Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Protecting and Promoting the Open Internet	)	GN Docket No. 14-28

COMMENTS OF TWILIO, INC.

Michael B. Hazzard
Arent Fox LLP
1717 K. St., N.W. Washington, DC
20036-5339
Tel: (202) 857-6029
Fax: (202) 857-6395
michael.hazzard@arentfox.com

Counsel to Twilio, Inc.

Dated: July 18, 2014

Twilio, Inc. ("Twilio") submits these comments in response to the Federal Communications Commission's *Notice of Proposed Rulemaking*[1] seeking comment on the "fundamental question" of "the right public policy choice to ensure that the Internet remains open."

I. INTRODUCTION AND SUMMARY

The Commission properly recognizes that "[t]he Internet is America's most important platform for economic growth, innovation, competition, free expression, and broadband investment and deployment."[2] Indeed, but for the emergence of the Internet and its emergence as an open platform, literally many thousands of companies, Twilio included, would not exist. The Internet has evolved in a manner that has placed consumer demands first, enabling consumers – and their application, network and content providers of choice – to have ubiquitous and seamless access to the lawful communications means and content of their choosing.

This is true not only of purely broadband-based services, but of hybrid services as well, including messaging. Many modern forms of messaging utilize combinations of broadband and traditional wireline and wireless facilities. Like pure broadband services, messaging services need to be affirmatively folded into the Commission's regulatory framework to protect consumers' ability to access lawful content, and ensure that competition can flourish. In the last several years consumers have shown a strong preference for message (SMS and MMS) calling over voice calling, with an average of 41.5 SMS calls (messages) per day compared to only 12

---

1 *In the Matter of Protecting and Promoting the Open Internet,* Notice of Proposed Rulemaking, 29 FCC Rcd 5561 (rel. May 15, 2014) ("NPRM").

2 NPRM at ¶ 1.

voice calls.[3] It is evident that the American public depends on SMS/MMS as an important means of communications, just as people rely on traditional voice and other forms of communications, provided over the Internet or otherwise.

Protecting consumers and competition by preventing blocking and promoting the free flow of communications among consumers and business has been a hallmark of Commission policy since the inception of the 1934 Communications Act. Indeed, one of the key objectives of the Communications Act is "to make available, so far as possible, to all the people of the United States … a rapid, efficient, Nation-wide and world-wide wire and radio communications services with adequate facilities."[4] "The blocking of telephone calls is antithetical to this fundamental goal."[5] Indeed, with very narrow exceptions, the Commission has consistently taken action to require all communications providers (carriers and non-carriers alike) to route calls appropriately and to prevent all forms of unlawful call blocking. Without a general ban on call blocking, "callers might never be assured that their calls would go through."[6]

In the NPRM, the Commission seeks comment on a variety of important Open Internet terms. Fundamentally, Twilio submits that the Commission should explicitly include

---

3 *See* Pew Research Internet Project, September 2011, Americans and Text Messaging (Sept. 19, 2011), available at http://www.pewinternet.org/2011/09/19/americans-and-text-messaging/.

4 47 U.S.C. § 151 *et seq.*; *see also* 47 U.S.C. § 254(b)(1)-(7) (directing the Commission to adopt policies that preserve and advance universal access to reliable and affordable telecommunications and information services).

5 *Policies and Rules Concerning Operator Service Providers; Amendment of Policies and Rules Concerning Operator Service Providers and Aggregators; Petition for Declaratory Ruling of Securus Technologies, Inc*., CC Docket Nos. 90-313 and 94-158 and WC Docket No. 09-144, Declaratory Ruling and Order, 28 FCC Rcd 13913 ¶ 8 (rel. Sept. 26, 2013).

6 *Access Charge Reform*, CC Docket No. 96-262, Seventh Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 9923, 9932-99, ¶ 24 (2001).

"messaging" as a form of covered communication, just as "voice," "applications," and "websites" are included. Twilio also supports the Commission's plan to reintroduce the blocking ban on lawful content and to prevent unreasonable discrimination. Twilio submits further that the Commission should extend the nondiscrimination requirement – and the related obligation to carry content to the destination network – across all communications modes, mobile as well as fixed.

Regarding the legal basis, Twilio submits that the Commission should utilize Title II as its source of authority. Title II is well understood, serving as the foundation upon which the nation's telecommunications infrastructure has been developed. Moreover, utilization of Title II would serve to harmonize regulatory regimes across services in a technologically neutral way.

