

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of )
)
)
Allowing Earlier Equipment Marketing and ) ET Docket No. 20-382
Importation Opportunities )
)
Petition to Expand Marketing Opportunities for ) RM-11857
Innovative Technologies )
)

NOTICE OF PROPOSED RULEMAKING

Adopted: December 10, 2020

Released: December 10, 2020

Comment Date: [30 days after date of publication in the Federal Register]

Reply Comment Date: [45 days after date of publication in the Federal Register]

By the Commission: Chairman Pai issuing a statement; Commissioners O’Rielly, and Starks issuing separate statements.

I. INTRODUCTION

1. The rapid and widespread deployment of radiofrequency devices has enabled the communications sector to drive innovation, promote economic growth, and become integral to nearly all aspects of modern life. The Commission’s equipment authorization program is essential to ensuring that the communications equipment Americans rely on every day, such as their cellphones and Wi-Fi devices, comply with the Commission’s technical rules. Those rules, in turn, provide assurance to all spectrum users that their devices will work as intended and operate free from harmful interference.

2. Over the years, the Commission has reexamined and modified its equipment authorization program to ensure that it operates efficiently and meets the needs of developers, manufacturers, and consumers. Today, we propose updates to our marketing and importation rules that would allow equipment manufacturers to better gauge consumer interest and prepare for new product launches. As the pace of innovation has increased in the Internet age and product development cycles have accelerated, new marketplace models that rely on individual interest to fund products have become embedded in our society. At the same time, market assessment tools have become more sophisticated as sellers try to optimize the number of products they produce or import to match anticipated sales.

3. The targeted enhancements to our equipment authorization rules we are proposing would leverage today’s fast-paced Internet-driven world to super-charge how the newest technologies and must-have devices reach consumers. As we once again examine our equipment authorization rules, our goal is to ensure they remain cost-effective and are properly tailored to a quickly-evolving marketplace.

II. BACKGROUND

4. Our equipment authorization rules are based on Section 302 of the Communications Act of 1934, as amended (the Act), which gives the Commission authority to make reasonable regulations governing the interference potential of devices that emit radiofrequency energy and can cause harm to

consumers or other radio operations.<sup>1</sup> The Commission uses the equipment authorization program, codified in Part 2 of our rules, to ensure that radiofrequency devices comply with the Commission's technical and equipment authorization requirements before they can be marketed in or imported to the United States.<sup>2</sup>

5. The Commission has a long history of reviewing and updating its rules to meet the challenges of a radiofrequency equipment ecosystem that continues to expand and evolve. In recent years, for example, the number of devices now authorized has expanded into the millions, radiofrequency equipment supply chains have become increasingly global, and manufacturers are under growing pressure to shorten the time it takes to bring new products to market.<sup>3</sup> In the *2017 Equipment Authorization Order* in ET Docket 15-170, the Commission modernized certain rules to align the equipment authorization processes with the current state of radiofrequency device technology and the global marketplace by, among other things, codifying contemporary electronic labeling (e-label) practices, modifying importation procedures to remove an outdated filing requirement that had become too burdensome, and changing the rules governing how personal devices and those used in trade shows may be brought into the country.<sup>4</sup> The *2017 Equipment Authorization Order* was part of a comprehensive review of the equipment authorization procedures that the Commission initiated in 2015.<sup>5</sup>

6. Our rules, as modified by the *2017 Equipment Authorization Order*, provide two different approval procedures for equipment authorization—Certification and Supplier's Declaration of Conformity (SDoC). Certification is the most rigorous approval process for radiofrequency devices with the greatest potential to cause harm to consumers or other radio operations. It is an equipment authorization issued by an FCC-recognized Telecommunication Certification Body (TCB) based on an evaluation of the supporting documentation and test data submitted to the TCB. Testing associated with Certification must be performed by an FCC-recognized accredited testing laboratory, and information for all Certified equipment is posted on a Commission-maintained public database. SDoC is a procedure that requires the party responsible for compliance (who must be located in the United States) to ensure that the equipment complies with the appropriate technical standards. Equipment authorized under the SDoC procedure is not listed in a Commission database.

7. When it adopted the *2017 Equipment Authorization Order*, the Commission left for further consideration several matters, including when equipment subject to Certification can be imported and how the Certification information is made available to the public; how to ensure that the Certification process is optimized for today's more complex devices that often include numerous transmitters

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<sup>1</sup> 47 U.S.C. § 302a.

<sup>2</sup> See 47 CFR § 2.803; see also 47 U.S.C. § 302a(b) (stating that “[n]o person shall manufacture, import, sell, offer for sale, or ship devices or home electronic equipment and systems, or use devices, which fail to comply with regulations promulgated pursuant to this section.”). The Office of Engineering and Technology (OET) administers day-to-day operation of the equipment authorization program. See 47 CFR § 0.241(b). OET's Laboratory Division maintains a webpage devoted to the equipment authorization program. See FCC, *Equipment Authorization*, <https://www.fcc.gov/engineering-technology/laboratory-division/general/equipment-authorization> (last visited Nov. 2, 2020).

<sup>3</sup> See Petition of Consumer Technology Association to Expand Marketing Opportunities for Innovative Technologies, RM-11857, at 3-6 (filed June 2, 2020) (CTA Petition) (noting recent developments in the radiofrequency equipment ecosystem that justify updates to the authorization process); see also *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, Notice of Proposed Rulemaking, 30 FCC Rcd 7725, 7727-31, paras. 4-15 (2015) (*2015 Notice*) (detailing how the equipment authorization process has evolved in recent decades).

<sup>4</sup> *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, First Report and Order, 32 FCC Rcd 8746 (2017) (*2017 Equipment Authorization Order*).

<sup>5</sup> See *2015 Notice*.

configured in increasingly varied manners; and whether to require manufacturers to certify that a device cannot be modified by third-party radiofrequency controlling software that could cause those devices to create harmful interference.<sup>6</sup>

8. In June of this year, CTA filed a petition seeking modification of the rules pertaining to the marketing and importation of radiofrequency devices.<sup>7</sup> CTA describes how our current equipment authorization rules can become speed bumps in the race to develop and deploy products and services for the 5G economy, and it identifies the current prohibition on conditional sales to consumers and the very limited ability to import devices prior to authorization as two restrictions that are especially ripe for revision.<sup>8</sup> On June 9, 2020, the Consumer and Governmental Affairs Bureau's Reference Information Center issued a *Public Notice* seeking comment on CTA's petition.<sup>9</sup> Eight comments and two reply comments were filed in response.

9. Subsequently, CTA asked the Commission to "grant a waiver of Section 2.803 to permit conditional sales to consumers in the interim."<sup>10</sup> Other commenters also suggest that we grant interim waiver relief during the pendency of the rulemaking proceeding.<sup>11</sup>

### III. DISCUSSION

10. We recognize that our equipment authorization rules have in some ways failed to keep pace with developments in the modern device ecosystem. In particular, our rules limit the ability of device manufacturers to market and import radiofrequency devices in the most efficient and cost-effective ways possible. We therefore take the opportunity here to propose specific rule changes that would allow device manufacturers to take full advantage of modern marketing and importation practices.

11. We decline, however, to grant CTA's request for an interim waiver. While we agree that CTA's proposed changes to our marketing rules merit consideration, CTA has not shown that a waiver is warranted while we develop a full record on the proposed changes. Specifically, we must explore a number of complex issues before allowing conditional sales of radiofrequency devices, or additional imports of radiofrequency devices, prior to the receipt of equipment authorization. These issues may also implicate other agencies, such as the Federal Trade Commission and Customs and Border Protection, which could require additional consideration and coordination. We therefore conclude that the public interest is best served by a thorough and deliberate examination of our rules related to the marketing and importation of radiofrequency devices.<sup>12</sup>

#### A. Marketing Rules

12. Our rules generally prohibit marketing radiofrequency devices prior to equipment

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<sup>6</sup> *2017 Equipment Authorization Order*, 32 FCC Rcd at 8747, para. 1 n.2. In the *2015 Notice*, the Commission initiated a broad discussion of the equipment authorization rules and procedures, asking whether "there other steps we can take to further our interest in preventing the importation of unauthorized and potentially harmful [radiofrequency] devices, while reducing importation burdens and marketing limitations?" 30 FCC Rcd at 7767, para. 121.

<sup>7</sup> See CTA Petition.

<sup>8</sup> *Id.* at i.

<sup>9</sup> *Petition of Consumer Technology Association to Expand Marketing Opportunities for Innovative Technologies*, RM-11857, Public Notice, Report No. 3150 (CGB June 9, 2020).

<sup>10</sup> Reply Comments of Consumer Tech. Assoc., RM-11857, at 3 (July 24, 2020) (CTA reply comments).

