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January 24, 2014

Submitted At the Request of the Bureau

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Communication Submitted at the Request of the Public Safety and
Homeland Security Bureau: Messaging Solutions to Support Text-to-911 (PS Docket Nos.
11-153, 10-255)

Dear Ms. Dortch:

This letter and the accompanying attachments are being submitted on behalf of
TeleCommunication Systems, Inc. in the above-referenced proceeding at the request of the
Public Safety and Homeland Security Bureau in answer to questions from the Bureau
regarding Text to 9-1-1 Info.

Please contact me if you have any questions

Sincerely,

Stinson Leonard Street LLP

H. Russell Frisby, Jr

HF:HF

Attachment

cc: Tim May

Text to 9-1-1 Info

#1 – Which players are “interconnected”?

Below is a table with the OTT players and whether their App is supported on multiple platforms (everybody except Apple), whether they use telephone numbers as your identity or identifier. I have also copied an article below that says almost all of the OTT apps (with the exception of BBM), uses your phone number as your identifier so you are logged in all of the time, and they also use SMS as an underlying verification tool back to your smartphone. Thus, there should not be a problem for the OTT apps to fall back to a SMS for 9-1-1 as they currently use SMS for verification purposes.

OTT Messaging Providers	Global Users (Millions)	Messages Sent per Month (Billions)	Primary Markets	% US (TCS estimate)	US OTT Messages Sent (Billions per Month - TCS Estimate)	App is Supported on Multiple OS Platforms	Uses or Can Use Telephone Number as Identity or Identifier
WhatsApp	350	330	Global	10%	33	Yes	Yes
Blackberry Messenger	80	300	Global	10%	30	Yes	No
Facebook Messenger	874	300	Global	15%	45	Yes	Yes
LINE	300	210	Japan, Expanding Global	0%	0	Yes	Yes
KaKao Talk	100	156	South Korea	0%	0	Yes	Yes
Apple iMessage	250	60	Global	35%	21	No	Yes
Nimbuzz	150	51	Global	6%	3	Yes	Yes
Kik Messenger	90	18	North America	50%	9	Yes	?
Viber	200	12	Global	5%	1	Yes	Yes
WeChat	236	Not Reported	China	0%	0	Yes	Yes
Google+	300	Not Reported	Global	10%	-	Yes	Yes
Skype	299	Not Reported	Global	10%	-	Yes	?
Samsung ChatON	100	Not Reported	Global	5%	-	Yes	Yes
Total OTT	3,329	1,437			142		
US SMS Monthly Messages Sent (CTIA)					92		

Note: Not meant to be an exhaustive list. Based on reported company data and other reported information

Note: Users are generally reported as active monthly users of the service

Note: LINE, Viber, Samsung and Kik report registered users and not active users

Note: Facebook users are monthly active mobile users

Note: Google+ users are total users of Google+ and not just its messaging service

Note: Skype users are total users of Skype service and not just its messaging service

Note: US SMS messages per month sent based on 50% of CTIA's reported 2.2 trillion US SMS messages sent and received in 2012

Note: Most OTT services use your phone number as identifier so you are never logged out on your smartphone

Note: While most OTT do not use SMS as message fall back, they do use SMS to verify your account

<http://asia.cnet.com/its-so-lonely-using-blackberry-messenger-for-android-62222771.htm>

It's so lonely using Blackberry Messenger for Android

by Michael Tan | 23 October 2013 5:29pm SGT

Hours after installing BBM for Android, my BBM contact list is still empty, mocking me with the thought that I have no friends. So I won't even write about the messaging experience -- that's covered everywhere else. Instead, I'll just share some of the thoughts that came to my mind when I was installing the app.

Username and password management feels like back in the 90s

When I started using chat messaging in 1996 with ICQ, then MSN and Skype, there was no way for these chat applications to identify the user as the PC had no unique number. Furthermore, PCs were sometimes shared -- so these applications always asked for a username and password to log into your account. However, phones are true personal computing devices -- they are always near the owner -- and they are uniquely identified by a phone number which follows the owner independent of devices. So why do I still need to be assigned a BBM Pin?

The SIM card's phone number causes a paradigm shift

A new generation of chat messaging apps: Whatsapp, Viber, LINE, WeChat, and almost every modern chat app recognizes the unique difference between phone and PC/notebook: phones are permanently logged in to several accounts at once, typically Google, Apple, Facebook, Twitter and most importantly, being logged in the network via the SIM card. Users have accepted the "log in once, stay logged in forever" paradigm.

Right now, every mainstream chat messaging app uses an SMS to your phone to verify identity without the need for you to enter any passwords, and stays logged in permanently until you uninstall the app from your phone or when you change phones. The typical setup procedure just requires you to install the app, enter your phone number and wait for the verification SMS and then you're good to go. Furthermore, leveraging on the fact that each phone has all your contacts, these new messaging apps will search through the phone contacts and automatically connect you up with all your contacts who actually have the same app installed on their phones.

From then on you can message anyone at all who has the same app installed, and they'll receive your texts.

Using the phone number as your identity is the paradigm shift which all new and hugely successful messaging apps relied on, and the sheer ease of use and speed and convenience of filling up the app contact list automatically have made it easy for users to install multiple chat apps on their phones, since they don't have to painstakingly populate the contact lists from scratch.

#2 – What percentage of text messages is sent via WiFi vs. Cellular?

For those applications that can only message to other users of the same application, all such text messages are sent OTT and would work in a cellular data or WiFi environment. When those applications that can send messages to any mobile device, regardless of whether the targeted user has the application in question, then messages can be sent via SMS (Apple's iMessage is the best example of

this) – those application providers have not revealed the percentage of messages which traverse their OTT network vs. those going via SMS.

Concerning SMS messages specifically, when a user is in a dual-mode environment (cellular and WiFi), SMS is always sent over cellular (except for Apple's iMessage where it could be sent using WiFi to another iMessage account). Thus – even if you are using data on a WiFi network, you would use the cellular network – assuming availability – to send an SMS. In a WiFi only environment, SMS cannot be sent (except for the case of two iMessage accounts).

#3 – In a WLAN environment, is location even possible?

Yes. It requires a WiFi database that maps MAC ID to an X/Y coordinate or street address. These databases are provided by several vendors.

#4 – Which Operating Systems already provide an SMS API?

All OS platforms provide a very easy to use API for SMS.

#5 – What would be the level of effort to interface to the SMS API?

Interfacing to the SMS API requires very little effort as all OS platforms provide an easy to use API and provide examples of the coding necessary to insert into your app. Also – most OTT apps already use SMS for verification purposes.

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