arts & Sciences

<http://fds.duke.edu/>

May 1st, 2009

Main Points

- FDS has been used for ~10 years; **widely adopted**; constantly improving
- FDS is **powerful, flexible, extendable**, and it's what faculty **want or need**
- FDS is a proven, cost-effective application **platform**
- FDS is **mission critical**; we'll provide the services as long as they are needed

A faculty member's view

“Frankly, I always look longingly back at the database system that Duke has. That system is excellent in every way that I know. It even turns making annual faculty reports into a trivial exercise, since one can enter all of the relevant events easily through a web interface that is intuitive, flexible, and simple.”

-- Robert Bryant, Duke J.M. Kreps Professor & MSRI Director at Berkeley, 2009

History & Scope

- Developed in math in 98/99, for internal use
- Adopted by A&S in 2003
- Designed primarily for the faculty's own needs to maintain and showcase achievements
- Principle: serve and empower the faculty
- Currently used by most schools & programs on campus. Data sync from the med school.
- Currently, 170 groups, 9k users for 12k appts, 145k publications, 29k lectures, 6k templates, etc. Real time data to many web sites.

Support

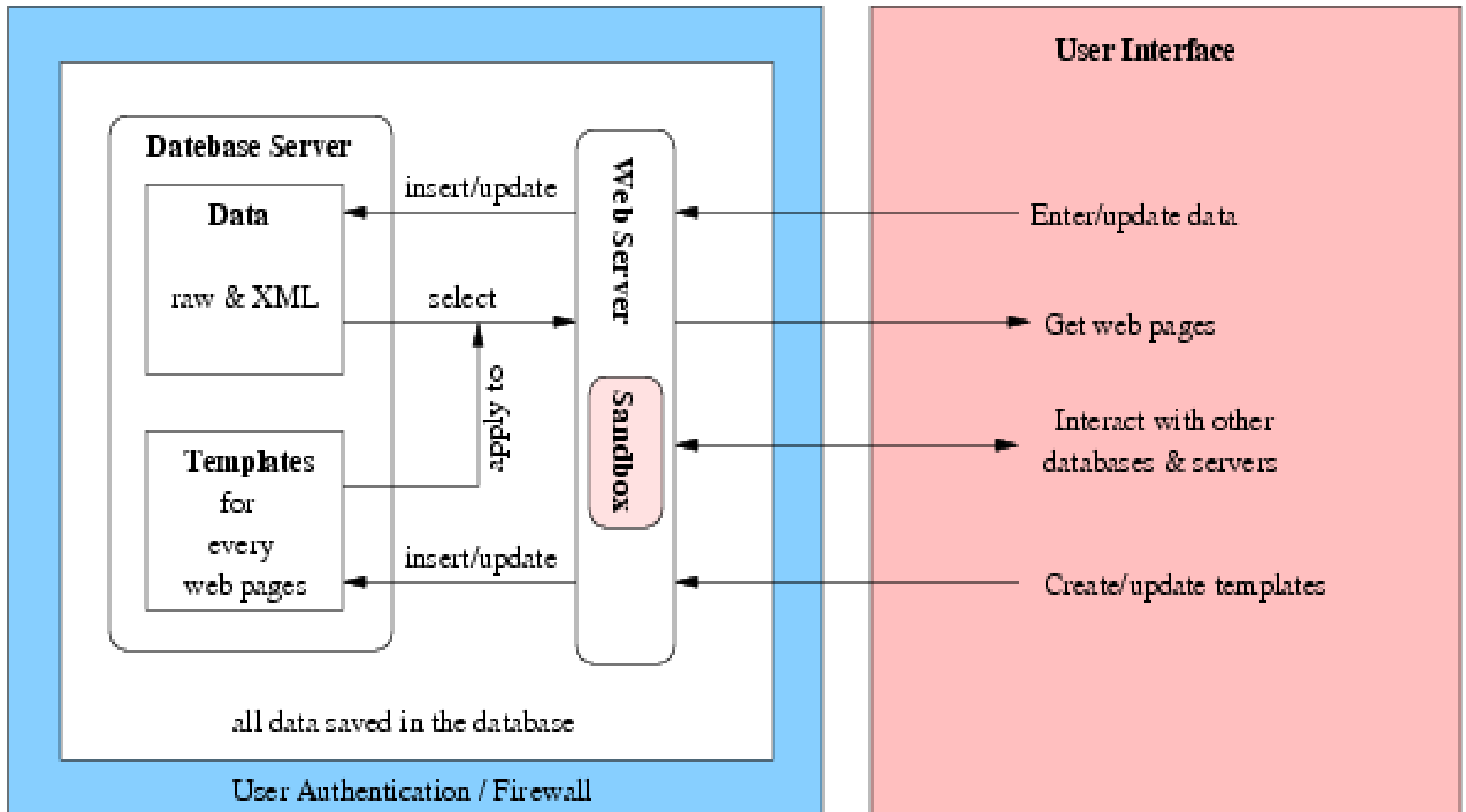
- First, thanks to many people who have helped the project through the years
- Supported part-time/spare-time/weekend by me (system & develop, Andrew Schretter as my backup) & Adrienne Moore (user support)
- Latched on the Math/AMS db servers
- Funding: none