<sup>11</sup> See, e.g., Comments of Rural & Agric. Council of Am., RM-11857, at 3 (July 24, 2020) (RACA comments); Comments of CTIA — The Wireless Assoc., RM-11857, at 3 (July 9, 2020) (CTIA comments).

<sup>12</sup> We also note that the proceeding in ET Docket 15-170, in which the Commission expressly left unresolved several issues related to its equipment authorization rules, remains open and may be addressed together with the issues opened in this *Notice*.

authorization but provide a limited exception to permit conditional sales contracts—that is, sales whereby the actual delivery of the product to the buyer is postponed—to wholesalers and retailers.<sup>13</sup> We propose to modernize our rules to also allow conditional sales, but not delivery, of radiofrequency devices to consumers prior to authorization. The proposal would better align our rules to fit today’s consumer expectations and product development practices while retaining the protections that our overall marketing rules provide.

13. Subpart I of Part 2 of our rules, which includes Section 2.803, sets out the conditions under which radiofrequency devices that are capable of causing harm to consumers or other radio operations may be marketed in the United States.<sup>14</sup> Marketing is broadly defined to include “sale or lease, or offering for sale or lease, including advertising for sale or lease, or importation, shipment, or distribution for the purpose of selling or leasing or offering for sale or lease.”<sup>15</sup> In general, parties may not market radiofrequency devices unless the devices have been properly authorized or otherwise comply with all applicable technical, labeling, identification and administrative requirements.<sup>16</sup> There are exceptions to the general prohibition, which allow limited marketing in the form of conditional sales contracts between manufacturers and wholesalers or retailers, and the sale of radiofrequency devices in the conceptual, developmental, design, or pre-production stage to business, commercial, industrial, scientific, or medical users.<sup>17</sup> These exceptions do not include conditional sales to consumers or members of the general public because when the Commission modified these rules in 1989 to permit certain conditional sales prior to authorization, it expressed concern that unauthorized radiofrequency devices would cause harm to consumers or other radio operations.<sup>18</sup> It subsequently reaffirmed this concern in response to a petition for reconsideration.<sup>19</sup>

14. In proposing to permit conditional sales of radiofrequency devices to consumers prior to authorization, we recognize the continuing importance of ensuring that unauthorized radiofrequency devices do not reach consumers where they could potentially cause harm. For this reason, we emphasize that we would continue to prohibit delivery to consumers of such devices prior to authorization. However, we also agree with CTA and other commenters that the marketplace and consumer experience have changed such that there is good reason to modify our rules to allow for conditional sales. In its petition, CTA states that “consumer expectations have evolved” since the Commission last considered this issue,<sup>20</sup> noting that “pre-launch orders and crowd-funding play a larger part in bringing innovations to

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<sup>13</sup> 47 CFR § 2.803(c)(2)(i).

<sup>14</sup> See Part 2, subpart I of our rules. 47 CFR §§ 2.801-815.

<sup>15</sup> 47 CFR § 2.803(a).

<sup>16</sup> 47 CFR § 2.803(b).

<sup>17</sup> 47 CFR § 2.803(c)(2)(i)-(ii). Such marketing is limited to devices that could be authorized under the current rules; could be authorized under waivers of such rules that are in effect at the time of marketing; or could be authorized under rules that have been adopted by the Commission but that have not yet become effective. 47 CFR § 2.803(c)(2). Other exceptions allow for market trials under our experimental licensing rules, as well as evaluation kit sales and displays or advertisements (such as at a trade show or exhibition), when accompanied by required disclosures. *Id.*

<sup>18</sup> *Revision of Part 15 of the Rules regarding the operation of radio frequency devices without an individual license*, First Report and Order, 4 FCC Rcd 3493, 3516, para. 127 (1989).

<sup>19</sup> *Revision of Part 15 of the Rules regarding the operation of radio frequency devices without an individual license*, Memorandum Opinion and Order, 6 FCC Rcd 1683, 1685, para. 19 (1991). ET Docket 15-170 has not addressed the marketing rules other than to make conforming word updates to Section 2.803(b)(2) in the *2017 Equipment Authorization Order*.

<sup>20</sup> CTA Petition at 7.

market[.]”<sup>21</sup> Lincoln Network describes our overall policy as “still sound,” but it asserts that marketing practices have changed in the intervening years.<sup>22</sup> CompTIA describes how direct-to-consumer pre-orders and pre-release purchases have become much more common.<sup>23</sup> A coalition of radiofrequency device manufacturers and retailers describes how customers express interest “in acquiring our new technologies as soon as possible” and become “confused about why they cannot pre-order our devices in the same way they can pre-order the latest automobile, album, video game, book, or fashion.”<sup>24</sup>

15. We recognize that business models have changed dramatically in today’s Internet-driven economy. Direct-to-consumer sales conducted over the Internet using crowd-funding platforms like Kickstarter and Indiegogo are increasingly a common way for consumers to obtain innovative devices. Online marketplaces like Amazon, eBay, and Newegg sell a wide variety of electronic devices from third parties to consumers over the Internet. E-commerce platforms like Shopify also provide sales and distribution services that allow manufacturers to sell devices directly to consumers. Entrepreneurs and start-ups can use these new distribution models to grow their businesses and bypass the channels often controlled by large incumbents.

16. CTA and many commenters describe benefits that could be realized by allowing conditional sales of radiofrequency devices to consumers. CTA states that conditional sales to consumers would “permit manufacturers to gather more accurate information about consumers’ intent to purchase[.]”<sup>25</sup> and that better supply-chain management will reduce waste “in the raw materials used for a device” as well as “in the transportation and related energy expenditures and money to move devices over vast distances.”<sup>26</sup> Commenters further describe how, under our current rules, it is difficult for manufacturers to gauge consumer demand.<sup>27</sup> Similarly, the coalition of radiofrequency device manufacturers and retailers argues that conditional sales would allow them “to properly prepare our supply chain (*i.e.*, more precisely stage shipments to users or delivery to retailers), know how many devices to manufacture, and deliver new technologies into users’ hands sooner.”<sup>28</sup> A broader conditional sale exemption is also well suited for the highly competitive communications market, where the development and life cycle of new devices is short,<sup>29</sup> and the proposed changes may be especially helpful for “small companies in need of capital, [as] paid preorders can demonstrate interest in a device to

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<sup>21</sup> *Id.* (citing Comments of Consumer Tech. Assoc., ET Docket No. 17-215, at 5 (filed Oct. 30, 2017)). *See also* CTA Petition at 11-12 (asserting that direct sales of radiofrequency devices have made distinctions between manufacturers, wholesalers, and retailers less meaningful to consumers).

<sup>22</sup> Letter from Lincoln Network, to Marlene H. Dortch, Secretary, FCC, RM-11857, at 3 (July 6, 2020) (Lincoln Network letter).

<sup>23</sup> Comments of Comp. Tech. Indus. Assoc., RM-11857, at 2 (July 9, 2020) (CompTIA comments); *see also* Reply Comments of Innovation Tech. & Info. Inst., RM-11857, at 1 (July 24, 2020) (ITIF reply comments) (“Pre-ordering devices ... is a far more common practice today.”).

<sup>24</sup> Letter from Amazon.com, AT&T Servs., Ericsson, Google, Intel, Microsoft, Nokia, Qualcomm, Samsung Elecs. Am., Sony Elecs., Sharp Home Elecs. Co. of Am., T-Mobile USA, & Verizon, to Marlene H. Dortch, Secretary, FCC, RM-11857, at 1 (July 31, 2020) (Device Coalition letter); *see also* Comments of Samsung Elecs. Am., RM-11857, at 6 (July 9, 2020) (Samsung comments) (noting that many devices are now pre-sold to consumers, including automobiles and other high-value items).

<sup>25</sup> CTA Petition at 9; *see also* Samsung comments at 5; ITIF reply comments at 2.

<sup>26</sup> CTA Petition at 10.

<sup>27</sup> Comments of Comp. & Comms. Indus. Assoc., RM-11857, at 5 (July 9, 2020) (CCIA comments); Reply Comments of Digit. Liberty, R St. Inst., & Ams. for Prosperity, RM-11857, at 3 (July 24, 2020) (Public Interest joint reply comments).

<sup>28</sup> Device Coalition letter at 2.

<sup>29</sup> Comments of TechFreedom, RM-11857, at 3 (July 9, 2020) (TechFreedom comments); *see also* ITIF reply comments at 2 (describing the market as “incredibly innovative”).

potential funders.”<sup>30</sup>

17. Finally, we recognize that the proposal has the potential to match popular consumer expectations. Recognizing that pre-orders were “only nascent” when the Commission last considered this issue, CTA observes that it is has now “become commonplace,” and that consumers today are “fully aware that they will need to await delivery, and [are] fully prepared for the consequences if a necessary contingency . . . does not occur.”<sup>31</sup> We seek comment on these observations and ask whether there are other benefits or risks associated with our proposal that we have not identified. Would expanding the scope of marketing to include conditional sales of radiofrequency devices directly to consumers yield the anticipated benefits for industry and consumers? Are there other actions we could take that would more effectively meet that objective?

