
Mobile Service Distribution from the End-User Perspective – The Survey Study on Recommendation Practices

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Abstract

Vast amounts of mobile services and applications are being offered to end users via app stores and service providers' web sites. In addition, users take part in the distribution of services by recommending services to each other, i.e. through various word-of-mouth practices. To understand the current patterns of user-initiated service distribution, we conducted an exploratory survey study (N=203) to investigate the recommendation practices and motivations of mobile service users in situations where they recommend to other(s) and other(s) recommend to them. We found that the dominating way to recommend mobile services to others is to tell about the service in face-to-face situations, despite available support for electronic sharing in mobile situations. Social media was also used, but clearly less frequently. Based on the findings of this study, we present design ideas for supporting users in their recommendation practices.

Author Keywords

Mobile services, distribution, recommendation practices, word-of-mouth.

ACM Classification Keywords

H.5.m [Information Interfaces and Presentation (e.g., HCI)]: Miscellaneous.

Introduction

Mobile application and service markets have grown at a rapid rate the past few years. Users discover and download a variety of mobile services within categories such as entertainment, utilities, lifestyle and finance. To be successful, these mobile services need to meet particular preferences and needs of individual users. According to [4], the download percentage of mobile services in the Apple app store in Asia alone has increased exponentially each month since December 2010. This is exclusive of the developers' communities where the procedure for uploading new applications and services is simplified with less supervision from the market providers. While corporates, startups as well as lone developers are targeting at millions of consumers globally, consumers can take part in distributing services by recommending them to each other.

By mobile apps and services we mean *native as well as web applications that provide functionality on a mobile phone*. Examples of mobile applications and services are social media services such as Facebook for mobile, games such as Asteroids or Building Blocks as well as utility tools such as unit converters and weather forecast tools. Although there are differences between applications and services – most notably, services use mobile networks to access content or functionality – for simplicity we will in this paper refer to both as mobile services.

Besides discovering mobile services in the app stores, on blog posts, through twitter feeds or through traditional advertising campaigns such as flyers and magazine coverage, potential users may become aware of new services by hearing about them from existing users. These instances of information sharing are based

on various forms of *word-of-mouth* (WOM) practices [2], typically performed either orally or electronically such as via email or text message. Depending on the mobile service, users may be able to send invitations to others through the service itself (such as in Bump! where you can share files and mobile services by bumping phones together, <http://bu.mp/>) or tell about experiences with a particular service via e-mails, instant messaging (IM) services, blog postings or through other social media channels where a large number of readers instantaneously may become aware of the service. In some cases, this communication is less conscious. For example, user actions in a service can be automatically shared via social media channels, such as accomplishments in sports tracking services that may trigger interest and possibly service adoption within others. From the service developers' viewpoint, having users discuss and possibly recommend services to each other is the goal of a viral marketing strategy [10].

Understanding mobile service distribution practices is thus important for several reasons. First, it is important to understand the interplay between the various distribution channels and actors that exist in the current mobile ecosystem. The central actors are content providers, developers, marketers and end-users with a common objective: to have good services that end-users can benefit from. The flow of information and value between these actors become core, in which service distribution is our main focus. Second, it is useful for the designers and developers of mobile services within the CHI community to understand how novel mobile services can become widespread. In particular, how they can effectively reach a target audience by taking advantages of the

end-users' recommendation activities. Third – although out of the scope of this paper to discuss further – understanding service distribution and word-of-mouth practices can help build evaluation setups in the wild beyond a small testing group [1].

Mobile service distribution can be studied from different perspectives and levels; from a corporate perspective (revenue), from a strategic perspective (investments), from a marketing perspective (adoption and distribution patterns) and from an end-user perspective. In this paper we look specifically to the distribution of mobile services from the end-user perspective. We aim to explore the motivations and means by which mobile service users recommend services to their acquaintances. To investigate the area of our research interests, we conducted an exploratory study with a survey among active mobile service users. In the following section, we will first present a brief background to this paper. We will follow with a description of our survey study and following that, we present the key results on recommendation practices. Finally, we present design ideas to better support users electronically in their mobile service recommendation practices and follow with discussions of our findings and study.

