



The State of Mobile Health

January 2017

HL7 Mobile Health Working Group

Gora Datta /

Presented by Matthew Graham



Gora Datta

- ✓ HL7 International Ambassador (2009 – current)
 - Member HL7 Technical Steering Committee (TSC) - 2016
 - Co-Chair Structure & Semantic Design Steering Division - 2016
 - Founding Co-Chair HL7 Mobile Health Work Group (2011 – current)
 - HL7 2009 Volunteer of the Year Award Winner
- ✓ HL7, IEEE, HIMSS Speaker
- ✓ HL7 Meaningful Use Tutor/Speaker
- ✓ Chair IEEE OC (Region 6 – USA) (2016 – current)
- ✓ Co-Chair IEEE OC CyberSecurity SIG (2015 – current)
- ✓ HIMSS Connected Health Committee Member (2015 - 2016)
- ✓ US Delegate to ISO/TC215 Health Informatics (2009 – current)
- ✓ ICT Expert - World Bank, Asian Development Bank
- ✓ Senior Member: IEEE, ACM

A Walk Down Memory Lane

- British Royal Army Medical Corps carries out the first successful blood transfusion using blood that had been stored and cooled
- World War I continues
- BMW is born
- Toggle light switch is invented
- *Pacific Aero Products* (later renamed Boeing) is born

