STATEMENT OF
COMMISSIONER NATHAN SIMINGTON

Re: *Promoting Efficient Use of Spectrum through Improved Receiver Interference Immunity Performance*, ET Docket No. 22-137, Notice of Inquiry (April 21, 2022)

Radiofrequency regulation in the United States emerged from the regulation of radio communication to and from seafaring vessels in 1910. At that time, there were actual oceans of physical space between ships, and metaphorical oceans of spectrum available for radio communications. The regulatory approaches were greenfield, the margins for error were wide, and spectral efficiency was not a concern.

By the time President Franklin Roosevelt signed the Communications Act into law twenty-four years later, commercial spectrum was still comparatively roomy. Sure, there were a few hundred radio stations, and one-to-one radio communications had grown more spectrum-intensive, but there was still plenty of space to, as it were, spread out.

And since the Communications Act was adopted, our regulations have, more or less, reflected the idea that spectrum is fundamentally abundant, and that mitigating interference and maximizing spectral efficiency is about spreading spectrum users out, whether geographically, or in radiofrequency. Even as spectrum use has intensified, legacy services, and non-spectrum activities dependent upon such services, have grown up in reliance on past allocations.

But the era of abundant spectrum is coming to a close. Like real estate, they just aren't making any more of it. The future is dense spectral neighborhoods of commercial users packed tightly, in space and in spectrum, vying for every last hertz of usable real estate. We should think of RF spectrum as fully occupied land whose usage must inevitably intensify. Our regulatory philosophy must accommodate this new reality.

The Notice of Inquiry we adopt today does just that. It asks what I view as the critical questions that must be answered if we are to prevent a spectral famine: how should the Commission allocate spectral rights; how should the Commission adjudicate spectral disputes; and how can the Commission treat the receive side of RF systems? It is time that our spectral rights framework becomes certain, and it is time that our regulatory approach goes duplex.

This NOI is the Commission's first step at exploring a new policy framework for commercial spectrum that takes these questions into account. And we must. To proceed with the status quo risks stymying innovative technologies that require intensive use of spectrum adjacent to incumbent commercial allocations. And potentially worse, it risks the regular recurrence of spectral disputes arising from implicit easements on valuable commercial spectrum reflecting ambiguous rights and adjudicative authority. The costs of this uncertainty are sometimes diffuse, and sometimes acute, but always too high.

FCC spectrum policy must clearly and precisely define spectrum rights, both in-band and at band edges, and those rights must reflect efficient receiver performance where that is a reasonable goal. This is the only framework truly capable of accommodating the interests of not only industry incumbents and future commercial users, but that also stands as a model for federal users. As I've argued before, we cannot afford the next C-Band fight—wherever in the allocation table it might be. This item takes a first step toward foreclosing that eventuality.

There are a few ways to get to a full duplex regulatory philosophy from where we are now, and today's Notice of Inquiry explores them all. From defining harm claim threshold rights for commercial

users; to issuing policy statements on the Commission's general approach; to defining receiver parameters in narrow cases, this Notice of Inquiry is held up by both belt and suspenders, and I believe the public comment to follow will be robust, clarifying, and informative as a result.

My office has been thinking about this topic for some time, and we are deeply indebted to Chairwoman Rosenworcel for her energetic collaboration and ultimate introduction of this item. We have also massively benefitted from the Office of Engineering and Technology for their diligent work in drafting the item, as well as from the expertise of subject matter experts throughout industry and academia.

I'd like to thank everyone who participated in or helped inform the FCC's Technological Advisory Council when it was studying these questions. But I'd be deeply remiss if I failed to specifically acknowledge two special contributors to my office's understanding of the issues and development of conviction around these issues.

The first is JP de Vries, whose work on all things spectrum—including, especially, harm claim thresholds—has evolved my own thinking on the topic.

The second is Dale Hatfield, who used to head our own OET. It will surprise no one when I say that an hour's conversation with Dale can yield a year of technical agenda. I have shamelessly pilfered his brilliant ideas and intend, with any luck, to steal many more. Thank you Dale.

I am proud to support this item.