

Operations Needed in e-Textbooks of the Future

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On October 25, participants at the WIPTE conference dinner were asked to think about the pedagogical practices that were important and how an electronic textbook could enhance and extend these practices. The over 100 dinner attendees discussed their thoughts at their tables and then shared their suggestions to answer the question:

What operational capabilities do need to be incorporated into the electronic textbook of the future?

The list below is a collection of the suggestions made by the audience. We hope they are useful to those who develop the hardware and software that will become the e-textbooks of the future. To submit your suggestions, please go to: filebox.ece.vt.edu/~jgtront/wipte/

- Electronic notes with electronic ink; stylus enabled
- Highlighting
- Audio
- Internal search
- External search; customizable
- Search on e-ink
- Customizable content from publishers
- Customizable content by user
- Embedded simulation
- Hyperlinks to www
- Jump to links that are user configurable (internal & external)
- Dynamic self-updating content
- Individual tutoring with assessment and differentiation
- Compelling
- Discoverable exercises
- Voice recognition control
- Collaboration with other students
- Multimedia content and linkage to external sources (digital libraries)
- Bookmarks
- Text to speech
- Links to Classroom Management Tools
- Good video playback capability

- Drill-down capability within topics (skill level settings)
- Split screen capability
- Ease of use
- Permanent ownership/access
- Open source
- Synchronization to the cloud for personalization
- Personally adaptable
- Flexible structure
- DRM
- Multiple input/output types
- Wired and wireless network capability
- 32 GB or greater storage
- Mechanism to share/sell used e-textbooks

A copy of the slides used during this discussion can be found at:

filebox.ece.vt.edu/~jgtront/wipte