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Usability Testing Library Mobile Websites in a Fragmented Smartphone Market

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Usability Testing Library Mobile Websites in a Fragmented Smartphone World

Kimberly Pendell & Michael Bowman

Outline

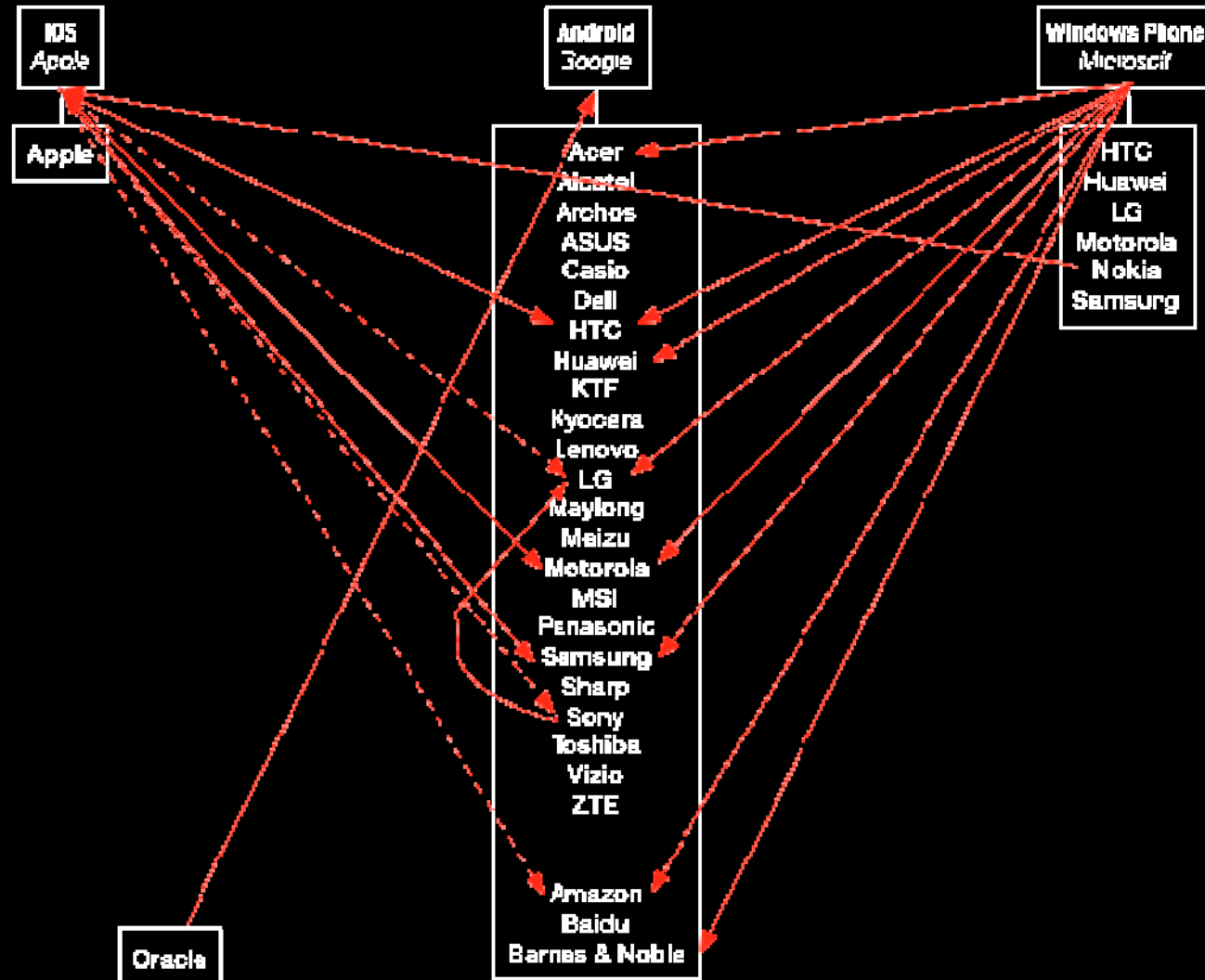
- a Smartphone ownership and use
- a Smartphone market and trends
- a Usability test and results
- a Mobile site suggestions and trends