18. The Commission originally limited conditional sales to wholesalers and retailers because it was concerned that unauthorized devices that made their way to consumers could cause harmful interference to radio communications.<sup>32</sup> Ensuring that unauthorized radiofrequency devices do not cause harm remains among our highest concerns. We nevertheless believe that our proposal can lead to sensible rules that provide more flexibility while maintaining appropriate safeguards. The coalition of radiofrequency device manufacturers and retailers notes that “Consumers would continue to be protected by the Commission’s rules against operation of devices lacking regulatory authorization, because devices would not be delivered to end users until approval is obtained.”<sup>33</sup> Similarly, CTIA cites the “fundamental premise” that devices may not be delivered to consumers until the equipment authorization process is complete.<sup>34</sup> TechFreedom also identifies the difficulty of recalling non-compliant devices as a reason why companies should be allowed to sell, but not ship, products that are awaiting regulatory approval.<sup>35</sup> We acknowledge these concerns and note that our rules are designed to prevent such sale and operation of non-compliant devices. Manufacturers and vendors who market and deliver non-compliant devices to purchasers in the United States, as well as domestic consumers who operate non-compliant devices, can be held liable for violating these rules.<sup>36</sup>

19. Because our proposal would, to some extent, remove the existing barriers between device developers, manufacturers, and distributors, on one hand, and consumers, on the other, we seek comment on whether there are additional safeguards that we should implement. As an initial matter, we ask whether there are certain types of devices for which conditional sales to consumers would not be appropriate. For example, these could include devices designed to operate in particular frequency bands where extensive pre-operation coordination is required; equipment designed for commercial operation that could pose a greater risk of harmful interference or harm to persons if not installed properly; and medical or other equipment that require review or approval by other regulatory bodies. How can we prevent devices that have no likelihood of being approved (such as those that would be designed to operate at an impermissible power level or be inconsistent with the service rules or frequency allocation)

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<sup>30</sup> CTA Petition at 10.

<sup>31</sup> CTA Petition at 11. CTA further reports that offers for technology products and radiofrequency devices can be found on popular crowd-funding sites despite the current prohibition on conditional sales of radiofrequency devices to consumers. *Id.* (citations omitted).

<sup>32</sup> *Revision of Part 15 of the Rules regarding the operation of radio frequency devices without an individual license*, First Report and Order, 4 FCC Rcd 3493, 3516, para. 127 (1989).

<sup>33</sup> Device Coalition letter at 2.

<sup>34</sup> CTIA comments at 5 (citing CTA Petition at 15).

<sup>35</sup> TechFreedom comments at 4.

<sup>36</sup> *See, e.g., C.T.S. Technology Co. Ltd., CTSttechnologys.com*, Forfeiture Order, File No. EB-SED-12-00005692, 31 FCC Rcd 6126 (2016) (imposing a penalty on foreign-based company because its marketing and sales of cellphone jammers to U.S. customers, effectuated abroad over the Internet, constituted a violation of U.S. law and Commission regulations).

from being marketed? Should equipment that could only operate under a Commission waiver be prohibited from marketing prior to a waiver being granted? We further recognize that certain types of devices are used to ensure the safety of life and property on board ships and aircraft.<sup>37</sup> Should we exclude those types of devices from this proposal? If not, we note that certain rules in Parts 80, 87, and 95 may need to be adjusted to align with our revised marketing rule,<sup>38</sup> and propose to revise these rules accordingly. Specifically, we believe that we would have to modify Section 95.391,<sup>39</sup> and we therefore seek comment on whether other rules, such as those provided under Sections 80.1061, 87.147, and 95.2991, would also need to be revised or clarified, as they specify marketing and labeling requirements that may conflict with our proposal.<sup>40</sup> Are there other specific devices subject to certain rules that might also need to be excluded? Commenters should be specific in detailing which rules, what types of equipment, and why these would need to be treated differently.

20. We generally agree with those commenters who observe that consumers today are much more familiar with conditional sales than they may have been in 1989, particularly given the widespread popularity of Kickstarter and other Internet-based platforms. Thus, we believe most consumers will comprehend that the product being marketed may not be delivered if the seller-specified conditions are not met—including, in the case of radiofrequency devices, that the seller is unable to obtain authorization for the equipment. Our proposed rule would require the prospective buyer to be advised at the time of marketing that the equipment is subject to the FCC's rules and delivery to the buyer is contingent upon compliance with the applicable equipment authorization and technical requirements. Should we require additional disclosures throughout the marketing and sales process, including up to the time of delivery? TechFreedom suggests that we require any seller to display specific language warning potential customers that they are pre-ordering a device that is not yet certified under FCC rules, and ultimately may never be delivered.<sup>41</sup> We agree that sellers should be required to prominently display language clarifying the conditional nature of a sale at the time of offer, as set forth in Appendix A, and we seek comment on this conclusion.

21. Are there other disclosures that sellers should make when marketing radiofrequency devices to consumers prior to equipment authorization? Should we require sellers to provide information on how to seek a refund in the event the device does not receive authorization? If so, how should this information be provided? How would consumers receive notice that authorization was not granted, and that the devices will not be delivered? What records of such notice are needed? Should we require online marketplaces to ensure all advertisements of devices marketed through conditional sales include the required disclosures? If unique identifying information (*e.g.*, model numbers, expected FCC ID) is known at the time of marketing, should we require that information to be disclosed in online advertisements?

22. Finally, should we require manufacturers to include a label on device packaging noting that it shall not be delivered to consumers prior to obtaining equipment authorization? If so, how should we implement this requirement as any such label would only have temporary applicability until equipment authorization is granted? What information should be included on the label? Should it include, for example, United States-based contact information, unique identifying information for the equipment, and/or the name of the manufacturer or testing laboratory? Are there other steps we could

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<sup>37</sup> For example, maritime survivor locating devices (MSLDs) and personal locator beacons (PLBs) are used to alert search and rescue services in the event of an emergency on ships and aircraft. *See* 47 CFR § 95.2903.

<sup>38</sup> *See, e.g.*, 47 CFR §§ 80.1061, 87.147, and 95.2991.

<sup>39</sup> *See* 47 CFR § 95.391 (“No person shall manufacture, import, sell or offer for sale non-certified equipment for the Personal Radio Services.”).

<sup>40</sup> *See* 47 CFR §§ 80.1061, 87.147, and 95.2991.

<sup>41</sup> TechFreedom comments at 5. *See also* 47 CFR §§ 2.803(c)(2)(iii) (requiring specific written disclosures for other marketing exceptions, such as during the display of devices at trade shows).

take to ensure that all parties are fully aware that device delivery is prohibited prior to authorization?

23. Should we impose particular recordkeeping requirements on the manufacturer so that such equipment can be accounted for if equipment authorization is ultimately not granted or enforcement action needs to be taken? If so, we would require that the manufacturer retain these records and provide them to the Commission upon request. What time period would be appropriate—one year, five years, or another time period? We seek comment on what recordkeeping requirements should be required. For example, TechFreedom suggests that we require that a manufacturer inform the Commission if it is allowing the pre-ordering of a device that will be designed to operate under our Part 15 rules and that requires Certification, and, if so, to provide the Commission with a monthly update on the number of units pre-ordered.<sup>42</sup> Should we require this initial disclosure and these monthly updates to the Commission? Should we require sellers to have a designated point of contact based in the United States? Should we require online marketplaces to maintain and display manufacturer points of contact? Should we require foreign manufacturers to have an agent in the United States to ensure such recordkeeping is accessible to the Commission and that the conditional purchaser has a domestic point of contact for any issues that arise with the conditional sale? Should we require foreign manufacturers to have a point of presence in the United States to ensure the existence of a party responsible for compliance with the Commission's rules and any violation thereof?

24. We also seek comment on what effect our proposal to extend our marketing exception to conditional sales to consumers might have on our enforcement activities. We acknowledge that our proposal could lead to situations that might upset consumers' expectations and we seek comment on whether we should adopt specific mitigation measures in response. Are any additional rules necessary to address any potential harms that may result from allowing conditional sales of radiofrequency devices to consumers? If so, what scenarios could cause problems and what could we do (*e.g.*, further modifying our rules) to address such issues? If equipment authorization is not granted, what actions should be required of the manufacturer to ensure that unauthorized equipment is not made available to consumers? If an unauthorized device is delivered to a consumer prior to receipt of the equipment authorization, what are the appropriate sanctions? What should the base forfeiture be for such violations? Should the forfeiture be based on the number of units delivered without obtaining an authorization? Should the Commission deny future equipment authorization applications from grantees who deliver unauthorized devices to consumers, either directly or indirectly through a third-party retailer? Should the Commission require additional protections for potential harm from online vendors or from overseas vendors? What would those protections look like? If a manufacturer delivers a device that has failed to receive authorization, should domestic consumers who operate the non-compliant device be liable for violating FCC rules? We seek comment on these suggestions as well as any other enforcement measures that may be appropriate.

