Authoring, Designing, and Delivering Ebooks: A Research and Practice Agenda

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Abstract
The transformation from printed textbooks to digital educational resources is being driven too much by market forces and technological opportunism, and as a result is ignoring much relevant research in education, cognitive science, information architecture, and graphic design. The first third of the workshop will be presentations by the proposers of this workshop that provide an overview of the most important design issues and the commonly used methods and technologies for authoring, delivering, and using ebooks. This review will set the stage for the next part of the workshop, which will involve presentations by workshop participants about projects to create ebooks or to explore relevant design topics. Finally, the last part of the workshop will be a more free-form discussion of issues about ebook design and deployment where more research is needed and where collaborations among the ISchools might be particularly effective because the multidisciplinary character of the issues matches the collective multidisciplinary character of the ISchools.

1   Introduction

Publishing and education are caught up in a tumultuous co-revolution, moving from a focus on printed resources used in traditional classrooms to digital resources used online by students who might be separated in both space and time from their instructors. We believe that this transformation from printed textbooks to digital educational resources is being driven too much by market forces and technological opportunism, and as a result is ignoring much relevant research in education, cognitive science, information architecture, and graphic design. Furthermore, where careful work is being done to design enhanced ebooks, much of this effort involves expensive hand-crafting that is tightly tied to specific authoring tools and delivery platforms.

2   Design, Technology, and Process Issues for eBook Authoring, Delivering, and Use

The first third of the workshop will be presentations by the proposers of this workshop that provide an overview of the most important design issues and the commonly used methods and technologies for authoring, delivering, and using ebooks. These include:

Design Issues

- search, navigation and orientation mechanisms
- interactivity
- non-text components; images, audio, animation, data visualization
- annotations (private and shared)
- the boundary or lack thereof between the book and supplemental content
- making books "smart" with intelligent content

- accessibility

Process and Technology Issues

- conversion of existing books vs. native authoring
- single source automation vs. hand-crafting continuum
- individual authors vs. collaborative authoring
- delivery platforms, ebook readers, emulators, browser extensions

3   Current Work in the ISchools on eBooks

This review will set the stage for the next part of the workshop, which will involve presentations by workshop participants about projects to create ebooks or to explore relevant design topics.   These presentations will be selected on the basis of submissions made by March 1 sent to glushko@berkeley.edu.

One project to be presented during this part of the workshop will be the work by the organizers on a collaboratively authored and customizable ebook called *The Discipline of Organizing* that many ISchools are now using as a textbook. The ebook's novel design enables its source content to be filtered according to disciplinary and user categories, making it adaptable for ISchool courses in information organization, knowledge management, digital collections, and information architecture.

We will demonstrate the authoring, production, and delivery technology developed for *The Discipline of Organizing* ebook editions that were published in August 2014. We will take a close look at the processes for creating and building ebooks will emphasize the role of XML markup, especially that needed for audience customization, and we will explain requirements for others to adopt these tools for their own ebook projects.

4   The Future of eBooks in the ISchools; Proposals for Collaboration

Finally, the last part of the workshop will be a more free-form discussion of issues about ebook design and deployment where more research is needed and where collaborations among the ISchools might be particularly effective because the multidisciplinary character of the issues matches the collective multidisciplinary character of the ISchools. In particular, we will propose projects to develop best practices on ebook accessibility, user interfaces to enable more personalized reading experiences, tools and techniques for collaborative authoring and maintenance of ebooks, and using linked data techniques to seamlessly integrate ebook content with dynamically discovered web resources.