Intranet of Physics
Department

A proposed project

By

Jihad Al-Sadah
Contents

• Motivation
• Intranet
• Applied to Physics Department
• Implementation
• Conclusion
My Motivation

• Digital Libraries

• My small hard disk is not the place to store commonly needed files/minutes

• Some sites of other universities

• E-trends, Informatics is the way of future
I Intranet, defined
I Intranet

• Definition
• Levels of Usage
• Aspects to be noted

• KFUPM Intranet
Intranet

- Network of computers with specific audience/users, access control and emphasis on functionality.
- Part on Internet enclosed with fences
- Overlap with Internet
Levels of Usage

• Level 1: Display
  • Supplement or replace prints
  • Dirty intranet

• Level 2: share
  • Exchange and/or use of databases
  • Security levels and access control

• Level 3: Interactive Communication
  • Independent from the other media (paper, meetings)
KFUPM Intranet

- Hardware part is done for us
- Department community is ready
  (server, email grouping, ftp, sharing)
- Administrative time is too long compared to research/ teaching time -> solution?
- Space limitation for paper records
Some points

• Contents
  • It is not the appearance
  • Avoid static contents
  • Accessibility should be reasonable

• Benefits
  • Cost to produce distribute and store papers
  • Time savings (initial cost, running cost)
II-A Teaching
II-A Teaching

- Contents: (Knowledge/Skills)
- Exams/QZ/ HW (verify)
- Grades (verify/ certify)
- Hyper course material (un-restricted to specific)
• Database of “All Courses All Terms”

• Individual Courses:
  • Home pages
    (Standardized + Dynamic + Smart features)
  • Soft Course Files
Database of
All Courses All Terms

• When this course was offered?
• Who taught it before?
• What books were used to teach it?
• Typical no. of students?
• Average performance?
• What is their average performance?
• Teaching experience or profile of this teacher?
Courses Home Pages

- Syllabus + Timings (classes, OH, Exams)
- Internet sites:
  coarse level + course extension
- Home work + Exams + Handouts
- Sample exams? + Solutions?!

- Smart Features:
  - Calculator1: *I missed my lab and I like to make it up, When is it possible?*
  - Calculator2: *I will be absent next Sunday, who can replace me?*
Soft Course Files

• More accessible and compact than paper
• Security!
  ____________________________
• Large part of our course files were digital
• Some parts could be scanned
• Good home pages may contribute
  ____________________________

• Two options with a difference
  • Gathered folder
  • Quality folder with listing and hyper links (standardization?) will help us later
Students Records

- Much less than registrar records
- Records of final physics grades only
- Local database

How many of phys 102 students are:

- Fresh
- W
- F
II-B Research
II-B Research
(Inter- / Intra-net)

- Database of papers
- Seminars & public lectures
- Research labs & groups
Database of papers

- Database (update, search) + web page:
  - Fields: title, keywords, abstract, journal/paper links, acceptance/publication dates
  - What kind of work can be done with these labs?

- Master index of all work

- Documentation role: people can point to papers instead of including them in their home pages.
Seminars & public lectures

• Database (update, search) + web page:
  • Common practice
  • Positive to Audience & the lecturer

• The lecturer to leave his:
  • Contact address (email/ homepage)
  • Reference materials / links
  • His presentation if he wishes

• 1 hour event ==> more lasting event
Research labs & groups

- Open ended problems/ current projects
- Links, Collaborating Labs
- Detailed account of facilities (2 versions)
  - Short: to bring collaborators & customers
  - Detailed: researcher to communicate over extended times
- Group + ex-members (contacts)
II-C Administration
• A Joke: off record

• KFUPM: King Fahd University of Petroleum and Minerals

• = = = = Memos
II-C Administration

• Faculty / Staff Scheduling system
• Committees (standing + temporary)
• Common Forms / procedures
• Memos tracking system
• Soft Personnel files
Scheduling System

- Database with all work load
- Smart teaching hours, (Thu, holiday, proctoring, lab free week)
- Smart meeting times
- Easy update, scheduling, display
- Instructor replacement info
- Potential time saver
Committees

• Each Committee with home page
• Fields: name, mission, membership (current & past), assignments, Rules, Future plans,
• Minutes on a database, with smart naming, search features,
• Scan needed old documents
Common Forms / Procedures

- Room reservation, self evaluation, maintenance, petition …
- PDF, html (lasting formats)
- Procedures & contacts related
- FAQ for new faculty, comprehensive
Memos tracking system

- Fields of such database:
  - Direction, classification dates, appended, serial#s, pointers, reminders
  - Bonded to email
  - Auto naming and storing
- Parallel to papers not a replacement
Soft Personnel files

• To aid not replace the existing records
• If done then records can be stacked differently
• Scanning old documents
III Implementation
II Implementation

- Current situation
- What do we want?
- Overall design
- Resources
- Time line
Current Situation

- Hardware part is done for us
- Department community is ready (server, email grouping, ftp, sharing)
- Seed ideas are appearing
- Good scanner hocked to a good PC!
Objectives

• Some vs. All: All but not once
• Ideas will mature and be refined with use
• Do little but seriously;

• Vital not disappoint your users;
Overall design

• Central page with links to various sub sites
• Access control with clear massages
• Database with web based update and search features
• Simplicity is vital so users can modify and update their work
Resources

• ICS, Senior Projects
  • Free expertise (security: 3rd party?)
  • serving both parties
• Secretary (data collection)
• Faculty (setting specifications)
• External programmers (why not?)
Project timeline

- Selection of starting works
- Layout of specifications
- Data collection
Conclusion
• Digital world is coming,
  • Ride the current instead of reverse swim
  • Earlier the better
  • Variance $\rightarrow$ Independence

: no One company, no one technology

• Transparency helps! (it is not MOD)