Its 2050: What am I reading?

Kim Marriott
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Magical Books

Harry Potter and the Chamber of Secrets

The Diamond Age

Splendiferous and delightful. The Sunday Times

New York Times bestselling author of Cryptonomicon

Stephenson has gotten even better. The Diamond Age

Or, a Young Lady's Illustrated Primer

Day after tomorrow.
The Future

eBooks should not be digital copies of print books--we have an opportunity to radically rethink what we mean by a “book. “

*Dynamic content*: interactive diagrams, videos, RSS feeds etc.


*Customised content*: based on the interests & needs of the viewer.

*Navigation*: New kinds of navigation (not just search & hyperlinks)

*Collaborative, continuous authoring*: Furthermore, documents can now be annotated and modified throughout their lifetime.

*Embedded*: semantic understanding, connected to other resources

*Responsive presentation*: eBooks can be viewed on a wide variety of electronic and print devices, need to adapt

*Accessibility*: Better support for blind and vision-impaired users to access on-line material including graphics.

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### Automatic Document Layout

<table>
<thead>
<tr>
<th>Problem</th>
<th>Notes</th>
<th>Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical kerning</td>
<td>pdfTex, InDesign</td>
<td>Used</td>
</tr>
<tr>
<td>H&amp;J</td>
<td>TeX, InDesign</td>
<td>Used</td>
</tr>
<tr>
<td>Fine-tuning</td>
<td>Basic layout given by designer: HTML, VDP</td>
<td>Used</td>
</tr>
<tr>
<td>Page breaking, float placement, column balancing</td>
<td>Present to some degree in TeX, InDesign, etc</td>
<td>Possible</td>
</tr>
<tr>
<td>Logical layout</td>
<td>Template based or guillotine layout</td>
<td>Some applications are mature but overall emerging</td>
</tr>
<tr>
<td>Retargeting</td>
<td>Fair bit of work for mobile devices</td>
<td>Emerging</td>
</tr>
<tr>
<td>Table layout</td>
<td>Lots of recent work on this</td>
<td>Possible</td>
</tr>
</tbody>
</table>

Accessible Graphics

Access to graphics is still very limited for blind people—an audio description is not enough for many tasks.

New technologies potentially offer much better access:

- Tactile graphics overlaid on a touch screen
- Low-cost refreshable braille project
- Touch screen with haptic/tactile feedback

Need content/standards for such graphics to be part of eBooks.
Conclusion

Need to ensure standards allow eBooks to be more than just a digital printed book

• For layout specify *what* not *how*

Lots of recent research on *automatic layout*—great if we can engage these researchers in the development of standards.

eBooks are great boon to people who are blind or have severe vision impairment, and even bigger boon if they can provide *accessible graphics*