

September, 2013



Agenda

- Why mobile printing?
- Goals of the Mopria Alliance
- The standards
- Key benefits



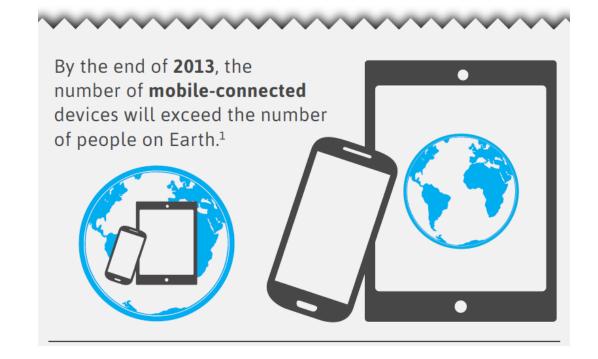
Mobile Adoption Continues to Rise

The computing market is changing

Worldwide shipments of smart phones will reach 1.6B by 2017².

Tablets will outship notebook PCs in 2013.

By 2015, tablets will outship the combined notebook and desktop markets at the worldwide level³.





[&]quot;Worldwide Smartphone 2013-2017 Forecast Update," IDC, June 2013.

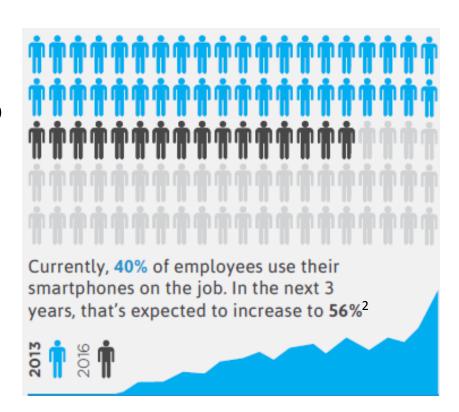


^{3 &}quot;Worldwide and U.S. Media Tablet 2013–2017 Forecast," IDC, May 2013.

Mobile Adoption for Work

The computing market is changing.

- 60% of US and European firms deploy BYOD programs for smart phones; while only 47% deploy BYOD programs for tablets and laptops. ¹
- 70% of IT cited increasing worker productivity as a key driver for BYOD programs.¹
- Other top drivers are:
 - Access to info while away from the office (63%) or from work or telecommuting (48%)
 - Ability to use personal phones for work activities (52%).¹



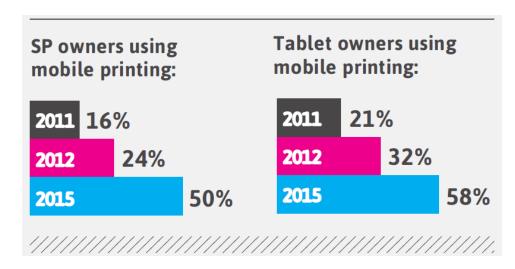


² InfoTrends. Is Printing from Mobile Devices Ready to Take Off? July 2012



People want to print from their mobile device

- ➤ Over 50% of smartphone users and over 35% of tablet users do not know how to print from their device
- Only slightly more than 25% of smart phone users and 50% of tablet users say they are able to print within their company
- ➤ say 50% of smartphone and tablet users today want to print and 75% say they will want to by 2015.



IDC Multi-client Study, Mobile Device Users/Non-Users: Print, Scan, Document Management, March 2013



What do they want to print?

Top applications respondents want to print but can't1



Consumer:

Airline boarding passes, coupons, tickets (events), flight itineraries, hotel reservations, and school/college/

Small Business:

Manufacturing, Sales,
Regulatory/ Compliance,
Drawings/Designs/
Signage/
Medical imaging,
Email

Medium Business:

HR, Medical,
Accounting,
Drawings/Designs/
Signage/
Medical imaging

Large Business:

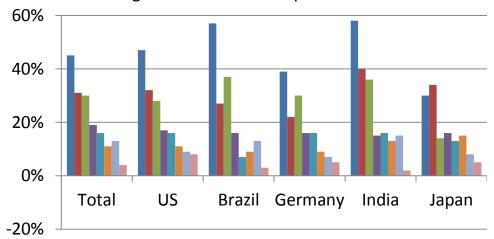
Legal, Manufacturing,
Marketing, Web (public),
Drawings/
Designs/Signage/
Medical imaging,
Accounting



Today's Limitations

Key Reasons for not using mobile printing

- No access to printer from device
- Device does not support mobile print
- I only view info on device
- I don't understand the process
- Takes too much time to print
- Overall process too slow
- Pages not formatted to print



Why Aren't Users Printing From their Mobile Device? - InfoTrends, 2011

50% of mobile device users say they don't print because they don't have a printer that connects to their device.

