Mobile App Monetization: Issues and Challenges

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ABSTRACT
In recent years, there has been tremendous advancement in the capabilities of mobile devices which in turn led increase in the development and use of mobile applications. Mobile device users are attracted towards feature-rich applications. The app developers are encouraged to develop applications to meet users need. The app developers can distribute and sell their applications in mobile application market. The rise of mobile application market opened up immense opportunities for mobile app developers to generate revenue by selling mobile applications to large number of consumers as well as to capture new customers. There exist various monetization models which developers opt for creation of economic value. Issues and challenges in this context are discussed in this paper.

Keywords
Mobile application platform, Monetization, Issues, Challenges

INTRODUCTION
Over the past few years, there has been explosive growth in selling of mobile devices caused increase demand of mobile applications. In recent time, mobile devices are not just communication devices but the rapid growth in the networking capacity made them capable to provide effective utilities to users. Ability of mobile devices further enhanced by increased bandwidth. Resource constraints of mobile devices in terms of storage and computation power are overcome by making use of mobile cloud computing which made possible to develop resource-intensive applications. Mobile users are attracted towards feature-rich applications. Increased mobile users and mobile app marketplaces provide vast opportunities for developers to create financial value. Application-platform enables developers to distribute their apps online by opting monetization model of their choice. The developers focus on app development while business functionalities are performed by platform owner. Platforms are associated with network effects[1]: the more number of consumers a platform adds, it increases the feasibility for developers to join, and vice versa. The platforms compete to gain high economic value and as a result platforms attract more developers and end-users.

MOBILE APPLICATION PLATFORMS
Mobile Application Platforms are online store for distributing mobile applications and designed to connect mobile application developers and users. There are several mobile application marketplaces among which some are operating system-native platforms while others are third-party platforms. Google play, Samsung’s Bada, RMI’s BlackBerry, Microsoft’s Windows Marketplace and Apple’s App Store are native platforms and GetJar, HandMark, PocketGear, Opera Mobile Store, Handango are third-party platforms. Apple store, Google play and Windows Marketplace are major platforms launched in year 2008, 2012 and 2009 respectively. Revenue sharing ratio of developers and
platform owners in these three major platforms in terms of percentage is 70:30. Entry fees for developers on Google play and windows marketplace are one-time $25 and $99 respectively. An app store fee for developers is $99 per year.

As per [2], a platform is open when 1) no restrictions are placed on participation in its development, commercialization or use; or 2) any restrictions—for example, requirements to conform to technical standards or pay licensing fees—are reasonable and non-discriminatory, that is, they are applied uniformly to all potential platform participants. Demand-side user(end user), Supply-side user(developer), platform provider(Hardware/OS and Platform sponsor(Design & IPR) are elements of openness and closeness in mobile application platform[3]. Considering two major platforms, AppStore and Google play, openness is discussed here in context of these elements. For end-user, platforms are closed. Access to a platform is granted if consumer purchases a certified device. Apple’s App store is strict in term of granting access by additional requirement of users’ credit card number. No interoperability exists among platforms as they are mutually exclusive, so application developed for one platform cannot be used on other platform. For developer, entry to Google Play Store is more liberal than Apple’s AppStore. Extension of development platform is strictly prohibited. For supply-side, platforms are open. Development tools are available for free of cost for all major platforms. Programming logic, visual appearance can be reused across the platforms for developing applications. Platforms are closed in terms of H/W, OS, Design and IPR(Intellectual Property Rights) when they are owned by proprietors. In essence, mobile application platforms are blend of open and closed elements.

MOBILE APP MONETIZATION MODELS
There are varieties of monetization models which app developers can use to generate revenue. Broadly, there are two monetization strategies for economic return: Charging users and Advertising. There are different models such as freemium, in-app purchase (IAP), subscription for paid apps. Freemium apps have two versions of app: lite&Pro. The lite version is unpaid apps with limited in some ways such as limited functionalities, features, time period etc., while Pro version of apps are paid app recommended and even purchased within “lite” version. The IAPis widely used in game applications where users buy virtual goods such as extra lives or in-game currency. IAP and freemium models can be used in variety of combinations as they are mutually exclusive. The subscription model is suitable to service focused apps which provides content rather than features where users are allowed viewing some predefined contents for free and then prompting user for subscription for details. Subscription apps which require people to pay monthly/yearly fees for media consumption are a growing trend [4].In in-app advertising model, apps are free to download but incorporate advertisement to generate revenue. Apps display advertisement in variety of ways such as including text ads, banner ads, expanding banner ads, rotating banner ads, “click to” ads, video ads, interstitial ads(displaying full-screen ads during a pause of the app for instance between rounds of game). The app developer can be paid based on either by the number of users the ad shown or by number of users who responded by taking immediate action after seeing the ad. All major mobile application platforms as well as independent ad brokerage networks offer “ad brokerage” service to app developers. Ads target users based on attributes and actions of users such as their location, the content of their communications and their past purchases.

ISSUES, CHALLENGES AND RECOMMENDATIONS
In this section issues and challenges regarding mobile app monetization are discussed.
App gets lost in market: Developing app with slightly better than already existing apps does not get recognition as large number of apps being released each day. Think, plan and develop an app with the intention of creating something unique which will stand out of the crowd. A distinctive quality of app leaves a strong impression on users. To make apps discoverable requires well-rounded app marketing strategy using organic and paid app marketing channels for both pre and post launch of app.

Matching consumer and apps: Try-before-you-buy strategy helps to attract users as they are not paying for the app. There are plenty of apps in market place, to match consumer and apps is challenge. Selecting an appropriate category, obtaining positive reviews and ratings, using screenshots of app, description that clearly reveal app usage, and optimizing app description with the right keywords for app can help to overcome this challenge. App name having unique and memorable words as well as includes the most important keywords that user will be searching for enable users to match their need.

Retaining users: Keeping users engaged is highly required to retain users. Building a first version of app with care is not enough. Fixing any bugs, adding features, releasing updates can help to retain and engage users.

Privacy: Apps having in-app advertising monetization strategy has raised a number of potential privacy risks. Security and privacy issues have been raised by in-app ad libraries. There exist threats ranging from collecting unnecessarily user information to allowing third-party code to execute within host application [5]. This led requirement to change the way existing ad libraries integrated into host application.

CONCLUSION
Rapid growth in mobile technologies has increased end-users of mobile devices and their demand for featured applications which has opened enormous opportunities for app developers to monetize. Application platform supports developers for business related task by allowing selling and distributing apps on this application market place. Variety of monetization models exist which developers can opt for are discussed in this paper along with issues, challenges and recommendations.

REFERENCES