II. TWILIO'S ROLE IN THE MODERN TELECOMMUNICATIONS NETWORK

Twilio was founded in 2008 as an innovative Internet-based cloud software company that is reinventing communications by abstracting traditional telecommunications into a web programmable interface that resides in the cloud. Twilio provides an application programming interface, or "API," to developers who use the API to create customer-facing web services, applications, and programs that enable communication. An API is a software language and message format used to communicate with an operating system or other application programs. APIs are typically pre-fabricated blocks of software code which perform certain low-level, but crucial functions, such as displaying text or graphics on a computer screen. APIs let developers and programmers create more sophisticated programs and applications from the base of the relatively simple APIs.

Twilio's API allows a developer to integrate traditional voice and SMS calling with existing programming languages. Developers can create new applications or add features to

existing products to allow those applications to make and receive phone calls and text messages. Using Twilio's API, web developers and businesses can build sophisticated unified communications solutions such as call centers, office phone systems, call tracking tools, SMS alerts, and more that interoperate with multiple telephone networks. Twilio's API works simultaneously across platforms, allowing web browsers, mobile phones, and tablets running iOS or Android to communicate seamlessly. Over 300,000 developers have used Twilio to integrate telecommunications into their applications and products.

Although Twilio's API enables others to make and receive phone calls and SMS, Twilio does not direct, influence or control how its customers' applications send or receive messages. Instead, Twilio's API acts as a conduit between the traditional telecommunications infrastructure and users of applications developed to transmit messages via Twilio's API. When Twilio receives information from applications utilizing the Twilio API, Twilio forwards that information without alteration either directly to downstream telecommunications carriers or to aggregators. Aggregators facilitate the transmission of information from Twilio to downstream telecommunications carriers. Further, Twilio's API standing alone does not function as a communications program. Rather, the API is simply the building block of the application created and used by Twilio's customers to enable message transmission. In other words, Twilio's API is not a finished product. Finally, Twilio's API plays no part in what telephone numbers, if any – including 911 – that an application user can select to call, as any dialing capabilities are controlled and programmed by the application developer.

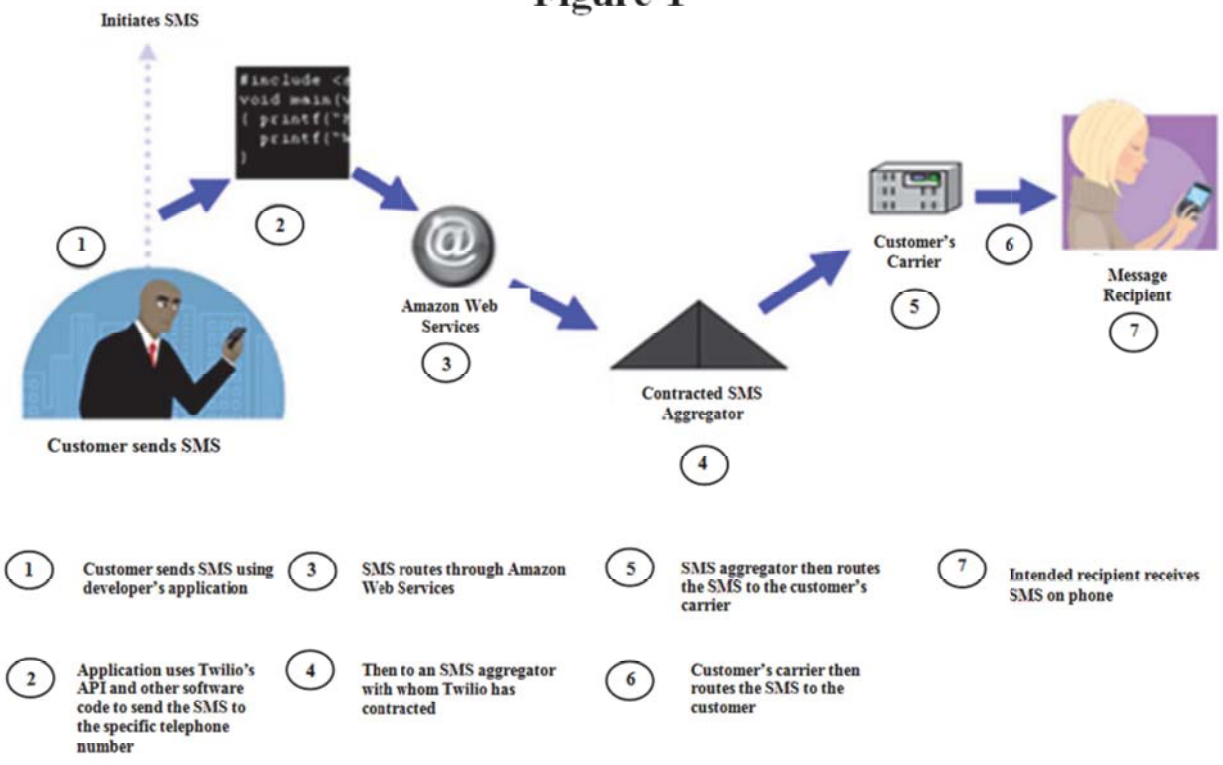
As one example, a Twilio application-developer customer might create an application that allows a consumer to transmit text messages between cell phone users, such as a group

