

Computer Science Principles

Web Programming

Web-Content Programming with HTML

CHAPTER 2: HOW THE WEB WORKS AND WEB OVERVIEW

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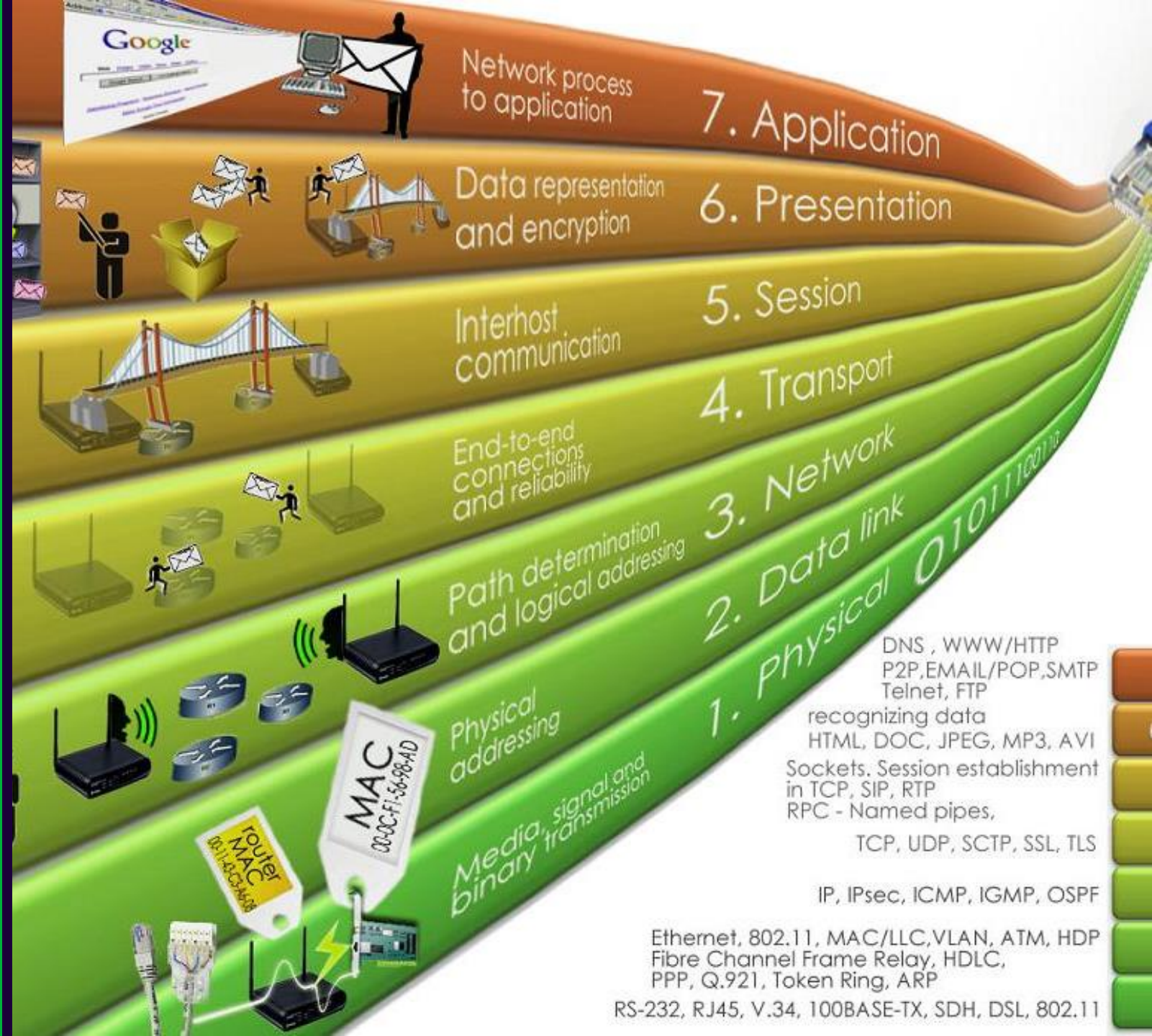
IEEE SENIOR MEMBER



How web works?

