

Mobile Printing Market

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ABSTRACT

A US based national company (IQJ) was interested to assess the mobile print market challenges and opportunities. A market study was conducted to identify the challenges and obstacles of this market with recommendations on how to bridge the gap between the current product limitations and the market needs. Using the data estimates were made for increased in the potential revenue opportunity for IQJ.

I. INTRODUCTION AND BACKGROUND

A US based national company (IQJ) was interested to assess the mobile print market challenges and opportunities. The company was experiencing growth challenges in the mobile printing market and the amount of printing completed via mobile devices was below expectation considering the growing number of mobile devices, increased consumer reliance on those devices, and the trend away from desktops and laptops. A team of MBA students and faculty was formed to conduct a market assessment study, identifying target markets and making recommendations to bridge the gap between the current product limitations and the market needs.

The global at-home printing market was estimated to be about \$21 billion in 2015 with a typical margin of about 4 percent. IQJ is an industry leader, alongside Xerox, Canon, Toshiba, Ricoh, and Lexmark. The print industry is facing many challenges as the shift to digital documents and storage increases – particularly, it is facing a gradual decline of about 2.5 percent per year¹

With the rise of social media and cloud storage, more information is being stored and transferred using internet channels, while less information is being printed for retention and distribution. The consumer printer industry uses the “razor and blades” business model, selling the printing unit at a price close to production cost and relying on selling paper and ink sales to make profit. While people are purchasing printers for use in homes and offices, they are consuming significantly less ink and paper by transitioning to digital resources. Many printers currently on the market have the capability to receive print jobs from internet capable mobile devices. Although there is the ability to do such printing, there remains a gap between the opportunity for printing from mobile devices, and the reality of how much is actually being printed. With the capability to print from mobile devices and data more accessible than ever before, it raises the question of why printing has not increased significantly.

Three distinct markets were analyzed: consumer, retail store, and application developer. A consumer survey was conducted to understand consumer mobile print usage, mobile capability knowledge, and challenges incurred to determine opportunities for improvement. Retail store analysis consisted of interviewing sales representatives and managers from a number of retail

companies. Application developer analysis consisted of contacting a number of developers with regard to their mobile applications to determine infrastructure limitations and obstacles in developing a print function.

II. MOBILE PRINT

Many of the IQJ printers have the capability of connecting to the internet, and thus allow for mobile printing via eprint, AirPrint, and Android print capabilities. Under the ePrint enterprise, the printer is connected to a cloud and each printer has its own designated email address that receive attachments to print via email. This ePrint feature allows for users to print from anywhere with a web or data connection by sending an email to the printer’s email address.² The AirPrint feature allows a WIFI connected mobile device to print instantly to a printer on the same network via an iOS device; Android devices also have a similar capability.

III. METHODOLOGY

The main goal for this project was to provide a comprehensive research on the mobile print market. To accomplish this goal, we divided the project into three objectives:

- 1) Conducting a consumer survey to investigate consumer preferences concerning application and printing usage.
- 2) Conducting interviews at retail store locations with managers and sales representatives to obtain insight into consumer behavior and knowledge concerning printer and mobile phone usage.
- 3) Conducting interviews with developers in the mobile application market and identifying disparity issues and opportunities concerning mobile printing.

Objective 1

The goal of the consumer survey was to gauge consumer behavior around mobile printing to figure out the main challenges consumers face, uncover why they are not printing more frequently from their device, and discover what would encourage them to print more via their mobile device to determine well-balanced solutions for our IQJ team. The survey questions used in our study focused on the below characteristics of the respondents, and it was administered to multiple market demographics of adults 18+ in the United States (majority in California) to determine the markets with the highest print concentration:

<ul style="list-style-type: none"> ● Demographic: age ● Whether they had access to a printer, wifi, and smartphone or other internet capable mobile device ● Knowledge of mobile print ● Utilization of mobile print ● Challenges to mobile print 	<ul style="list-style-type: none"> ● Desires to mobile print ● Volume of mobile print ● Awareness of mobile print ● Mobile print behaviors and experience ● Education of mobile print (i.e., advertisements, word of mouth, etc.)
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A pretest of the survey was created on Google Docs. The survey was tested with group members, was presented to IQJ for comments. The survey was then transferred to Qualtrics for distribution (The survey indicated that it was a research project for a university and the client remained anonymous). From the list of constructs, 21 questions were administered with a skip logic, so that each user would need to answer only the portion of the questions relevant to her or his circumstances based on our fact-finding questions. Our goal was to obtain a sample size of 400 respondents and limited our research to individuals aged 18 and above to avoid legal complications. We obtained responses through social media websites (e.g., Facebook, Twitter, etc.), emails to MBA students, emails to Staff & Faculty of SDSU, personal emails to companies which we had contacts, emails to family.

Objective 2

A list was compiled with input from the IQJ to identify sought after retail store information regarding mobile print and mobile phone devices sold to consumers as well as the sales process of those devices:

<ul style="list-style-type: none"> ○ Sales Results: <ul style="list-style-type: none"> -Numbers sold: Mobile print capable devices versus non-capable devices -Cost of: Mobile print capable devices versus non-capable devices ○ Customer Inquiries: <ul style="list-style-type: none"> -Inquiries and concerns received by customers about mobile printing ○ Demographics: <ul style="list-style-type: none"> -Of customers asking for printers -Of customers inquiring about mobile printing -Types of customers showing the most interest in mobile printing (i.e., students, business people, teachers, etc.) 	<ul style="list-style-type: none"> ○ Sales Process: <ul style="list-style-type: none"> -How mobile printing is portrayed during the initial customer inquiry (whether customer inquired about mobile printing or just a general printer) -Training the retail representative received on the printing fleet inventory sold and mobile printing capabilities -If and how mobile printing is demonstrated by the representative to the customer
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Retail interviews were aimed at determining how the mobile print devices are sold to the consumer market and the inquiries/questions/concerns received from consumers.