25. Finally, we seek comment on the government's role when a conditionally sold radiofrequency device cannot be delivered and consumers may be entitled to a refund or similar remedy under the sales agreement. Conditional sales typically involve initial payments and other financial commitments from consumers. Under our proposed rules, how likely is it that consumers would contact the Commission with complaints or concerns about conditional sales contracts involving radiofrequency devices? Are there actions we can take to ensure that we set appropriate consumer expectations, direct consumers to appropriate resources, and avoid becoming overwhelmed with general questions and complaints for which other agencies or entities may be a more appropriate contact? Should sellers make additional product and contact information readily available—such as on their websites or that of a relevant industry trade group (such as CTA), or as a specific disclosure to the Commission—to make it easier to identify what a caller is talking about and where they should direct their concerns?

26. Several commenters suggest that consumers could seek relief via the Federal Trade

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<sup>42</sup> TechFreedom comments at 5.



Commission, state attorneys general, or other enforcement entities outside of the Commission.<sup>43</sup> For example, the Computer and Communications Industry Association argues that “if the Commission is concerned that a company may defraud customers who participate in pre-sales of devices prior to FCC authorization, the Federal Trade Commission has broad authority to enforce against unfair or deceptive acts.”<sup>44</sup> CTA notes that state attorneys general also have authority to pursue relief for consumers in many cases.<sup>45</sup> Several commenters also cite state consumer protection laws and state attorneys general as potential sources of relief for consumers here.<sup>46</sup> Are these the best authorities for redressing potential consumer injuries from conditional sales of radiofrequency devices? How should the information about these authorities be provided to consumers? What role, if any, should the Commission have in providing this information to consumers? What role, if any, should the Commission have in assisting other official bodies in seeking redress for consumers? Should the Commission make contact information available on its website to identify where consumers should direct their concerns? We tentatively conclude that adequate remedies exist for contractual and similar harms that are external to the Commission and seek comment on this observation. Should the Commission establish a memorandum of understanding with the Federal Trade Commission to share information on potential violations or best practices in this area, as it has done in the past to facilitate coordination on issues that span multiple jurisdictions?<sup>47</sup>

27. Our proposed rule would retain the existing reference to “manufacturers” entering into conditional sales contracts, but we seek comment on CTA’s request that, “[t]o the extent entities become responsible for a device’s FCC compliance, those ‘responsible parties’ also should be permitted to engage in conditional sales with consumers.”<sup>48</sup> We recognize that “manufacturers” may be too limiting for the wide range of creators and innovators who are likely to take advantage of conditional sales of radiofrequency devices to consumers. However, we are not confident that CTA’s suggested addition of “responsible parties, as defined in Section 2.909” is the most appropriate way to expand the scope of the exemption. That rule addresses the chain of responsibility for the equipment authorization process.<sup>49</sup> For certain conditional sales situations, such as the beginning stages of a Kickstarter campaign, the seller may neither be a “manufacturer” nor a “responsible party” for purposes of our Part 2 rules; indeed, for equipment in the conceptual stage, the seller may not have even begun the equipment authorization process. How should we account for such sellers? Alternately, are there benefits or risks to retaining the existing limitation to manufacturers? Would doing so, for example, help ensure that unauthorized and

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<sup>43</sup> See, e.g., Lincoln Network letter at 3; Letter from Comp. Tech. Indus. Assoc., Engine, INCOMPAS, Internet Assoc., Info. Tech. Indus. Council, TechFreedom, and Telecomms. Indus. Assoc., to Marlene H. Dortch, Secretary, FCC, RM-11857, at 2 (July 9, 2020) (Joint Commenters letter); Public Interest joint reply comments at 7.

<sup>44</sup> Computer and Communications Industry Association (CCIA) comments at 6 (citing 15 U.S.C. § 45).

<sup>45</sup> CTA Petition at 17 (“Likewise, state attorneys general are aggressive in protecting their citizens against unscrupulous sellers who take payment from their citizens but fail to deliver the sold products.”) (citation omitted).

<sup>46</sup> See, e.g., Joint Commenters letter at 2; CCIA comments at 6.

<sup>47</sup> See, e.g., Restoring Internet Freedom FCC-FTC Memorandum of Understanding (Dec. 14, 2017), [https://www.ftc.gov/system/files/documents/cooperation\\_agreements/fcc\\_fcc\\_mou\\_internet\\_freedom\\_order\\_1214\\_final\\_0.pdf](https://www.ftc.gov/system/files/documents/cooperation_agreements/fcc_fcc_mou_internet_freedom_order_1214_final_0.pdf); FCC-FTC Consumer Protection Memorandum of Understanding (Nov. 16, 2015), [https://www.ftc.gov/system/files/documents/cooperation\\_agreements/151116ftcfcc-mou.pdf](https://www.ftc.gov/system/files/documents/cooperation_agreements/151116ftcfcc-mou.pdf).

<sup>48</sup> CTA Petition at 12, n.40 (citing 47 CFR § 2.909).

<sup>49</sup> Under Section 2.909, the party to whom a grant of equipment certification is issued is responsible for the compliance of the equipment with the applicable standards. 47 CFR § 2.909(a). A party other than the grantee may manufacture the equipment covered by the grant, provided that the equipment bears the FCC Identifier (FCC ID) as set out in its authorization grant and that the original grantee maintains responsibility for equipment compliance. 47 CFR § 2.929(b). If equipment is modified subsequent to authorization, and no new authorization is obtained, the modifying party becomes responsible for compliance and must include a label noting that the equipment has been modified and providing contact information for the modifying party. 47 CFR § 2.909(d). These rules ensure that compliance responsibility is maintained throughout the design and manufacturing process for equipment.

non-compliant radiofrequency devices do not make their way to consumers and cause harm?

28. We do not propose to change Section 2.803(c)(2)(ii), as CTA suggested in its petition.<sup>50</sup> Section 2.803(c)(2)(ii) is a separate provision that allows limited marketing, in the form of sales, to a narrow class of specialized entities. Notably, it explicitly prohibits the offering for sale to other parties or to end users located in a residential environment. Our goal in proposing a narrow expansion of our exception to the marketing prohibition is to allow for conditional sales to the general public (which is also CTA's stated goal).<sup>51</sup> We do not believe it is necessary to change this portion of the rule to satisfy our discrete objective, and believe that doing so might actually eliminate an important avenue for limited marketing that exists outside the conditional sales contract context. We seek comment on this conclusion.

29. We further note that CTA proposed replacing this section with language that would allow manufacturers to enter into contracts for importation and preparatory activities prior to sale.<sup>52</sup> We do not believe that such activities constitute "marketing" that would be prohibited if not explicitly permitted under our conditional sales contract rule, but we seek comment from parties that may hold a different view.

30. Finally, we seek comment on the relative costs and benefits of our proposal to modify our marketing rule. Can the benefits of allowing conditional sales of radiofrequency devices be quantified in terms of cost savings to equipment developers and manufacturers? How would this rule change affect the development time for devices and how long it takes to get new innovative devices to market? How should conditional sales of goods and services pre-sold in other contexts inform the Commission's analysis of conditional sales for radiofrequency devices? We encourage commenters to provide data on how common conditional sales are and, to the extent possible, quantify the benefits such conditional sales yield for both industry and consumers. What would be the costs and benefits of expanding conditional sales beyond manufacturers to include a broader class of responsible parties? What would be the costs and benefits of our proposals for record keeping of authorized and unauthorized equipment? How often do crowd-funding campaigns, like those on Kickstarter and other platforms, result in technology products being delivered to consumers? What are the average refund rates for unsuccessful crowd-funding or pre-sale events featuring a technology product that is ultimately not brought to market?

## **B. Importation Rules**

31. We propose to modernize our rules to allow a limited number of radiofrequency devices subject to Certification to be imported into the United States prior to equipment authorization for pre-sale activities, including imaging, packaging, and delivery to retail locations. We would do this by adding a new condition under which limited quantities of radiofrequency devices are permitted to be imported.<sup>53</sup> We believe this proposal would allow device manufacturers to better prepare for new product launches while guarding against the proliferation of unauthorized and non-compliant devices that might increase the risk of causing harm to consumers or other radio operations.

32. Subpart K of Part 2 of our rules sets out the conditions under which radiofrequency devices may be imported into the United States.<sup>54</sup> These rules are designed to provide assurance that radiofrequency devices brought into the United States comply with the technical standards that the Commission has developed to minimize the potential for harm to consumers or other radio operations. These rules also recognize narrowly defined conditions where equipment that has not completed the Commission's equipment authorization process nevertheless may be imported under controlled

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<sup>50</sup> CTA Petition at 11.