Background

The amount of mobile services available in the markets are expanding rapidly. Several app stores feature rating systems, rankings and highlights to simplify discovery and search. However, with several thousands of mobile services to choose from, it can easily become a complicated procedure to find the right service. Thus recommendations can play a significant role in finding mobile services of interest. Through recommender

systems for mobile devices, users can become aware of services that are of interest to them based on their personal preferences. Example services such as Best Apps Market (<http://www.bestappsmarket.com/>) provides users with a portal with commented and rated apps in various lists such as 'Critical apps' and 'Take charge of your life!'. Within the HCI community, researchers have investigated various portals and recommender systems to support users in their search for mobile services (see i.e. [3] and [6]) and the dynamics of the mobile markets [8].

While we find more upcoming research on the deployment and use of mobile services through service markets, we find limited related work looking in particular to the recommendation practices of mobile service users. In e.g. [7] we find mobile media sharing practices of mobile phone. Key findings in this work suggest mobile media sharing and recommendations taking place amongst, in this case groups of friends, was the wish from the recommender's side to provide other(s) with media the recommender believed they would appreciate. However, similar studies in the context of the mobile markets and the larger mobile ecosystem are scarce.

We do find a large body of literature within marketing research informing for our understanding of mobile service distribution from additional perspectives. From the service developers' and marketers' perspective, *viral marketing* strategies can be used to gain traction in the target group by promoting consumer-to-consumer communication to disseminate information about the service. In comparison to company-to-consumer advertisement that tends to be controlled and direct, the viral marketing strategy relies on

consumer action. The aim is for consumers to add their (positive) experience of a product in their further communication of it, which increases the credibility and interest from the consumer's perspective [10]. Different marketing strategies employ different methods in their campaigns, such as adding provocative content, striving for fun, or offering engaging elements (such as games). The purpose of these efforts is to trigger the inherent phenomenon of social sharing of emotions. In basic, products or services that trigger us emotionally are more likely to be communicated further to others in our peer network. Encountering such advertisements and motivators to engage with particular brands or services through social media platforms and e-advertisements can spur service distribution greatly [5].

With this study, our aim is to investigate motivations and practices end-users currently employ in their recommendations of mobile services. In the following section we describe our survey study and follow with key findings in the results section. Following this we present a set of design ideas to support users electronically in their recommendation practices and end this paper by discussing our study and findings.

A Survey Study

When planning our study we assumed that recommendation of mobile services was not a daily routine to most mobile phone users. In addition, there are a wide variety of service types and mobile devices and thus it would be desirable to gain a broad sample of different users with different recommendation practices. While there are alternative ways to investigate the effects of personalized recommendations such as in [9], a common method for

eliciting consumer attitudes and behavior from a broad audience is the use of the survey method. We designed a web survey for this particular study (using SurveyMonkey, www.surveymonkey.com) to reach an international audience. The survey had two main parts; Part A with questions about mobile service recommendations the respondent had made to others, and Part B, which contained questions about recommendations the respondents had received from others. By including these two viewpoints we wanted to ensure a more thorough coverage of the phenomenon.

The two main parts (Parts A and B) of the survey contained questions about the relationship the respondents had with the receiver/giver of the recommendation, the type of service that was recommended, where it was recommended, when it was recommended, the means by which the service was recommended and the motivations behind the recommendation. For both part A and B, the respondents were asked to think of a particular service and the recommendation situation tied to it, to make the questions concrete and to ease remembering a particular situation.

We sent the link to the survey through various mailing lists, social media channels as well as a mentioning on a tech blog. We received a total of 203 respondents, of which 157 completed the survey and 45 respondents completed parts of the survey (for example, only Part A). Of the respondents, 129 were males, 67 females and 7 'other'. The age of the respondents were between 17 and 84 years, with an average of 34.0 years. They were located in North America, Europe, Asia and the Middle East and had in general a fairly high level of completed education. Most of the respondents are

heavy mobile phone users and are aware of new advancements in mobile phones and services. We aimed at advanced mobile technology users in our call for respondents to ensure our sets of respondents had fairly regular experiences with recommendations of mobile services.