Internet Use by U.S. Smartphone Owners

Pew Internet & American Life Project, April–May 2011

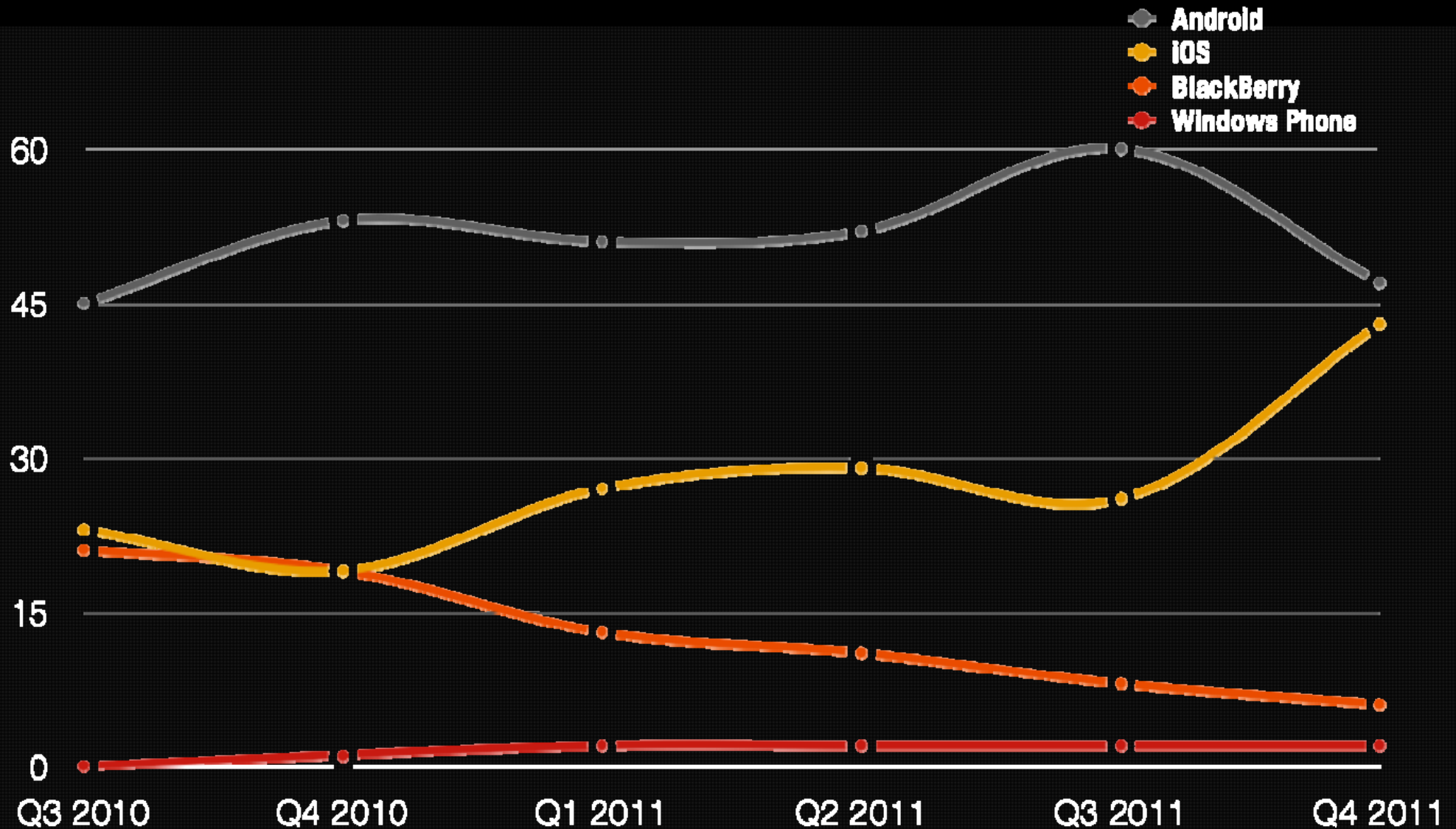
- a 35% of Americans owned a smartphone in April, 43% by December (Nielsen)
- a 69% typically go online daily using their smartphone: 81% of 18–29 yo, 71% of 30–49 yo, 44% of 50+ yo
- a 25% go online **mostly** using their smartphone, particularly: 42% of 18–29 yo, 38% of African-Americans and Latinos, 40% of < \$30,000 annual income, 33% of high school graduates with no college

