

Quality, Reliability, and Security for Smart Networks

2012 IEEE CQR Workshop

May 15, 2012

San Diego, CA

Smart Device Sales Continue to Grow

- **The Guardian reported forecast of all tablet sales to rise to almost 60% of PC sales**

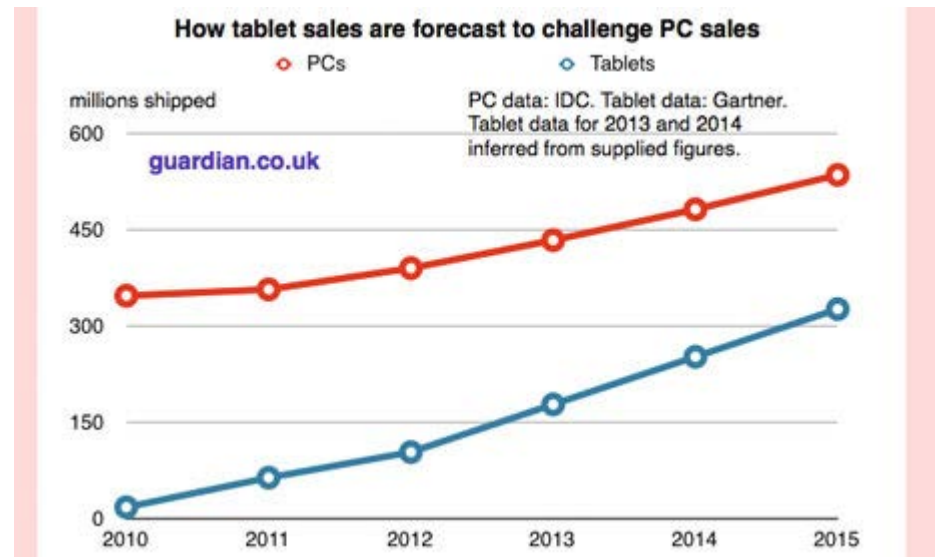
• <http://www.guardian.co.uk/technology/2011/sep/22/tablet-forecast-gartner-ipad>

- **Juniper Research reported e-Reader sales will continue to rise from 25m in 2011 to 67m in 2014**

• <http://juniperresearch.com/viewpressrelease.php?pr=272>

- **Per Gartner, “In 2011 as a whole, end users bought 1.8 billion units, an 11.1 percent increase from 2010 (see Table 2).”**

• <http://www.gartner.com/it/page.jsp?id=1924314>



Penetration of Smartphones

- Nielsen Reported in Feb, 2012, that Smartphone penetration in the US was 49.7%

- http://blog.nielsen.com/nielsenwire/online_mobile/smartphones-account-for-half-of-all-mobile-phones-dominate-new-phone-purchases-in-the-us

- Nielsen reported In March 2012, smartphone penetration was 50.4%

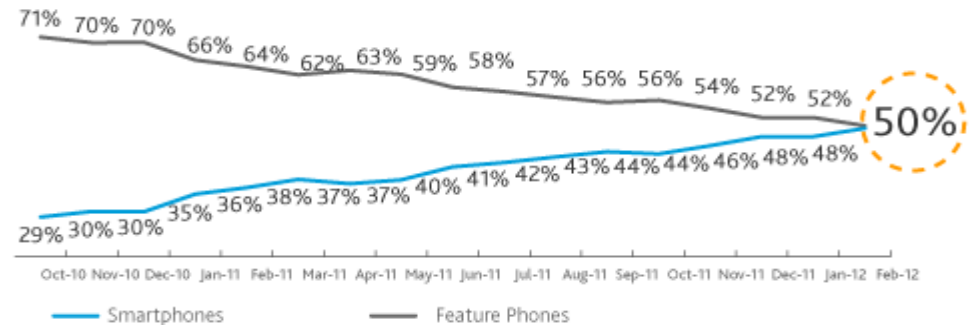
- <http://techcrunch.com/2012/05/07/nielsen-smartphones-used-by-50-4-of-u-s-consumers-android-48-5-of-them/>

- Nielsen also reported use of Smartphones varies depending on age group

- http://blog.nielsen.com/nielsenwire/online_mobile/generation-app-62-of-mobile-users-25-34-own-smartphones/

U.S. Smartphone Penetration

February 2012, Nielsen Mobile Insights



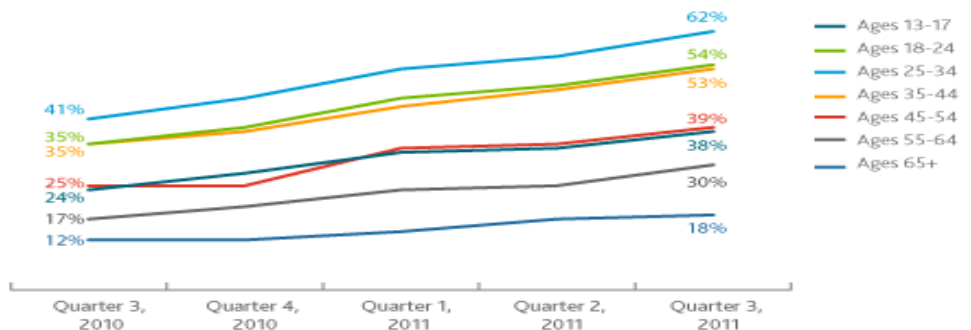
Read as: During February 2012, 50 percent of US mobile subscribers owned a smartphone

Source: Nielsen



Smartphone Penetration By Age Group

Q3 2010 - Q3 2011, U.S.