Results

In this section we present key findings from the survey, in particular on the motivations and means of recommendations made by the respondents as well as other(s). We do this by dividing our results into two cases. Part A shows results on questions concerning when the respondent made a recommendation to someone. Part B shows results of someone else's recommendations to the respondent. We start by giving examples of recommendations made by the respondents as well as to the respondents by others, and follow with the details in sub topics related to the recommendations.

Examples of Recommendation Cases

To illustrate the variety of recommendation cases we encountered in our material, we present a few examples of how the respondents replied on their recommendation practices. Some of the respondents took the opportunity to mention not one, but several instances where s/he recommended the same service to more than one person.

Part A: The following examples illustrate responses from the respondents on recommendations they gave themselves:

Respondent #19, 38, Male, Finland
Service: GoogleMaps (Category 'Other')

Recommended to: Friend

Motivation: I personally had a good experience with it

Means: Face-to-face

Where: Commuting (Train, Tram, Bus, Car etc.)

Did they start to use it: No, "My friend was quite impressed with it and the accuracy of the positioning, but said that he knows all the places he needs to go to."

Respondent #103; Male, 45 years, Italy

Service: Viber ('Creative tools', 'Utilities')

Recommended to: Significant other/ Partner, Other colleague

Motivations:

I needed others to use the service in order to fully appreciate it

I thought the application would be appreciated by the other person(s)

Means: 1) Face-to-face, 2) Text/SMS

Where: At home, At work

Did they start to use it: Yes

Part B: The following examples illustrate responses from respondents on recommendations they received from other(s):

Respondent #78: Female, 29 years, US

Service: Thrutu ('Location-sharing service', 'Utilities')

Recommended by: Significant other/Partner

Motivation: The application required more of us to use it in order to fully appreciate it

Means: 1. Phone call, 2. Face-to-face, 3. Text/SMS

Where: At home

Did I start using the service: Yes

Respondent #195: Male, 30, UK

Service: TweetBot ('Social networking')

By whom: Friend

Motivations:

The person had a good experience with it
 The person thought I would appreciate it
 Means: 1. The service had posted the information about the person's use of it publicly on social media, 2. Face-to-face
 Where: At work
 Did I start using the service: Yes, "Trusted recommendation and great first impression"

The illustrated examples show a variety of mobile service recommendation practices. A majority of the respondents in the survey used only one means for their recommendations, but there were many instances where different means were used for the same service, either consecutively for one recommendation receiver (for example, Respondent #78) or for several (Respondent #193).

Recommended Services

Part A: The respondents were asked to think about a particular service they recommended to someone else, and asked to select the category/categories that described the service (see Figure 1). The most common categories among the recommended services were Games and 'Other' (21%), while Location-sharing services and Utilities were the second most common (16%). Among 'Other', the respondents mention services for the local public transport, mobile versions of newsreaders, various IM services, e-book readers, dictionaries and specific mobile web browsers.

Part B: Among the services recommended to the respondents, the respondents reported once again Games (23%) while 'Other' was the second most common (19%) and Location-sharing services (16%) and Utilities (16%) was third most common (see Figure 2). Among 'Other', the respondents mentioned widgets

and background images for mobiles, various music composing services, TV for mobiles, clients for Twitter, IM services and alert services.

From the graphs of both Part A and Part B, it seems clear that the most common recommendations are concerned with services for leisure and enjoyment. However, utilities were also recommended, together with services for connecting with others such as location-sharing services.