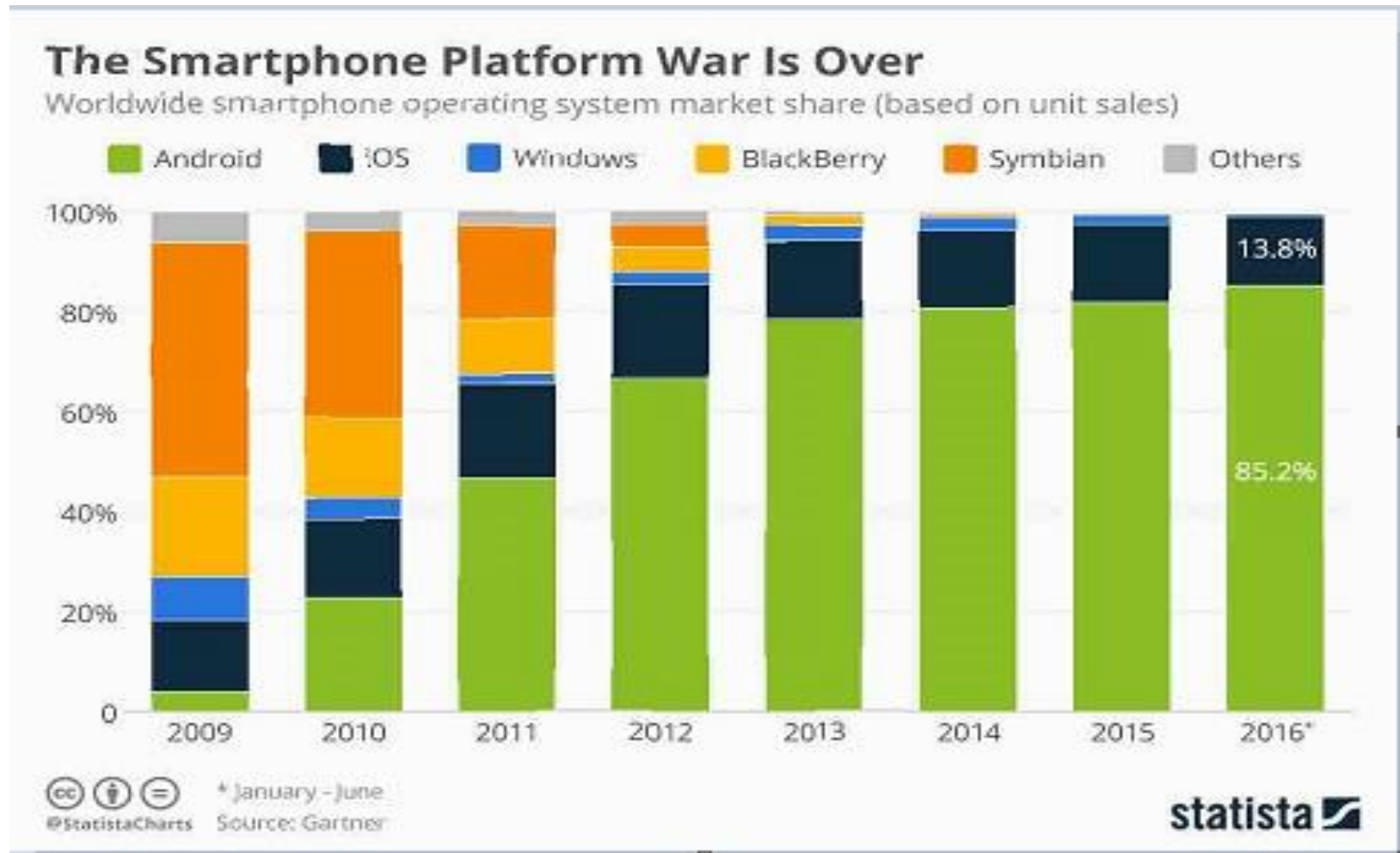
1916

Source: <https://en.wikipedia.org/wiki/1916>

Mobile Revolution

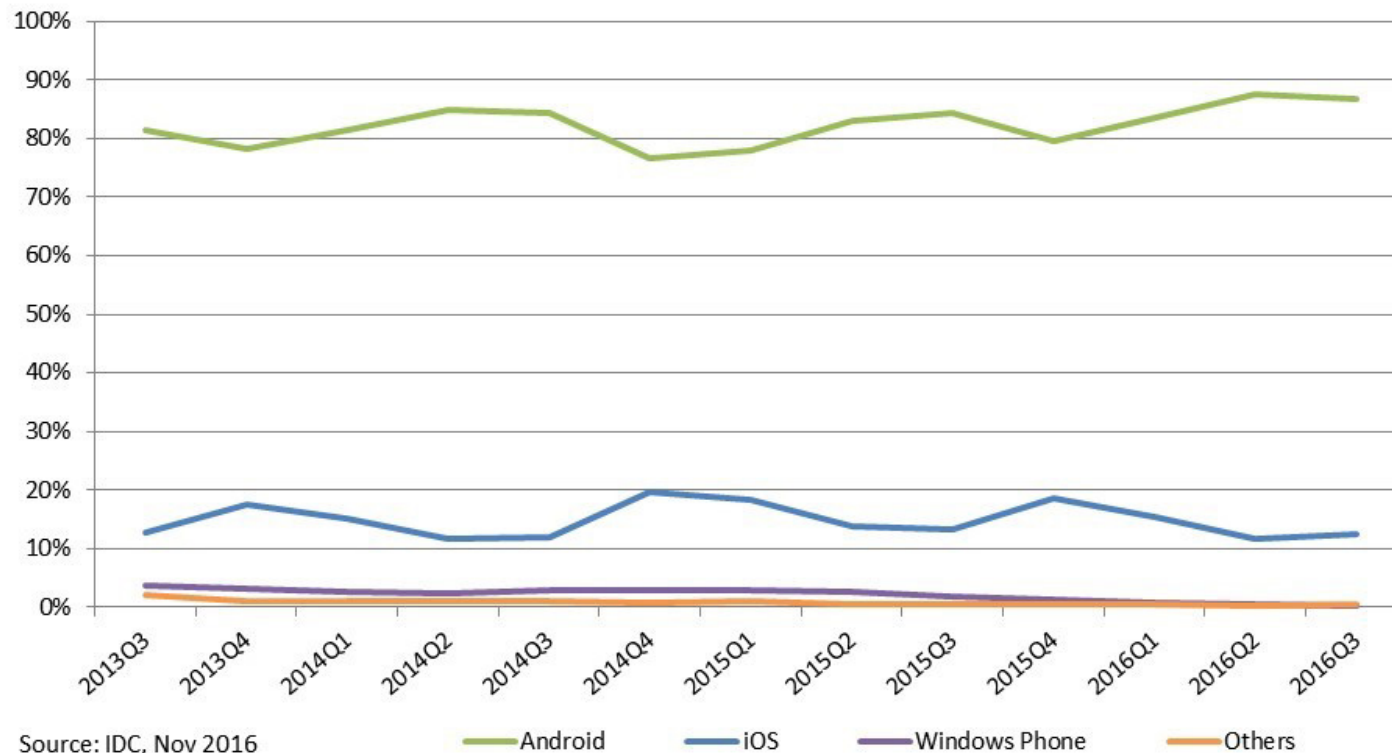
- Mobile phone market
 - first billion mobile phones: 20 years
 - second billion phones: 4 years
 - third billion: 2 years
 - Fourth & fifth billion: 1 year – in 2013
 - 2014: nearly One Billion “smart” mobile phones sold globally
 - 2015 – Over 1.2 Billion smart phones sold
- 80+% of the world’s population lives within range of a cellular network, (40% in 2000).