Source: Nielsen



Example: Graph of Apple Devices Sold vs. Time in market

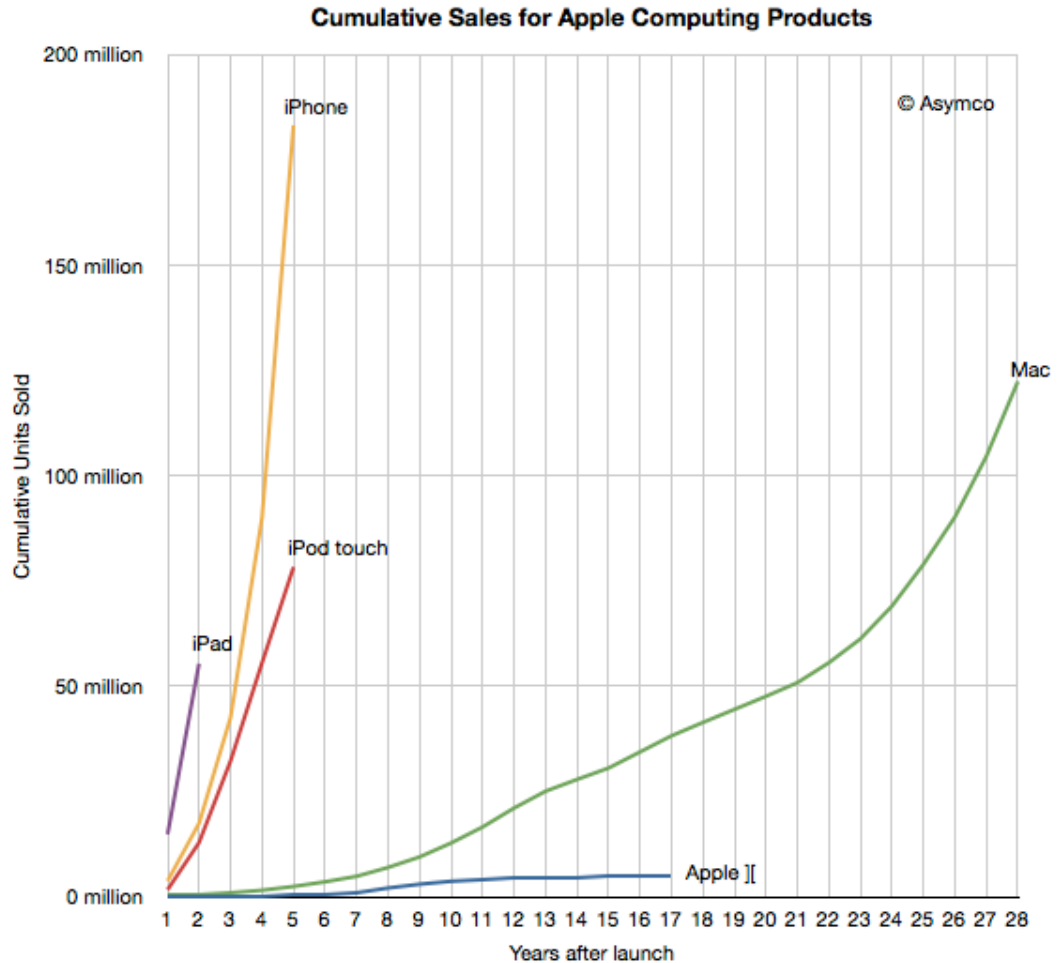
- Tim Cook, CEO of Apple: “This 55 is something no one would have guessed. Including us. To put it in context, it took us 22 years to sell 55 million Macs. It took us about 5 years to sell 22 million iPods, and it took us about 3 years to sell that many iPhones. And so, this thing is, as you said, it’s on a trajectory that’s off the charts”

- Horace Dideu blogged that Apple has sold more iOS devices (iPhone, iPod, iPad) in 2011 than all Macs ever sold.

- See this URL:

<http://www.asymco.com/2012/02/16/ios-devices-in-2011-vs-macs-sold-it-in-28-years/>

For more information.



Smart Device Compared to Other Items

- Typical Smartphone size = 5"X2.5"X0.4", weighs 4.0 – 5.5 oz.
- Rolodex – A box holding 500 (or more) cards
- Calendar/ Planner
- Office Documents – 9" X 11.5" X 2" (Typical Binder)
- Encyclopedia & Dictionary
- Camera
- Email!
- Video Game Console (Arcade game) – Upright box, or TV plus console plus controllers
- Oh, and most smart devices can make calls



Is Network Access a Big Deal? And What About Security?

- Is the impact of these devices to networks significant?
 - Most devices are WiFi enabled
 - Many use 3G/4G networks <- Smartphones, some other devices
 - Very convenient to download music, apps, video
 - Can access DBs and data streams that support services that would have previously been downloaded to the device (Garmin GPS vs. Google Maps)
 - Doesn't data just come out of a pipe or conduit?
 - How does the Cloud fit into all of this?
- What About Security?
 - Personal Data
 - Work Data
 - Device is stolen, lost, or broken? What then?

The Real Reason Behind the Smartphone Explosion

From: ext tubaandy@yahoo.com [tubaandy@yahoo.com]
To: Rollins, Andy (NSN - US/Arlington Heights)
Cc:
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Session Chairs

- Characterization and Needs – Rick Krock, ALU
- Security – Tara Timblin