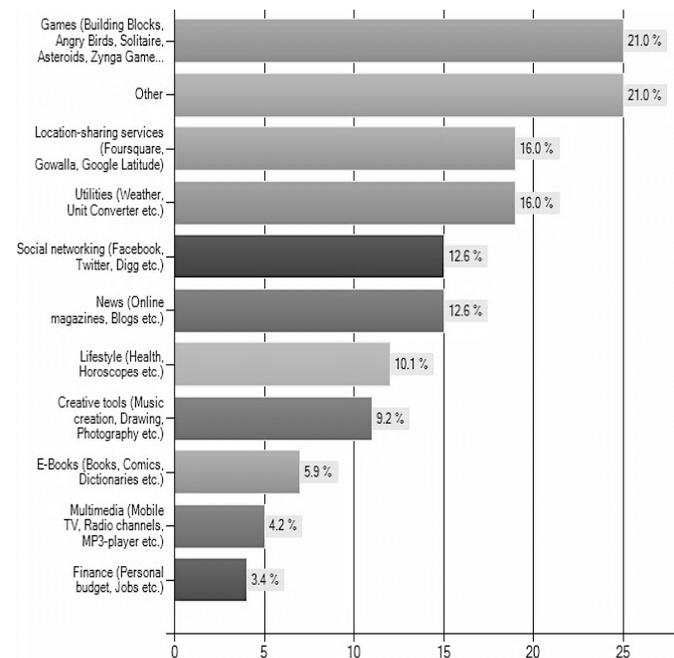


Figure 1. Types of services recommended to other(s) (N=119)

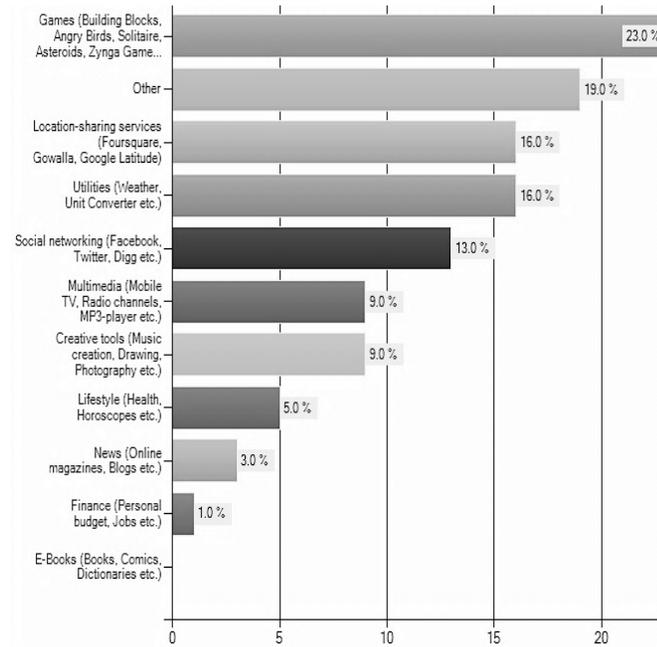


Figure 2. Types of services recommended by other(s) (N=100)

Relationship to the recommender

Part A: Upon choosing a specific service recommendation, the respondents were asked about their relationship with the person(s) whom they recommended the service to (Figure 3). A majority replied that the person in question was a 'Friend' (62.2% of N=119), while the second most common form of relationship was 'Other colleague' (29.4%), and the third most common was 'Significant other/Partner' (23.5%).

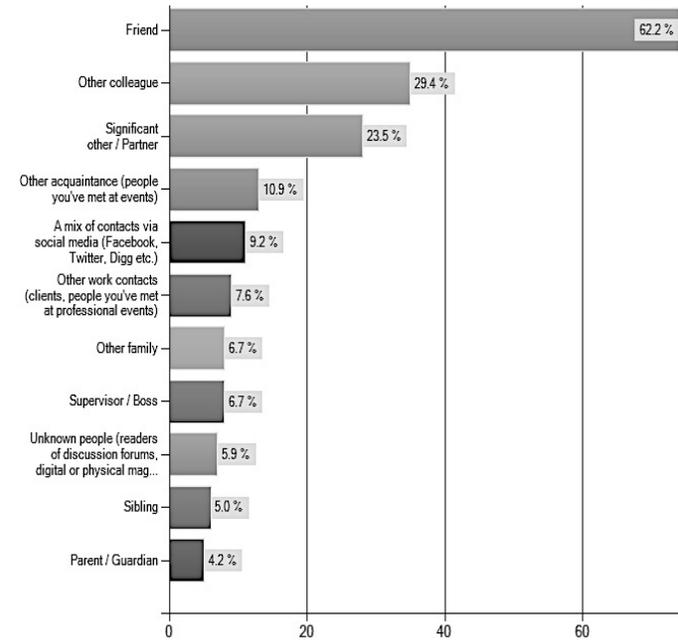


Figure 3. Relationship to the receiver of the recommendation (N=119).