texting application. Here, the path of these text messages initiated by the application users would be as follows:

1) Customer sends SMS using developer's application
2) Application uses Twilio's API and other software code to send the SMS to the specific telephone number
3) SMS routes through Amazon Web Services
4) Then to an SMS aggregator with whom Twilio has contracted
5) SMS aggregator then routes the SMS to the customer's carrier
6) Customer's carrier then routes the SMS to the recipient customer
7) Developer's customer receives SMS on phone

This path is represented in **Figure 1** below.[7]

Figure 1



[7] Twilio's API also can enable voice calling. Inbound services as well as outbound services are available as well.

In sum the developer's application is the interface to the user and the user is the starting point for each instance where a text message is sent to the intended recipient. Further, the dialing capabilities are provided by the developer's application and any agreement concerning what information the developer is permitted to disclose, such as the developer's privacy policy, is between the developer and the users of its application. Twilio serves only as an intermediary by simply transmitting the content of the user's message and the instructions sent by the developer's application, and has no relationship with the application user.

III. THE SCOPE OF THE PROPOSED RULES SHOULD EXPLICITLY INCLUDE MESSAGING AND ELIMINATE "FIXED" AND "MOBILE" DISTINCTIONS TO THE EXTENT PRACTICABLE

The Commission seeks comment on variety of definitions that comprise the 2010 open Internet rules. Twilio submits that the definitions of these rules be explicitly expanded to include messaging. Further, recognizing that networks are continuing to converge and have increased ability to interoperate, the Commission should eliminate distinctions between "fixed" and "mobile" services to keep the rules as straightforward as possible.

At the outset, the Commission defines "broadband Internet access service" as follows:

> A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the services described in the previous sentence, or that is used to evade the protections set forth in this Part.[8]

Messaging, including SMS and MMS messaging is a "mass-market retail service by wire and radio." Messaging also can be and is utilized to access and otherwise send and receive data from "substantially all Internet endpoints" and includes "capabilities that are incidental to and enable

[8] NPRM at ¶ 54.

operation of communications services." Messaging squarely fits within the scope of the Commission's "broadband Internet access service" definition, and Twilio submits that it should be explicitly included by the Commission.

Explicitly including messaging as a component of broadband Internet access service would go a long way to ensuring that consumers, network providers, and application providers can benefit from the free exchange of content via messaging, just like other forms of voice and data communications. Toward that end, the Commission similarly should specifically include messaging in the context of the "no blocking" rule. As proposed, the "No Blocking" rules state:

> A person engaged in the provision of fixed broadband Internet access, insofar as such a person is so engaged, shall not block lawful content, applications, services or non-harmful devices, subject to reasonable network management.
>
> A person engaged in the provision of mobile broadband Internet access services, so far as such person is engaged, shall not block consumers from accessing lawful websites, subject to reasonable network management; nor shall such a person block applications that compete with the provider's voice or video telephony services, subject to reasonable network management.[9]

In so far as blocking goes, the distinction between "fixed" and "mobile" should be eliminated, and all providers should be subject to the "no blocking" requirements.

To the extent that the Commission preserves a "fixed" and "mobile" distinction, Twilio recommends the following modification to the "mobile" definition:

> A person engaged in the provision of mobile broadband Internet access services, so far as such person is engaged, shall not block consumers from accessing lawful content, subject to reasonable network management; nor shall such a person block applications that compete with the provider's voice, messaging or video telephony services, subject to reasonable network management.

