

App Store Strategies for Service Providers

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Abstract — Apple App Store has introduced a substantially different model for digital good distribution to mobile users. Following Apple's spectacular success other smartphone and mobile OS vendors have started similar services. Mobile operators who invest hundreds of millions in 2,5G, 3G and now 4G technologies have a right to participate in the digital economy they enable. Can they quickly bite into the app store business and turn it to their advantage or they will be out of game again?

This paper will try to answer these important questions by analysing the app store market and investigating potential app store strategies and scenarios for mobile operators.

Keywords: *app stores; business models; strategy;*

Disclaimer — The app store market is still very new and extremely dynamic. The key market parameters are changing on a daily basis. Therefore, all the facts and figures provided in this paper may be outdated by the date of its publication.

I. INTRODUCTION

By opening App Store in July 2008, Apple started sending shockwaves across the mobile industry. In July 2010, exactly two years after, Apple App Store has reported more than five billion applications downloads, has grown to an impressive number of over 200.000 apps [1] created by a small army of 43.000 developers as reported by market analyst AppStoreHQ [2]. That spectacular success translated to a significant increase of iPhone sales and turned Apple to one of the front-runners of the mobile industry.

In June 2010, there was around 80 would-be application stores available worldwide according to market research firm Foresters [3]. Following Apple's success, Google, Nokia, RIM, Microsoft, Samsung, Sony Ericsson and other smartphone and mobile OS vendors have created similar application store services. There are also several independent app stores, such as GetJar, Handango (recently acquired by PocketGear) or SlideMe just to name a few.

For mobile operators app stores can become an interesting and attractive enrichment of their value proposition for subscribers. Can operators quickly bite into the app store business, or their subscribers will go over the top reducing their role to 'dumb pipes'? Are operators really interested in taking the challenge of turning app stores to their advantage?

To answer these questions and we need to analyse the app store market and confront the hype with the actual business reality.

II. APP STORE MARKET OUTLOOK

App stores are a logical extension of the mobile content market that has existed for more than a decade. 'Pre-app store' mobile content included not only ringtones, wallpapers and movie clips, but also the whole range of advanced games and applications, such as maps, navigation, multimedia players, photo processing, mailing, dictionaries, Office-type utilities, and communication apps e.g. Skype, Fring and Google Voice.

Mobile users have been able to install 3rd party applications and games on their handsets for a long time. Applications were distributed primarily through multi-modal portals operated by handset vendors (e.g. Nokia OVI), mobile network operators (e.g. Vodafone Life) and hundreds of independent mobile content providers (e.g. BeeCell), brands (e.g. Fox Mobile) and app developers themselves.

Leading handsets vendors, such as Nokia, Sony Ericsson or Samsung have a long tradition of cooperating with third party developers. For years they have run developer programs providing SDKs, testing tools and support to hundreds of tens of thousands developers worldwide.

So maybe app stores are really nothing new?

To answer this question we have to analyze app stores' value proposition, usage patterns, market drivers and business models.

A. App Store Value Proposition

App stores allow the uses of smartphones and tablets to personalize and customize their mobile devices. This is a very attractive value proposition. The user buys a handset with a number of key apps and services preinstalled and then personalize it by downloading other free and premium apps from app stores. However good it sounds we are only at the beginning of this process.

The recent survey carried out by Foresters [3] shows that 21 per cent of all European mobile users consider availability of apps and app stores as an important factor when choosing a new mobile handset. This figure can be probably explained by the market penetration of smartphones that at the end of 2009 accounted for 18 per cent of all mobile handsets.

The same market survey shows, however, that only 4 per cent of all European adult mobile users and 15 per cent of smartphone users keep on downloading apps on a regular basis (i.e. at least once per month). At the same time, as many as 64 per cent of iPhone users download apps on a monthly basis!

This significant gap between the actual usage of apps and consumer awareness can be explained by the fact that unlike iPhone other smartphones only recently started to be shipped with embedded native app store (i.e. preinstalled app store client), which is key to the simplicity of app store usage. Also comparing with Apple App Store and Android Market, the offering of Nokia OVI and other 'native' vendor-driven app stores is rather limited.