Part B: We asked the respondents to think of an occasion when someone else made a recommendation to them, and their relationship with the person(s). 49.5% (of N=101) mentioned a 'Friend' being the one recommending the service (see Figure 4). The second most common option was 'Other colleague' (22.8%), and the third most common was 'Significant other/Partner' (11.9%). To this question, 'Unknown people' were the fourth most common alternative.

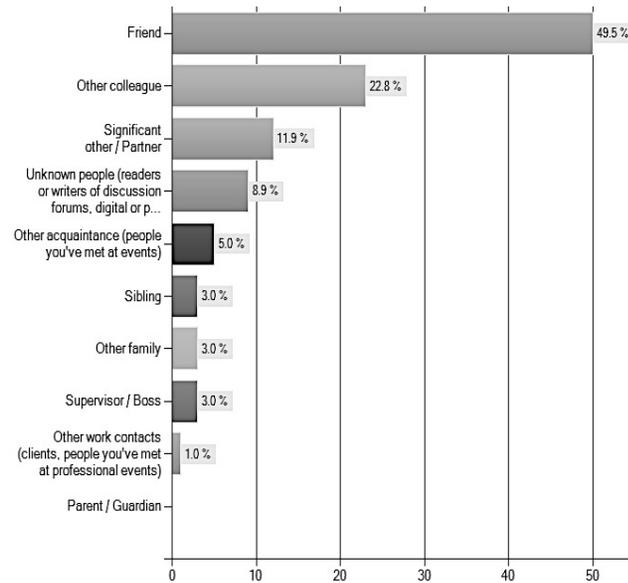


Figure 4. Relationship to the recommender (N=101).

The numbers for both Part A and B are similar. It seems that the people most commonly make or receive recommendations are those that the giver or receiver of a recommendation have a close relationship with or meet on a regular basis.

Motivations to recommend

Case A: The respondents were asked about their motivation(s) for recommending the mobile service in question. The first and major reason to recommend was that the respondent personally had a good experience with the service (77.6% of N=116), the second most common motivation being the respondent thinking that the receiver of the recommendation would appreciate the service (50%). Other motivations were

that there was a need to use the service with others to fully appreciate it (10.3%) and that the service promoted further sharing of the service (6%).

Case B: The respondents were equally asked about the hypothetical motivation(s) of the recommender for recommending the particular service to them. While similar to previous numbers, with a majority hypothesizing that a good user experience provided by the service (76% of N=100) and a belief that the respondent would appreciate the service (38%), 'Other' (13%) was the third most common alternative. Among 'Other', the respondents mention the service supporting the respondent's daily habits with the recommender, the recommender had heard good things about it, an immediate need for it, the respondent asking for the service him/her self as well as the lack of sharing experiences about the service through the service itself (motivating the recommender to do the recommendation in person).

From the results of both Part A and Part B it seems that the most common motivation is a good user experience from the service in question. Assuming that the receiver of a recommendation will appreciate the service seems to spur recommendations as well, pointing to a wanted situation where the receiver of the recommendation will gain positive experiences from using the particular service in question.

Places where recommendations were made

Case A: Regarding where the recommendation took place, a majority of respondents mentioned 'at work' (36.8% of N=117), followed by 'at home' (29.9%). The third most common was 'Other', which was a mix of free-form alternatives such as 'Over the phone',

'Through a social media channel', 'At parents' meeting', 'On a bike ride' and via 'Podcast'.

Case B: The most common location for recommendations made by others was 'At work' (31.0% of N=100), followed by 'At home' (27.0%) and 'Other' (16%). 'Other' in this context was a mix of free-form alternatives such as 'blog post', 'holiday trip', 'advertisement', 'Internet browsing', 'via Twitter', 'Facebook' and various IM services.

