

Browser Bugs & Validation

SIPB Introduction to Web Design
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Jonté Craighead & Cathy Zhang

Lecture Overview

- A Brief Review: Layout Design
- Browser Bugs
- Validation
- Accessibility
- Site Infrastructure & Organization

The Rendering Issue

- W3C produces specifications for CSS
 - Defines valid properties and values
 - Defines how properties/values affect final rendering
 - Does not specify how to generate rendered page
 - Each browser implements own rendering methods
 - ➡ Potential for rendering errors
- CSS 2, recommended in 1998 has just recently been fully supported

Rendering Engines

Trident



Gecko



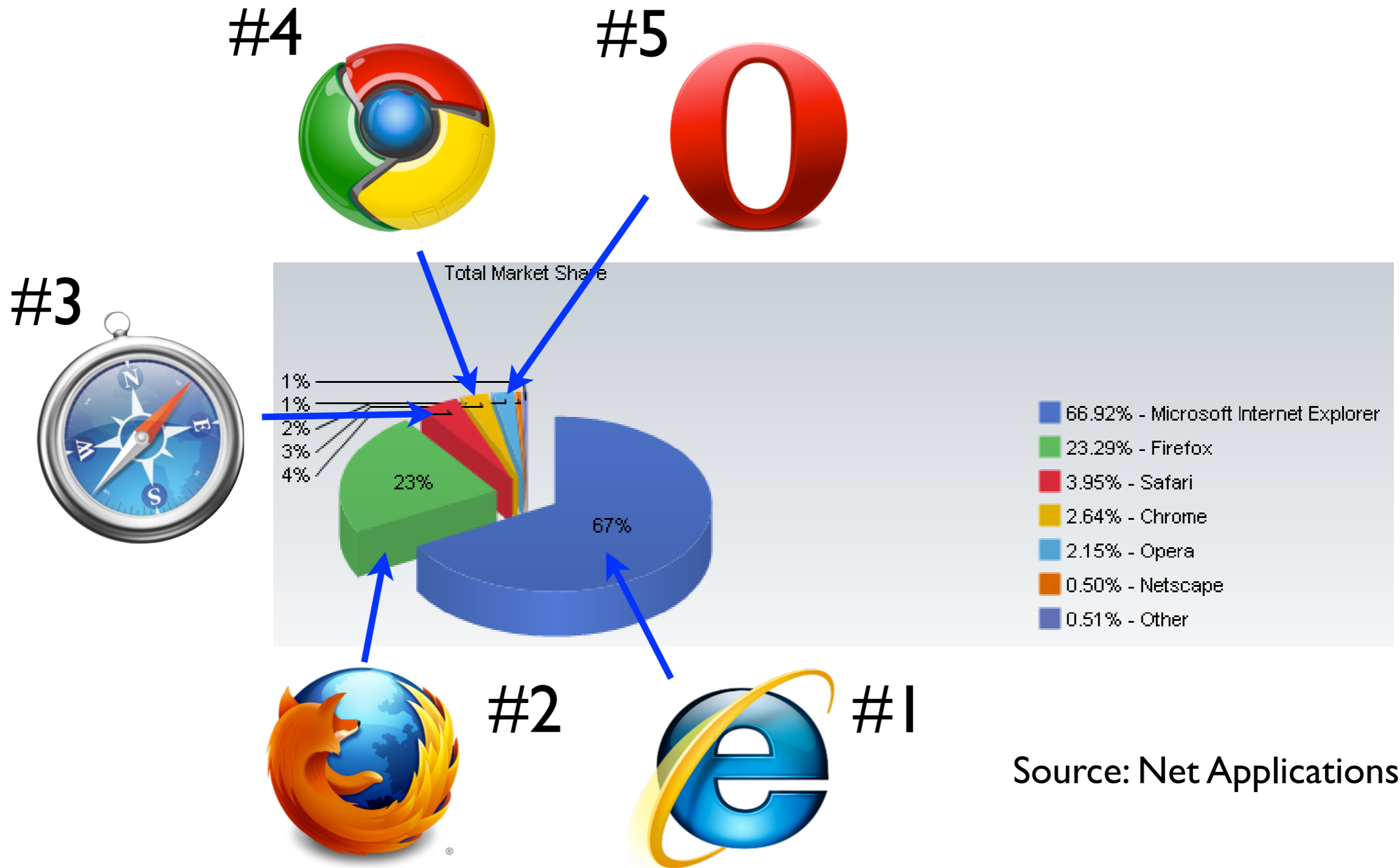
WebKit



Presto



Browser Market Share



Source: Net Applications

A Bit of History

- With IE 6, Microsoft won the browser wars
 - Microsoft allowed IE development to lapse
 - IE pre-installed on Microsoft Windows
 - ➔ Large default market share
- Firefox
 - Developed as open-source alternative from Netscape
- Webkit
 - Open-source engine used by Safari & Google Chrome

Internet Explorer Bugs

- Expanding Box Problem
 - Width: Outer box will always expand to fit contents
 - Height: Outer box's height acts as minimum height
- Float Model Problem I
 - Non-floated content beside float does not flow
- Float Model Problem II (a.k.a “Escaping Floats”)
 - Incorrect rendering of multiple floats

Dealing with Browser Bugs

- Ensure that your markup and CSS are valid
- Develop in a standards-compliant browser
 - Test in other compliant browsers
- Test last in IE, make changes as appropriate
 - Conditional comments to apply IE-specific fixes
- Avoid using Javascript to determine browser

Conditional Comments

- Proprietary IE method for conditionally parsing content
- Target code is wrapped within a comment block
 - Parsed by browser based on condition given
 - Can be used to include non-valid or IE-specific CSS
- Included in comments
 - ➡ Ignored by other browsers
 - ➡ Valid markup & CSS (Ignored by validator)

Conditional Comments

A Basic Example

```
<!-- [if IE]>  
  <strong>Why are you using IE?</strong>  
<![endif]-->
```

A Practical Example

```
<!-- [if IE 6]>  
  <link rel="stylesheet" href="ie6.css" />  
<![endif]-->
```

➔ Include stylesheets only for IE (or a specific IE version)

Validation

- Why validate?
 - Ensures document is well-formed and functional
 - ➡ Best starting point for cross-browser support
 - Enables potential forward-compatibility
 - Assists in finding document errors
- How?
 - Using official W3C validators

W3C Validation Service

- Validators for both HTML & CSS
- Allows for validation by link, upload, and direct input
- Provides list of validation errors and suggestions
 - Page is not valid even if there is only one error
- Links to validation results can be included on pages