Course In A Box:
Requirements Gathering

Discussion document

Scope

This document considers the design requirements of a template set for Informatics courses. The initial emphasis is on pages under *http://www.inf.ed.ac.uk/teaching/courses*, but course information is also held elsewhere:

- University's Degree Regulations & Programmes of Study DB *(https://www.star.euclid.ed.ac.uk/ipp/cx_sb_infr.htm)*
- Registry (exam info, &c) *(http://www.ed.ac.uk/schools-departments/registry)*

The overall structure of course information, outwith specific course details, is not considered. Re-assessment of this is outside the scope of this document. There are intermediate pages - under *www.inf.ed.ac.uk/teaching/courses/,* but above individual course areas - to which CIAB is also not intended to apply. CIAB will provide a template for individual courses only.

A large amount of course information is stored in the *Degree Regulations & Programmes of Study* database, and some consideration should be given to the degree of synchronisation between this and course web pages. This database also holds official descriptions of courses, which form part of the "contractual agreement" with the student. Inclusion of (links to) such information should also be considered.

Associated with this document is a *Data Ownership* document, which lists all discrete data items (smallest meaningful data chunks) and data categories (largest meaningful data groups) that have been identified by this requirements gathering process.

What's Already Available?

Other VLEs

There is no remit for this project to speculate on future developments of VLEs at College & University level, and it also appears that no new VLE (if chosen) is likely to be in place before 2012/13.

There are ongoing, informal discussions about the use of VLEs between "people in College of Science and Engineering schools, and relevant people in IS, concerning ... possible future use of VLEs" on the Ad-hoc Collaboration Wiki, *https://www.wiki.ed.ac.uk/display/AdhocCollaboration.*

DRPS: Course Catalogue

Some course information is available via EUCLID, containing "golden copy" of that information. This should - if possible - be used as primary source for automatically generated pages.

Requirements gathering

We need to find out what teaching staff actually want from a course website - what information is necessary, what optional; how it should be made available; how it should be maintained and updated, etc.

These items will constitute a set of desirable features, which will then (as part of another process) be graded according to the likelihood of implementation based on available resources, compatibility with other components, &c.

Existing methods for page creation

Currently, each individual Informatics course has a local page within the course level (Inf1, Inf2) structure which contains several sections - including some or all of:

- People Involved (Lecturer, &c)
- Course Description
- Exams
- General Information & Other Resources

...and links to:

- Lecture Notes
- Exercises/Practicals
- Assignments

These pages are currently hand-edited as appropriate, although held in a CVS repository. A new course lecturer may copy and modify existing pages, or create ones from scratch.

- pages held in CVS repository
- checked out & edited manually

Finding out what's required

Note that this project does not attempt to (re)design the web pages, but to *define required content* and *functionality* – any web design is part of a later stage. Some discussion points and suggestions have a web design element, but - unless it impinges on function - these are not considered.

In overview:

1. Identify the People Involved
2. Gather Requirements
3. Categorize Requirements
4. Interpret and Record Requirements
5. Sign Off

In detail:

1. Establish who will use the CIAB webpages (from the data generation, data maintenance, and data usage points of view), and who will be responsible for the sign-off decision. Agree project scope.

2. Collect requirements/wish-lists from all relevant interested parties, identifying what they want and expect from this project (each person will have an individual perspective, so gathered requirements will provide a composite picture).

3. Sort out collected requirements into categories:
    - *Functional requirements*
      (the features and functions with which the end-user will interact directly)
    - *Operational requirements*
      (operations that must be carried out in the background to keep things functioning)
    - *Technical requirements*
      (issues that must be considered for successful implementation)
    - *Transitional requirements*
      (steps needed to implement change to new service)

4. Examine requirements and categories, ensuring that requirements are:
    - *precisely defined*
      (not ambiguous or vague, and listed in sufficient detail to create a working system)
    - *prioritised*
      (identify which requirements are necessary, and which merely desirable)
    - *compatible*
      (do not conflict with existing processes or procedures)
    - *consistent*
      (not contradictory or mutually exclusive)
    - *feasible*
      (technically possible, and politically and pragmatically acceptable)

5. Agree the acceptable final list (with the "stakeholders")

Later stages will include viability assessment and implementation, but not as part of this project.

What do teaching staff want from a course website?