Mobile OS Market Share



Mobile OS Market Share 2016

**Worldwide Smartphone OS Market Share
(Share in Unit Shipments)**



Mobile Convergence

- 99% of mobile OS sales 2016
 - Android 87%
 - IOS 12%
- Targeting native mobile application development has become simpler.
- Smart on FHIR provides interoperability for Mobile Health Applications across multiple EHR Vendors.

MH Challenges/Opportunities

- There are over 165,000 mobile health apps
 - RIME OF THE MODERN TECHNOLOGIST - “mobile, mobile everywhere....none *talk* to anyone”
 - 12% of mHealth apps account for more than 90% of all consumer downloads
 - with nearly half of all downloads generated by just 36 apps
- By 2017, 50% of smartphone user will have downloaded mobile health apps
- 90% of MH (and financial) apps are vulnerable to critical security risks
- Mobile Health app are projected to become a regular part of our care (over the next 5 years)

Mobile Health Market

- 2016 projection: > \$13B
- By 2017, it is estimated, the market for Mobile Health apps, will be...
 - \$26 billion
- By 2020:
 - > \$50B

Stakeholders



Source: HL7 Mobile Health Newsletter V1Is1

HL7 Mobile Health WG Mission

- The HL7 Mobile Health Work Group creates and promotes health information technology standards and frameworks for mobile health.

HL7 Mobile Health WG Charter

- Identify (and develop, as applicable) data standards and functional requirements that are specific to the mobile health environment
- Identify and promote mobile health concepts for interoperability as adopted and adapted for use in the mobile environment
- Coordinate and cooperate with other groups interested in using mobile health to promote health, wellness, public health, clinical, social media, and other settings.
- Provide a forum where HL7 members and stakeholders collaborate in standardizing to enable the secure exchange, storage, analysis, and transmission of data and information for mobile applications and/or mobile devices.

HL7 Mobile Health Resources

- Working Group Web Site:

http://wiki.hl7.org/index.php?title=Mobile_Health

- Wiki Page

http://wiki.hl7.org/index.php?title=Mobile_Health

- Mobile Health Friday's

- Weekly Friday at 11am EST

Scope of Mobile Health

- Not a vertical domain
- But a horizontal framework that cuts across and impacts all health care domains
- A channel for innovation and engagement
- Ubiquitous shift in the point of access for patient care and engagement

MH Consumer Scenarios

■ Patient empowerment

- Patient involvement in care process across a wide range of lifestyles, including: support for long term conditions

■ Independent living

- Assisted living drawing on a range of mobile services

■ Behavioural health

- Behavioural health support anytime, anywhere

■ Messaging (ranging from unsecure to secure)

- Bridging the health divide

MH Clinical Scenarios

- Moving around a hospital
 - EHR System services follow providers around a hospital
- Clinical Messaging Alerts
 - Code Yellow Alert
 - Inbox – New Results Ready for Review
 - Departmental Status Boards (Census and Acuity)
- Flexible Workflows - Access Patient Chart
- TeleHealth

Mobile Health Market Trends

- Main driver: Ever increasing global smartphone users
- Young Customers driving the market
- MH apps leveraging features of smartphones or tablets
 - Location service
 - Text Messaging
 - Picture, Video
 - Gyroscope
 - Micro payment service
- MH apps native rather than web-based
- Birth of MH app stores
- MH will push/expand/broaden the health business model
- MH apps will bridge the global health divide
- Evolving HL7 MH standards

Key Mobile Health Areas by 2020

- Wearable & Smart Diagnostics
- Healthier Living (Wellness programs)
- TeleHealth
- Personalized Medicine
- Secure Health Apps

Healthcare in the 21st Century

- Next generation: “iPAD” kids
- Blurred Lines: Impact of Social Media
- Are we there yet: I want it NOW
- Take Charge: Consumer Health
- Genetic Health – personalized medicine
- Longitudinal Health Record
- Emerging Areas: IoT (HoT), Big DATA, Open Data
- Global Village: Urban, Rural, Remote, Underserved
- Mobile micro-payments

Summary

■ MOBILE HEALTH

- Not a vertical domain
 - But a horizontal framework that cuts across and impacts all health care domains
-
- As we transition to a digital record framework; use of Mobile Health leads the way (in access, capture and dissemination of health information)
-
- As Mobile Devices become more and more ubiquitous, accessing our Health Information is only a few tap/swipe away!



THANK YOU

gora@cal2cal.com