<sup>51</sup> *Id.* at 6.

<sup>52</sup> CTA Petition at A-1.

<sup>53</sup> 47 CFR § 2.1204(a).

<sup>54</sup> See Part 2, subpart K of our rules. 47 CFR §§ 2.1201-1207.

circumstances, such as for compliance testing,<sup>55</sup> repair,<sup>56</sup> or use by the Federal government.<sup>57</sup>

33. To ensure that the Commission's rules provide opportunities for maximum innovation among developers and manufacturers and tangible benefits for American consumers, the Commission periodically examines its importation rules to assess whether they continue to represent the most appropriate way to ensure that radiofrequency devices brought into the United States comply with the Commission's technical standards. Most recently, the *2017 Equipment Authorization Order* modified our importation rules to double the number of radiofrequency devices allowed to be imported for demonstration purposes at a trade show, from 200 to 400 devices,<sup>58</sup> and to allow an individual to import up to three radiofrequency devices for the individual's own use,<sup>59</sup> provided those devices will not be sold or marketed. Together, those rule changes eliminated outdated or duplicative requirements and updated the rules to better reflect the way business is conducted today. We believe that we can continue this tradition by narrowly expanding our import condition rule.

34. In its petition, CTA urges the Commission to update our rules to add a condition that permits the importation of limited quantities of radiofrequency devices prior to authorization for pre-sale activities.<sup>60</sup> Such pre-sale activities would include imaging,<sup>61</sup> packaging,<sup>62</sup> and delivery of devices to retail locations, but "exclude the displaying of the device to consumers prior to equipment authorization."<sup>63</sup> Under the existing rules, the vast majority of imported equipment satisfies Section 2.1204's import conditions by having been issued an equipment authorization (or, for devices that do not require an equipment authorization, the devices comply with FCC technical administrative regulations).<sup>64</sup> The smaller number of radiofrequency devices that are brought into the country under the remaining conditions are done so for discrete purposes, such as the importation of up to 400 radiofrequency devices for demonstration at industry trade shows and up to 4,000 radiofrequency devices for testing and evaluation.<sup>65</sup> CTA does not ask us to expand or otherwise modify these existing provisions, but instead to add a new permissible import condition that would allow up to 4,000 radiofrequency devices to be imported prior to authorization for pre-sale activities.<sup>66</sup> CTA states that this additional provision is needed because our existing import conditions are too restrictive to support global product launch activities; as an example, it describes how the lag between when equipment authorization is received and when pre-sale activities can take place keeps consumers from being able to see and physically evaluate

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<sup>55</sup> 47 CFR § 2.1204(a)(3).

<sup>56</sup> 47 CFR § 2.1204(a)(8).

<sup>57</sup> 47 CFR § 2.1204(a)(6).

<sup>58</sup> *2017 Equipment Authorization Order*, 32 FCC Rcd at 8772-73, paras. 59-61; 47 CFR § 2.1204(a)(4).

<sup>59</sup> *Id.* at 8774-75, paras. 64-66. We also adopted non-substantive edits to Section 2.1204 that reflected the shifting of grants of Certification from the Commission to TCBS, *id.*, at 8767, para. 49, n.173, and we eliminated the list of example devices in Section 2.1202(a) that are excluded from our importation rules, *id.*, at 8773-74, paras. 62-63.

<sup>60</sup> CTA Petition at 12-15.

<sup>61</sup> CTA notes that "imaging means loading the devices with specific software to demonstrate specific features of the devices when displayed in a retail location." *Id.* at 12, n.42.

<sup>62</sup> CTA notes that "packaging means the box and the entire contents of a package in which the device is delivered for distribution, including in-box material." *Id.* at 12, n.43.

<sup>63</sup> *Id.* at 12, n.44.

<sup>64</sup> 47 CFR § 2.1204(a)(1)-(2).

<sup>65</sup> 47 CFR § 2.1204(a)(3)-(4). Both of these provisions explicitly require that such devices "not be offered for sale or marketed." *Id.*

<sup>66</sup> CTA Petition at 14, A-2.

new devices in a timely manner.<sup>67</sup>

35. All commenters who addressed this proposal from CTA were supportive. The coalition of radiofrequency device manufacturers and retailers urges the Commission to adopt this proposal, claiming it “would accelerate the speed to market, give greater flexibility to structuring supply chains, allow retailers to put devices on display and prepare store shelves quickly once authorization is received and, ultimately, benefit American consumers and the economy.”<sup>68</sup> Samsung claims this would help manufacturers cope with “unexpected delays in completing Commission certification, which could be caused by a variety of factors some of which have nothing to do with the actions of the manufacturer such as a government shutdown, major ports shutdown due to unrelated disputes, or a global event such as the COVID-19 pandemic.”<sup>69</sup> Industry groups and public interest groups also support this proposal.<sup>70</sup>

36. We believe that importation of a limited number of radiofrequency devices subject to Certification prior to authorization for pre-sale activities could provide substantial benefits to device manufacturers and retailers, operating in today’s marketplace that is characterized by out-of-country production of many radiofrequency devices, shortened product cycles, and the importance of quickly familiarizing consumers with new electronic devices. The proposed change would allow consumers to see and examine devices more quickly to allow them to make more timely purchase decisions and will assist sales associates who need to become familiar with the features associated with mobile 5G devices, Internet of Things devices, and augmented reality and virtual reality devices once those devices are Certified and may be operated. Facilitating an accelerated rollout of such devices is an important way we can maintain the United States’ global leadership in these industries.<sup>71</sup>

37. In proposing to modify our rules, we remain mindful that we must continue to protect against the possibility of unauthorized devices making their way to consumers and causing harm to consumers or other radio operations. Our proposal is designed to support a narrow objective and incorporates defined limitations and therefore is consistent with other existing importation conditions that allow for the importation of otherwise-unauthorized devices for specific purposes under appropriate conditions and controls. As such, we do not believe that it would fundamentally change the general importation practice, in which the overwhelming majority of radiofrequency devices that are imported will satisfy the condition that an equipment authorization has already been obtained.<sup>72</sup> We seek comment on this observation.

38. As a threshold matter, we note the limited scope of our proposal. Our rule would only apply to devices subject to Certification. These devices are subject to an authorization process that involves rigorous review by a TCB and listing in a Commission database, which should make importers well equipped to satisfy the controls we place in the proposed importation condition.<sup>73</sup> By contrast,

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<sup>67</sup> CTA Petition at i.

<sup>68</sup> Device Coalition letter at 2-3.

<sup>69</sup> Samsung comments at 7 (citations omitted).

<sup>70</sup> See, e.g., Lincoln Network letter at 2-3; Joint Commenters letter at 1-2; Comments of Telecomms. Indus. Assoc., RM-11857, at 2 (July 9, 2020) (TIA comments); CCIA comments at 4-5; CTIA comments at 3-4; CompTIA comments at 3-4; RACA comments at 2; TechFreedom comments at 3-4; Public Interest joint reply comments at 3-4; ITIF reply comments at 2.

<sup>71</sup> See, e.g., Lincoln Network letter at 1-2; Joint Commenters letter at 2; CCIA comments at 2-3; CTIA comments at 3; Samsung comments at 2; CTA reply comments at 1; RACA comments at 2; Device Coalition letter at 1.

<sup>72</sup> 47 CFR § 2.1204(a)(1).

<sup>73</sup> It is also consistent with the CTA Petition, which refers to actions that are associated with Certification. For example, CTA refers to the “official grant of authorization” and CTA’s proposed rule modification allows for the use of the expected FCC ID. CTA Petition at i. and A-3. See also Samsung comments at 7 (referring to “Commission certification”).

because SDoC is a self-certification process that gives the manufacturer substantially greater control over when a product meets our equipment authorization requirements, we see no compelling reason to provide for pre-authorization importation of such devices. We further note that the proposed rule would only allow for specified pre-sale activities, which explicitly exclude marketing and operation. Is this definition of pre-sale activities appropriate? Would this definition of pre-sale activities conflict with other rules, including the proposed rule discussed above to allow marketing of devices prior to authorization? Are there other pre-sale activities that should be included or excluded? Should operation by a limited class of parties (such as agents of the manufacturer) be allowed or prohibited, and if allowed, under what circumstances and how should those parties be defined?