From both part A and B it thus appears that recommendations are mostly done in stationary situations. The other options ('The home of someone else', 'Other work-related venue', 'Eating out', 'At school', 'Night out' and 'Event') gained each about or less than 10 percent of the responses.

Means of recommendation

The respondents were asked about the means by which recommendations were made. The survey presented a set of alternatives and the respondents were asked to place a number next to the alternatives in the order in which they occurred for the specific service recommendation. For the first means they placed number 1, number 2 for the second means etc. An example case would be that a respondent started off by recommending a service during a face-to-face encounter, and later on sent a link about the service via e-mail. The respondent would then place a '1' next to 'During a face-to-face conversation', and a '2' next to 'I sent information about it in an e-mail'.

Table 1 shows example means that were shown as options in the survey. The Respondent average refers to the average of the numbers placed next to each

alternative means by all respondents. Evidently, a low average suggests the respondents placed low numbers next to the alternative. Count is the total amount of respondents selecting each alternative, respectively.

Means	Resp. average	Count
During a face-to-face conversation	1.16	94
I shared the information publicly via social media (Facebook, Twitter etc.)	2.57	14
I sent information about it in an e-mail	1.8	10
I told about it over a phone call	1.6	10
Other	1.71	7
I informed about it in a discussion thread in a forum	1.8	5
I sent information about it in an SMS/Text	1.75	4
I informed about it in a blog post/article	1.67	3
I sent an invitation via e-mail	1	3
I sent an invitation via SMS/Text	2	2
The service posted the information about my use on my (Facebook, Twitter, Digg etc.) account	2.5	2

Table 1. Means of recommendation (N=114).

Case A: From Table 1 we see that the most common and frequent means of recommending a mobile service is during face-to-face encounters. With a response

count of 94 and a response average of 1.16, it is clear that it is either the first means or among the first means by which the respondents have recommended a mobile service. The second most common means, but with a high average, is posting information about the service publicly via social media. The third most common means being sending information about it over e-mail. Amongst 'Other', the respondents mention various IM services, a posted photo (using Instagram, in this case) that spurred the conversation as well as auto-generated SMS invites for informing about the service as their first means.

Case B: In Table 2 we find a similar division on the alternatives as in table 1. Again, a clear majority of respondents reported that the recommendation occurred during a face-to-face conversation. The second most common means was again, the recommender posting the information publicly via social media. The third most common mean was being recommended over a phone call, receiving information over e-mail and 'Other'. 'Other' in this context was a mix of a recommendation given from the service itself, recommendations received through various IM services and the respondent initiating the recommendation by asking the recommender about a particular service.

While in both Table 1 and 2 we find evidence that the respondents find opportunities for recommendations during physical encounters, we also find evidence of mediated communication taking a position. In both tables, posting information about a service through social media seemed common as an alternative, though not to the same extent as face-to-face conversations.

Means	Resp. average	Count
During a face-to-face conversation	1.05	73
The person posted the information publicly via social media (Facebook, Twitter etc.)	1.15	13
I was told about it over a phone call	1.2	5
I received information about it in an e-mail	1.2	5
Other	1	5
I was informed about it in a blog post/ article	1.5	4
The service had posted the information about the person's use of it publicly on social media (Facebook, Twitter, Digg etc.)	1	3
I was informed about it in a discussion thread in a forum	2.5	2
I was sent information about it in an SMS/Text	1	1
I received an invitation via e-mail	2	1
I was sent an invitation via SMS/ Text	3	1

Table 2. Means of recommendation (N=100)

Success of Recommendations

Part A: When the respondents were asked whether the recommendation receiver(s) had started to use the service, a large number of respondents replied that

they did not know (47.5% of N=118). 44.1% of the respondents said that the recommendation receiver(s) did use the service while 8.5% said they did not. Upon commenting their response, the respondents mentioned a mix of positive comments and feedback after the recommendation, as well as little feedback or no follow-up to the recommendation.