InfoTrends 2011

Key drivers for these issues

- Scattered standards too many choices
- Difficulty for app developers to incorporate print
- In Business: IT security concerns and policies limiting mobile devices on the company network



Mopria Alliance



What is it

The Mopria Alliance is a non-profit membership organization of leading global technology companies with the shared goal of providing intuitively simple wireless printing from smartphones, tablets and other mobile devices.

Goals

- Drive selected standards adoption by mobile, printer and OS industry leaders
- Support mobile software application providers to deploy print functionality
- Develop innovations & experience standards in the interaction of mobile and print devices
- Certify products to carry the Mopria brand mark
- Educate consumers and business customers about the ability to easily print from mobile devices



Mopria Alliance Outcome

Unparalleled interoperability between brands resulting in a better user experience than PC printing



customers just expect to use their printer with devices that replace their PC

Meeting Customer's Needs in "Post-PC" ERA

Peripherals that participate will remain relevant

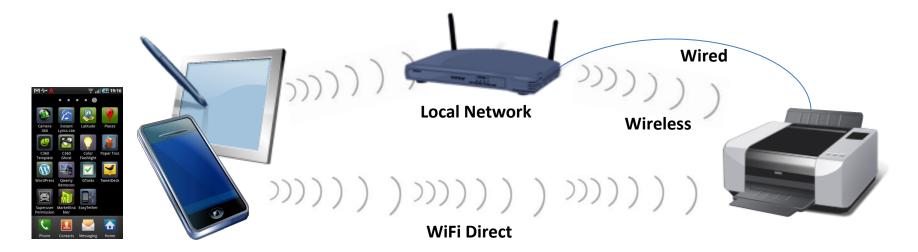






How: The Mobile Print Ecosystem

The ability to <u>simply</u> print from your mobile device requires:



Mobile App

Print is an embedded function in the app

Mobile Device

Print is an embedded function in the Operating System (OS) (no setup, no software installation)

Connect Options

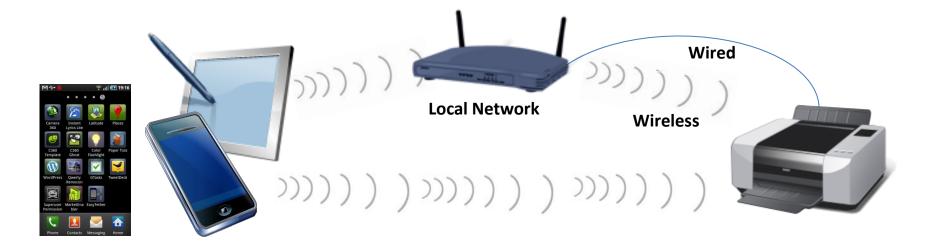
Peer-to-peer with WiFi
 Direct
 Through wireless
 and/or wired network
 which share
 connectivity

Printer

- Universal Standard for print protocol and printer language (PDL)
 - Architecture supports documented legacy printers



How: The Initial Standards



Mobile App

Open API to deploy print functionality and convert files to accepted formats

Mobile Device

- Print Subsystem to convert files to accepted formats & discover printers (Bonjour)
- User Experience guidelines

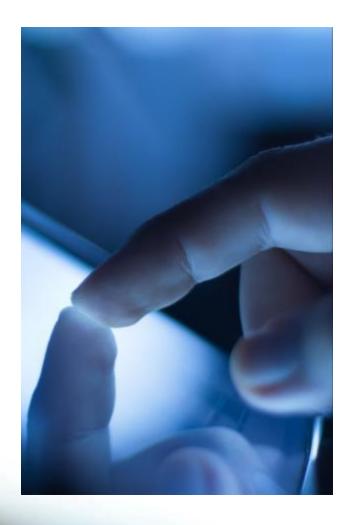
WiFi Direct

- WiFi Direct Services Print specific application of WiFi Direct to pass data between mobile and print device
- NFC touch-to-print option NFC implementation requirements
- File types selected for print job rendering:
 - PWG Raster
 - PCLm
 - JPEG
 - PDF (future)



Printer

Customer Benefits



- Intuitive experience
- No app, no downloads
- Standard way to connect to a printer, send a print job etc. across different mobile devices
- Applications include print feature
- Many connection methods: local wireless network, peer-to-peer, or NFC
- Mobile print solution that works for business within IT BYOD policies



Alliance Member Benefits

- Meet consumer demand for ease of use
- Broad compatibility of certified devices
- Increase consumer engagement and device use
- "Unlock" printed pages
- Enable new applications previously limited by lack of print/scan features
- Turn resources away from simply establishing and maintaining basic print to new innovations involving mobile device and printers
- Alliance support from test tools and device certification to marketing the benefits of the Mopria brand mark

Founders:











Join the Mopria Alliance

The Mopria Alliance will bring together the industry to promote interoperability, streamline qualification processes, and provide an improved user experience.

Membership targets: Printer & Mobile Device Manufacturers & OS Providers

Free support for: Mobile App Developers

For more information: www.mopria.org

