

An Analysis of Mobile Gaming Development

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Abstract— Mobiles, Tablets and other wearable devices are much relies on gaming platform. The mobile games are vital in making mobile industry beneficial for media and entertainment industries. Since they rely there is a major shift in the gaming industry towards mobile platform. This paper mainly stress on different mobile platforms and industrial ecosystem. This shift has brought good tidings for the major mobile game companies to develop mobile Apps and to market them. Apart from communication through mobile with the apps platform the usage of mobile has rapidly increased. Being people spent much time on Apps and Mobile Games on smart phones these shift gaming companies to beneficial level. The profit census of top gaming companies are higher and profit percentage going to increase in coming years.

Keywords: Mobile, Gaming platforms, Software, Mobile Gaming companies, gaming markets

I. INTRODUCTION

Due basically to the diffusion of mobile handsets and devices, the mobile platform offers wider demographics than any other and a just about unlimited house for the event of recent and new forms of games. Additionally, mobile games will make intensive use of the competitive blessings of the mobile platform: omnipresence any time, any place-, the best level of personalization –but keeping shut contact with the social network, and, trying into the long run, context awareness location as a current and main example. However, mobile gaming confronts conjointly variety of challenges, starting from technology and economic science to the institutional framework. From a historical perspective there was initial a business culture clash between mobile operators and content / applications suppliers only laterally and part resolved through the applying stores burst onto the mobile scene. Price, usability and process power of mobile phones was next, once more on its thanks to be solved with the market success of smart phones and new varieties of devices. Lack of mobile broadband obstructive on-line and social gambling is additionally changing into a problem from the past a minimum of in most components of the developed world, and notably in Europe. however the on top of, the echoes of those difficulties surface within the complexities of the mobile ecosystem, within the fight for the management role within the rising platforms inside the system, and within the totally different perceptions on the mobile game realm evolution: still for several game developers mobile is simply another distribution channel; for mobile industries games are simply another form of content / application. However on the far side mere technoeconomics lie variety of a lot of basic challenges. Attracting, appreciated and sustaining innovation within the mobile game field therefore it becomes a “serious” trade is

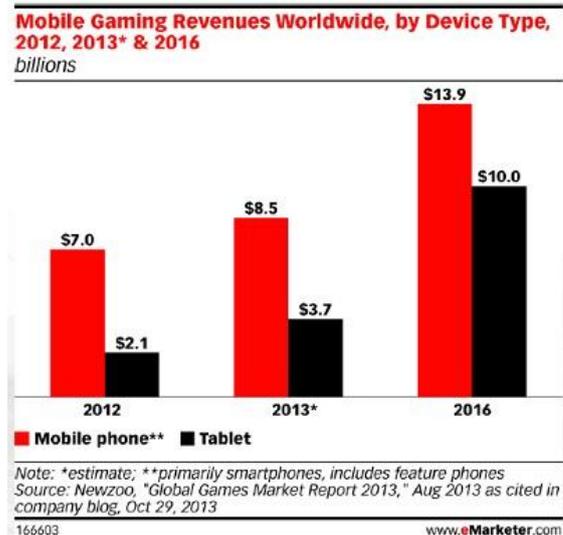


Fig. 1: Mobile Gaming Revenues Worldwide by Device Type

arguably the larger of them. The conditions for such innovations square measure connected with the emergence of distinct platforms that view to draw in talent. Precisely, in this paper the most options of such platforms square measure bestowed and compared to extract some conclusions on the challenges and opportunities for mobile game developers.

II. THE MOBILE GAMING COMPANIES

Mobile game app development is a highly lucrative field, especially for developers who are immensely successful in the app market of their choice. The inclusion of in-app purchases in game apps has helped developers not only make more revenue out of their own apps, but also gain more visibility in the major app stores, including the Play Store, the App Store and so on. It has been revealed that the leading mobile game app developers rake in over \$1 billion in revenue from each of their apps. It is expected that these developers will collectively make over \$25 billion in terms of revenue.

A. Here is a List of the Top Mobile Game App Developer Companies:

1) GungHo:

GungHo claims that its most popular game, Puzzle & Dragons, was generating over \$3.5 million in revenue per day in the past few months. While the game’s design and success story is inspiring for app developers, it is also a lesson on app marketing and promotion. It is expected that the company would report sales of about \$1.5 billion this year.

2) Supercell:

Super cell, which recently gave Softbank and Gung-ho a 51 percent stake for \$1.53 billion, is now valued at over \$3

billion. This company's highly successful Clash of Clans, ended up topping the iOS game app charts. Now also available on Android, Supercell continues to forge ahead, focusing on tablets as well the company is expected to report a revenue turnout of about \$800 million on their games.