39. CTA has identified specific conditions that it claims will allow the Commission to “expand its importation rules with confidence that devices will not be marketed to and operated by the public and end users until after a device has received a grant of authorization.”<sup>74</sup> Commenters agree that the Commission’s existing rules combined with the safeguards suggested by CTA will adequately protect consumers from harm. Samsung believes the safeguards recommended by CTA “are more than sufficient and are consistent with previous Commission actions that provided additional opportunities for acquainting the public with radiofrequency devices without compromising the equipment authorization regime or increasing the risk of harmful interference.”<sup>75</sup> CompTIA describes these safeguards as “sensible” and notes its support.<sup>76</sup>

40. We agree with these parties that we will need to provide additional safeguards as part of any new import condition and seek comment on the specific controls that we should incorporate into our final rules. We first seek comment on the numerical limitation CTA has proposed, and then ask about the four conditions it identifies: (1) Manufacturers must have a reasonable basis to believe authorization will be granted within 30 days of importation; (2) Devices must have temporary labels indicating that they cannot be displayed or advertised prior to authorization; (3) Devices must remain under the ownership of the manufacturers and possession, alone, would be transferred prior to authorization; and (4) Manufacturers must have processes in place to retrieve the equipment from retailers in the event that authorization is denied.<sup>77</sup> We also ask whether there are conditions we should adopt in addition to or instead of those CTA has identified. In particular, we encourage commenters to identify the specific requirements that would be the most effective while minimizing potential burdens.

41. CTA asks us to limit the number of radiofrequency devices that can be imported for pre-sale activities to 4,000. CTA proposes this limit on devices as it is consistent with the existing importation limit for compliance testing.<sup>78</sup> This limit would apply nationwide, not for each shipment of devices imported into the United States. Are specific controls needed to ensure manufacturers cannot exceed this limit by, for example, making separate 4,000-unit shipments through multiple ports of entry? If so, what controls would be needed? The proposed rule would also codify a method to exceed this number by providing for written approval to be obtained from the Commission’s Chief Engineer.<sup>79</sup> Should this written approval be made public? Does this numerical limitation, with a provision for allowing a greater number of devices, provide a suitable balance between meeting manufacturer and importer needs and limiting the number of unauthorized devices that may be imported under this condition? We note that Samsung argues for a higher limit, claiming that “during a rollout of flagship mobile devices, the proposed 4,000 device threshold is insufficient to provide enough models to each

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<sup>74</sup> CTA Petition at 15.

<sup>75</sup> Samsung comments at 8.

<sup>76</sup> CompTIA comments at 4.

<sup>77</sup> CTA Petition at 14.

<sup>78</sup> CTA Petition at 14. *See also* 47 CFR §2.1204(a)(3).

<sup>79</sup> The existing rules already contain this same method for requesting devices in excess of 4,000. *See* 47 CFR § 2.1204(a)(3)(i).

retail store located in the United States.”<sup>80</sup> CompTIA also supports a number larger than 4,000.<sup>81</sup> For these commenters, would 8,000 be sufficient? Alternately, given that thousands of devices are granted Certification each year, would a smaller limit result in a meaningful reduction in the risk of unauthorized devices being imported? Commenters addressing this matter should provide specific data to justify their suggested limit.

42. We seek comment on CTA’s suggestion that we implement a requirement that manufacturers must have a reasonable basis to believe authorization will be granted within 30 days of importation. Is 30 days an appropriate length of time? Would a longer or shorter timeline for obtaining authorization be appropriate here?

43. What does it mean for a manufacturer to have a reasonable basis to believe authorization will be obtained? Are there particular elements that must make up such determination? For example, would a belief that authorization will be obtained within 30 days be reasonable only if a manufacturer has filed an equipment authorization application with a TCB? Are achieving or performing other milestones in the authorization process appropriate measures of reasonableness? Should the manufacturer be required to request permission in the context of the authorization application process to import devices under this proposed rule? Do existing Commission processes, like pre-approval guidance or waiver requests, provide manufacturers with a sufficient general indication of timeframe to allow ascertainment of “reasonable belief” under this proposed rule? Should the novelty of a device or its features factor into whether an expectation of approval is reasonable? Should the Commission consider the past experience of the manufacturer in obtaining equipment Certifications as relevant to this determination? Would accounting for past experience, or lack thereof, discourage small businesses or new entrants from taking advantage of this new rule?

44. Should we require the manufacturer to document, and provide such documentation to the Commission upon request, the basis for its determination of reasonableness prior to importing the devices? If so, how long should the manufacturer be required to retain this documentation? To the extent that such documentation may be important for compliance and enforcement purposes, we propose that manufacturers be required to maintain this information for five years and provide it to the Commission upon request. Would a longer or shorter timeframe be more appropriate for retaining this information?<sup>82</sup> If so, how long should the information be retained and why? Finally, what consequences would be suitable for cases where the manufacturer’s basis to believe authorization will be obtained cannot be considered “reasonable,” or if authorization is not obtained within 30 days (or another time period, if that would be more appropriate)?

45. CTA’s proposal would also require use of a temporary device label. We seek comment on how such a requirement would be implemented and the benefits it could provide. What information should be required on these labels? CTA notes that the *2017 Equipment Authorization Order* implemented a temporary labeling requirement for devices with electronic labeling information that “cannot reasonably be expected to be viewable when devices are packaged and encased in shipping materials and are uncharged or powered down.”<sup>83</sup> Here, CTA suggests that the temporary labels “would similarly provide notice of the Commission’s rules—namely, that devices cannot be displayed, operated, or sold prior to FCC authorization.”<sup>84</sup> Should we require use of the specific language CTA identifies? Would such information be appropriate and adequate in this case? Should other information be required

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<sup>80</sup> Samsung comments at 8-9. It identifies this number as one to two models per store. *Id.*

<sup>81</sup> CompTIA comments at 4.

<sup>82</sup> We note that Rule 2.1203 requires a manufacturer to maintain for one year the documentation for how it determined that the radiofrequency devices being imported comply with one of the conditions in Rule 2.1204. 47 CFR § 2.1203.

<sup>83</sup> CTA Petition at 14-15 (citing *2017 Equipment Authorization Order*, at 8765-66, para. 46).

<sup>84</sup> *Id.* at 15.

here, such as the model numbers or expected FCC IDs associated with the devices? Should the temporary labels indicate the administrative, civil, and criminal penalties that can result from unauthorized operation of radiofrequency devices? Should the manufacturer or importer be required to have a designated point of contact indicated on the temporary labels and, if so, should we require the contact to be United States-based? We also seek comment on whether the temporary label must plainly state all of the required information on its face or if the use of a URL or other “pointer” should be allowed (and, if so, whether all of the required information should be allowed to be conveyed in that manner)?

46. We also seek comment on whether a labeling requirement should be used to assist consumers and other parties in determining whether the device has become Certified. Should the label contain a URL or other machine-readable “pointer” that enables retailers and end-users to verify the status of a device’s authorization? If so, would the label need to be temporary? Are other labels or import documentation necessary to allow third parties to identify whether there is a legitimate attempt to obtain authorization for the otherwise unauthorized devices? Should, for example, manufacturers be required to maintain a database or other public-facing way to confirm that an authorization is being sought for the device? Would a temporary label make it easier for bad actors to sell unauthorized devices by falsely claiming their devices have received or are in the process of receiving authorization?<sup>85</sup> Finally, if temporary labels include a URL or other pointer to an online website or database where the equipment’s authorization status can be verified, would that reduce the chances of bad actors using such labels for fraudulent purposes?

47. We seek comment on CTA’s proposal that we require manufacturers to maintain legal ownership of devices, even after transferring control of them to retailers. How would such a requirement operate in practice? Is the language proposed in Appendix A sufficient to implement this proposal? If manufacturers retain legal ownership of devices after they have left their direct control, would that provide them with adequate incentive and means to ensure that their devices do not cause harm to consumers or other radio operations? Would they be able to help remediate any harm that may occur? What are the primary benefits of codifying such a requirement? Would this make it easier for manufacturers to identify and recall radiofrequency devices from retailers in the event that equipment authorization is not obtained? Would this condition be more burdensome for small manufacturers than large manufacturers? How would this condition impact device retailers? Would it impact small retailers differently than large retailers? Should online retailers and brick-and-mortar retailers be treated differently? Should foreign-based manufacturers be treated differently? Are manufacturers the correct entity here or is there a larger universe of entities to which the ownership provision should apply, such as importers or sellers? Should manufacturers be required to maintain a public-facing database of imports made under this proposed rule? If so, what information should be included in such a database? Should manufacturers otherwise be responsible for unauthorized devices imported under this proposed rule that are operated illegally?