Course web-page generation options:

1. initial **templates, but completely static and manually maintained**
(essentially what we have at the moment, but a little more formalised, with standardised content sections)

2. initial **templates, with edited content plus links to externally-generated pages**

3. initial **templates, but with some generated content**
(lecturer, location, &c, extracted from University/School/ITO databases), manually maintained thereafter

4. initial **templates, some content generated dynamically "on demand"**
(pages built or updated when requested, interrogating DBs "on the fly")

5. **completely dynamic pages, all content generated "on demand"**
using University, School, and ITO database conduits

It is assumed that the chosen option will be something akin to (3) or (4).

Things To Consider:

- How acceptable is current overall structure of courses material?
(Does it need reorganising *before* templates are created? For example, Course Guides such as http://www.inf.ed.ac.uk/teaching/courses/inf1/1Aguide.html) .

- Course pages for UG1/UG2 (10-point courses) are significantly different from UG3/4 Honours/MSc (20-point courses) - need different formats?

- smaller, multiple pages rather than long, scrollable pages?

- possible auto-generation or management of any parts of course guides?
(this is probably not CIAB)

- if data is generated automagically, make sure that:
    - there's a known mechanism for getting it changed/updated/fixed
    (know who to talk to, who owns the data)
    - it's updated sufficiently quickly
    (possibly with the option of ad-hoc comments if there's a delay)

- some lecture details need to be updatable by:
    - lecturer
    - TAs
    - admin staff

- data ownership - where is the "golden copy" and who is responsible for it?

- a format/structure for course pages needs to be decided (*possibly* by HoS), and then

monitored (by Course Organisers?), possibly agreed/checked by Teaching Committee once a year?

- uniform approach to course material – some use WebCT, because it offers self-assessment functionality (this should be provided locally, or a uniform approach adopted... the present situation confuses students).

- better integration of the information about tutorial groups and tutors (generated/imported from elsewhere?)

- establish responsibilities of ITO (ISS) and Course Organisers for information displayed on course web pages - note also different categories of responsibility: ownership, generation, maintenance.

- exam info needs to be displayed in reasonable detail on course page (not a single link to somewhere else)

- templates (and resulting pages) should be checked for best-practice, accessibility, and compliance with University web guidelines

Possible additions:

- inclusion of **ad-hoc announcements and messages**, and/or **latest news** (change of location, temporary lecturer, etc)

- **feedback section**, or blog

- **history mechanism** for manually-edited & dynamic pages (including QA & course comparisons to see previous year's course details) (what archival & history mechanisms for dynamically-generated and on-demand pages?)

- **past exam papers** (Library)**, exam timetables, and related info** (but not mock exams).
  Could be dealt with by ITO (ISS), but past papers may be sensitive (see archiving) and timetabling is a *nightmare* - link to external timetabling at most.

- student **self-assessment** (along lines of WebCT)?

- **archiving** of assignments and solutions from previous years?
  (Maybe not a good idea for course web pages? Material can be re-used, so potentially sensitive? Not via CIAB!)

- mechanism needed for students to contribute (different to/separate from feedback? if so, what form should it take - firstclass? wiki? Blog?)

- layout & formatting considerations (LHS, RHS panels, page length, &c)

Breakdown of Course Info (discrete data chunks and other elements):

Items currently in use on one or more course pages:

- **lecturer**
  - name
  - email address
  - other contact details
- **teaching assistant(s)**
  - name
  - email address
  - other contact details
- **course secretary**
  - name
  - email address
  - other contact details
- **lecture information**
  - description
  - location, time, and date
  - lecture/slides documentation/text
- **coursework information**
  - description/syllabus
  - requirements/prerequisites
  - number/duration of lectures
  - weighting & assessment criteria (*more detail required?*)
  - resources
    - link to lecture video(s)
    - links to external software & utilities
    - additional notes
    - reading list
  - link to DRPS (to avoid ISS/lecturer info inconsistencies)
- **tutorial information**
  (some details held on ITO database)
  - description
  - location, number, and duration
  - tutor(s)
  - tutorial/exercise documentation/text
- **exam information**
  - location
  - duration
  - requirements
  - format (open book, written, practical)
  - weighting
  - past papers (should be Library link for definitive copies?)
- **lab information**
  - demonstrators
  - sessions/timetable (or link?) & availability
  - sign-up page

Additional items (not currently in use):

- link to the **ISS contact/support form**
- course **software requirements** area
  (currently dealt with separately via Research & Teaching CO Unit)
- **latest news**/stop press area
  (change of location, temporary lecturer, &c)
- **feedback area**
- **history mechanism** (last year's course, &c)
- **assignment archive**
- student **self-assessment** (along lines of WebCT)
- **forum area** (peer-to-peer discussion, one-to-many)
- link to Registry for **exam timetable** generation, &c
- Library link for **past exam papers** (primary location?)