The next question is what app stores are used for?

Starting from the market leader, Apple App Store, games and entertainment are the most popular application categories representing 58 and 18 per cent of all downloads, respectively, as reported by Distimo [4]. This means that three out of four of all downloaded iPhone apps are used for pure play purposes. Even on RIM's Blackberry targeting enterprise and SMB customers, games are in the lead with 29 per cent popularity whereas professional utilities represent only 18 per cent of downloads. One could expect that it would be the other way around - that 'serious' business users would download apps that helped them work, not play. These figures show the true nature of smartphone and app store usage.

There was a hope in the Telecom community that the rapid development of app stores would yield a significant number of third party communication apps addressing needs of niche consumer and business market segments. Apparently, that's not the case. Except of Skype, Fring, Google Voice and a handful of other telephony and messaging applications like Multimodal Communication Companion recently launched by Alcatel-Lucent, it is really hard to find communication apps in the stores. Developing games seems to be a much better business.

B. App Store Market Drivers

Explosion of the app store business was not a coincidence but a logical result of four market processes:

- Growing popularity of mobile devices with broadband Internet access (3G, HSPA, WiFi)
- Increasing adoption of flat rate charging plans for mobile data services.
- Creation of smartphones – high-end, Internet and multimedia-enabled mobile handsets.
- Opening of several mobile Operating Systems in particular Android to third parties.

The first process enabled so-called cloud applications. In contrast to on-board applications that are self-contained and thus require all data and logic to be installed on a handset, the a cloud app use a 'thin client' on a mobile device while the actual service logic and data runs 'in the cloud' (read on the Internet). Majority of popular web services such as Google, Google Maps, YouTube, Facebook, LinkedIn, Wikipedia and thousands of others have been mobile-enabled in this way.

The second process eliminated the long-lasting dilemma of charging for off-portal mobile content and services for which subscribers had to pay usage fees, but also data transmission fees. Through virtually unlimited buckets of gigabytes offered in flat rates, users can now enjoy unlimited and quick access to all resource on the Internet including cloud apps.

The third process gave users very powerful, and feature-rich, multimedia-enabled devices. By 2013, smartphones should account for 28 per cent of the mobile handset market. The growing penetration of smartphones and an increasing number of smartphone models priced below 100 USD apiece have significant impact on the development of app stores.

The fourth process gave developers a whole spectrum of open mobile application platforms with feature-rich APIs and advanced capabilities. According to a research firm Canalys [5] in Q2 2010 Symbian OS was by far the number one OS platform for smartphones with 43.5 per cent of the market share followed by RIM's Blackberry with 18 per cent and Android with 17 per cent. Apple iPhone OS was number four with market share of 13.5 per cent. Android is the fastest growing mobile OS. Android's open strategy and support from HTC, Motorola, Samsung, Sony Ericsson and LG has driven its market share up 886 per cent between the second quarter of 2010 and the same period in 2009. iSuppli projects [6] that the Android will overtake Apple in global installed base by 2012 equating to 19.4 and 15.9 per cent market share, respectively.

C. App Store Eco System and Business Model

Following the success of iTunes music store, Apple created a complete app store eco system that attracted numerous developers and generated 200.000 applications after just two years [1].

The Apple App Store echo system includes:

- **A simple access to the app store service** through both iPhone and PC/Mac based client applications. It provides user-friendly browsing, discovery (Genius) and installation functions as well as simple payment methods by credit cards (single registration only!) and operators' billing.
- **A simple and efficient business model** with very low entry barriers and highly simplified business processes. Developers themselves can add their application to the store while Apple runs a certification and approval process (and actually rejects apps pretty often).
- **A powerful Apple iOS application platform** and devices including iPhone, iPod Touch and recently iPad with great design, large touch screens, powerful CPUs, WiFi and 3G Internet access, and feature-rich APIs to camera, location, gyroscope, messaging, and other handset capabilities and services.
- **An attractive revenue share model** – where the App Store retains 30 per cent of application price and 70 per cent goes to the developers. (In mobile content space operators keep usually about 40-50 per cent of the price, distributors/portals another 35-40 per cent so not much is left for the designers and developers.)