48. The fourth safeguard CTA suggests is to require manufacturers to have processes in place to retrieve the equipment from retailers in the event that authorization is denied. How should such processes be structured? For example, should the Commission specify these processes or allow manufacturers to develop their own processes, provided they are effective in retrieving equipment from retailers in the event that authorization is denied? Should we require manufacturers to maintain specific detailed records of which devices are supplied to which locations and/or prepare a formal plan prior to importation? If so, should we require that these records be supplied to the Commission or posted to the manufacturer’s website or the website of a relevant industry trade group (such as CTA)? How long should we require these records to be maintained? As with other similar records, should we require that such records be made available to the Commission upon request (such as before devices may be imported

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<sup>85</sup> See, e.g., Letter from Michael O’Rielly, Commissioner, FCC, to Devin Wenig, President, eBay, and Jeff Bezos, Chairman, Amazon, at 1 (May 25, 2018), <https://docs.fcc.gov/public/attachments/DOC-350985A1.pdf> (noting that bad actors have fraudulently affixed the FCC logo onto unauthorized devices before selling them on online marketplaces).

for pre-sale activities or in the event that a device recall becomes necessary)?

49. If the manufacturer is unable to obtain authorization for its equipment, should the Commission require the manufacturer to provide the Commission a report detailing its plan for retrieving equipment along with status reports updating the progress of that endeavor? If so, what information should be included in this report? Should we require manufacturers to report the model and serial numbers of all devices that are retrieved? When should a status report be required? How long should manufacturers have to complete the device retrieval process? Would 14 days be appropriate? Should manufacturers have more or less time to complete the retrieval process?

50. We recognize that there are additional conditions or approaches beyond those identified by CTA that could be appropriate to meet our objectives of adding a new permissible import condition while minimizing the potential for unauthorized and non-compliant radiofrequency devices to cause harm to consumers or other radio operations. Would it be sufficient for us to adopt only those safeguards suggested by CTA? Are there other requirements that we should consider incorporating into our final rule? For example, in addition to or in lieu of a strict numerical importation limit, should we differentiate based on the nature or type of device? Should we exempt certain classes of equipment or equipment that are intended to operate in certain bands due to greater risk of harmful interference or harm to persons, such as U-NII devices, medical devices, or devices designed to operate exclusively in public safety bands? If so, commenters should be specific as to what equipment or bands should be excluded. Further, we recognize that certain types of devices are used to ensure the safety of life and property on board ships and aircraft.<sup>86</sup> We seek comment on whether there is any reason to exclude those types of devices from this proposal. We also note that certain rules in Parts 80, 87, and 95 may need to be adjusted for purposes of streamlining the proposed framework.<sup>87</sup> We propose to revise Section 95.391 to ensure that our rules are consistent with the proposed framework.<sup>88</sup> We seek comment on whether other rules, such as Sections 80.1061, 87.147, and 95.2991, should also be revised or clarified.<sup>89</sup>

51. In a similar vein, some commenters have suggested that we could require a remote-shutdown feature for all radiofrequency devices imported for pre-sale activities.<sup>90</sup> We note that under our experimental licensing rules, there are specific situations in which we require licensees to either recall or disable devices at the end of an experiment.<sup>91</sup> Are there sufficient similarities between experiments conducted under those rules and the importation of devices that we consider here to allow devices to be disabled in lieu of being recalled? We seek comment on whether the Commission should consider such a requirement for radiofrequency devices that are imported prior to Certification under this proposed rule, whether it should apply to all types of radiofrequency devices or only radiofrequency devices that operate in accordance with particular Commission rule parts, and what the relative benefits and risks would be of allowing this option.

52. Finally, we note that the proposed rule restricts devices from being displayed, offered for sale, or marketed to consumers, but places no limitations on where they may be sent after importation. Do parties believe that this would present unwarranted risks for adequate control of the devices prior to authorization? If so, should we require that the devices be kept only at specific locations, such as

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<sup>86</sup> For example, MSLDs and PLBs are used to alert search and rescue services in the event of an emergency on ships and aircraft.

<sup>87</sup> See, e.g., 47 CFR §§ 80.1061, 87.147, and 95.2991.

<sup>88</sup> See 47 CFR § 95.391 (“No person shall manufacture, import, sell, or offer for sale non-certified equipment for the Personal Radio Services.”).

<sup>89</sup> See 47 CFR §§ 80.1061, 87.147, and 95.2991.

<sup>90</sup> See, e.g., Public Interest joint reply comments at 7 (suggesting the Commission consider requiring a remote-shutdown feature).

<sup>91</sup> 47 CFR § 5.704(b).



distribution facilities, prior to authorization?

53. Because our proposed rule modification would allow radiofrequency devices that are not yet Certified to be imported, we seek comment on how manufacturers intend to ensure that these devices comply with our labeling and disclosure requirements once authorization is obtained.<sup>92</sup> Our proposed rule incorporates CTA's suggestion that devices imported pursuant to this Section "may include the expected FCC ID if obscured by the temporary label."<sup>93</sup> We seek comment on whether this would be an effective way to ensure that a device complies with our rules once it receives authorization. Would there be situations where manufacturers would have to physically recall devices to ensure that they comply with the labeling and disclosure requirements associated with our equipment authorization rules? How could we be confident that manufacturers take all necessary steps to ensure that devices imported prior to equipment authorization comply with our labeling and disclosure rules? What impact would the use of electronic labeling have on this matter?

54. How should enforcement of this rule be structured? What penalties would be appropriate for violating any of the conditions attached to this rule? For example, should a manufacturer be barred from availing itself of this exception for future importations if it fails to obtain authorization for a radiofrequency device imported under this proposed rule? Or if it fails to comply with any of the labeling or reporting requirements we might ultimately adopt? Should a manufacturer be barred from availing itself of this exception for future importations only if it fails to retrieve all devices after failing to obtain authorization for a radiofrequency device imported under this proposed rule? Should the manufacturer be subject to a penalty under Section 503 of the Act, and if so, what should be the base forfeiture for such violations? Are there other ways we should structure enforcement where the manufacturer fails to retrieve equipment in the event an authorization is denied?

55. We seek comment on this importation proposal and the likely costs and benefits associated with expanding the provisions under which radiofrequency devices may be imported to support pre-sale activities. Can these benefits be quantified in terms of cost savings to device manufacturers? How would this rule affect the time it takes to get new innovative devices to market? Would importing devices for pre-sale activities generate any other benefits or risks for industry or consumers? We encourage commenters to provide data to quantify these benefits and risks. In addition, what would be the costs to firms in following the safeguards discussed above, such as the use of temporary device labels and maintaining processes to retrieve equipment from retailers if authorization is denied? If commenters have alternative proposals to reform the importation rules, what would be the benefits and costs?

56. We note that our equipment authorization proceeding in ET Docket 15-170, which also asked questions about importation, remains open and active.<sup>94</sup> We tentatively conclude that the marketing and importation changes we propose in this Notice of Proposed Rulemaking are sufficiently discrete that we could act on them independently. We nevertheless seek comment on how they might interrelate with any open equipment authorization matters we have under consideration.

57. Finally, we continue to recognize that other agencies play an important role in importation matters. For example, the Customs and Border Protection has authority over all goods entering the United States and is charged with facilitating lawful international trade,<sup>95</sup> and has a

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<sup>92</sup> See, e.g., 47 CFR § 2.925 (specifying that equipment covered in an application for equipment authorization shall bear a label listing the FCC Identifier consisting of the two elements in the exact order specified in § 2.926).

<sup>93</sup> CTA Petition at A-3.

<sup>94</sup> See, e.g., Letter from M. Anne Swanson and Timothy J. Cooney on behalf of Garmin International, Inc. to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 15-170 (filed Nov. 12, 2019).

<sup>95</sup> See U.S. Customs & Border Protection, *About CBP*, <https://www.cbp.gov/about> (last visited Nov. 2, 2020).

longstanding cooperative relationship with the Commission.<sup>96</sup> Are there specific actions the Commission can take in working with Customs and Border Protection to help ensure that radiofrequency devices imported for pre-sale activities prior to authorization comply with all applicable conditions? Are there other agencies we should work with to ensure that our importation rules operate in an effective and efficient manner? Are there other agencies that have addressed importation issues related to products subject to approval that would provide a model for achieving our objectives?

#### IV. PROCEDURAL MATTERS

58. *Initial Regulatory Flexibility Act Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>97</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) relating to this NPRM. The IRFA is set forth in Appendix B. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the NPRM. The Commission will send a copy of the NPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>98</sup> In addition, the NPRM and IRFA (or summaries thereof) will be published in the *Federal Register*.<sup>99</sup>

59. *Paperwork Reduction Act.* This document may result in new or revised information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13 (44 U.S.C. §§ 3501 through 3520). If the Commission adopts any new or revised information collection requirement, the Commission will publish a notice in the *Federal Register* inviting the public to comment on the requirement, as required by the Paperwork Reduction Act of 1995, Public Law 104-13 (44 U.S.C. §§ 3501-3520). In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4), the Commission will seek specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

60. *Filing Requirements—Comments and Replies.* Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs>.
- Paper Filers:
  - Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
  - Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.
  - Effective March 19, 2020, and until further notice, the Commission no longer accepts any

<sup>96</sup> See, e.g., *2017 Equipment Authorization Order*, at 8767-70, paras. 50-54 (detailing cooperation between FCC and Customs and Border Protection on device importation).

