Multimodal System Output
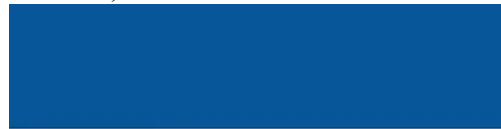**Professor Doctor Sebastian Moller**
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Text generation

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Multimodal System Output: Text generation.
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In the present video

(Refer Slide Time: 00:19)

Text generation. Typography:

- **Display of text** according to ergonomic and perceptual criteria
- Two levels:
  - **Microtypography**
  - **Macrotypography**
- **Basics of microtypography**:
  - Serifs   AaBbCc
  - Ligation   fi → fi
   fl → fl

(Malaka et al., 2009)

we will talk about the text generation and more precisely on how to organize text according to ergonomic and perceptual criteria. This process is called the typography.

Actually we can distinguish two levels of typography which we call microtypography and macrotypography. Microtypography is the small scale text composition whereas macrotypography is a composition of text on a piece of paper or on a screen.

Let us first address the basics of microtypography. As you see in the picture behind me, each character has a different shape and sometimes at the endings of the characters there are perpendicular lines which somehow make the ending of the character little bit more into relief. These endings are called the serifs and we usually distinguish between serif characters and serif-less characters.

Sometimes the characters are moved towards each other in order to combine them which we call a ligation which you see also in the picture behind me.

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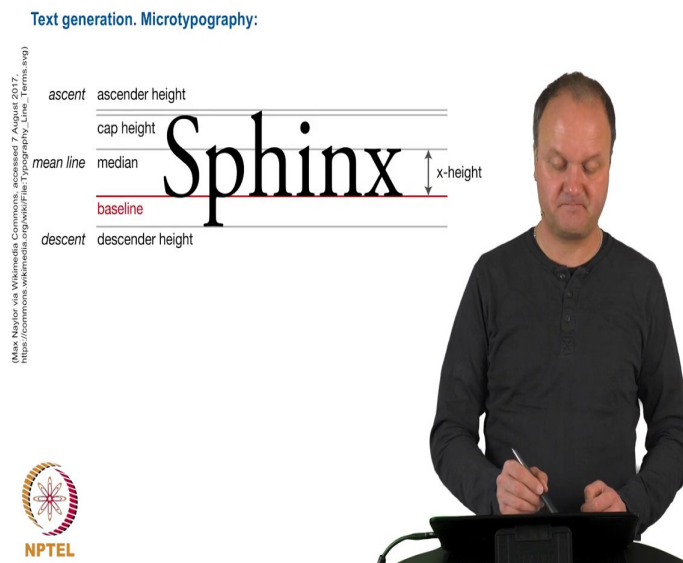
The characters have individual heights and they are organized along a baseline which you see here. And the small characters, they have the height which goes to the median or there are some which go below the baseline up to the so-called descender and there are others like capital letters which go to the upper part of the line scheme which you see behind me.

The characters themselves of course

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Text generation. Microtypography:

- **Font**:
    - **Proportional font**
    - **Non-proportional font**
- **Font size**: Mostly indicated in typographic points
- **Font style**:
    - Normal
    - **Bold**
    - *Italics*

(Malaka et al., 2009)

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have different shapes and they may be displayed in different ways. Usually these characters are organized in so-called fonts and font families.

We usually distinguish between proportional fonts that is fonts where each character has an individual width and non-proportional fonts where each character has the same width. For example Courier is an example of the non-proportional or fixed width font.

The font size is usually indicated in terms of typographic fonts and those typographic fonts depend on the standard. For example for the postscript standard 1 point is 1 over 72 inches.

And we can then also change the font style. For example from a normal to a bold font and to italics font and we can even combine those font styles that usually we should make sparse use of different font styles in order to not make the picture of the text look inhomogenous and destroy the attention of the reader.

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There are some more specific ways, for example to adjust the spacing of the letters, some which are called kerning that is when letters are moved
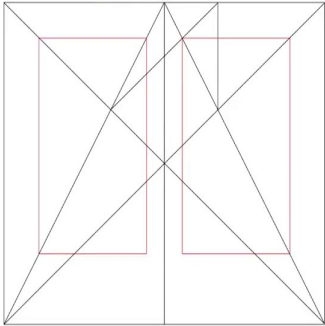
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towards each other in order to avoid an excessive space between them which comes from the particular shape of those characters as you see here, between the A and the V. And of course we can also adjust the line spacing.

All these are aspects of the microtypography.

The second level is the

Text generation. Macrotypography:

organization of the text on a page. And we usually describe the page by the so-called page ratio. A common page ratio is for example 2 to 3. And then there are common rules which govern the adjustment of text on such a page.
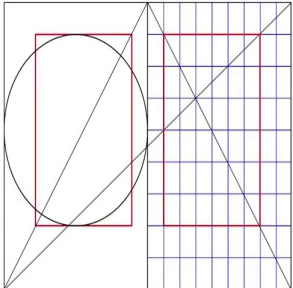
A very common canon is the so-called Van de Graf canon which illustrates the margin ratio between the inner margin, the top margin, the outer margin and the bottom margin. And if you construct it as it is displayed on the screen behind me, you get a margin ratio of 2 to 3 to 4 to 6, which is something which is very pleasant for the reader.

In principle such a van de Graf canon works for all types of page ratios. Another

Text generation. Macrotypography:

- **Canons of page construction**: Exterior limits of text and pictures

very common canon for page construction is Tschichold's Golden section which you see in the picture behind me which is based on the separation of the page into 9th, into blocks of 9th parts of the page length and width and width.

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References.

R. Malaka, A. Butz und H. Hußmann, *Medieninformatik – Eine Einführung*. München: Pearson Studium, 2009.

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