FDS' Goals & Achievements

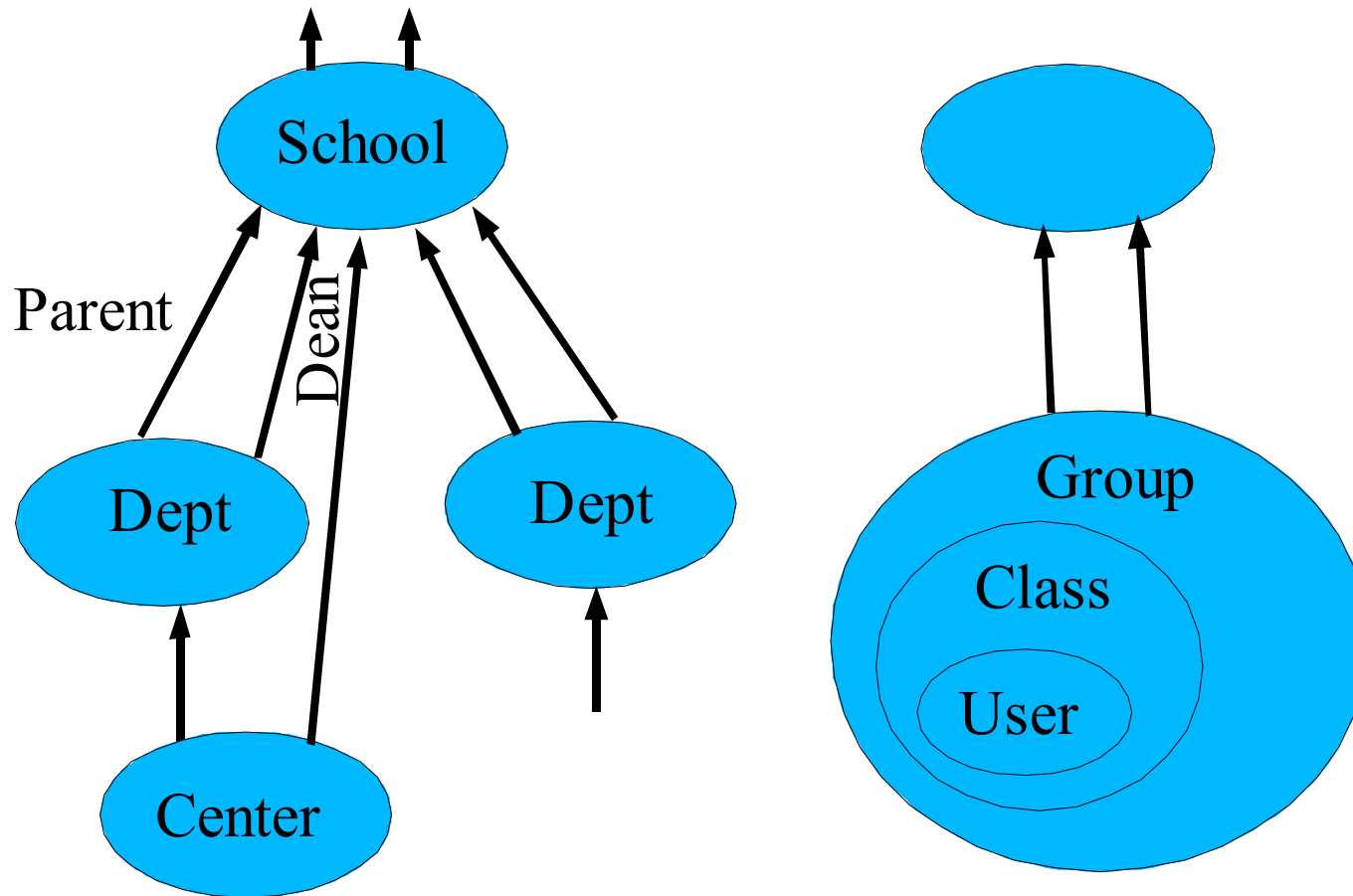
- Provide basic contact info in useful forms
- Showcase research & teaching
- Facilitate the annual evaluation processes
- Provide standard but flexible web pages, such as CVs and faculty profiles
- Must be easy for faculty to update, & only once
- Data must be easy to reuse, locally & remotely
- Faculty are motivated to update
- Save/archive important institutional data

