Fundamental of Digital Media Design Design

Chapter 2
Introduction to Text

by

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Communitising Technology

Chapter Description

- **Aims**
  - To understand the concept of text, the elements and input types and
  - To differentiate between font & faces
  - To learn the terms, classification and style of text
  - To know the use of text and how to choose the right font.

- **Expected Outcomes**
  - Understand the concept, principles, terminology of font
  - Able to manipulate and design font (typography).

- **References**
  - Zhe-Nian Li, Mark S. Drew.S & Jiangchuan Liu. Fundamentals of Multimedia (Texts in Computer Science) 2nd ed. 2014 Edition. Springer Publication. 2014. ISBN-13: 978-3319052892.
  - Jim Krause, Lesson in Typography, Creative Core, 2016, United States of America

Topics

- Introduction
- Text elements
- Text input
- Font & Faces
- Font terms
- Font classification
- Serif & Sans Serif
- Font styles
- Guideline of choosing font
- Use of text
- Conclusion

Introduction

- Text is the simplest media and requires least amount of file storage.

- Text can be in a form of words, sentences and paragraphs used in communication.

- Most of text is not visually attractive compared to other media types, but it can convey essential and precise information.

Introduction (cont)

- Multimedia application depends on text to describe:
    - **Page title**
    - **Delivering information in form of multiple sentences / paragraphs**
    - **Labels for pictures**
    - **Instructions for operating the application**

- Text is probably the most common form of information delivery.

Text consist of 3 elements:

1. Alphabet characters

   - A – Z and a – z

2. Numbers

   - 0 – 9

3. Special characters

   - Punctuation (. , ; " ' ! : - /)

   - Signs ($ + - = @ # % ^ & *)

Text Input

Text can be captured in following ways:

1. Keyboard

2. Mouse

3. Scanner (OCR) – Optical Character Recognition*

> * designed to translate images of handwritten or typewritten text (usually captured by a scanner) into machine-editable text.

Fonts & Faces

- **Typeface**
  - Graphic representation or the shape of characters.
    - A **typeface** is a family of related fonts
  - Example : Bookman Old Style

- **Font**
  - Collection of characters of different sizes and styles of a typeface.
  - Example : **Arial 18 point Bold**

- **Font Styles**
  - Bold, Italic and Underline

- **Font Size**
  - Expressed in point
  - Example : **18 point (x)**

Font Terms

- **Baseline** – the line on which the bases of characters are arranged

- **Leading** – the distance between successive baselines

- **x-height** – the distance between the baseline and the top of a lower-case letter *x*

- **Ascenders/descenders** – strokes that rise above the x-height/drop below the baseline

- **Kerning** – adjustment of space between certain pairs of letters (e.g. AV) to make them look more uniform

Font Terms (cont)

- **Tracking** - Spacing between characters.

- **Serif** - Flag or decoration at the end of a character stroke.

- **Regular**, **Condensed** and **Expanded** – the body width of the font.

- **Cases** : upper and lower. BALL vs ball

- **Case Sensitive** : exactly matched

Font Classification

- **Spacing**: *monospaced* (fixed width)/*proportional*

- **Serifs**: *serifed/sans serif*
  - Serifs are the small strokes added to the ends of character
  - shapes in conventional book fonts

- **Shape**: *upright/italic/slanted*
- Slant is a vertical shear effect, italic uses different glyph shapes with a slant