The 30/70 revenue share model has been adopted by majority of application stores players. However, some independent Android app stores such as SlideMe doesn't take a cut of the revenue from app sales, but only subtracts a payment-processing fee required by the credit card companies and applicable taxes, and lets developers keep the rest.

D. Key App Store Players

The App Store market resembles very much the web services market where the leader holds 80-90 per cent market share, the next one is ten times smaller and the rest of players get barely anything.

Apple remains an undisputable leader of the app store market. By growing over thirteen thousand apps per month [4] Apple App Store has now exceeded 200.000 applications [1].

Interesting enough, after launching iPhone in January 2007 Apple's management, obsessed with vertical integration and controlling of the 'whole stack', was actually against opening the platform for third party applications [7]. The change of heart that resulted in launching App Store over a year later proved to be very fortunate for Apple.

Google Android Market, the number two star in the app store firmament with over 25.000 apps. Android has the biggest potential to effectively compete with Apple [6] as it is supported by several leading handset manufactures and both Android OS and Android Market are gaining momentum.

Nokia OVI Store with about 10.000 apps is number three. It averages 1.7 million downloads per day [8]. Nokia OVI Store is followed by Blackberry App World (number two smartphone manufacture), Samsung and LG app stores (the number two and three mobile handset market players) offering a few thousand applications each.

Other handset vendor-branded app stores include Windows Marketplace for Mobile, Palm App Catalog, Sony Ericsson PlayNow and Palm App Catalog. However, they together are one row of magnitude smaller than Apple store.

There are also several vendor-independent app stores. Unlike Apple, Google allows for multiple app stores to exist for Android. New independent Android app stores such as AndSpot, SlideMe and AndAppStore attracts developers and users with better search and app-recommendation features (4). Other popular mobile OS like Symbian have independent stores My-Symbian.com, Symbian One, Handango (now PocketGear) and the biggest GetJar.

E. Monetizing App Stores – The Reality App Store Business Who makes money on app stores?

To answerer this intriguing question let's take a look at the actual structure of the app store offerings and their pricing.

A substantial number of apps offered through app stores are free. Paid apps often offer limited free versions to attract potential customers. Not surprisingly free apps are the most popular especially among younger users educated by Internet where 'everything is free'. According to the Distimo report published in June 2010 [9], in Apple Store 28 per cent off all

apps are free. In Blackberry App World and Nokia OVI this number is 26 per cent. Google Android Market is the absolute leader of this statistics with 57 per cent of free apps.

The prices structure of paid apps is another important factor. According to Distimo [9] nearly 50 per cent of iPhone paid apps are priced below 1 USD (usually 99 Cents), over 75 per cent are priced below 3 USD and 99 percent cost less than 50 USD. This gives an iPhone paid app an average price of 4,01 USD. According to Mobclix [10] this figure is actually at the level 3,37 USD.

Mobclix reports that average prices in Android Market and Nokia OVI store are 4,01 USD and 2,51 USD, respectively. The average prices are double as high in Blackberry App World and Windows Mobile App Store and average 8,58 USD and 7,48 USD, respectively. These app stores target primarily enterprise and SMB users rather than consumers, which explains this price difference.

With millions of downloads daily these micro prices can still generate significant revenues. During two years Apple App Store has enjoyed over 5 billion downloads and paid about 1 billion USD to app developers according to Foresters [3].

Impressive? Yes, but not entirely.

The number of third party iPhone app developers, as estimated by AppStore HQ [2], has already exceeded 43.000. They produced over 200.000 and the majority of them are either free or priced at 0.99 USD. Certainly developers of top ranking games and utilities, such as Angry Birds, Stick Skater or Fruit Ninja or Battery Doctor Pro (all priced at 0.99 USD) make a good business, but it is likely that a significant number of developers have not recouped their development costs or never earned a penny. The question remains why they are keep on producing even more apps every day?