3) *Rovio:*

Rovio, which is most known for its very popular Angry Birds series, is also now equally famous for its game merchandise. The giant's revenue, which was around \$195 million last year, is expected to grow to epic proportions this year. Another popular title from this developer includes The Croods, which is available on Android, iOS and Kindle. Angry Birds is available on iOS, Android and Windows Phone.

4) *Disney Games:*

Disney Games has been doing extremely well with its "Where's My Water" series of games, which also sells its own merchandise, similar to Angry Birds. The giant is expected to make close to \$300 million in revenue this year, from mobile games alone. Other popular games include Star Wars: Tiny Death Star and Castle of Illusion Starring Mickey Mouse.

5) *Game Loft:*

Game Loft reportedly crossed the \$100 million mark in revenue right back in the first half of this year. The most prominent games from this company include Gangstar Vegas; Thor: The Dark World and Modern Combat 3: Fallen Nation. These games are available on Play Store as well as on the iOS App Store.

6) *King:*

King's immensely popular Candy Crush Saga has veritably overshadowed all its other titles this year. Though the company releases newer titles on a regular basis, King claims that Candy Crush Saga alone, which is available on Android and iOS, has generated over \$300 million this year.

7) *Kabam:*

Kabam, which has developed extremely popular games such as The Hobbit, Dragons of Atlantis and the Kingdoms of Camelot, continues to have a dream run in the mobile gaming industry. This company is expected to bring in over \$300 in revenue.

8) *Mobage:*

The Mobage mobile social gaming network from DeNA presents a variety of interesting games, which has supposedly generated total revenue of over \$500 million in its first quarter. The company's most popular games are Blood Brothers, Rage for Bahamas' and Transformers Legends, which are available on Android and the iOS.

III. SOFTWARE PLATFORMS

In the mobile domain, code for games, either within the shape of content or as an application, is developed for a particular platform summarizes the most options for the foremost relevant of them: Apple, Google, RIM, Microsoft, Linux, Sun, Qualcomm and people from mobile operators! The most outstanding platform these days is Apple's. It is composed of 4 main pieces: the iPhone-iPod-iPad because the mobile/portable devices (including Apple's OS X as in operation system, the most recent version, iPhone 4.0, launched in April 2010), the App Store

wherever applications square measure accessible for users to download the iTunes software system as the request and system and a software system development kit (SDK) for interested parties. iTunes and iPod, centred in music and images, predated the launch of the iPhone –the true "mobile game changer"- in 2007. In step with Fierce Markets, there were 40 million units of the iPhone within the mobile market in February 2010. Initially developers may solely produce third party iPhone applications that run remotely via the expedition net browser put in within the device. However, the success of the iPhone and therefore the accessibility of programmers to bypass the software restrictions within the software system of the iPhone and allow different third-party applications operate, caused the reaction from Apple and therefore the accessibility from March 2008 of a software system development kit that permits developers to provide sanctioned third-party applications on the iPhone. At constant time, Apple (Mar 2009) has warned once more the results of the "jailbreaking" practices of the third-party applications not approved. The Apple strategy suits the "closed" platform model [5] wherever Apple reserves itself a high degree of management on each component of the platform –hardware, software system, software development kit- and specially on the approval of applications. As a main example, in step with be intimate, Apple can "revoke the digital certificate of any of your applications at anytime" as expressed within the terms of the iPhone Developer Program License Agreement, a contract all developers should sign to distribute their software system via the App Store. In fact, till finish of 2009 there was no "adult" content on the iPhone and lots of applications suffer delays attributable to unknown causes to enter the App Store. In step with the most recent information accessible from business sources (see Fierce Markets for instance), in early 2010 there were quite 1000 developers World Health Organization signed for applications in the iPhone and, in step with mobile application analytics provider Flurry, the iPhone OS project application starts have almost double in an exceedingly month since the Apple declared its iPad tablet device in February 2010.

Ovi Store is presently the third one in terms of vary. At this time is value to recollect that, not like the App Store, Android, BlackBerry, and Windows Mobile allow finding and putting in applications outside of the official stores –using the services of firms like Handango, Handmark, GetJar, etc.- and so the figure for all of those application stores are literally higher essentially than those reported within the official store knowledge.