At present, consumers utilize mobile broadband to access a wide variety of lawful content beyond websites. While consumers certainly use mobile devices to access websites, consumers

[9] *Id.* at ¶ 94.

also access and exchange information using myriad applications that were barely in their infancy when the Commission originally adopted its rules in 2010.

The "unreasonable discrimination" rule should be expanded to include mobile Internet broadband access providers, to the extent the Commission maintains a "fixed"/"mobile" distinction.[10] Increasingly, consumers utilize mobile devices to access the Internet and a host of applications, including voice, messaging, and video, to interact with others. Subject to technical feasibility issues and reasonable network management, "mobile" providers should no more have the ability to discriminate against content sources than "fixed" providers. Indeed, under either communication mode, consumers should have the right to access the lawful content of their choosing. The Commission correctly states that "the freedom to send and receive lawful content and to use and provide applications and services" is "essential to the Internet's openness and to competition in the adjacent markets such as voice communications …."[11] Twilio could not agree more, and to further this essential freedom, nondiscrimination requirements should apply to mobile as well as fixed networks.

IV. TITLE II SERVES AS A REASONABLE, WELL-UNDERSTOOD BASIS FOR MAINTAINING AN OPEN INTERNET

Twilio submits that the reclassification of broadband under Title II would best ensure an open-Internet. Title II has served as the foundation of network interconnection and traffic exchange since 1934. Title II's parameters are well understood and have been utilized successfully across numerous technological modes. Furthermore, Title II gives the Commission

---

[10] *See id.* at ¶ 140.

[11] *Preserving the Open Internet*, GN Docket No. 09-191, WC Docket No. 07-52, Report and Order, 25 FCC Rcd 17905, 17941-42, ¶ 62 (2010), *aff'd in part, vacated and remanded in part sub nom Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014).

– and the industry – an explicit "forbearance" mechanism, which has a proven track record of reducing regulation while at the same time protecting consumers and competition. Title II is the natural classification point for broadband transmission services,[12] and the issues that the Commission is currently facing are essentially identical to those addressed through Title II for decades.

At present, the consumers and the industry at large face a "real threat, not merely a hypothetical concern" that network providers may "restrict[] its customers from the Internet and prevent[] edge providers from reaching consumers over robust, fast and continuously improving networks."[13] Indeed, Twilio has had first-hand experience with these threats, particularly with mobile operators blocking consumer access to content of their choosing, artificially limiting throughput, or otherwise refusing to route lawful content to and from the consumer's desired destination.

A Title II approach could rapidly eliminate the "real threats" of blocking and discrimination that consumers, Twilio, and others face on a day-to-day basis. Title II has been utilized successfully for decades to develop interconnected networks, wired and wireless. The Act requires that "wireless services that meet the definition of 'commercial mobile service' be regulated as common carriers under Title II,"[14] and accordingly, Title II is robust enough to govern all Internet access, fixed and mobile.

Furthermore, Title II protects network providers. As "common carriers," network providers are not responsible for the content that is carried across their networks. Without

---

12 The Commission has already classified messaging as subject to Title II under the Telephone Consumer Protection Act, 47 U.S.C. § 227.

13 NPRM at ¶ 5.

14 *Id.* at ¶ 150.

common carriage protection, network providers risk being responsible for the content of the communications made by their customers, creating a nearly impossible monitoring and compliance burden on network providers. This is precisely what has occurred in messaging, where the lack of regulatory clarity has resulted in excessive and costly content review and even service disruption in cases where a consumer is merely seeking to access lawful content. A Title II foundation leaves the issue of content between the consumer and the content provider.

Although proceeding under section 706 or some alternative legal basis might potentially be effective, the Commission risks years of dispute over the scope of its 706 authority, and the mechanisms by which it or others can actually rely upon and enforce regulations promulgated pursuant to such a framework. For all of these reasons, Twilio submits that the Commission should follow the tried and true framework of Title II, rather than some untested, unproven alternative.

V. CONCLUSION

Consistent with the foregoing, Twilio urges the Commission to adopt Open Internet rules that explicitly include messaging, extended as fully as practicable to mobile networks, and promulgated pursuant to Title II of the Communications Act.

Dated: July 18, 2014

Respectfully submitted,

By: s/ Michael B. Hazzard
Michael B. Hazzard
Arent Fox LLP
1717 K. St., N.W.
Washington, DC 20036-5339
Tel: (202) 857-6029
Fax: (202) 857-6395
michael.hazzard@arentfox.com

Counsel to Twilio, Inc.