WYSIWYG vs. coding text

or thinking about structuring documents...

The Proseminar Quadrology (3/4)
http://education.dbai.tuwien.ac.at/wie/WS05/

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Deciding on the key message and storylining are key steps in the process of writing, and should be done previous to actual wording of the text.

**WRITING A SCIENTIFIC ARTICLE***

- **Decide on key message**
  - Think about the key message / the main ideas you want to convey in your article

- **Craft the storyline**
  - Logical flow of thoughts
  - red line
  - iterative
  - transitions

- **Create text**
  - Find suitable wording and formulate your thoughts into phrases
  - Consider length specifications and accordingly adjust your text

* assuming your research is done and the task at hand is to write up your results for an article

Source: [http://education.dbai.tuwien.ac.at/wie/WS05/](http://education.dbai.tuwien.ac.at/wie/WS05/)
For this reason, we disagree with common arguments against WYSIWYG editors.

CONCEPTUALLY DISTINCT TASKS IN WRITING

Composition vs. typsetting
([Cot99], Sect. 2.1)

1. Composition of the text:
   - actual choice of words to express the ideas
   - logical structuring of the text
2. Typesetting of the document

Structuring vs. wording

1. Determining the audience and template of the document
2. Logical structuring of one’s thoughts
3. Actual wording of the thoughts

Source: http://education.dbai.tuwien.ac.at/wie/WS05/
GROCERY LIST EXAMPLE – COMPOSING TEXT WITH WYSIWYG*

<table>
<thead>
<tr>
<th>Input author*</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>Tomatoes</td>
</tr>
<tr>
<td></td>
<td>Water melon</td>
</tr>
<tr>
<td>Milk fridge</td>
<td>Mozarella</td>
</tr>
<tr>
<td></td>
<td>Milk</td>
</tr>
<tr>
<td></td>
<td>Butter</td>
</tr>
<tr>
<td>Beverages</td>
<td>Champagne</td>
</tr>
<tr>
<td></td>
<td>Mineral water</td>
</tr>
<tr>
<td></td>
<td>Orange Juice</td>
</tr>
<tr>
<td>Cashier</td>
<td>Vienna Newspaper</td>
</tr>
<tr>
<td></td>
<td>Chewing gum</td>
</tr>
<tr>
<td></td>
<td>Tomatoes</td>
</tr>
<tr>
<td></td>
<td>Water melon</td>
</tr>
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<tr>
<td>Cashier</td>
<td>Vienna Newspaper</td>
</tr>
<tr>
<td></td>
<td>Chewing gum</td>
</tr>
</tbody>
</table>

* Using MS Office Word 2003
Source: http://education.dbai.tuwien.ac.at/wie/WS05/
GROCERY LIST EXAMPLE – CODING TEXT*

\documentclass{article}
\begin{document}
\Large
\begin{center}
\begin{tabular}{lp{6cm}}
\textbf{Vegetables} & Tomatoes \\
& Water melon \\
\textbf{Milk fridge} & Mozarella \\
& Milk \\
& Butter
\end{tabular}
\end{center}
\begin{center}
\begin{tabular}{lp{6cm}}
\textbf{Beverages} & Champagne \\
& Mineral water \\
& Orange Juice
\end{tabular}
\end{center}
\begin{center}
\begin{tabular}{lp{6cm}}
\textbf{Cashier} & Vienna Newspaper \\
& Chewing gum
\end{tabular}
\end{center}
\end{document}

* Using WinEdt 5.3, MiKTeX 2.4
Source: http://education.dbai.tuwien.ac.at/wie/WS05/
“THE EVILS OF WYSIWYG“ ([Cot99], Sect. 2.2)

1. The author is distracted from the proper business of composing text, ...

2. ... The final product (of a word processor) is greatly inferior to that of a real typesetting program.

3. The user of a word processor is under a strong temptation to lose sight of the logical structure of the text and to conflate this with superficial typographical elements.
“THE EVILS OF ...WHAT?”