The Smartphone Landscape



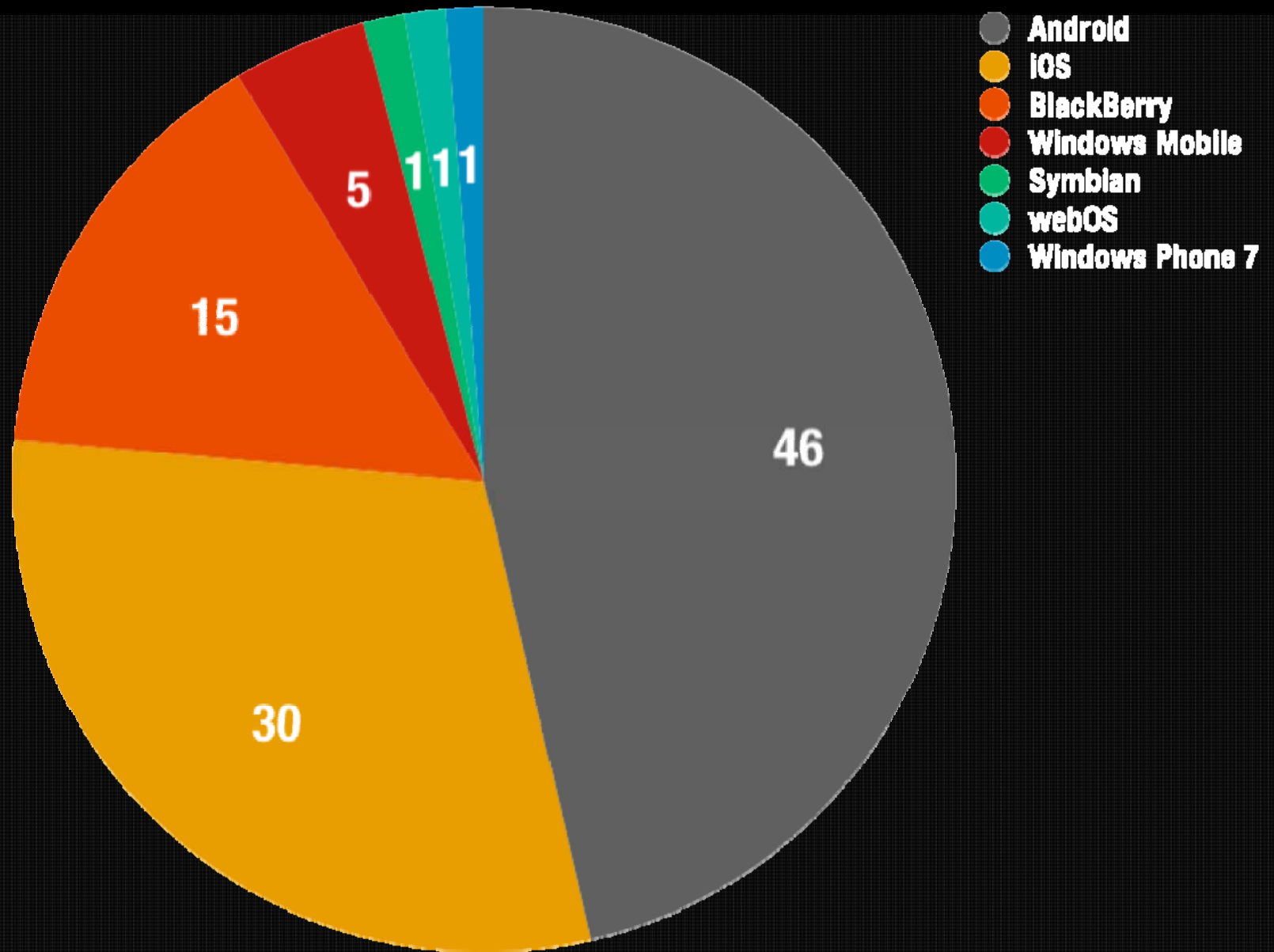
U.S. Smartphone Market Share, 2010–11

Sales per quarter



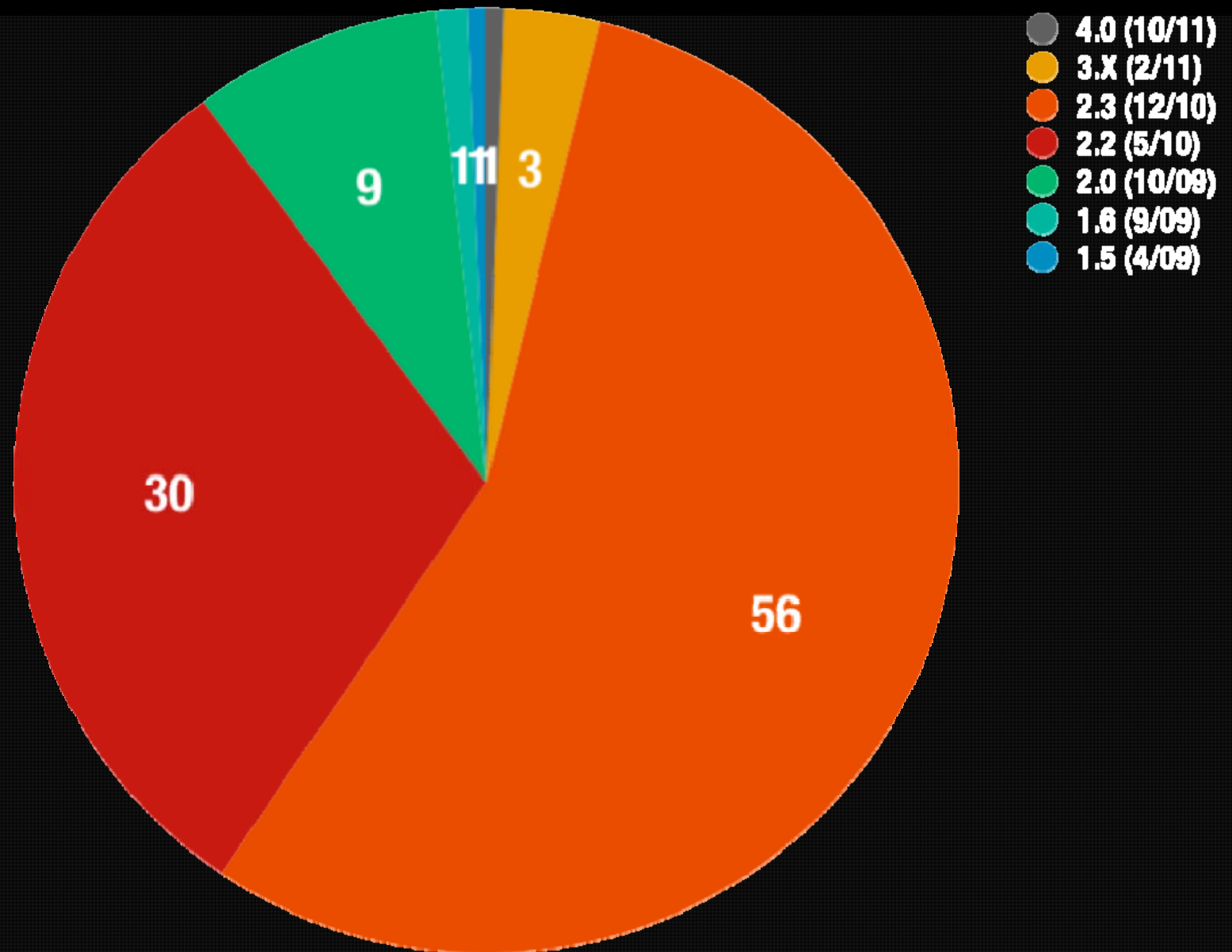