Apple does not publish official App Store revenue figures. If the recent Foresters predictions [3] are correct, Apple gross revenue from App Store to date has been about 1,5 billion USD. In 2009, The Wall Street Journal [11] estimated that average app store revenue per iPhone user was about 27 USD compared to 600 USD from iPhone handset itself. The App Store spending per user is probably slightly higher today so with over 50 million iPhones shipped so far the App Store revenue of 1,5 billion USD sounds realistic.

This means that until now Apple earned at the best 0,5 billion USD from its App Store business, which accounts to less than 5 per cent of the total iPhone, iPod and iPad revenues.

Not surprisingly, several analysts point out that both iTunes and Apple App Store are used by Apple primarily to drive the demand for their hardware, namely iPod, iPhone and recently launched iPad. This strategy seems to work well for Apple that increased iPhone sales from 3,7 million in Q2 2009 to 8,7 million in Q2 2010 and is constantly gaining market share.

Any service provider planning to invest in app store should carefully analyze Apple's business case and think twice.

III. APP STORE STRATEGIES FOR SERVICE PROVIDERS

Mobile Network Operators (MNOs) who invest hundreds of millions in 2.5G, 3G and now 4G mobile broadband access technologies have a right to participate in the digital economy they enable. As their customers go over-the-top to vendor-specific and independent app stores, many operators fear that they will not be able to fully monetize their investments as and their role will be reduced to "dumb pipes".

However, the app store market is already crowded and is quickly maturing. The window of opportunity will be closing soon. Successful players will be those capable of creating attractive business models for third party developers and providing them with marketing, sales and payment solutions.

Are MNOs capable of doing this? Are they able to react quickly enough?

Certainly the perspective of being completely excluded from the app store business is not appealing to leading MNOs. We will probably observe different strategies here:

- Tier 1 MNOs will certainly try to launch their own app stores possibly built using white-labelled app store platforms offered by Ericsson, Amdocs and other vendors. The main challenge here will be to attract developers and to create differentiating apps.
- Tier 2/3 MNOs will probably follow up by either licensing third party app stores such as Handango or GetJar or/and by aggregating apps already offered by different handset vendors.
- MNOs can also position themselves as "toll booths" demanding a cut from app stores for all paid apps downloaded by their customers. However, despite some attempts, this option is not gaining popularity, as too restrictive.

Tier 1 operators have already snapped up the opportunity to offer their own app stores. Vodafone, Orange, Verizon, Sprint, Telefonica, China Mobile and several other Tier 1 operators have already launched their stores. They have the resources necessary to drive app store business as well as experience in working with application developers.

Tier 2 and Tier 3 MNOs and those operating in the emerging markets have different perspective. With very high percentage of prepaid subscriber base, ARPU measured in single digit numbers and very low penetration of smartphones all this app store hype might sound like a story from another planet. However, even they have made first steps in this direction by creating basic mobile portals with content and game offerings – this is exactly what happened in the mature markets 5 to 8 years ago.

A. Enriching Application Offerings

Service providers can only extract value from app stores if they add some value first. They do not own mobile platforms and they do not really own developer communities. However, they have many valuable assets including:

- Strong brands recognized by the customers
- Millions of existing (and paying) mobile subscribers
- Trustful billing relationship with subscribers
- Subscriber profile including real-time information
- Universal authentication through SIM cards
- Advanced billing and charging mechanisms
- Rich network-based service capabilities

All these assets can be potentially monetized by MNOs in their app stores. They can be also be used to enrich user experience through:

- **Enhanced App Capabilities** - Service providers may enable additional network-service APIs (e.g. GSMA ONE API) such as user profile, account status or user location to allow developers to add value and enrich the existing applications and to create new ones. For instance, a Facebook app can show what friends are nearby (which require network-based location APIs).
- **Real-Time App Promotion** – Service providers have very detail knowledge about their users and they can monitor their behaviour. This information can be perfectly used for application promotion in real time. For instance, service provider can push map and travel guides applications to subscribers who are at airports.
- **Per-usage Charging** - This makes little sense for \$0.99 apps, but for more expensive applications such as language translators or mobile navigation used occasionally (e.g. on vacations) paying per usage may be very attractive. Such a model is already used for some navigation applications providers.
- **Parental Control** – kids and teenagers are frequent users of app and music stores. Mobile operators can allow parents to control the types of content, apps and games their kids can download to avoid abuse, porno, violence, etc. Parents may also wish to control their kids spending. Service providers can allow them to define a limited amount on their children's mobile prepaid or postpaid account to be spent for apps and control these spendings.