1. ... distracted from ... composing text ...
2. ... The final product ... is greatly inferior ...
3. ...lose sight of the logical structure of the text ...

Composing text with WYSIWYG*

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Tomatoes</th>
<th>Water melon</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Mozarella</td>
<td>Milk</td>
</tr>
<tr>
<td></td>
<td>Butter</td>
<td></td>
</tr>
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<tr>
<td></td>
<td>Orange Juice</td>
<td></td>
</tr>
<tr>
<td>Cashier</td>
<td>Vienna Newspaper</td>
<td>Chewing gum</td>
</tr>
</tbody>
</table>

Coding text**

```latex
\documentclass{article}
\begin{document}
\Large
\begin{center}
\begin{tabular}{|l|l|}
\hline
Vegetables & Tomatoes & Water melon \\
Milk fridge & Mozarella & Milk \\
& & Butter \\
Beverages & Champagne & Mineral water \\
& & Orange Juice \\
Cashier & Vienna Newspaper & Chewing gum \\
\hline
\end{tabular}
\end{center}
\end{document}
```

* Using MS Office Word 2003
** Using WinEdt 5.3, MiKTeX 2.4
Source: http://education.dbai.tuwien.ac.at/wie/WS05/
CODING TEXT (1/…)

Layer 1 contains the fraction of core or unique information \( a_u = 1 / \rho_1 = 0.44 \). Layers 2 and 3 contain redundant representations of the core information. Arranged from left to right we have fractions of core information with decreasing redundancy. In our example we can distinguish two blocks of information with \( \rho_0 = 0 \) and \( \rho_0 = 3 \) that contain each 0.2 units of unique information appearing 3 or 2 times, respectively.

We use the variable \( \alpha \) to describe the fraction of unique information that can be found within a certain block with constant redundancy. Hence, we can write for \( \rho_1 \) in \( 1 \leq \rho_1 \leq 2 \)

\[
\begin{align*}
\text{Begin equation} \\
\alpha_1 &= \alpha_u = \frac{\alpha_1}{\rho_0} \\
\text{End equation}
\end{align*}
\]

From \( \langle \text{ref:eg1}\rangle \), we can write unique recall as

\[
\text{Begin equation} \\
\rho_1 &= \frac{\rho_0 \alpha_1}{\alpha_2} = \frac{\rho_0 (\alpha_1 + \alpha_2)}{\alpha_2} \\
\text{End equation}
\]

where \( \alpha_1 \) and \( \alpha_2 \) express the amount of unique information covered from each block.

Assuming equal probability of discovery for each piece of information, the recall or coverage of information within each of the two blocks 1 and 2 is the same as the overall recall \( \rho_1 = \rho_2 = \rho \).

\[
\text{Indent} \text{ We can now write for each of the two blocks} \\
\text{Begin equation} \\
\rho_1 &= \frac{\rho_0 \alpha_1}{\alpha_2} = \frac{\rho_0 \alpha_1}{\rho_0 \alpha_2} \\
\text{End equation}
\]

\[
\text{Indent} \text{ Using this together with} \langle \text{eq:example 1.5} \rangle, \text{we get} \\
\text{Begin equation} \\
\rho_1 &= \alpha_1 \rho_1 + \alpha_2 \rho_2 \\
\text{End equation}
\]

According to proposition \( \langle \text{prop:redundancy formula} \rangle \), unique recall for each of the two blocks can be written as

\[
\text{Begin align} \\
\rho_1 &= (1-r)^3 \\
\rho_2 &= (1-r)^3 \\
\text{End align}
\]

"... the mechanics of typing an ASCII document suitable for feeding to LaTeX are not much different from typing in a modern word processor." ([Cot99], Sect. 2.4)

* Using WinEdt 5.3, MiKTeX 2.4
Source: http://education.dbai.tuwien.ac.at/wie/WS05/
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