- A combination of 7-18 questions were asked in each interview depending on the store, the information supplied, and the representative engaged.
- Interviews were conducted at two to three locations of the ten top retail stores in San Diego county based on store inventory of mobile devices, printers or both (Apple, AT&T, Best Buy, Office Depot, Sprint, Staples, Target, Verizon, WalMart, and Windows)
- The list of sought after retail locations was verified with IQJ.
- The interviews were conducted on behalf of San Diego State University, without affiliation to IQJ to ensure unbiased results.

The goal was to conduct interviews at multiple locations of each retail store with managers and sales representatives. Sales Representatives are defined as employees within the print, computer, or mobile device departments.

Objective 3

For information about the current state of the application market, we looked at metrics of multiple tech websites as well as application market reports to address the following questions:

- List of the most successful mobile application companies
- List of applications with printable content
- Number of downloads in the application stores: iOS, Android, Windows, Blackberry
- Percentage of these downloads actively used by consumers
- Type of content the application provides
- Number of applications a typical consumer will download

The following question constructs were developed with input from IQJ. The goal of the interviews was to discover application printing challenges and identify potential opportunities within the application market.

Secondary Research

The expected number of mobile device users globally is approximately 1.4 billion by end of 2016. According to comScore, the United States alone has 159 million smartphone users. A high number of mobile device owners will help generate a greater need to print. A smartphone or tablet is the primary device to take photos for 61.2 percent of the population. This is because the use of smartphones favors spontaneity and accessibility. People take approximately 58 pictures a month on their smartphones. The amount of photos taken on a consumer's phone represents possible print content if photo printing was easily accessible. According to comScore, the United States alone has 159 million smartphone users⁴ A high number of mobile device owners will help generate a greater need to print. A smartphone or tablet is the primary device to take photos for 61.2 percent of the population.⁵ People take approximately 58 pictures a month on their smartphones. The amount of photos taken on a consumer's phone represents possible print content if photo printing was easily accessible.

IV. FINDINGS

Awareness of the mobile printing capability was 69 percent of our sample group. We found a majority of people have mobile-print capable printers and devices, yet only 22 percent of these people use them. The primary reason for people choosing not to print was the discord between what they want a hard copy of and what is on their phone. Incorporating easy print features into applications could potentially change this.

The mobile application market is a growing. Many people “can’t imagine” life without some of the popular applications like Calendar, Maps, and Email. According to Gartner, the application market is expected to reach 268 billion downloads by year 2017, with 90 percent of them from the Apple and Google Play store alone. The research aligns directly with our consumer survey research, which shows that the majority of consumers are utilizing those two platforms. Table below depicts the mobile application store download trend from 2012-2017. The free download

market continues to heavily outweigh the paid market. Research shows that application revenues in 2013 reached \$26 billion and is expected to grow to \$77 billion by 2017.

	2012	2013	2014	2015	2016	2017
<i>Free Downloads</i>	57,331	82,876	127,704	167,054	211,313	253,194
<i>Paid-for Downloads</i>	6,654	9,186	11,105	12,574	13,488	14,778
<i>Total Downloads</i>	63,985	102,062	138,809	179,628	224,801	268,692
<i>Free Downloads %</i>	89.6	91	92	93	94	94.5

Source: Gartner (September 2013)

V. SUMMARY AND CONCLUSION

Consumer Market:

The consumer survey showed that 91 percent of respondents have access to a mobile print capable printer. Therefore, the low volume of mobile printing is not simply because users do not have access to a printer. Consequently, we recommend focusing on strategies to increase the number of documents and frequency that the users print.

- Focus all marketing efforts on Android and IOS platforms, instead of Windows and Blackberry, since 90 percent of the application downloads come from these two platforms.
- 75 percent of users would like the capability to print from their smartphone. This presents an opportunity for IQJ to satisfy this market segment by redesigning the required interfaces for ease of use and needed functionality by the consumers.

We recommend targeting advertising of mobile print capabilities to real estate companies and consumers in a sales career. These individuals would benefit from the efficiency that mobile printing provides as they are able to send documents from remote locations to their office. These individuals also typically have the latest technology to keep up with changing trends.

Retail Store:

According to our survey, one-third of the shoppers are unaware of mobile print capabilities. The remaining two-thirds are aware of mobile printing. However, when asked where they learned about the capability, the retail store locations ranked lowest. We recommend a national training program for the top ten IQJ retailers. In San Diego county, the top retailers that we would recommend to train are Best Buy, Target, Staples, Office Depot, and Walmart. Have in-Store Customer Interaction Demonstration Station as our results revealed that only 2 out of the 10 interviewed

retail companies demonstrated the feature to the customer. The box and the user manual both should clearly identify the mobile print device capabilities.

Application Market:

Promotion of Print Benefits to Mobile Application Developers:

- Focus on increasing the print functions within applications on the smartphone platform versus the tablet, as the usage of applications on smartphones is greater than on tablets.
- Focusing efforts to target these markets will make compatibility issues between printers and mobile printing devices less of a problem, as less platforms will have to be catered to.
- Focus efforts on the Android and iOS markets as they are the origin of the majority of the application downloads
- Focus efforts on lower scale application developers, as their Application Programming Interface can be adjusted to include a print function

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