- **Weight**: *bold/normal/light*

Font Terms

Picture source: http://www.myfirstfont.com/images/glyphterms.gif

Font Terms

Picture source: http://www.webcomicalliance.com/wp-
content/uploads/2011/01/fontfactor-tracking.jpg
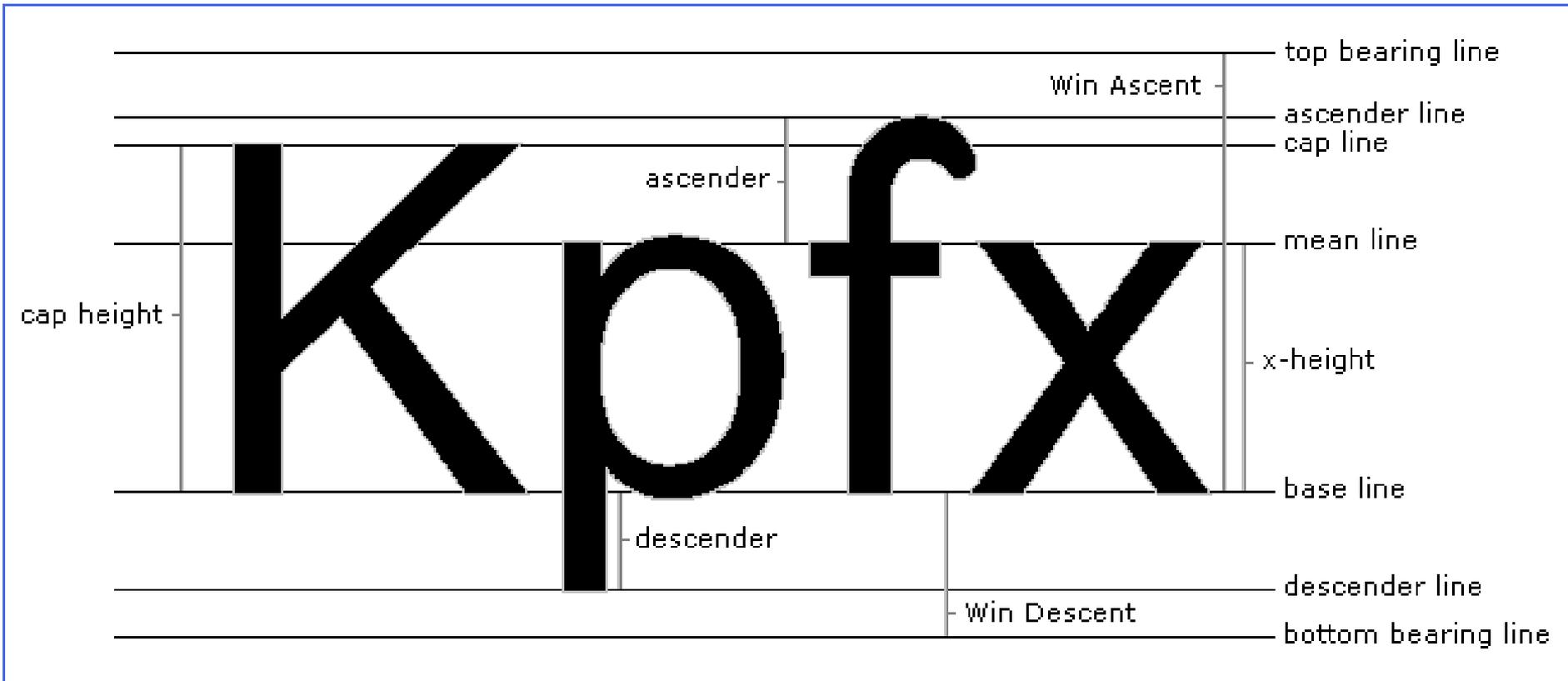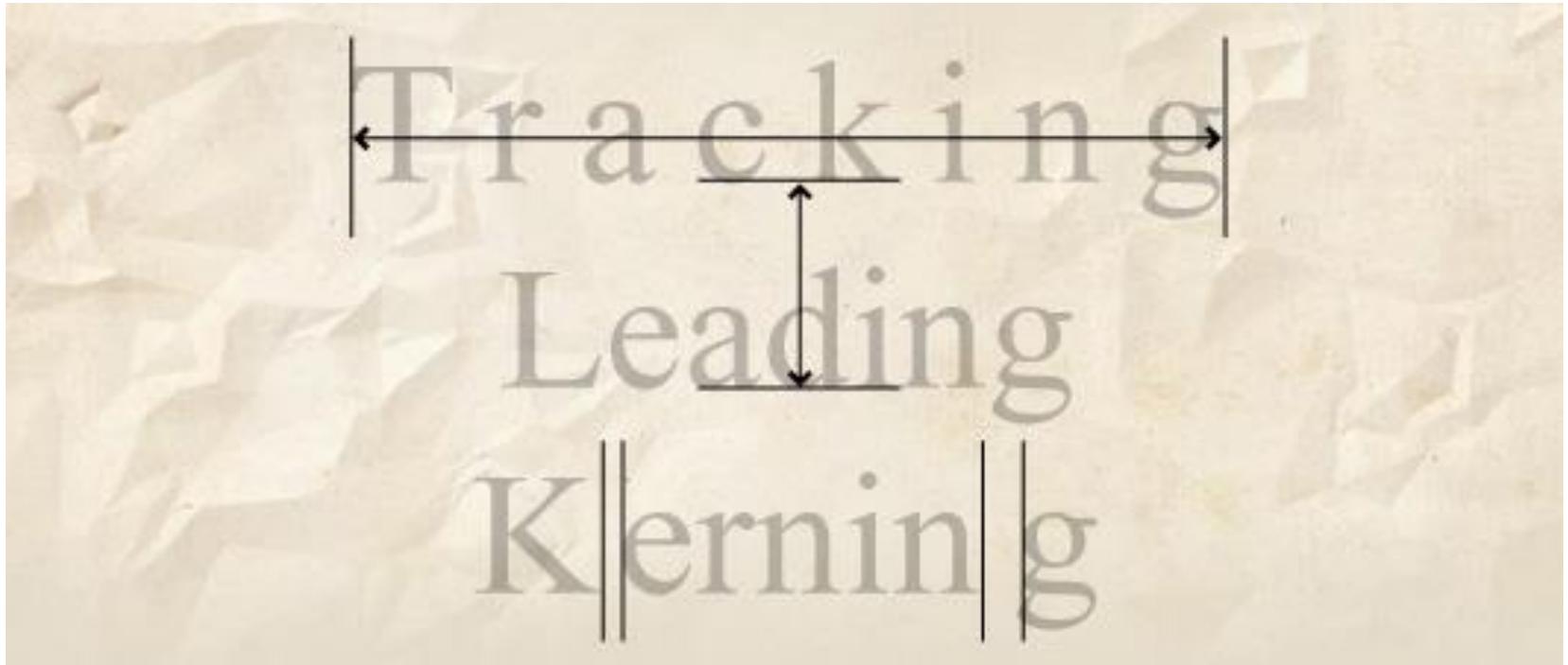
Serif & Sans Serif Font

