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trusted network protection

Code of Conduct for the Messaging Wars

Data Intelligence & Analytics Report

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Code of Conduct for the Messaging Wars

Every day, thousands of social network, messaging and game mobile applications compete for downloads and usage by smartphone users around the world. The key metric and basis for valuation of these apps is the number of users they acquire and so they will go to great lengths to protect and grow their user base. As the WhatsApp acquisition by Facebook(1) has shown, the value put on large user bases with significant engagement is immense.

Recently in AdaptiveMobile's view, there has a been a trend towards increasingly aggressive techniques to 'encourage' take up of social network, messaging and game apps, one of which is growth hacking - achieved through mass SMS app promotion invites sent on behalf of users who install these apps. AdaptiveMobile[2], in a recent announcement, brought to the industry's attention the difficulties that can arise when Apps try to grow rapidly using App messaging abuse. Subsequently, Google[3] made changes to their Android Developer Policy to ban Apps from sending unsolicited SMS promotions.

But why did this change happen now? And why is it necessary?

In this report, AdaptiveMobile presents for the first time, research that has investigated which Apps are sending invites that are being perceived as unwanted, why, and the scale of the issue. This report provides a snapshot of the most active social network & messaging Apps in North America that use Growth Hacking to increase their subscriber bases, highlighting which ones we believe are the most aggressive and which Apps behave the best. This report also contains the first ever chart representing the scale of the problem and a set of recommendations for App developers to follow.

App Invites

Millions of people receive App Invites every day in the US alone, with this number reaching tens of millions when considered on a global scale. App invites are promotional text messages which tell you someone you know has joined an App and invite you to join too; they are normally but not always sent from a user's phone when they install an App, and use the user's contact list with permission. Many of these App invites (which we call App-Spam), unwanted, are regarded as spam by the recipient, and are generally very difficult for mobile phone users to stop receiving. The industry, until now, has not looked at this topic in-depth, so it's time to shine some more light on which Apps exactly are contributing to this App-Spam.

As a result of research by AdaptiveMobile's Data Intelligence & Analytics team we can start to separate out the Apps that send the most invites, and in our view the most aggressive, from those Apps which 'play fair'.

Before we get onto categorising the misbehaving Apps, there are a few factors that affect our evaluation of Apps engaged in growth hacking:

- The first is time. Apps ebb and flow, and an App that generates large amounts of App-Spam a few months ago may no longer be causing an issue now for various reasons. The App may have changed its invite system or it simply may no longer be popular. To take that into account this is a snapshot of App data for a six week period in the months of February and March 2014
- The second is the categorisation of what we believe defines an aggressive App. This is explained in more detail below, but a key take-away is that the number of complaints alone for an App only gives part of the story. We need to see the whole picture
- Finally, the data shared in this report is taken from analysis of the most active Apps that are generating invites in North America, but while the most prevalent Apps may vary between geographies, the same growth hacking strategies are replicated in smartphones around the world

What Apps

First of all let's take a look at the Apps themselves. Here we have marked the Apps on a few simple, but key user interface and behavioural features that seem to contribute to App-Spam. These are:

- Can invite a friend   : Whether the user can invite one or more people
- Can invite all friends   : Whether the user has the ability invite all friends at once
- Ask to invite a friend   : Is the user asked to invite one or more friend, normally on install or start up
- Ask to invite all friends : Is the user asked to invite all friends
- All friends preselected   : Whether in the invite user selection screen all friends are preselected to invite
- Not easy to abort   : Is it possible to abort the friend inviting process easily
- Can't edit Invite   : Can the user edit the Invite message

The results below already demonstrate that some Apps like Glide and Secrets have a lot of tick marks while others only have some or very few. Keep that in mind as we go further.