Google's platform within the line in terms of application at the tip of 2009 however has caused a substantial impact on the ecosystem. Google's strategy relies on 3 main elements: Android as open operational systems essentially –but not only-for mobile devices, a group of package facilities for developers on this platform and therefore the devices provided by an increasing variety of makers. Android was undraped by the Google-led Open phone Alliance in Gregorian calendar month 2007. Within the 1,2 months programmers downloaded the package development kit for android quite 250,000 times, in keeping with Google, although at the time there have been no handsets supporting it within the market. in contrast, developers downloaded the Symbian OS Getting Started

guide some 70000 times within the twelve months ended in Sept 2007.

HTC was the primary device provider to include android in an exceedingly mobile phone in 2008. Throughout 2009 it has been followed by an increasing variety of makers, most notoriously Motorola and Samsung. At the tip of 2009, Google set to enter directly into the phone market with its own phone, the Nexus One, presently a failure. Google strategy follows terribly closely the "open innovation" model where obtainable information, each internal and external, is used to accelerate internal innovation and expand the markets for Microsoft approach to mobile applications is predicated on Windows Mobile and Windows Market. Windows Mobile could be a operating system combined with a collection of basic applications for mobile devices supported the Microsoft Win32 API. Devices that run Windows Mobile embody netbooks, smartphones, portable media centres, and on-board computers sure as shooting automobiles. It's designed to be somewhat the same as desktop versions of Windows, feature-wise and esthetical. Additionally variety of third-party computer code developments is out there for Windows Mobile. Windows Mobile has been updated many times, with this version (from 2007) being Windows Mobile half dozen. In 2010 Microsoft can introduce Windows Phone Chief among the new options in Windows Phone seven could be a series of "hubs" integration connected content from the online, applications and services. The hubs embody games that transports Microsoft's Xbox Live play platform to mobile devices. Windows Marketplace for Mobile was launched in Oct 2009 with concerning 250 applications. Per trade sources (FierceMarkets) it's concerning a thousand applications in March 2010 external use of innovation. In fact, Google subsidises the development of android in exchange of deciding the foremost appropriate roadmap ahead for the package. Google has additionally set and operates the android Market in Oct 2008 and therefore the corresponding processes for charging, asking and sharing revenues with developers and publishers Google retains half-hour of revenues in its app store to "compensate for the expenses in steering and developing the android software". In contrast to Apple in android Market there's not a mechanism for previous approval of applications within the store; their functionalities and contents are responsibility of the developers and publishers. The main conditions for developers are comparatively like Apple's: there are 48 hours from the time of purchase (Not-download) for a full refund of any applicable fees, there's an unlimited variety of reinstalls of every application obtained via the android Market, Google retains the correct to remotely remove applications from the device, Google isn't accountable for charge disputes, Google doesn't give client support for applications distributed on android Market and, finally, Google doesn't permit content that contains status and sexually specific material, violent or bullying behaviour, hate speech, non-public and counselling, malicious products, prohibited product, outlawed activities or infringes copyright rules. solely users 13 years archaic or older square measure permitted to use android Market. On December 2009 Google announced that there square measure 16000 active applications in android Market. On Feb 2010, ZDNet

has according that android Market is that the second largest application store with regarding 20000 apps compared to Apple's 150000 apps. Free applications in Android Market were 47 compared to 25th in Apple's Store. In March 2010 Google proclaimed that its android Market mobile applications shop front currently boasts roughly 30000 apps virtually doubling in exactly 3 months. The share of games among the applications within the store appears comparatively like that of Apple's. Mobile games for the android platform had a 53% month-over-month gross sales increase in Gregorian calendar month 2009 in line with marketing research firm Fade. However, Fade indicates that October's popular premium android game, Lupis Labs Software's RoboDefense, sold-out 7600 units at \$2.99 each, that interprets to gross monthly revenues of simply \$22724. The entire android game sales for 2009 square measure calculable to have reached \$1.75 million.

IV. MOBILE GAMING MARKETS

Together with mobile games marketing platform AppLift have developed an extensive infographic featuring key global and regional mobile games metrics. This new joint market investigates the appeal of different regions for mobile game publishers and sheds light onto growth opportunities, monetization potential and user acquisition costs. The major findings of the analysis are summarized in the "The Global Mobile Games Landscape", an infographic which provides insights on global and regional mobile gaming data across 6 continental regions. Both macro and individual player level data is included, as well as a concluding regional appeal score for mobile publishers. "In order to benefit the most from the mobile games opportunity, publishers not only require insights on a global scale, but also need to understand the full consumer journey, ultimately leading to revenue growth. This is where our market data on players, share of paying players and average spent complements the game marketing metrics known to mobile games marketing.