U.S. Smartphone Ownership, Q4 2011

Installed base



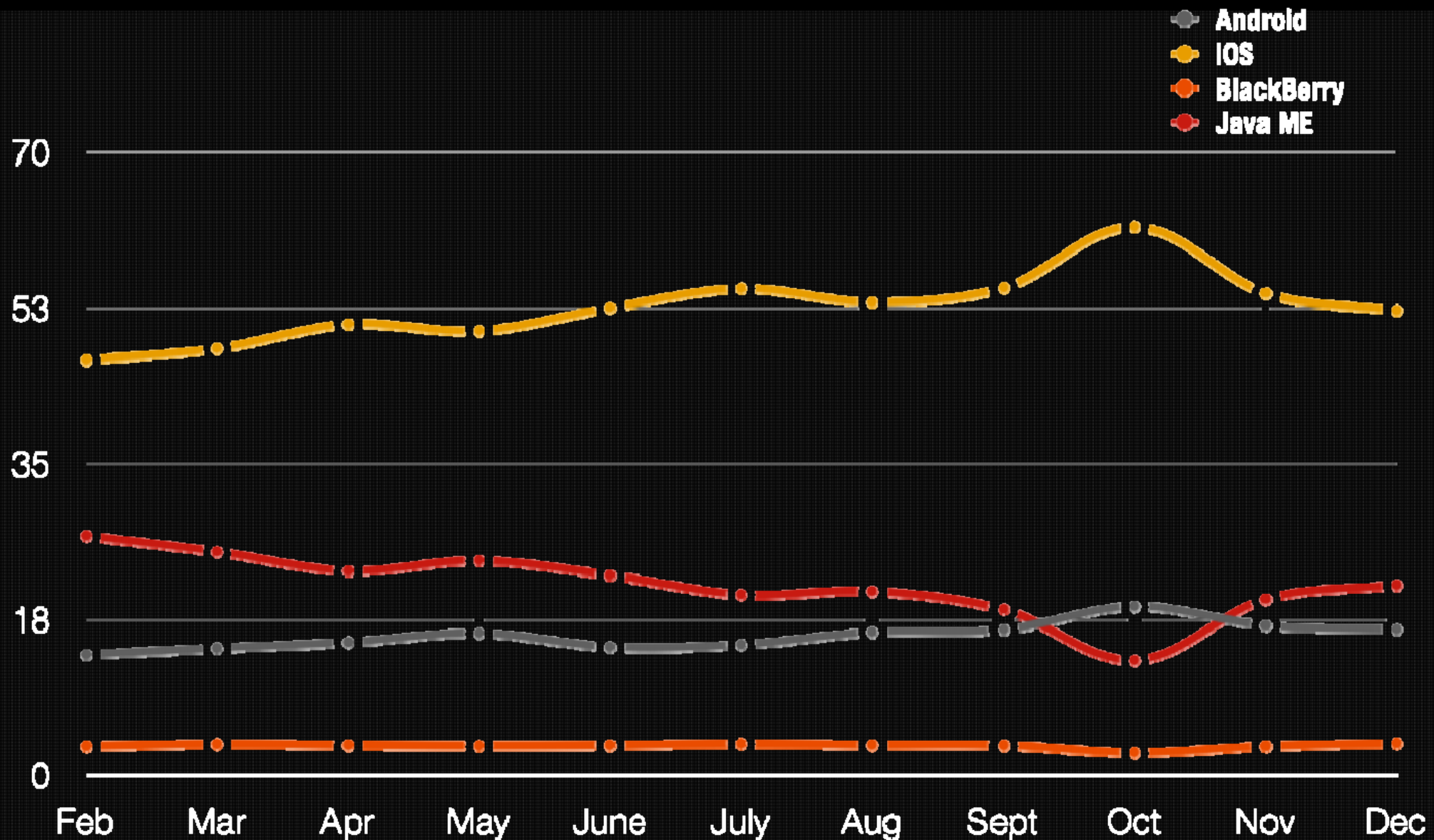
Android OS Version Market Share

January 2012



Mobile Internet Access Market Share

February–December 2011



Trends

- a Android's future
- a Monopoly, duopoly or triopoly?
- a The future of feature phones
- a The effect of tablets