> Note: we have selected a broad cross-section of 15 Apps active in North America below.
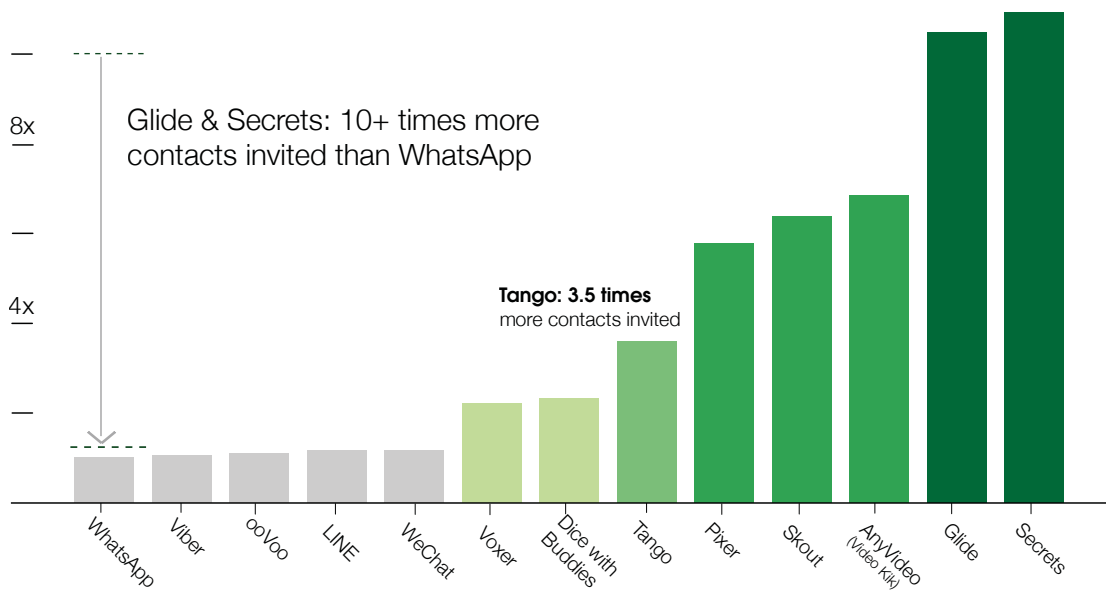> These represent the origin of the vast majority of invites sent during this period.

App	Can invite a friend	Can invite all friends	Ask to invite a friend	Ask to invite all friends	All friends preselected	Not Easy to abort	Can't edit invite	Notes
Glide	✔	✔	✔	✔	✔	✔	✗	5
Secrets	✔	✔*	✔*	✔*	✔*	✔*	✗	*Ver. 1.52 onwards has removed this
Anyvideo (Video Kik)	✔*	✔	✔*	✔	✔	✗	✗	*Asked to invite all
Skout	✔	✔	✔	✔	✔	✗*	✔	*Somewhat difficult to abort
Pixer	✔*	✔	✔*	✔	✔*	✗	✔	*Can invite all only
Hangtime – Events with Friends	✔	✔	✔*	✔	✔	✗	✔	*Asked to invite all
Meow	✔	✔	✔	✗	✗*	✗	✔	*All contacts selected temporarily
Tango	✔	✔	✔	✗	✗	✗	✔	
Dice With Buddies	✔	✗*	✗*	✗*	✗	✗	✗	*User gets points for inviting contacts
Voxer	✔	✔*	✔	✗	✗	✗	✗	*Confirmation required for certain numbers
LINE	✔	✗	✔	✗	✗	✗	✗	
ooVoo	✔	✗	✔	✗	✗	✗	✗	
WhatsApp	✔	✗	✔	✗	✗	✗	✗	
Viber	✔	✗	✗	✗	✗	✗	✗	
WeChat	✔	✗	✗	✗	✗	✗	✗	

This chart is the classification of the behaviour of the Android version of Apps at the start of February 2014, and therefore may no longer be current as of the report date. The apps in green we have contacted regarding their UI design and App Invites. Some of these Apps have responded or made changes in their behaviour since we reached out to them. We discuss more on this later in the report.

How Many of your Contacts get Appspam from you?

Breakdown, in North America, of average number of Contacts sent an Invite once a Growth Hacking App is installed on a mobile device.

12x Number of Contacts Invited
(times WhatsApp Baseline)

8x

Glide & Secrets: 10+ times more contacts invited than WhatsApp

4x

Tango: 3.5 times more contacts invited

WhatsApp | Viber | ooVoo | LINE | WeChat | Voxer | Dice with Buddies | Tango | Pixer | Skout | AnyVideo (Video Kik) | Glide | Secrets

*__HangTime & Meow__ : No data shown as Invites are not generated from device

Sources: AdaptiveMobile

They're Multiplying!

The next area we investigated is how much these Apps try to multiply, i.e. whether we can measure the extent to which they are growth hacking. Our aim here is to see whether the settings that we covered above with a tick mark seem to make any impact on number of invites sent.