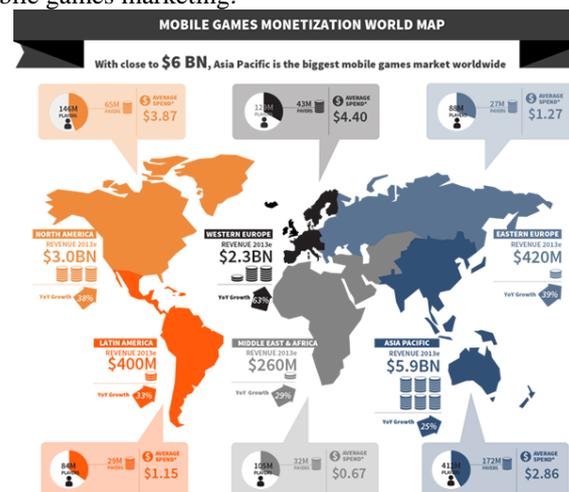


Fig. 2: Mobile Game Monetization World Map



Fig. 3: The Global Mobile Games Landscape

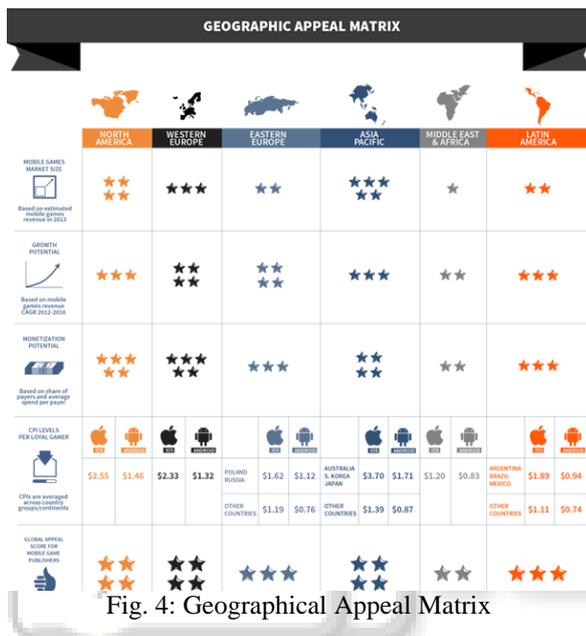


Fig. 4: Geographical Appeal Matrix

V. SOME CONCLUSIONS ON THE CHALLENGES FOR MOBILE GAME DEVELOPERS

A new report has named 2015 as the year in which the value of the mobile games market will exceed that of consoles, making it the industry's most lucrative sector. The Quarterly Global Games Market Update, from Newzoo, pins the total estimated value of mobile games at \$25 billion for the year, a huge leap of 42 per cent from the total value in 2013. That rise, the company believes, is not only thanks to the sudden rush of revenues from vast developing markets like India, but also the continuing performance of markets like North America and Asia, which some had predicted to have reached saturation point.

"With the public release of these new forecasts, Newzoo is deliberately countering the sentiment aired in recent months that the mobile gaming market is becoming saturated in mature Western markets, especially the US," said analyst Vincent van Deelen in a note accompanying the research. "This is simply not the case. The recent results of individual high profile companies such as Rovio, King, DeNA and GREE are not necessarily indicative of the state of the mobile market as a whole. It is not in our interest to inflate market figures, but the hard facts have forced us to adjust our estimates upward. We have maintained our year-on-year growth rates toward 2017, ultimately leading to a

\$40Bn+ market in 2017." With its combination of both organic and cannibalistic market growth, mobile continues to represent both threats and opportunities to more traditional retail avenues. Whilst many publishers are making headway into mobile markets with separate publishing arms, acquisitions and companion apps, revenues for mobile's biggest players are already dwarfing their console and handheld counterparts. Apple's gaming revenues alone, for example, are predicted to total somewhere in the region of \$4 billion for 2014 - somewhere around double that forecast for Nintendo.

For now, Apple remains the top dog in terms of mobile gaming income, edging out a predicted revenue total of \$3 billion dollars for Google Play in 2014. That, says Newzoo's Peter Warman, is down to the edge provided by the company's tablet portfolio. "In mature Western markets, we see the battle between iOS and Android shifting toward tablets," said the Newzoo CEO. "In most of these countries, including the US, Android smartphones gross more revenues than the iPhone, but the iPad keeps iOS ahead in overall mobile game spending. Android tablets seem to be in the same position its smartphones were in 4 years ago: fragmented in terms of device specs and a lower share of game and average spending. Amazon's Kindle Fire is an exception, scoring high on both KPIs, but for now the iPad maintains its lead, taking the lion's share of tablet game revenues."

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