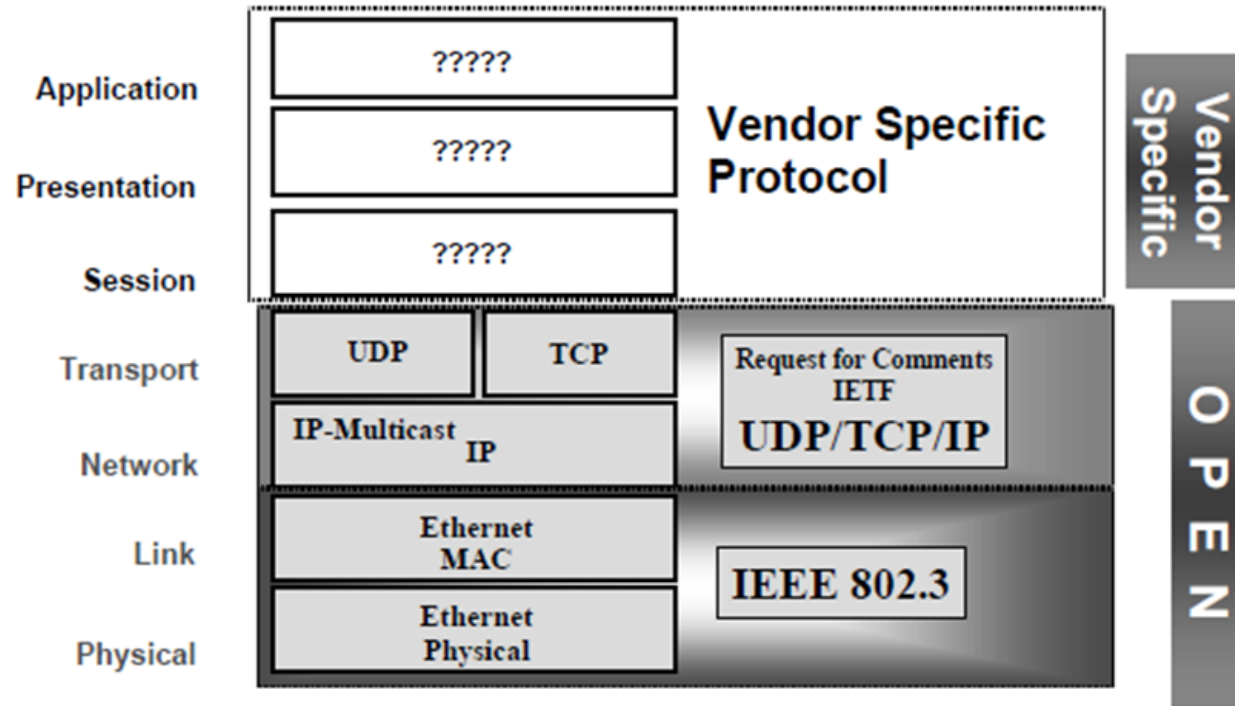
CHAPTER 2

OSI 7 Layer Model

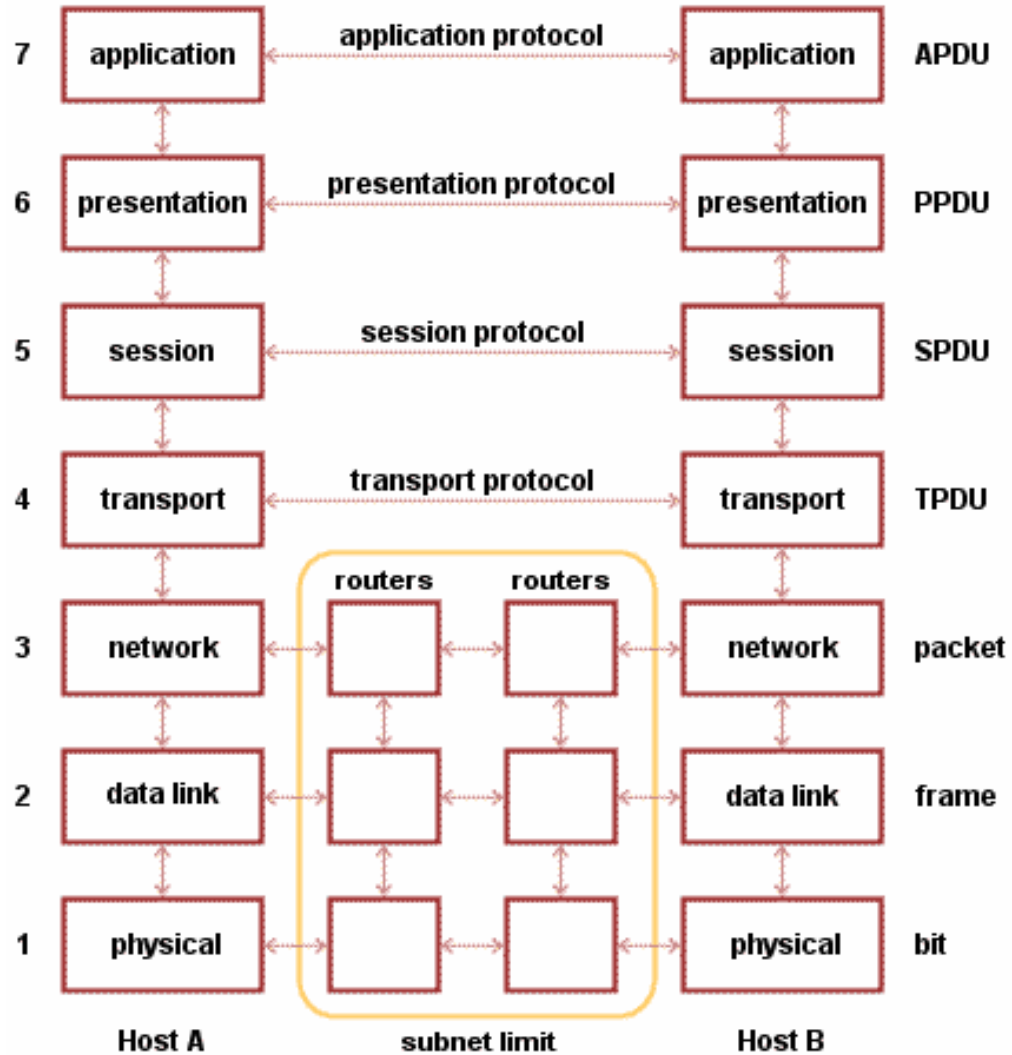


Seven-Layer OSI Model

Ethernet TCP/IP Stack



OSI Model LAN Protocols



Logical Internet Model

Application Layer Protocols

- File Transfer Protocol (FTP)
- Hypertext Transfer Protocol (HTTP)
- Simple Mail Transfer Protocol (SMTP)
- Post-Office Protocol (POP3)
- Domain Name System (DNS)

Application Layer Protocols

Uniform Resource Locator:

<scheme>:<hierarchical part>[? query][# fragment]