Field Testing vs. Laboratory Testing

- a Field testing: difficult to have reliable method for reporting back user experience; high level of participant cooperation required
- a Laboratory testing: important usability problems with mobile website can be easily missed

Our Version of Hybrid Usability Testing

- a Recruit participants to test site with their own phones
- a Controlled environment with recording capability
- a Predetermined tasks
- a Time for user to explore site independently
- a Post-test survey

Recruiting Participants

- a Facebook post on library account
- a Announcement in library news blog, appearing on library homepage
- a Flyers in the library and campus bulletin boards

Have a smart phone?



Like coffee & snacks?

We're looking for students with smart phones to help us test the new Library mobile website!

The test will take about 30 minutes and you'll get a \$10 giftcard for Starbucks.

Email psulibrarymobile@gmail.com to schedule a day and time convenient for you.

Please include your name, phone number, and the type of smart phone you have (iPhone, Android, Blackberry or other).

Library Mobile Website

Document Camera as Recording Device

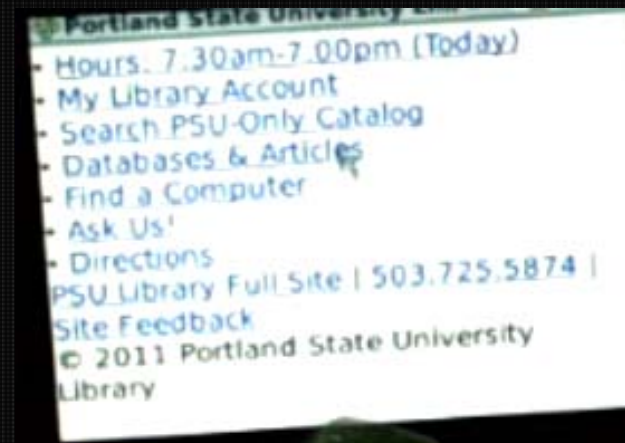


Results

- a Participants slow to connect the task of searching for a book with label “Search PSU-only Catalog”
- a Multiple problems with chat reference
- a Lack of mobile-friendly proxy authentication, error messages and linked forms
- a Slow page loading
- a Problems unique to different devices

Website Display Comparison

Smartphone vs. Feature Phone



Connectivity & Authentication

Internet Connection	Library Mobile Website	Chat Reference	EBSCO <i>host</i>
PSU unsecure wi-fi	No authentication	Authentication required	Authentication required
PSU secure wi-fi	No authentication	No authentication	No authentication
Cell network	No authentication	No authentication	Authentication required
Off campus	No authentication	No authentication	Authentication required

Notable Post-Test Survey Results

a High ratings for appearance and ease of use

a Search for articles on mobile website

- 9 of 12 participants selected weekly or more than weekly

a Use “Find A Computer”

- 8 of 12 participants selected weekly or more than weekly
- “Everyday” and “Very important”

Usability Tips for Mobile Sites

- a Essential, user oriented content
- a Consider the user's mobile context
- a Navigation as simple as possible
- a Design for screen rotation

Learn From Our Mistakes

- a Consider the variety of ways users connect to your mobile site and how that might impact their use of site features
- a Don't make your usability tasks so simple that you waste the opportunity to get more in-depth information
- a Expect the unexpected

Portland State Smartphone Share

Usability study (May) & mobile website analytics (Sept.–Jan.)