- Fonts can broadly be said to be of one of two types: *serif or sans serif*
- A serif is the decorative 'bit' at the end of a letter stroke
  - Serif fonts have them and sans serif fonts don't ('sans' being French for 'without')
- **Serif fonts** are usually used for printed media or documents that have large quantities of text.
  - This is because the serif helps guide the reader's eye along the line
- **Sans Serif fonts** are considered better for computer displays because of the sharper **contrast**.

Serif VS Sans Serif

Picture source: https://visualhierarchy.co/blog/wp-content/uploads/2015/07/serif-sansserif.jpg
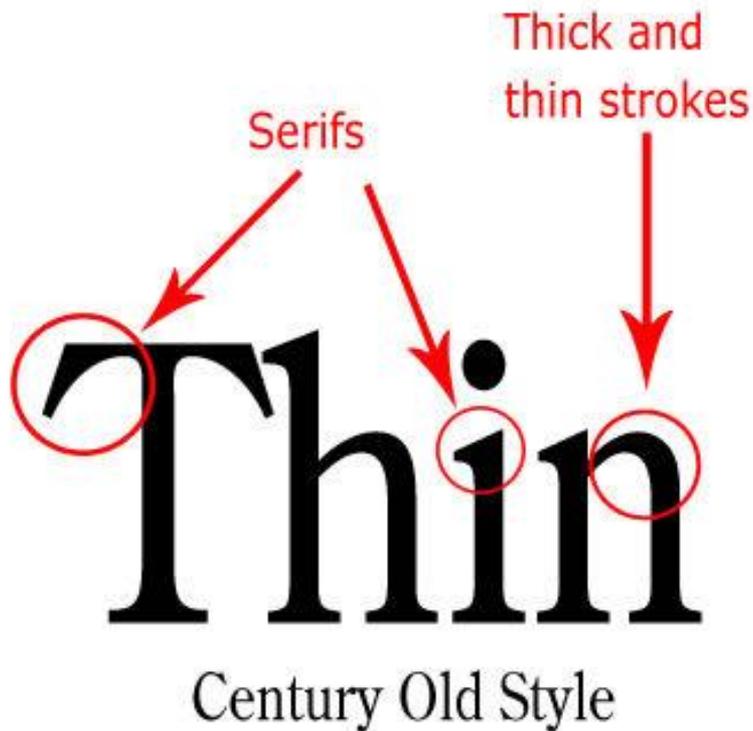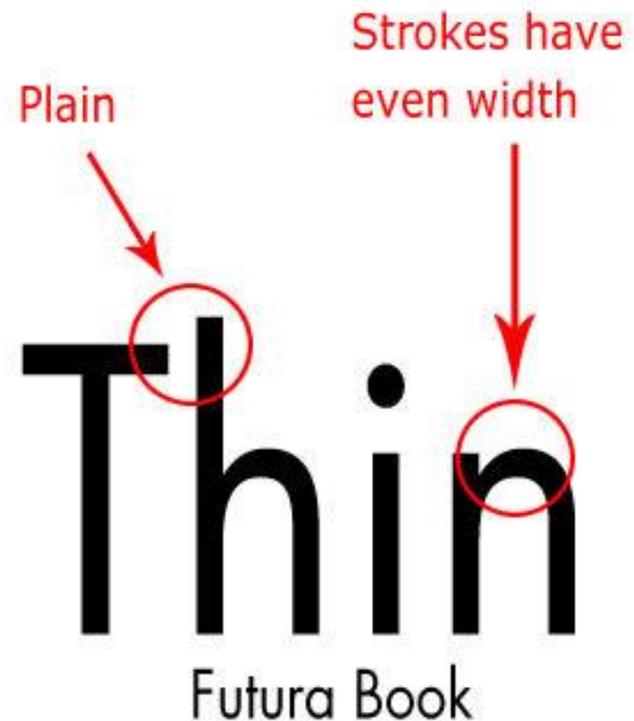
Font Styles

- **Bold**, *Italic*, <u>Underline</u>, Strikethrough, superscript or subscript, embossed or shadow
- **Colours**
- Some common fonts used today include:
  - Arial (or Helvetica)
    - A sans serif font
  - Times New Roman (or Times Roman)
    - A serif font
  - Courier New (or Courier)
    - A **monospaced** font (all characters have the same width)
  - Refer to microsoft word.

Guideline of choosing Font

- For small type, **do not use decorative fonts** because in small size they are unreadable.

- Use **as few typefaces as possible** but you can vary the size and style using *italic* or **bold.**

- **Adjust the leading or line spacing** where you have a lot of text for easier reading.

- **Vary the size of a font** according to the importance of the message you are delivering.

- Use **bold or emphasize text** to highlight ideas or concept.

Guideline of choosing Font (cont)

- In large headlines, adjust **the spacing between letters (kerning)** so that the spacing feels right.

- Use anti-aliasing for big fonts but turn off anti-aliasing for small fonts.

- Surround headlines with white space

- Distinguish **text links** with colors and underlining

- Use drop caps and initial caps

Use of Text

Positive ways to communicate message by less text and other ways are:

1. Hypertext
2. Pop-up Messages
3. Drop-down Boxes
4. Scroll Bars
5. Buttons for interaction
6. Symbols & Icons

Conclusion

- Text is the simplest of data types and requires the least amount of storage

- 3 categories of text elements:

  Alphabet characters, Numbers, Special characters

- 3 types of text:

  Unformatted text, Formatted text, Hypertext

- Font is the collection of characters of different sizes and styles of a typeface.

- Typeface is the graphic representation or the shape of characters.

- **Font Terminology:**

  Baseline, Leading, x-height, Ascenders/Descenders, Kerning, Tracking, Serif

Conclusion

- **Classification of fonts:**

  Spacing, Serifs, Shape, Weight

- Font types:

  PostScript, TrueType, Bitmap

- Bitmaps require one bitmap for each size.

  - **File size increases as more sizes are added.**

  - **Require a lot of memory.**

- Vector fonts can draw any size by scaling the vector drawing primitives mathematically.

  - File size is much smaller than bitmaps.

- Rasterization refers that font is drawn on the screen one pixel at a time.

- Anti-aliasing blends the font into the background colour to minimize the jagged edges making for smoother overall appearance.