Part B: When the respondents were asked about their actions after the recommendation they were given, 77% (of N=100) reported that they did start to use the service while 23% said they did not. Among the comments to this question, respondents mentioned curiosity, trust in the expertise of the recommender, compelling interface and a need for the service as motivators for starting to use the service. Among the comments from the respondent that did not adopt the service they were recommended, there were mentions of complicated setup procedures, a steep learning curve to use the service, unnecessary functionality built in, not designed for engagement as well as unavailability of WiFi when trying to use it.

Design Ideas to Support End-users in Their Recommendation Practices

From our data we found face-to-face recommendations being the most common and most preferred means to recommend services. While we have little detailed information on the contexts of and the reasoning behind the recommendations, it is clear that face-to-face encounters are successful in mediating personal experiences. However, it should not be neglected that recommendations through social media platforms have taken a great position in mediating person-to-person recommendations. Inspired by our results from the survey and the possibilities these two means provide

for supporting mobile service recommendations, we present here some initial ideas on how to support users in their recommendation practices in personal and meaningful ways:

Supporting Face-to-Face Recommendations With Proximity Sensing

Because face-to-face situations seem to offer prominent occasions to recommend services, it could be further supported by sensing the proximity of people in one's social circles (friends, family, colleagues). Once an acquaintance with their mobile device comes to the proximity of a service user's phone, the service could display a message such as "*Sarah seems to be nearby. Do you want to recommend service X to her?*" and offer a link for immediate sharing. The service in question would be one that the user is frequently using or rank high amongst other services the user is currently using. The suggestion to further recommend a particular service would then be initiated by the user him/her self, though a bookmark or a 'Remind me' option in settings the user activates for a particular contact. This could lead to a discussion of that specific service and possibly, a successful recommendation. Tied to this, there could also be a 'send feedback' feature that allows the receiver of a recommendation to let the recommender know that receiver thought about the service.

A bookmark or 'Remind me' option for the user to remember a particular recommendation would be useful specifically for mobile applications, as applications do not connect with a server in order to be used.

Context-aware Recommendations Through Social Media

In the survey, social media was the second most used means to recommend. In particular for location -and activity specific services (such as sports trackers and certain utility services), a recommender service for the user could be available and activate at certain contexts of use, such as when the user is physically at sports centres, university campus areas or at restaurants. The service could have a feature where it recognises a situation (ideally, the location, social context or task context) and displays a query. Example messages could be "your friend Mike has been visiting this training facility often, would you like to recommend the service Y that you use to Mike?" or "your friend Mike has been visiting this training facility often, would you like to ask him for a good service recommendation for activity A?"

The potential non-users could be identified from one's social networks and their activities though their approved location information. A recommendation to share to relevant contacts could be automatically generated by the system based on services the user already use and rank high. After the user's permission, the service could post information about the service to potential receiver(s) through a social media platform, or auto-generated links to send via SMS or e-mail.

Recommendations through App Markets Based on Social Networks

While face-to-face or direct recommendations were prominent, current techniques to highlight mobile services in app markets still include highest ranked services and new additions to each genre. To fully take advantage of the personal touch to, and promote a level of relevance in the highlighted services, there could also be services included that people you already

know have commented. While browsing through services from various genres on an app market, the user could find amongst the recommended ones, those commended by friends from one's social circles as guiding the user in selecting specific services. The recommended services (by acquaintances) could in this case contain comments and experiences the acquaintance has posted. This would be achieved by services asking its users whether they would like to share their stories on the market (or any social media platform of interest).

Discussion and Conclusion

In this paper we have addressed mobile service distribution from an end-user perspective. This means that we have focused in particular on when, why, how, by whom and to whom recommendations are made to. To understand recommendation practices we conducted a survey study with 203 respondents. Our aim was to explore this area and even though with the number of respondents re received we cannot generalize the results across the countries, the results help form a basic understanding of this relatively unexplored practice of user-initiated mobile service distribution.

From our data we found that users most often recommend mobile services to others they have a close relationship with or otherwise regularly meet. This is positive from the end user perspective as end users can get targeted recommendations from people who know their needs, interests and expertise. Further on, service developers (corporates, entrepreneurs and researchers alike) may utilize means of spreading awareness of particular mobile services through different planned viral marketing techniques. Successful efforts in choice of different marketing techniques towards the target

audience may lead to users continuing the recommendation of the mobile service to a broad set of additional potential users.