LAMP Architecture

How FDS works



Group Layout



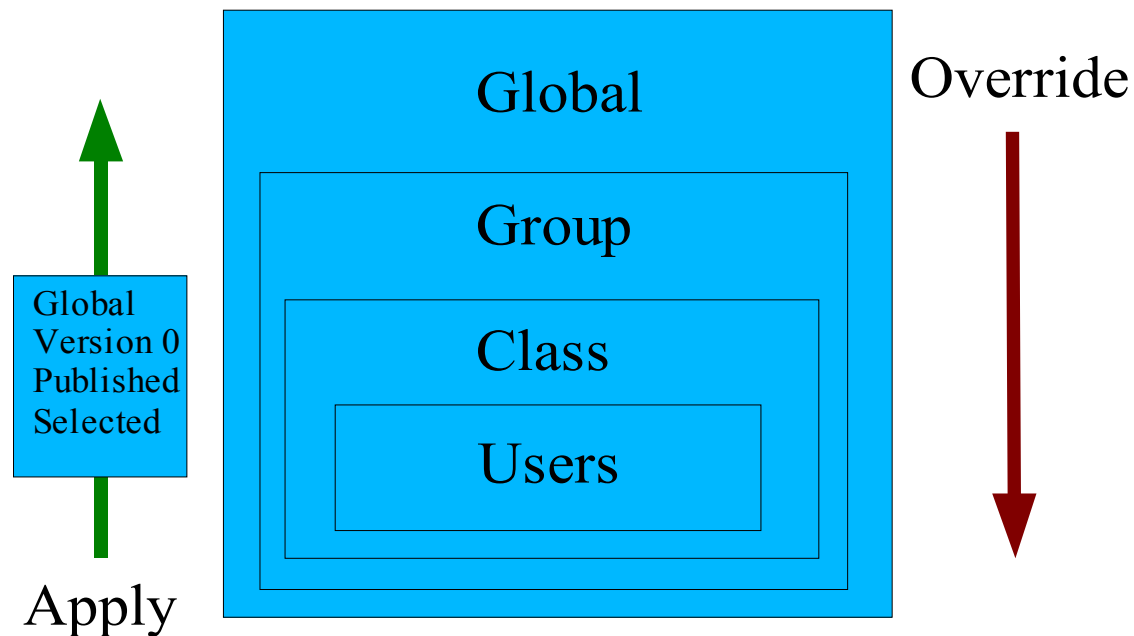
<http://fds.duke.edu/db/aas/Math/faculty/drm>

A user can belong to multiple groups

Main Features

- **Data** is maintained and updated by **departments** or **individuals**; faculty control the privacy of their own **information**
- Faculty research **data** can be **rendered** in **any format**. e.g., feed the touchscreen project
- A standard XML-based system architecture, with builtin automatic archiving capability, guarantees that the data is **portable** and **reusable**

- A powerful templating engine with site wide and individual template based versionings lets each unit and faculty **customize** the system to meet their own needs, and publish any selected **data** to the web in their own way



version control (g/cls/u),
sharable, inheritance,
override, global & local,
dynamic binding

Main Features, cont.

- SQL Builder, Certified Templates, XML connectors make data mining straightforward
- Integration with a school's annual faculty evaluations process ensures up-to-date information without increasing faculty workload or administrative overhead
- FDS interacts easily with other enterprise information systems: LDAP directory, SISS, Grants; PubMed etc, and any other standard based sources, with added values.

Misc.

- handle mostly common needed data, can be easily extended to others (e.g., Blog, APT)
- xml input/output, pdf output for all pages
- distributed workflow for news publishing, expertises from ground up
- used as portal/service provider to other campus wide services
- Secure, scalable and fast
- All connections encrypted, sensitive data encrypted with PGP, remote backup to UCLA

In conclusion

FDS is a powerful CMS which has been serving Duke faculty's needs well; and it has become a critical enterprise level service. We'll continue to do our best to support it for as long as needed.

Thank you.