

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of )  
 )  
Encouraging the Provision of New Technologies ) GN Docket No. 18-22  
and Services to the Public )

**COMMENTS OF THE GPS INNOVATION ALLIANCE**

The GPS Innovation Alliance (“GPSIA”) submits these comments in response to the Commission’s Notice of Proposed Rulemaking in the above-captioned docket, seeking input on guidelines and procedures to implement Section 7 of the Communications Act of 1934, as amended, 47 U.S.C. § 157.<sup>1</sup> That brief statutory section seeks to encourage the provision of new technologies and services, and the Commission’s proposed rules set forth processes for “ensur[ing] that new technologies and services that serve the public interest can develop and be made available to the public on a timely basis.”<sup>2</sup> While GPSIA supports the development and adoption of new and innovative technologies and services, it cautions that codified government procedures may not always provide the best means of accelerating their deployment. Below, GPSIA addresses several of the proposals set forth in the *Notice* in order to highlight issues that will require particular FCC attention and sensitivity if the new regime is to function as a true boost to market-based innovation and not simply as a path for selecting “winners” and “losers.”

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<sup>1</sup> GPSIA was formed in February 2013 to protect, promote, and enhance the use of Global Position System (“GPS”) and Global Navigation Satellite System (“GNSS”) technologies. Members and affiliates of GPSIA come from a wide variety of fields and businesses reliant on GPS, including manufacturing, aviation, agriculture, construction, transportation, first responders, surveying, and mapping. GPSIA also includes organizations representing consumers who depend on GPS for boating and other outdoor activities and use GPS in their automobiles, smartphones, and tablets.

<sup>2</sup> *Encouraging the Provision of New Technologies and Services to the Public*, Notice of Proposed Rulemaking, FCC 18-18, ¶ 2 (rel. Feb. 23, 2018) (“*Notice*”).

Over the past 30 years, Global Positioning System (“GPS”)-enabled technology has become a critical and irreplaceable part of our national infrastructure, and it becomes more deeply ingrained and essential every year. The growth of GPS-enabled technologies is dependent on rigorously developed technical rules, interference protections, and a universally stable and predictable spectrum environment. In order to ensure that a broad range of spectrum-based services can co-exist, the Commission’s adoption of any new processes must consider policy and public interest concerns relevant to diverse services. The importance of GPS and the Global Navigation Satellite System (“GNSS”) to safety-of-life, the domestic and global economies, and the daily activities of individuals worldwide, cannot be taken for granted or over-emphasized. In considering ways to accelerate the deployment of new technologies and services, GPSIA urges the Commission to take into account certain basic spectrum principles that are discussed below.

As an initial step, the *Notice* proposes to codify a set of factors by which the Commission would evaluate whether the proposed technology or service is truly “new” and, therefore, whether its accelerated introduction would serve the public interest.<sup>3</sup> First among these is a determination that the new technology or service is “both technically feasible and available for commercial use/application, not merely theoretical or speculative, so that the public benefits from the proposed new technology or service can be evaluated in a meaningful way and can be realized as soon as practicable.”<sup>4</sup> GPSIA supports consideration of such factors, but the only guidance that the Commission provides to explain them is insufficient – requiring, as an example, provision simply of “the results of experimental testing, technical analysis, or

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<sup>3</sup> *Notice* ¶ 14-17. See *Notice* App. A, Proposed Rule Section 1.6004.

<sup>4</sup> *Notice* ¶ 15 (citation omitted).

research.”<sup>5</sup> GPSIA submits that this suggestion falls far short of demonstrating both “feasibility” and “commercial availability.” Those two criteria require much more, if the Commission and interested parties are to vet a new proposal.

In addition to testing, analysis, and research, an applicant should have to demonstrate that its innovation can successfully transition from a laboratory environment to a production environment as well as a “real world” environment in which many external factors – for instance, weather or vibration – could affect performance. In particular, an applicant should be required to demonstrate that equipment, consisting of commercially available components can be produced using representative manufacturing techniques. Commercial availability must take into consideration the ability to produce equipment at market-acceptable costs and not just, for example, the creation of a prototype that has been hand-built in a laboratory using components that may not be readily available in commercial quantities. Such additional demonstrations are essential for the Commission and licensees and spectrum users alike to truly evaluate both the proposal’s ability to function in an increasingly complex spectrum environment and its readiness for prompt market introduction.

Second, the Commission discusses several “categories of factors” to identify whether proposed technologies or services are actually “new.”<sup>6</sup> The *Notice* admits that such a determination may not be “easy, particularly considering that technologies and services in the communications industry are often evolutionary rather than revolutionary.”<sup>7</sup> If the proposed innovation has not been previously authorized, the Commission suggests that proponents explain how it differs from previously authorized technologies and services. If the proposal enhances a

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<sup>5</sup> *Notice*, App. A, Proposed Rules Section 1.6004(a).

<sup>6</sup> *Notice* ¶ 16.

<sup>7</sup> *Id.*

previously authorized technology or service, the Commission would again require a demonstration of the differences. In either case, the proposed rule begs the question of what level of difference is sufficient? What trace of similarity might sink a proposal? By adopting the proposed rules, the Commission would be entering down a very subjective path and inviting disputes that would inevitably consume administrative resources and potentially invite litigation.

Finally, the proposed rules would require that the proponent of a new technology or service demonstrate that the new offering is in the public interest.<sup>8</sup> In this regard, the Commission suggests showings of how innovation and investment are promoted, new competitive choices offered, accessibility improved for those with disabilities, or unserved or underserved needs met. GPSIA submits that an important part of this public interest analysis should include how the new offering is consistent with the Commission's key spectrum management responsibilities.

In the case of any proposed new service or technology that will use spectrum in or adjacent to bands that support navigation services, the public interest review must take into consideration fundamental distinctions among different services – particularly navigation and communications services and their different levels of susceptibility to potential interference. The Commission should therefore recognize, as part of this review and its application of core spectrum management principles, the impact that a 1 dB decrease in the carrier-to-noise density ratio (“C/N<sub>0</sub>”) has on navigation services and the actions that any proponents of new transmission technologies can, and as a matter of public policy should, take to protect against these decreases. The Commission's review of the public interest, as part of an accelerated “green lighting” of innovative technologies or services in or adjacent to bands that support

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<sup>8</sup> *Id.* ¶ 17.

navigation services, must factor in whether the technology poses significant interference threats and be grounded in this basic internationally recognized precept.

New technologies and innovations found to pose such interference risk raise public interest concerns and should not qualify for the proposed Section 7 expedited treatment. Even if such proposals may not benefit from the Section 7 expedited procedures, they may ultimately be approved by the Commission after the FCC has had the opportunity to create and examine a full record on the pro's and con's of the proposal and, if appropriate, to fashion conditions that address any remaining public interest concerns.

In the 35 years since Section 7 was added to the Communications Act, Americans have benefitted immeasurably from the introduction of myriad new communication and navigation technologies and services. As the Commission considers new rules that may govern their deployment, GPSIA urges the Commission to assess carefully whether more codified rules may actually be needed to ensure that the rapid roll-out continues and is not slowed or skewed.

Respectfully submitted,

By /s/ J. David Grossman

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