Mopria™ Certification on Xerox® Devices Built on Xerox® ConnectKey® Technology

White Paper

Introduction

What is Mopria?

Mopria is an acronym derived from the Mobile Print Alliance. The charter of this alliance of printer manufacturers is to create simple wireless printing from smartphones, tablets, and other mobile devices. Mopria printing does not require any driver installation or software download on these devices. The founding members of the Mopria Alliance are Canon, HP, Samsung and Xerox. Other manufacturers, such as Brother, Epson, Konica Minolta. Kyocera, Lexmark and Ricoh have come onboard.

This feature shall ensure that Xerox® devices built on Xerox® ConnectKey® technology work in compliance with the Mopria Alliance Technical Specifications.

Mopria Print functionality will be embedded in phones, tablets or other mobile devices and there is no set-up required.

When mobile device users have access to a Mopria-certified printer, they will be able to effortlessly discover and print to this printer.

The Page Description Languages (PDLs) currently supported by the Mopria Alliance include: PCLm and PWG Raster (from the Printer Working Group standards body) with PDF coming soon. Printer manufacturers must support one of these PDLs to be compliant with the current Mopria Alliance standard. Xerox® devices allow other PDLs to pass through if the mobile client provides the file in one of the device native formats.

The Mopria-enabled mobile device needs to discover Xerox® multifunction printers in order to present it to the application as a printing destination. Mopria implements discovery following the procedures defined in the Bonjour Printing Specification 1.2, which specifies the use of Multicast DNS for service discovery.

Certification

In order to state that a device is Mopria compliant, it must pass a certification process defined by the Mopria Alliance. The following Xerox® devices have achieved this certification:

- Xerox® ColorQube® 8700 Color Multifunction Printer

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- Xerox® ColorQube® 9302/9303 Color Multifunction Printer

- Xerox® WorkCentre® 3655 Multifunction Printer

- Xerox® WorkCentre® 5845/5855 Multifunction Printer

- Xerox® WorkCentre® 5865/5875/5890 Multifunction Printer

- Xerox® WorkCentre® 5945/5955 Multifunction Printer

- Xerox® WorkCentre® 6655 Color Multifunction Printer

- Xerox® WorkCentre® 7220/7225 Color Multifunction Printer

- Xerox® WorkCentre® 7830/7835/7845/7855 Color Multifunction Printer

- Xerox® WorkCentre® 7970 Color Multifunction Printer

For more information about Mopria certification, please visit: **www.mopria.org/DeveloperResources/Certifications.aspx**.

Printing Support

Xerox® devices built on Xerox® ConnectKey® technology support the following Page Description Languages (PDLs): PCLm, PDF 1.7, PWG Raster, PostScript, JPEG, PCL, TIFF, and URF.

Note, PostScript interpreters are optional on some Xerox® devices. The Mopria-enabled mobile device will be aware of what formats are supported by the discovered printer and prior to printing a document of a non-supported format, will render it to a printer supported format before transmission of the print job.

Printing is accomplished over the IPP protocol as detailed in the *IPP 2.0 Specification*. Features such as duplex capability, supported PDLs and media handling capabilities are specified in the **Mopria Technical Specification 1.02**.

Security

Xerox® devices built on ConnectKey® technology allow for the enabling or disabling of Mopria printer discovery.

For traffic that needs to be secure, the Xerox® device supports Mopria printing over HTTPS.

An Audit Log is maintained on the Xerox® device that indicates in Audit Log events when Mopria Discovery is enabled and disabled.

Operation Requirements

Network Requirements

- Mopria requires that devices are discoverable via Multicast DNS (mDNS). In some networks, mDNS traffic is not allowed to be passed across subnets. In these cases, a printer will only be discoverable if the Mopria-enabled mobile device and the Mopria capable Xerox® device are on the same subnet. Apple® AirPrint™ uses mDNS as well and faces similar networking challenges across subnets. For possible solutions for Enterprise Networks that span multiple subnets, please refer to our **Xerox® ConnectKey® devices deliver Apple® AirPrint™ to the Enterprise** White Paper.

Xerox® Device Requirements

To print to a Xerox® device via Mopria, the following printer settings should be configured:

- The Xerox® device can be configured for wired networking or wireless networking. There is no requirement for a Xerox® device to be wirelessly enabled. The Mopria-enabled mobile device will be using wireless communications.
  - In order for Mopria to work with a wired printer, the printer and the client need to be on the same router or the wired and wireless network segments need to be bridged and allow mDNS traffic to be routed between them.
- The Xerox® device must have mDNS and IPP printing configured and enabled.
- The Xerox® device must have Mopria discovery enabled which is the default.

Mobile Client Requirements

To use Mopria, a mobile device that supports Mopria printing is required. Google has recently incorporated print into their new Android™ Operating System (OS) version 4.4 (Kit Kat). With the Mopria provided plug-in, devices with this operating system will be Mopria-enabled. Mopria-capable clients need to turn on Wi-Fi under the Settings icon (one time) prior to performing the print function.

Mobile Device Apps that Support Mopria

Currently, printing can be accomplished on a Mopria-enabled mobile device from the email, gallery, and web browser applications. Other applications may be available that offer this feature in the future.

Conclusion

Xerox is at the forefront of delivering on the challenge to provide simple wireless printing from smartphones, tablets, and other mobile devices. Mopria printing does not require any driver installation or software download on these devices. This provides a solution with smart devices that simplify your work.