

1 HCI and the Web

1.1 HCI – A Quick Reminder

1.2 Web Technology – A Brief Overview

1.3 Web Usability

1.4 Designing Web Sites for Usability

1.5 Web Accessibility

Literature:

- Jakob Nielsen: Designing Web Usability, New Riders 2000
- Steve Krug: Don't Make Me Think, New Riders 2006 (2nd ed.)
- Shneiderman, Plaisant: Designing the User Interface: Strategies for Effective Human-Computer Interaction (5th Edition)

The Web Means Heterogeneity of Platforms

- Processing power
 - Processor, co-processors, cache
 - RAM
- I/O-performance
 - Hard drive speed
 - Network
- Input and Output
 - Displays
 - Keyboard layout
- Additional Hardware and Periphery
 - Video and audio (in/out)
 - Card reader, printer, scanner
- Software,
 - Browser
 - Operating System

Differences ...

The screenshot shows three overlapping browser windows displaying the taz website. The main content area is visible in the Mozilla Firefox window, showing the following elements:

- Header:** "die tageszeitung" logo, date "21.4.2005", and navigation links like "Archiv", "Recherchedienst", "Impressum", "Abo", "Anzeigen", "tazshop", "taz-Genoss".
- Navigation:** "Startseite", "Regionalausgaben", "tazmag, Magazin", "Le Monde diplomatique", "TomTunnel".
- Sidebar (left):** "Inhalt" menu with links: "Seite 1", "Aktuelles", "Themen des Tages", "Inland", "Wirtschaft und Umwelt", "Ausland", "Meinung und Diskussion", "Kultur", "tazzwei", "Leibesübungen".
- Main Article (center):**
 - Section:** "Ausland"
 - Headline:** "Rücktritt und Neustart Berlusconi"
 - Text:** "Der italienische Ministerpräsident wirft aus taktischen Gründen das Handtuch, denn er will mit seinen alten Partnern eine neue Koalitionsregierung bilden. Doch die Parteien sind völlig zerstritten. Daher sind kurzfristige Neuwahlen nicht auszuschließen"
 - Author:** "115 Zeilen, MICHAEL BRAUN (TAZ-Bericht)"
 - Sub-headline:** "Neue Vorwürfe gegen Bolton"
- Right Column (ads/promos):**
 - "Weltmusik 30.4." (12 Seiten)
 - "taz-Veranstaltungen" with "nrw taz retten abonnieren" and "1.000 Abo bis zum 30. Juni"
 - "Sind Sie eine Heldin?" (with image of a woman)
 - "extrablatt" (with image of a newspaper)
 - Text: "Falls Sie sich tatsächlich fragen sollten, warum Sie eine Zeitung wie die taz brauchen, legen wir Ihrem Probeabo noch ein Buch mit den Antworten obendrauf. 5 Wochen taz plus Buch: 15 Euro"

Statistics on Platform Usage

But:

- Never trust the statistics!
 - Also small groups of users are important!
 - Statistics may be very unreliable

Browser Statistics Month by Month

| 2009 | IE7 | IE6 | IE8 | Firefox | Chrome | Safari | Opera |
|-----------|-------|-------|-------|---------|--------|--------|-------|
| September | 15.3% | 12.1% | 12.2% | 46.6% | 7.1% | 3.6% | 2.2% |
| August | 15.1% | 13.6% | 10.6% | 47.4% | 7.0% | 3.3% | 2.1% |
| July | 15.9% | 14.4% | 9.1% | 47.9% | 6.5% | 3.3% | 2.1% |

| 2008 | IE7 | IE6 | IE5 | Firefox | Chrome | Safari | Opera |
|----------|-------|-------|-----|---------|--------|--------|-------|
| December | 26.1% | 19.6% | | 44.4% | 3.6% | 2.7% | 2.4% |
| November | 26.6% | 20.0% | | 44.2% | 3.1% | 2.7% | 2.3% |
| October | 26.9% | 20.2% | | 44.0% | 3.0% | 2.8% | 2.2% |

...

| 2002 | IE6 | IE5 | AOL | N3 | N5 | N4 | IE4 |
|-----------|-------|-------|------|------|------|------|------|
| November | 53.5% | 29.9% | 5.2% | 1.1% | 4.9% | 2.0% | |
| September | 49.1% | 34.4% | 4.5% | 1.3% | 4.5% | 2.2% | |
| July | 44.4% | 40.1% | 3.5% | 1.2% | 3.5% | 2.6% | 0.5% |

OS Platform Statistics

Windows XP is the most popular operating system. The Windows family counts for about 90%:

| 2009 | WinXP | W2000 | Win7 | Vista | W2003 | Linux | Mac |
|-----------|-------|-------|------|-------|-------|-------|------|
| September | 65.2% | 0.8% | 3.2% | 18.3% | 1.5% | 4.1% | 6.5% |
| August | 66.2% | 0.9% | 2.5% | 18.1% | | | |
| July | 67.1% | 1.0% | 1.9% | 17.7% | | | |