To do that we plotted out average number of Invites observed to be sent from mobile phone with these Apps during the relevant period, once they are installed. This graph uses the number of invites sent by WhatsApp as the **baseline for good app invite behaviour,** as our research showed WhatsApp generated one of the lowest number of invites per phone.

Looking at this graph, we can see that there are several distinct groups identifiable by sending behaviour. As Secrets and Glide followed the same model of making it very difficult for a user to avoid texting all their contacts, they cause a much larger number of SMS messages to be sent, as many more people can't figure out how to avoid sending texts to all their friends. This causes their invites per App value to be much higher. Behind Secrets and Glide are Video Kik, Skout and Pixer which are designed to encourage you to invite all contacts at once. There are then several others, all the way until you get to the much 'quieter' Apps on the left side. These Apps: WhatsApp, Viber, ooVoo, LINE and WeChat, as we discuss later, implement the 'good' or best practice app invite model which should be followed.

We also noticed that even small changes can make a difference – Voxer's ability to 'Invite All' brings it above the standard level of WhatsApp, Viber and WeChat. Dice with Buddies has a non-intrusive UI, but actually gives in-game points for the more people you invite, therefore encouraging people to send more messages to their contacts.

The takeaway here seems to be that the more an App 'guides' users into sending invites, the higher the number of invites that are sent to others. And where do these Apps get these 'others' from? Your contact list: it's what they need to replicate.

It seems that Apps are, on average, increasing the number of invites they send. Comparing a two day period in February with a two day period in September 2013, we found that on average, Apps now generate 8.5 times more invites now than they did nearly six months beforehand.
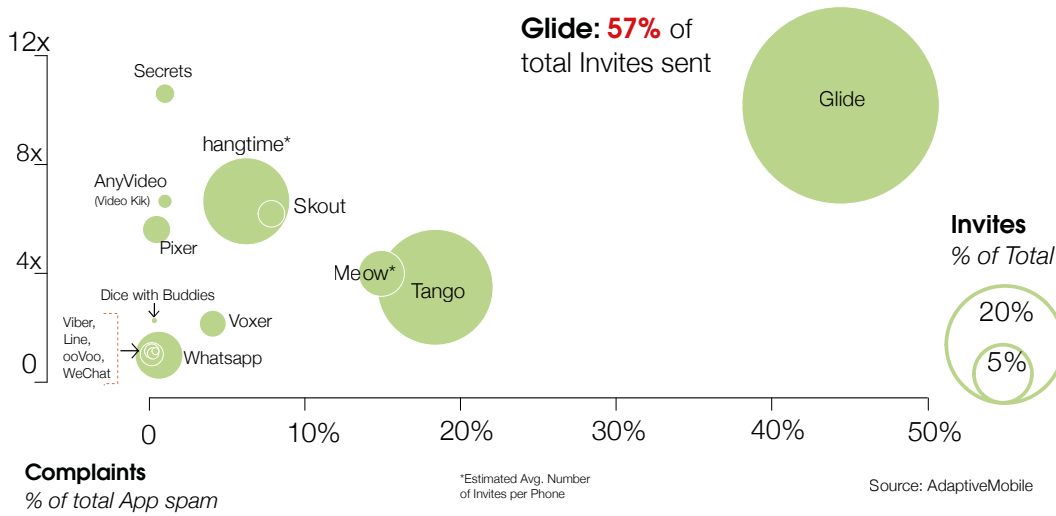
However the above are averages, and what we really want to know is the actual impact on mobile subscribers. If an app has a low subscriber base it's not going to make much difference. So by putting together the average number of invites sent per phone, with the total number of invites sent and the reported complaints per app, we can see what the whole ecosystem looks like.

The Biggest App Spammers

Glide & **Tango** account for **76.9%** of all high volume Growth Hacking Messages sent in North America.

Invites per Phone
times Whatsapp baseline

Glide: 57% of total Invites sent

Invites
% of Total

*Estimated Avg. Number of Invites per Phone

Source: AdaptiveMobile

Complaints
% of total App spam

Putting the Connections Together

Here is an overall view of the Apps under review and the effect that their design and invites have. On the vertical axis we have the average number of invites sent per app and on the horizontal axis is a relative weighting of the amount of times these Apps have been reported as "spammy" by individuals. Finally, the bubble size is indicative of the total number of invites sent by each app during this period. This is the first chart to show the true nature of Growth Hacking for these various Apps.