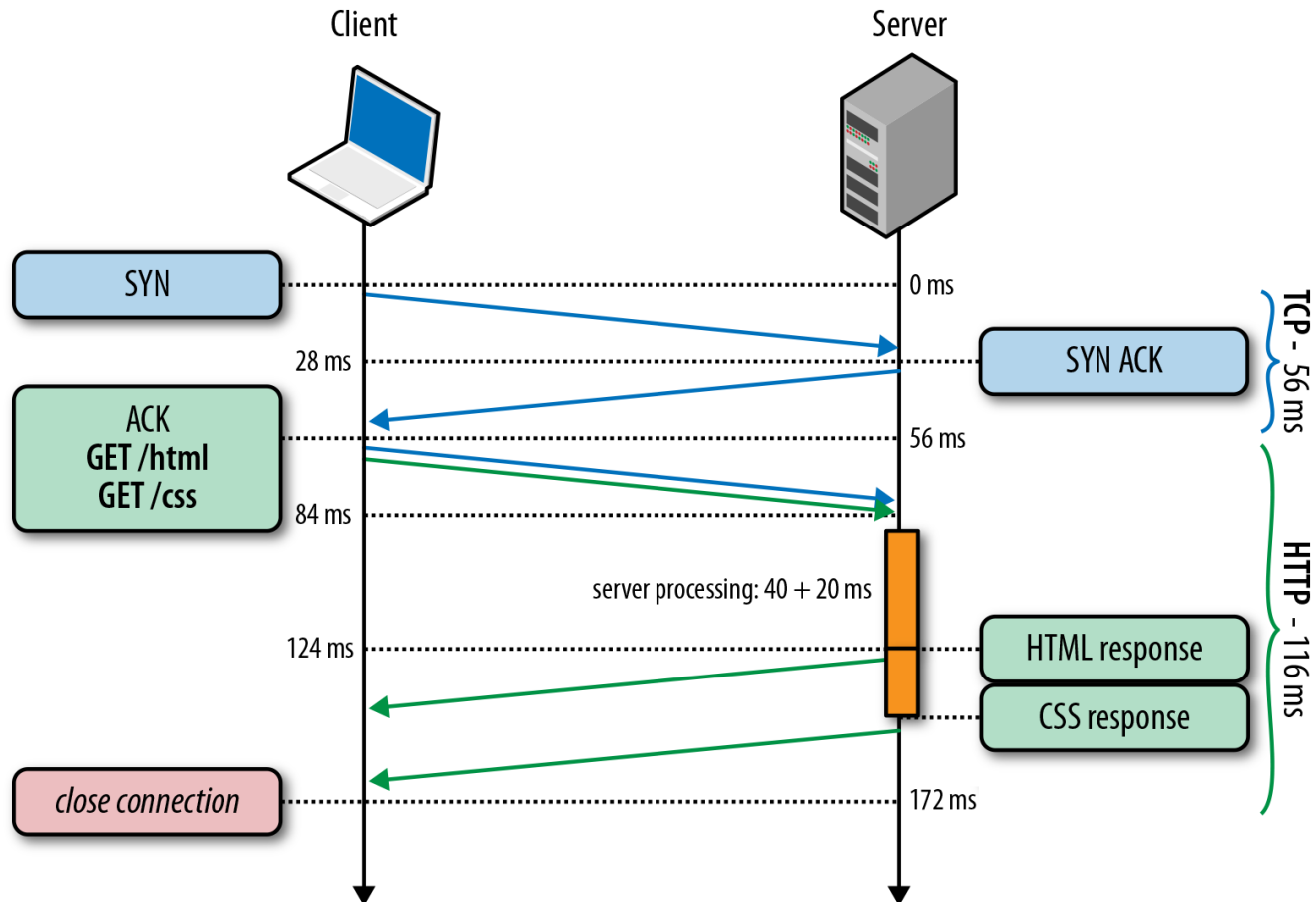
Important Schemes: ftp, http, mailto, file, app, dns, https, im, info, mms

