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*

Most important steps in writing considered by lecturer

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

- Logical flow of thoughts
- red line
- iterative
- transitions

- 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

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For this reason, we disagree with common arguments against WYSIWYG editors.

CONCEPTUALLY DISTINCT TASKS IN WRITING

Opinion of the lecturer

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

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GROCERY LIST EXAMPLE – COMPOSING TEXT WITH WYSIWYG*

Input author*

Vegetables	Tomatoes Water melon
Milk fridge	Mozarella Milk Butter
Beverages	Champagne Mineral water Orange Juice
Cashier	Vienna Newspaper Chewing gum

Output

Vegetables	Tomatoes Water melon
Milk fridge	Mozarella Milk Butter
Beverages	Champagne Mineral water Orange Juice
Cashier	Vienna Newspaper Chewing gum

* Using MS Office Word 2003

Source: http://education.dbai.tuwien.ac.at/wie/WS05/

GROCERY LIST EXAMPLE – CODING TEXT*

Input author*

```
\documentclass{article}
\begin{document}
 \Large

 \begin{center}
  \begin{tabular}{lp{6cm}}

    \textbf{Vegetables} & \raggedright Tomatoes\\
    Water melon \tabularnewline[10pt]

    \textbf{Milk fridge}& \raggedright Mozarella\\
    Milk\\
    Butter \tabularnewline[8pt]

    \textbf{Beverages}& \raggedright Champagne\\
    Mineral water\\
    Orange Juice \tabularnewline[8pt]

    \textbf{Cashier}& \raggedright Vienna Newspaper\\
    Chewing gum \tabularnewline[8pt]

  \end{tabular}
 \end{center}

\end{document}
```

Output

Vegetables	Tomatoes Water melon
Milk fridge	Mozarella Milk Butter
Beverages	Champagne Mineral water Orange Juice
Cashier	Vienna Newspaper Chewing gum

* 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 ad to conflate this with superficial typographical elements.

Source: http://education.dbai.tuwien.ac.at/wie/WS05/

“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*

Vegetables	Tomatoes Water melon
Milk fridge	Mozarella Milk Butter
Beverages	Champagne Mineral water Orange Juice
Cashier	Vienna Newspaper Chewing gum

Coding text**

```
\documentclass{article}
\begin{document}
 \Large

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    \textbf{Vegetables} & \raggedright Tomatoes\\
    Water melon \tabularnewline[10pt]

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    Milk\\
    Butter \tabularnewline[8pt]

    \textbf{Beverages}& \raggedright Champagne\\
    Mineral water\\
    Orange Juice \tabularnewline[8pt]

    \textbf{Cashier}& \raggedright Vienna Newspaper\\
    Chewing gum \tabularnewline[8pt]

  \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 $a_u=1
/ \rho = 0.4$. 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
$\rho_1=3$ and $\rho_2=2$ 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 $i \in \{ 1,2 \}$
\begin{equation}
    a_{ui}=\alpha_i a_u = \frac{\alpha_i}  {\rho} \ .
\end{equation}

From (\ref{eq:def r u}), we can write unique recall as
\begin{equation}
    r_u= \frac {b_u} {a_u} = \rho b_u = \rho (b_{u1} + b_{u2}) \ .
    \label{eq:example 2 5}
\end{equation}
where $b_{u1}$ and $b_{u2}$ 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 ($r_1 =
r_2 = r$).

\noindent We can now write for each of the two blocks
\begin{equation}
    r_{ui}=\frac{b_{ui}} {a_{ui}} = \frac{\rho b_{ui}}    {\alpha_i}
\end{equation}

\noindent Using this together with (\ref{eq:example 2 5}), we get
\begin{equation}
    r_u= \alpha_1 r_{u1} + \alpha_2 r_{u2}
    \label{eq:example 2 5 2}
\end{equation}

According to proposition~\ref{prop:redundancy formula}, unique
recall for each of the two blocks can be written as
\begin{align}
    r_{u1} &=1-(1-r)^3 \\
    r_{u2} &=1-(1-r)^2
\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/

RELATED LITERATURE

- [Cot99]: Allin Cottrell. *Word Processors: Stupid and Inefficient*. Online position paper, 1999. http://ricardo.ecn.wfu.edu/~cottrell/wp.html (3 Nov. 2005).
- [Nie05]: Jakob Nielsen. *R.I.P. WYSIWYG*. Online column, posted October 10, 2005. http://www.useit.com/alertbox/wysiwyg.html (3 Nov. 2005).