Evidently, service adoption and further distribution among users is beneficial for developers as their services get distributed more efficiently because of the impact personal recommendations have. It might therefore be of particular importance to support personal recommendations other than targeting specific demographics. Hence our early design ideas to support recommendation practices in additional ways than through targeted marketing alone. However, since our ideas are early ones, we do not actually know if they would add additional value to the user, or enhance the experience of giving and receiving recommendations. We do, however, know from the survey responses that both personal face-to-face recommendations and recommendations mediated through social media platforms are successful. In particular as service adoption is high in both Part A (services recommended by the respondents) and Part B (services recommended by other(s)). A merge between mediated recommendations and face-to-face recommendations could be particularly interesting and powerful.

From the survey data we know that the main motivations the respondents had for recommending services (and hypothesized as motivator others had for their recommendations) was a good experience with the particular service. We also know that the respondents reasoned that the other(s) would appreciate the recommended service. This may reflect people's needs to share recommendations personally, taking into account particular contexts that suit for recommending mobile services to others. This goes in

line with earlier findings in [7] about sharing practices of mobile media between groups of friends. However, we do not have any detailed information about the particular qualities that face-to-face recommendations hold that make it particularly successful and still preferred. This may be due to the fact that current distribution channels are not sufficient enough to surpass face-to-face encounters, or that not enough people are taking advantage of these additional channels for receiving and giving recommendations. It could also be that face-to-face encounters give additional dimensions to the recommendations, such as the ability to add additional personal preferences or stories to the recommendation or demonstrating the service on the spot.

Of the types of services that were recommended, a majority of the reported services were typically services for enjoyment and connecting with others. Games, location-based services and utilities being the most recommended ones also point to the sharing of services that provide hedonic qualities other than necessity of use. This may also be due to the fact that these types of services commonly used. Social media services were not recommended that often, perhaps because users already have their social networks built up and thus needs to recommend these are most often not necessary.

Future work

From our initial stance on the importance of such a study, one of our motivations was to understand the interplay between the different channels and actors in the current mobile ecosystem. By understanding the roles of the central actors in the ecosystem we would understand the flow of information and value more

clearly. This would provide both strategic and analytic value for all actors involved. However, our current study does not focus on other actors in the ecosystem, nor the attitudes and expectations user have towards these actors. At the same time, the nature of a survey study hinders us to clearly understand the particular user experiences that drive recommendations, as well as a complete picture of the contexts of recommendations. When and by what means certain recommendations are more preferred than others. Another one of our aims with this study was to understand the most effective means and methods to reach a target audience when developing and distributing novel service designs. However, we did not include any questions in the survey regarding expectations or attitudes towards various distribution channels. While a majority of our respondents used face-to-face communication as their main means for recommendations, they most likely have experiences with more and varied distribution channels to reach potential users with recommendations.

It should also be noted here that our design ideas came about from inspirations we received from our data. While we can find arguments for testing these ideas in real life situations, we acknowledge the fact that we do not have deeper understanding of why certain mobile services are recommended over others. Nor do we know if the design ideas would succeed in supporting users in their recommendation practices. Further on, it is not our aim to suggest that we are able to understand the intricacies of recommendation practices with the presented design ideas. Ideally we would be able to understand service distribution not only from an end-user perspective, but also from the point of view of developers and marketers to gain a better overview of

how different actors in the ecosystem come together to create a seamless service experience and ultimately a seamless service distribution experience.

Based on the above-mentioned reasons, we have formulated a set of activities we would like to complete in a second phase of working with this area of research. To begin with, we aim to follow up on our survey study by performing semi-structured interviews with a number of respondents that took part in our survey. This would provide us with more detailed qualitative data that we do not have in time of writing. We are also interested in service distribution from additional perspectives, which is why we will get in touch with entrepreneurs and marketers to investigate their take on strategies for service distribution. We will also dig deeper into the mobile ecosystem in order to look over the relationships between the different actors in the ecosystem and the role of the different distribution channels in this ecosystem.

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