B. Simplifying Application Development

Online services such as Facebook, Google, Skype or even small, niche ones offer today APIs to third party developers. They are very attractive as platforms as through them developers can reach the global market with minimal cost and effort. Mobile handsets represent also a very attractive option to app developers, because they are shipped in millions worldwide and provide a great market distribution channel.

Application developers have today unlimited possibilities to earn money by creating apps for PCs, mobile handsets, web services, enterprises and specialized industries. Why should they spend their time with network operators?

In this context, doing business with mobile operators is anything but simple. Fragmentation is one of the biggest obstacles in attracting developers to create apps using operators' network APIs.

Any mobile operator can address only limited population, usually 30-40 per cent of users in a country. Lack of harmonization of network APIs among different MNOs is yet another problem that increases fragmentation and scares away developers. To reach European population through MNO channels a developer would have to establish business and integrate with over 300 mobile operators. This is totally unrealistic.

This issue already became apparent for mobile content providers that went through this tedious process some years ago. The biggest ones like Fox Mobile Entertainment with Jamster and Jamba content portals can deliver their content, services and games to 125 operators worldwide whereas the total number of MNOs is close to 800. A typical content provider integrates at max with 3-10 mobile operators only.

Of course big domestic markets like China or USA as well as large MNO groups like Vodafone, Orange or T-Mobile change this perspective as they can provide economy of scale. Still, as for now it is much easier to create and distribute apps through handset vendors than operators.

To overcome fragmentation and simplify application development and distribution leading mobile operators have recently created the **Wholesale Applications Community** (www.wholesaleappcommunity.com). It has been established to increase the overall market for mobile applications by encouraging open standardized technologies and providing complimentary commercial models. The WAC should allow developers to deploy an application across multiple devices and multiple network operators without the need to negotiate with each of them. The WAC will also allow developers to monetize applications sold through associated application stores.

However, it is still too early to judge if the WAC initiative will have any commercial impact on the mobile operators' business in general and app stores in particular.

IV. CONCLUSIONS

An analysis of the Apple App Store business case presented in section II shows that it is very unlikely that app stores can directly generate any substantial new revenue stream for mobile operators. If Apple, the market leader with 200.000 apps and over 50 million users, makes just a few hundred millions a year from their App Store, how much would an average mobile operator make?

Mobile subscribers are getting used to app stores and soon they may simply expect their service providers to offer branded app stores as well. Offering an app store may become a necessity even without a strong business case, in the same way as retail banks have to offer Internet banking services even

though they do not generate any substantial additional revenues for them. Who will open a bank account today without having an Internet access?

Considering the weak business case, creating an app store eco system is rather unrealistic except for Tier 1 players in the biggest markets. Operators should rather try to leverage their strong customer relationship and brand and focus on app distribution and charging. To reduce costs and time to market, operators should reach for existing white-labelled solutions or try to provide branded app store front-ends aggregating several existing stores. Enabling charging for apps through prepaid and post-paid accounts could provide great value to the users especially kids and teenagers without credit cards.

More ambitious operators can offer a differentiating set of apps to their own subscribers, such as local news, mobile account management, parental control or traffic information. Knowing well subscribers' profiles enables operators to offer a good app recommendation mechanisms (Genius). Such small but useful and unique app offering could on the long run increase customer loyalty and reduce churn.

Apple smartly uses the App Store to drive sales of their mobile devices. Learning from this example, mobile operators should try to use app stores as a magnet for their subscribers to buy new models of smartphones along with more advanced service packages including unlimited data access. This in turn can increase their revenues from data services and handset sales. For the moment these are probably the only true reasons justifying app store investments.

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