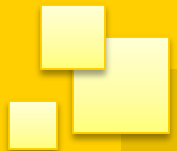


A decorative graphic on the left side of the slide consisting of several overlapping squares in black, yellow, and light gray.

## **Session 5**

# **Future of Web Design**





## Session Overview

In this session, you will be able to:

- Explain advancements in the fields of images, animation, tools, hardware, and software that make up a Web design
- Explain the potential challenges in the field of Web design
- Identify suitable tips that will support Web design against future potential challenges





# Introduction

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- Print medium – static in nature and behaved as one-sided communication
- With developments in technology, Web revolutionized itself as a worldwide interface to find information, purchase goods and services, connect with people, and so on
- In the past, the interface platform ruled the Web and its design
- Today, engineers and designers have adopted responsive designs that remain consistent across all platforms





# Static File Formats

## JPEG

- 24-bit color
- Tight compression
- Cross-platform compatibility
- JPEG 2000 is not available at a mass to the end users

## PNG

- Supports 48-bit color
- 16-bit RGB channel separations
- 16-bit grayscale
- 65,000 different shades
- Supports transparency, vignettes, drop shadows, and fade outs
- Support for gamma and chromaticity correction
- Not a well-recognized file on the Internet because of the browser limitations
- Color management abilities are not fully
- Supported by Windows, Macintosh, or UNIX



# Animated Formats



## **MNG**

- Patent-free status against UNISYS claim over GIF
- Independent colors by way of gamma, chromaticity, and ICC
- lossless compression
- moving sprites
- nested loops
- compatible with JPEG Network Graphics (JNG)



## **SVG**

- can be rendered for display on a 96 a 300 dpi printer, without any quality compromise
- SVG vector image, rendered at 96 dpi can be put to a printer, and then added with the required bitmap effects
- Supports image panning and zooming
- Capable of producing bitmap type effects on vector images without using a bitmap editor





# Speed—Emergence of Broadband Technologies

## Broadband technologies

- Cable
- DSL
- Satellite Communication
- Wireless Broadband
- Wireless cable



## Major hardware advancements of recent times

- Advanced Micro Devices (AMD) released 1000 MHz CPU followed by Intel creating their own 1000 MHz chip
- 33 megabyte (MB) per second hard drive is being replaced with 66 megabyte per second drives
- 'Ultra 160 Small Computer System Interface (SCSI)' drives is replacing "Ultra-Wide SCSI" drives, giving 80 megabytes per second
- At the RAM front, the 'Bus Speed' is also increasing from 66 MHz to 100 MHz
- Beneficiaries of these advancements are the graphic designers





# Languages

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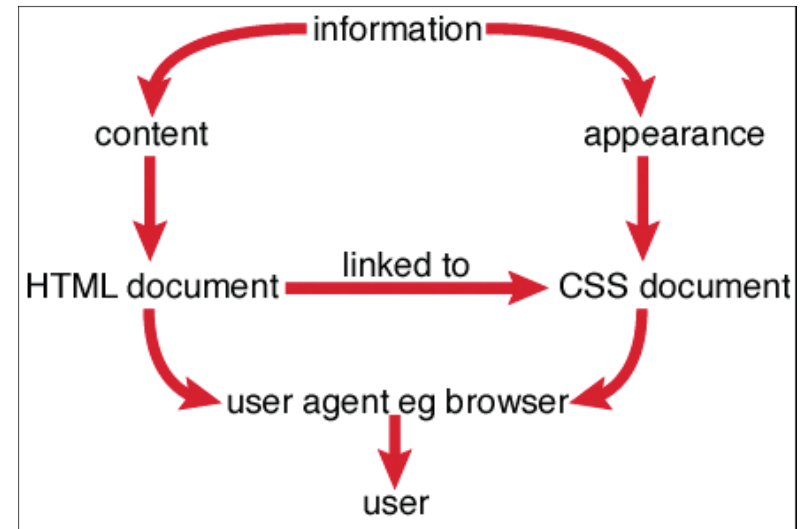
- Hypertext Markup Language (HTML) will be the basic language of the Web for the future.
- Languages and coding technologies that enhance the abilities of HTML are likely to become more and more prevalent.





# Style Sheets

- Style sheets provides convenience to the designers.
- It can also be used to reassign any or all-existing HTML tags.
- It is also possible to overrule a style sheet element.



*How style sheet works*





## Fonts

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- OpenType fonts liberated the Web designers from the conventional fonts and styles.
- HTML5 became the most popular amongst designers for programming language and CSS3 became the latest standard for CSS.