Display Resolution

The current trend is that most computers are using a screen size of 1024x768 pixels or more:

| Date | Higher | 1024x768 | 800x600 | 640x480 | Unknown |
|--------------|--------|----------|---------|---------|---------|
| January 2009 | 57% | 36% | 4% | 0% | 3% |

w3schools.com

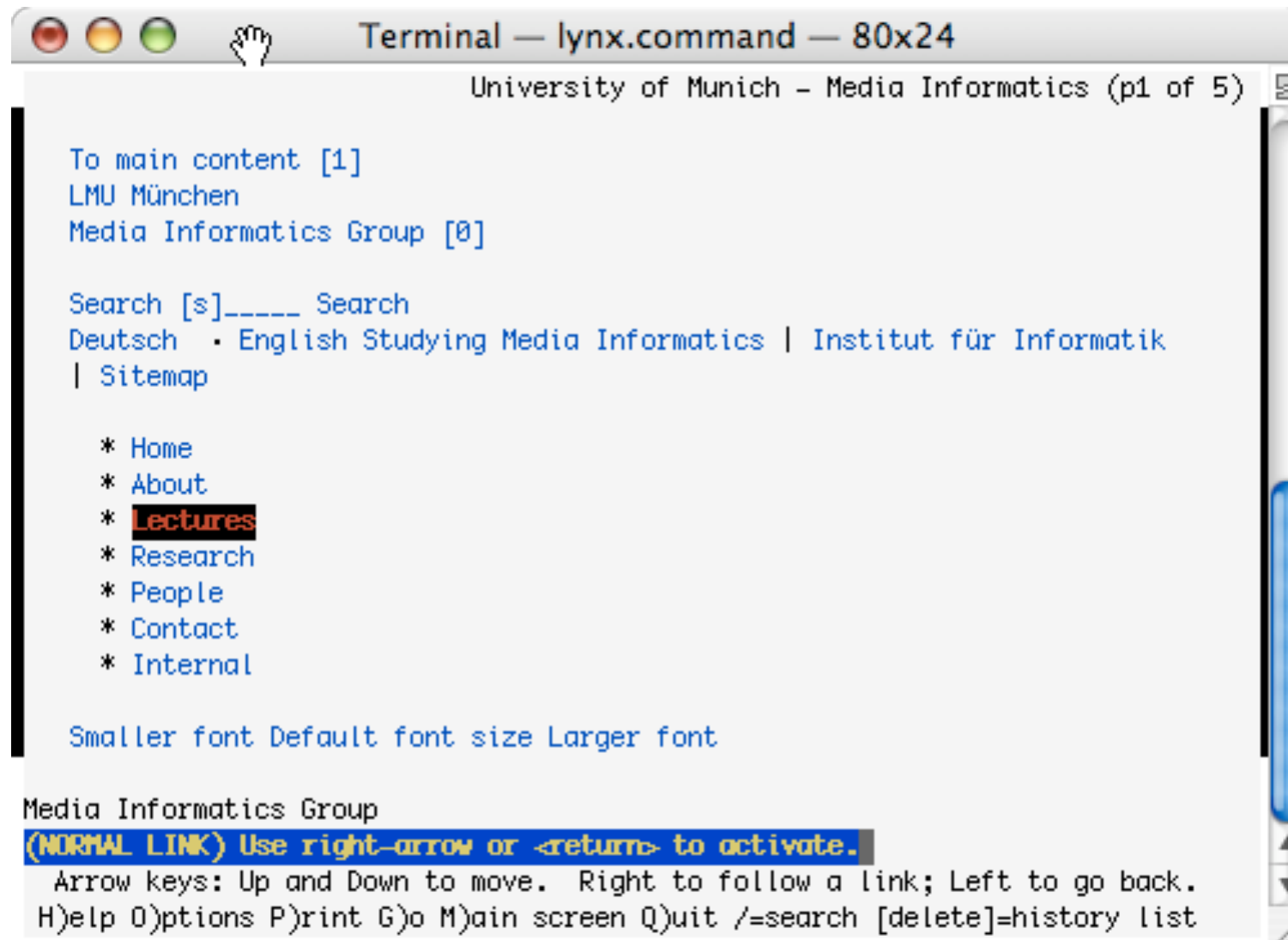
Other Graphical Browsers



What are the Differences?

- Input
 - Text entry
 - Speech
 - Granularity
 - ...
 - Security / Privacy
 - Mobility
 - Capabilities
 - Plug-ins
 - Video
 - Bandwidth
 - Multitasking
 - Cost
- Output
 - Text
 - Language
 - Direction
 - Fonts
 - Size
 - Display
 - Size
 - Resolution
 - Displayable colours
 - Aspect ratio
 - Speech
 - ...

Plain Text Browser, e.g. Lynx



Audio Browsing

- There are users who *listen* to Web sites!
- Example:
 - Web browser *Safari*
 - Screen reader *Voice Over* (built into Mac OS)
- Who among the Web designers will think of these users?



VoiceOver

Your Mac speaks for itself.



Heterogeneity of Users

- In principle, anybody can use the Web!
- Huge span of user variety:
 - Kids
 - Beginners
 - Elderly
 - Experienced technically educated professionals
 - Technically ill-educated professionals
 - Hackers
- “Know Thy User” - Is it possible on the Web?
- Why do people use the Web?
 - Assumedly easy and simple way of achieving things
 - Because it is fun
 - Because there are no other options
- (As always:) Simplicity is most important