Opensource E-learning platform for Indian Academia

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Why opensource?

- All the software engineering steps are integrated.
- The basic philosophy – release as you build.
- Users act as testers.
- They lead to improvement in design by asking for new features, pointing out the flaws.
- Parrallely competing software development threads can occurs. The good ones – survive.

In Indian Academia

- The requirement for learning management system – different than anywhere else in the world.
- Conclusion derived from last three years of learning in the process of opensource LMS development

Important thing

- Learning material – continuously evolving entity.
- Packaged content material may not be sufficient.
- Guided experience through a mentor/ teacher – required for most of the learners.

LMS development – our experience

- Development of Brihaspati – based on the experience in IIT Kanpur.
- The feedback from faculty, students is considered to improve existing functionalities, addition of new functionlities.
- As the changes are made they are immediately released after stabilization.

Changes after learning from IITK deployment

- Same can be taught by different persons in different semesters.
- Faculty may not like to share the content with other for putting in their course areas.
- Concept of course-faculty doublet identifying the course.
- Depending on the who is teaching a course – active or inactive course for the student.

Deployment in other academic institutes

- Pamphlets sent to all the engineering colleges, universties.
- Letter to all the universties VCs send from UGC chairman
- Some universities could adapt and use it easily.
- Some got it installed. But they were stuck for lack of content.

LMS framework modification

- Requires communication capabilities to be built among various Brihaspati servers.
- Requires features allowing the synchronisation and transfer of contact between agreed upon courses at two Brihaspati installation.
- Agreement can be on two way or one way synchronisation.

Scenario for the utilization of above

- Institute A (an IIT) has lot of courses on Brihaspati-A.
- Institute B (an small engineering college) has installation Brihaspati-B.
  - It does not have teachers for all the courses.
  - They can do agreement with IITK for provisioning of certain course X to their student through Brihaspati-B.

- In Brihaspati-A, instructor for course X configure the permission for Brihaspati-B.
- Brihaspati-B synchronises periodically with Brihaspati-A and provides the material to their students.

Advantage

- The institute with limited resources can use internet infrastructure and the Brihaspati server of better institutes to augment their Brihaspati server.
- Can make available the good material to their students in the course where they lack in good faculty.

Future directions

- Brihasapati-2
  - Separation of content author and course instructor
  - Support for reusable content modules (SCORM objects)
  - Hindi, Urdu interfaces.
- Expecting the improved internet infrastructure (multicast support) in future.
- Brihaspati_sync for holding the live classroom over internet is under development.
  - The developed code is continuously released for other developers and testers.
- Multicast-unicast gateways??

What is expected from other academic institute?

- Motivating them to start development threads at their ends.
  - Localization in the language of their region
  - Addition of new features locally required.
  - Documentation for users and developers

Modification for corporate applications??

- Using typically mozilla-netscape, helixplayer-realplayer, openoffice-staroffice model
  - Commerical version of Brihaspati
  - low cost compared to closed source product
  - Enhanced performance and additional features.

Conclusions

- Indian academia need to solve their problems on their own
- Need to make the solutions catering the local requirement
- Sharing and interaction among academia essential for the growth of the movement.