URL Sample: type http in google

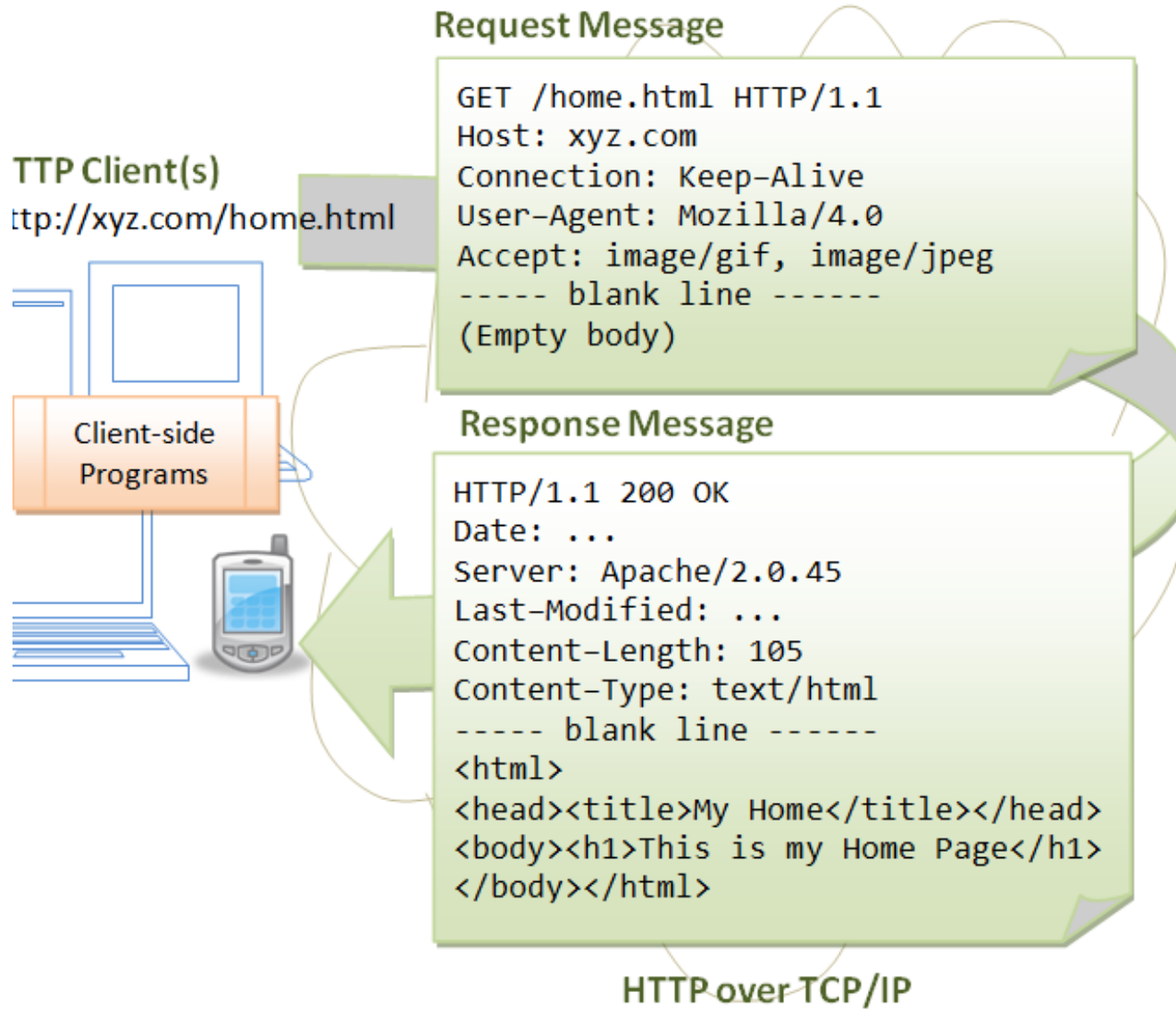
https://www.google.com/search?q=Application+Layer+Protocols&oq=Application+Layer+Protocols&aqs=chrome.0.69i59.6246j0j8&sourceid=chrome&es_sm=122&ie=UTF-8#q=http