Immediately we see that Apps tend to fall into different categories. The higher the app is on the vertical axis, the more aggressive it is in terms of the average number of invites sent per app, the more to the right on the horizontal axis the app is, the more it has been complained about, and the larger the bubble is the more invites have been sent by this App during the period. Bubble size is a function of

the total number of invites sent by all phones with the App installed (and takes into account the 'actively inviting' user base). Using this, we can see that Bubble Size (number of invites) does not always equal complaints.

WhatsApp does not generate many complaints even though it sends a considerable amount of invites. This is because people using WhatsApp can easily invite only those they want to, whereas Glide 'forces' users to 'Invite All' and generates the greatest number of complaints from its huge numbers of invites. Another interesting observation: Tango's sizable amount of invites and high complaints is something of an anomaly compared to its UI design ranking. Our belief is that this is due to an 'Invite on Activity' feature (namely taking a photo), which causes many more invites to be sent than would be expected.

Mystery Invites

In some cases, people report that they receive invites from people they don't know, and they are being randomly spammed. Whilst there have been some instances in the past where some Apps have taken Growth Hacking to a whole new level, this kind of 'mystery' spamming is rare and in most cases Apps take your information from somewhere on the device or in your contact list as they understand that to spam random numbers will result in them getting blocked very quickly.

In these instances it is most likely that users are getting constant invites because his or her number may be on a phone that has been recycled but not cleared, or a phone number may be on your Facebook page or some other linked networking account. Furthermore, if a user has a new mobile phone number, he or she may have received a phone number that was previously linked to others.

What to Do

As a result of this analysis, AdaptiveMobile has compiled a set of recommendations for a messaging code of conduct. This is to address the issues highlighted in this report and prevent subscribers from receiving unwanted App Invites. The key is that if an App chooses to send invites, and if this is permitted by the relevant App store and mobile operator, then it should make sure that safeguards are built into the design; as we have shown the wrong design can lead to messaging abuse and complaints. As this report has highlighted, some Apps are behaving well and generating few complaints, whilst others continue to have a negative impact on the ecosystem.

AdaptiveMobile recommendations include:
- Make it easy for a user not to invite All contacts
- Do not ask on start up or activity to Invite All contacts
- Do not give an Invite All option
- Do not pre-select All contacts to be invited in an invite screen
- Allow the user to edit the invite text
- Do not make inviting others via SMS Invites, part of an incentive system (points etc.)

The above recommendations are based on the UI design and Invite implementation of WhatsApp, Viber, WeChat, ooVoo and LINE. These apps have proved to generate minimum complaints yet still in some cases send sizable amount of invites. The last recommendation is to address an emerging trend of Invites being rewarded with points or some other type of incentive system. Our research indicates that this is not yet common, however this may potentially be the next growth hacking tactic to be used.

Getting the Message

During the writing of this report, we reached out to all the Apps that we believed to be generating excessive invites per App (in green in the table) and causing a high number of complaints. We're encouraged to report that some Apps like Tango have responded saying they would change their UI design based on feedback. In addition we have confirmed that Secrets have changed their UI design to no longer push users to invite all contacts and we applaud this change.

In addition, AdaptiveMobile has shared our research and recommendations with other members of the App ecosystem including Google. Google has subsequently made changes to the Google Play Developer Policy to instruct that Apps on Google Play should not send unsolicited promotion messages via SMS. This is an important step forward for the industry and Apps now have 15 days to comply with this change.

AdaptiveMobile will continue to work closely with Application developers, our mobile operator customers and the Industry at large, to put in place practices and recommendations to help address the issue of growth hacking and forms of messaging abuse.

AdaptiveMobile is the first organisation to identify the scale and impact of this latest form of messaging abuse and share with the industry. We believe mobile subscribers are entitled to a mobile experience without unwanted app-spam and the App industry can and should do better to prevent this. The App messaging wars may be escalating, but in the desire to gain territory, it is the subscriber that is suffering the collateral damage. It's time to enforce the rules.

All Apps Tested on Android
Version numbers: Glide 1.03.05, Secrets 1.4.8, Anyvideo (Video Kik) 1.1.11, skout 4.1.4, Pixer 3.90, hangtime 3.6, meow 2.9, tango 3.4.7, voxer 1.5.5, LINE 4.1.2, ooVoo 2.1.0, whatsapp 2.11, Viber 4.3.0, wechat 5.2, Dice with Buddies 3.3.2

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