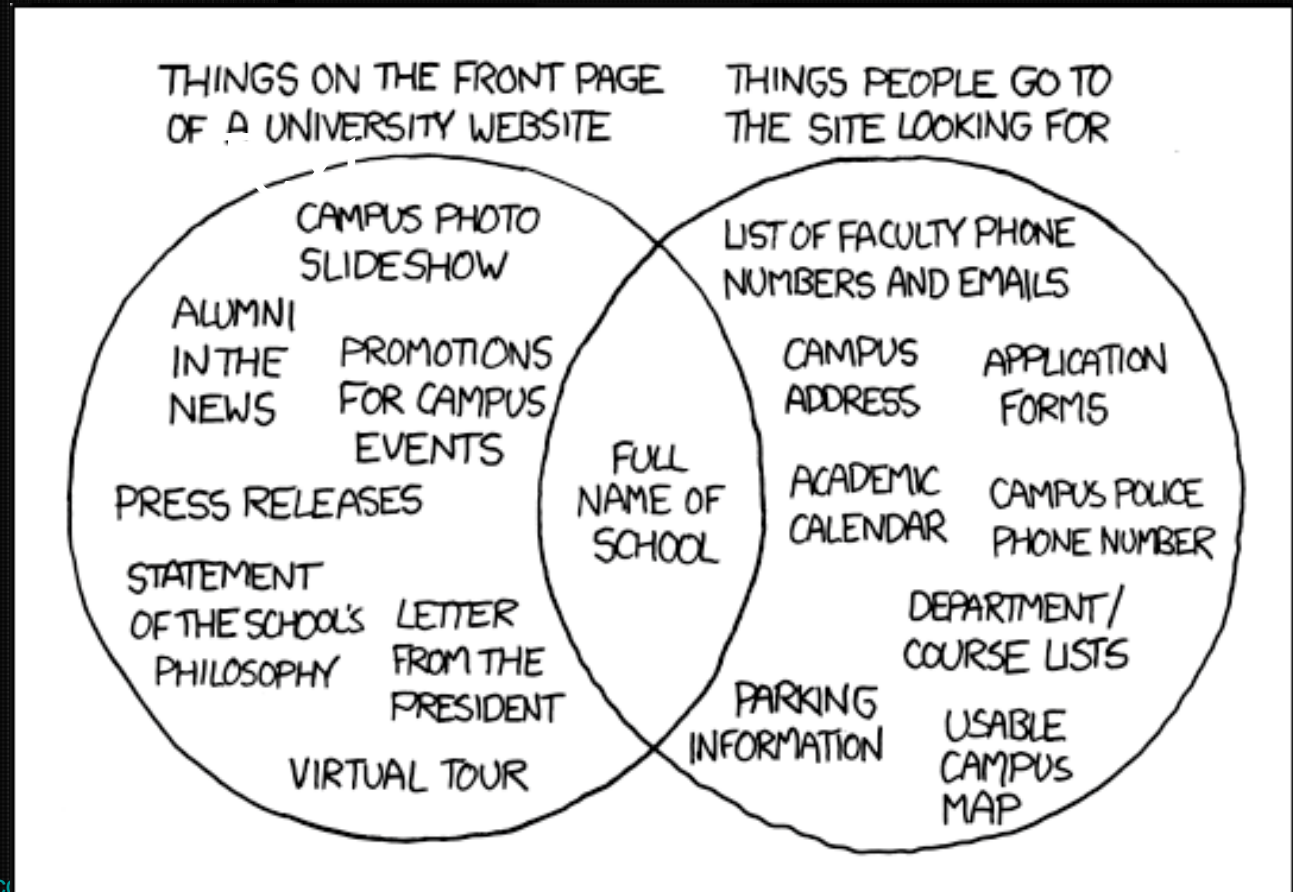
	Study Volunteers	Website Usage
Android	31%	23%
iOS	52%	70%
BlackBerry	4%	0.6%
Windows Phone	4%	0.5%
webOS	4%	0%

Possible Futures of Mobile Web Design

a Progressive
enhancement

a Responsive design

a Mobile first



Questions?

Pendell, Kimberly D., and Michael S. Bowman. (In press).
“Usability Study of a Library’s Mobile Website: An
Example from Portland State University.” *Information
Technology and Libraries*.