## XML

- It is designed specifically for structured data such as spreadsheets and databases.
- The texted information that appears in an open SVG file is actually created using XML.
- With the help of XML, information such as technical reports and financial data can be made private or public with a level of detail and accessibility.
- XML has introduced a new language to the world called SMIL.





## SMIL

- SMIL stands for Synchronized Multimedia Integration Language.
- It can be used to synchronize playback of audio, video, text, and animation.
- It allows Web content such as sales presentations, training courses, and multimedia slide shows.
- It supports Streaming Audio and Video, which can be played simultaneously with its downloading.
- It is a simple, easy to use language, which can be edited using common text editors such as the Microsoft Notepad as well as SMIL editor itself.





# Software

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## Web Browser Software

- PNG
- SVG

## Content Creation and Editing Software

- JPEG
- GIF





# Web Design Challenges and Tips

Plan on paper

Sketch a Top Level Framework

Apply Grid to a Design

Typography

Select good Color Theme

Layout Division

Rethink the Established

Developers Input

Pay Attention to Details

Perfection—'Sharpening the Work'

Maintaining Files and their Versions

Design for the Best but Prepare for the Worst'

Being Optimistic and Cynical

Mutual Consent

Visual and Content Hierarchy

Open to New Ideas

Tracking Design during Development Process


Unfinished Projects





## Summary

1-3

- The traditional JPEG and PNG formats were the designer's first preference.
  - JPEG 2000 format has shown potential as far as still image compression is concerned.
  - PNG format supports 48-bit color, 16-bit RGB channel separations, and 16-bit grayscale.
  - The features of MNG are lossless compression, moving sprites, nested loops, and is compatible with JPEG Network Graphics (JNG).
  - SVG images, being scalable, can be rendered for display on a 96 Dots per inch (dpi) monitor or a 300 dpi printer, without any quality compromise.
  - Cable, DSL, Satellite communication, Wireless broadband, Wireless Cable are some of the broadband technologies that are likely to replace the present 56 Kilobits per second (Kbps) modems as standard equipment in the near future.
- 

- Advanced Micro Devices (AMD) released 1000 MHz CPU, traditional 33 megabyte (MB) per second hard drive replaced with 66 megabyte per second drives, Ultra 160 Small Computer System Interface (SCSI) drives replaced with “Ultra-Wide SCSI” drives, Bus Speed increased from 66 MHz to 100 MHz as some of the major advancements in hardware.
- Languages and coding technologies that enhance the abilities of HTML are likely to become more and more prevalent.
- Style Sheet provides convenience to the designers. It can be used to reassign any or all-existing HTML tags.
- OpenType fonts liberated the Web designers from the conventional fonts and styles.
- XML shares similarity to HTML, but the former is much more powerful
- SMIL can be used to synchronize playback of audio, video, text, and animation.





- To move in pace with the technological development, both the content creation software and the Web browser software competed. However, the content creation software outpaced the Web browser software.
- Principles and guidelines for Web designing have emerged after prolonged practice, client reviews, and user responses. However, with the changing scenario, new challenges often keep surfacing. These challenges can be overcome only when the Web designers tactfully manage their designs with respect to its users.





## Knowledge Check

1-6

Q1. In a style sheet, if the entire body text of the document has to use the "Arial, Helvetica, Verdana, Sans Serif" font set, the designer can specify the same in the HEAD tag to edit the whole.

- a. True
- b. False





## Knowledge Check

2-6

Q2. \_\_\_\_\_ fonts liberated the Web designers through the @fontface revolution.

- a. OpenType
- b. TrueType
- c. PostScript
- d. Print Font





## Knowledge Check

3-6

Q3. \_\_\_\_\_ is designed specifically for structured data such as spreadsheets and databases.

- a. PNG
- b. XML
- c. HTTP
- d. JPEG





## Knowledge Check

4-6

Q4. SMIL is a simple, easy to use language, which can be edited using only SMIL editor and not any common text editors such as the Microsoft Notepad.

- a. True
- b. False





## Knowledge Check

5-6

Q5. Usage of a \_\_\_\_\_ set of colors is advisable to avoid visual overload.

- a. Limited
- b. Unlimited
- c. Varied
- d. Exclusive





## Knowledge Check

6-6

Q6. Once the project designing is complete and the sign-off is given from the client it goes ahead for \_\_\_\_\_.

- a. Sketching
- b. Development
- c. Rework
- d. Discussion