<http://www.example.com/2012/samples/first.html>

Scheme-Domain Name-----Directory-----Document



HTTP Connection Session Overview



HTTP Connection: Detailed Information



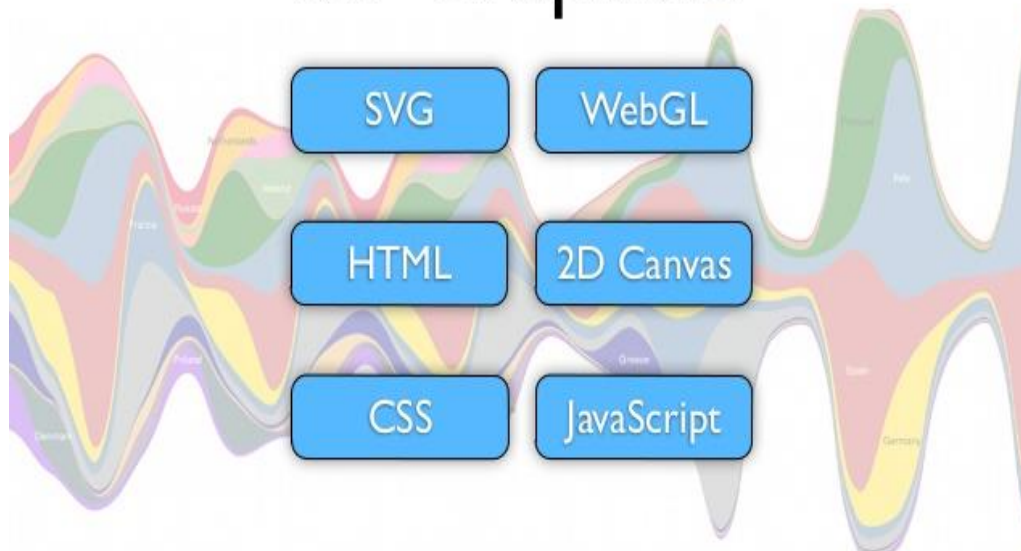
Web Overview

CHAPTER 3



Web Standards

Why so many standards
for Graphics?

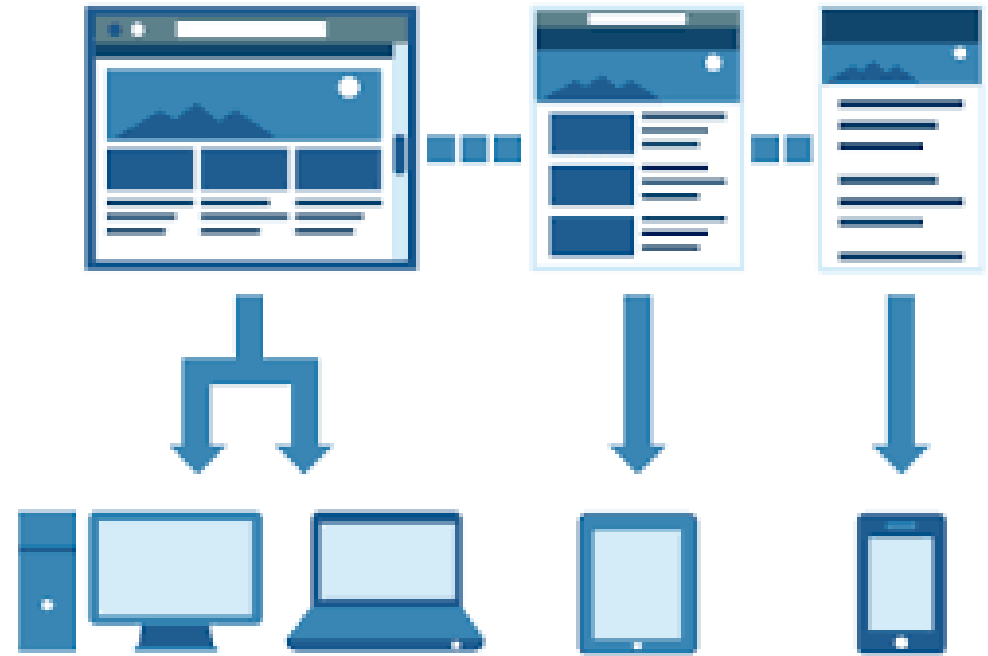


Thursday, February 28, 13



Web Page, App,
PC Program can
all be a viewport
for a Web-site





Responsive Web Design



Web Design Criteria



Scalability



Progressive
Enhancement



Responsive
Design



Accessibility
(Vision, Mobility,
Auditory, or
Cognitive
impairment)



Site Optimization
(Speed
Optimization)



Smallest Image
File, Minimize
HTML/CSs,
Minimum
Javascript, load
script in parallel,
Reduce Requests,
Don't Download
Unnecessary Files