<sup>97</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 *et seq.*, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996). The SBREFA was enacted as Title II of the Contract with America Advancement Act of 1996 (CWAAA).

<sup>98</sup> See 5 U.S.C. § 603(a).

<sup>99</sup> *Id.*

hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020), <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street, NE, Washington, DC 20554.

61. *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the FCC's Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

62. *Ex Parte Rules—Permit-But-Disclose.* This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. *Ex parte* presentations are permissible if disclosed in accordance with Commission rules, except during the Sunshine Agenda period when presentations, *ex parte* or otherwise, are generally prohibited. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. Memoranda must contain a summary of the substance of the *ex parte* presentation and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with section 1.1206(b) of the rules. In proceedings governed by section 1.49(f) of the rules or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

63. *Additional Information.* For additional information on this Notice of Proposed Rulemaking, contact Brian Butler at (202) 418-2702 or [Brian.Butler@fcc.gov](mailto:Brian.Butler@fcc.gov), Office of Engineering and Technology, Spectrum Policy Branch; or Thomas Struble at (202) 418-2470 or [Thomas.Struble@fcc.gov](mailto:Thomas.Struble@fcc.gov), Office of Engineering and Technology, Office of the Chief Engineer.

## V. ORDERING CLAUSES

64. **IT IS ORDERED** that, pursuant to Sections 4(i), 301, 302, 303(c), 303(f), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 302a, 303(c), 303(f), and 303(r), this Notice of Proposed Rulemaking **IS ADOPTED** as set forth above.

65. **IT IS ORDERED** that the Petition for Rulemaking filed by the Consumer Technology Association **IS GRANTED** to the extent described herein. The petition for waiver filed in the alternative is **DENIED**.

66. **IT IS FURTHER ORDERED** that the Commission's Consumer & Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

## APPENDIX A

## Proposed Rules

For the reasons set forth in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 2 as follows:

**Part 2 — FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS**

1. The authority citation for part 2 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.803(c)(2)(i) is amended by revising paragraph (c)(2)(i) to read as follows:

**§ 2.803 Marketing of radio frequency devices prior to equipment authorization.**

\* \* \* \* \*

(c) \* \* \*

(2) \* \* \*

(i) Conditional sales contracts (including agreements to produce new devices manufactured in accordance with designated specifications), and advertisements for such sales, are permitted between manufacturers and potential customers provided that the prospective buyer is advised at the time of marketing, through a prominent disclosure, that the equipment is subject to the FCC rules and delivery to the buyer or to centers of distribution is conditional upon a determination that the equipment complies with the applicable equipment authorization and technical requirements. Delivery to customers of equipment subject to FCC rules prior to obtaining the applicable equipment authorization and complying with the applicable technical requirements is prohibited.

\* \* \* \* \*

3. Section 2.1204 is amended by adding paragraph (a)(11) to read as follows:

**§ 2.1204 Import Conditions.**

(a) \* \* \*

\* \* \* \* \*

(11) The radio frequency device is subject to Certification and is being imported in quantities of 4,000 or fewer units for pre-sale activity. Pre-sale activity includes packaging and delivering devices to retail locations, as well as loading devices with specific software to demonstrate specific features of the devices when displayed at retail locations. The devices will not be displayed, operated, offered for sale, marketed to consumers, or sold until proper equipment authorization has been obtained.

(i) The Chief, Office of Engineering and Technology, may approve importation of a greater number of units in a manner otherwise consistent with this paragraph (11) in response to a specific request;

(ii) This exception is only available to manufacturers for radiofrequency devices who have a reasonable belief that authorization will be granted within 30 days of importation;

(iii) Each device imported under this exception must contain a temporary removable label stating:

“This device cannot be displayed, operated, offered for sale, marketed to consumers, or sold until FCC equipment authorization has been granted. Under penalty of law, this label may not be removed prior to the grant of FCC authorization.”

(iv) Notwithstanding § 2.926, radiofrequency devices imported pursuant to this paragraph (11) may include the expected FCC ID if obscured by the temporary label described in this section or, in the case of electronic displays, if it cannot be viewed prior to authorization.

(v) The radiofrequency devices remain under legal ownership of the device manufacturer, and only possession of the device is transferred prior to authorization. Manufacturers must have processes in place to retrieve the equipment in the event that authorization is not received.

(vi) Manufacturers must maintain, for a period of sixty (60) months, records identifying the recipient of devices imported for pre-sale activities. Such records must identify the device name and product identifier, the quantity shipped, the date on which the device authorization was sought, the expected FCC ID number, and the identity of the recipient, including address and telephone number. The manufacturer must provide records maintained under this paragraph (vi) upon the request of Commission personnel.

#### **Part 95 — PERSONAL RADIO SERVICES**

1. The authority citation for part 95 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 307, unless otherwise noted.

2. Section 95.391 is revised to read as follows:

#### **§ 95.391 Manufacturing, importation, and sales of non-certified equipment prohibited.**

No person shall manufacture, import, sell or offer for sale non-certified equipment for the Personal Radio Services except as provided for in § 2.803(c)(2)(i) of this chapter. *See* § 302(b) of the Communications Act (47 U.S.C. 302a(b)). *See also* part 2, subpart I (§ 2.801 et seq.) of this chapter for rules governing marketing of radiofrequency devices.

## APPENDIX B

## Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this *Allowing Earlier Equipment Marketing and Importation Opportunities*, Notice of Proposed Rulemaking (Notice). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided in the item. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).<sup>2</sup> In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.<sup>3</sup>

**A. Need for, and Objectives of, the Proposed Rules**

2. In June 2020, the Consumer Technology Association (CTA) filed a petition for rulemaking seeking modification of the Commission's rules pertaining to the marketing and importation of radiofrequency (RF) devices. CTA argues that those rules are out-of-date and may hinder development and deployment of state-of-the-art RF products and services. CTA therefore recommends that the Commission update its RF marketing and importation rules.

3. In this Notice, we propose to modernize the Commission's marketing rules to permit conditional sales of RF devices to consumers prior to equipment authorization, provided that those devices are not delivered to consumers until equipment authorization has been obtained. We also propose to modernize the Commission's importation rules to permit importation of a limited number of RF devices for certain pre-sale activities prior to the devices obtaining a certification. Pre-sale activities would include packaging and shipping devices to retail locations, as well as loading devices with software to demonstrate specific features and capabilities of the devices. The Notice seeks comment on conditions to ensure that RF devices comply with this new importation provision prior to obtaining equipment authorization.

**B. Legal Basis**

4. The proposed action is taken under authority found in sections 4(i), 301, 302(a), 303(c), 303(f), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 302(a), 303(c), 303(f) and 303(r); and section 1.411 of the Commission's Rules, 47 CFR § 1.411.

**C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply**

5. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.<sup>4</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>5</sup> In addition, the term "small business" has the

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> See 5 U.S.C. § 603(a).

<sup>3</sup> See *id.*

<sup>4</sup> See 5 U.S.C. § 603(b)(3).

<sup>5</sup> 5 U.S.C. § 601(6).

same meaning as the term “small business concern” under the Small Business Act.<sup>6</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>7</sup>

6. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>8</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA’s) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>9</sup> These types of small businesses represent 99.9% of all businesses in the United States, which translates to 30.7 million businesses.<sup>10</sup>

7. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>11</sup> The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.<sup>12</sup> Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.<sup>13</sup>

8. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>14</sup> U.S. Census Bureau data from the 2017 Census

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<sup>6</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>7</sup> 15 U.S.C. § 632.

<sup>8</sup> See 5 U.S.C. § 601(3)-(6).

<sup>9</sup> See SBA, Office of Advocacy, “What’s New With Small Business?” (Sept. 2019), <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf>.

<sup>10</sup> *Id.*

<sup>11</sup> 5 U.S.C. § 601(4).

<sup>12</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,” <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

<sup>13</sup> See Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-EO-BMF>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>14</sup> 5 U.S.C. § 601(5).



of Governments<sup>15</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>16</sup> Of this number there were 36,931 general purpose governments (county,<sup>17</sup> municipal and town or township<sup>18</sup>) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts<sup>19</sup> with enrollment populations of less than 50,000.<sup>20</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>21</sup>

9. *Radio Frequency Equipment Manufacturers (RF Manufacturers)*. Neither the Commission nor the SBA has developed a small business size standard applicable to Radio Frequency Equipment Manufacturers (RF Manufacturers). There are several analogous SBA small entity categories applicable to RF Manufacturers—Fixed Microwave Services, Other Communications Equipment Manufacturing, and Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. A description of these small entity categories and the small business size standards under the SBA rules are detailed below.

10. *Fixed Microwave Services*. Microwave services include common carrier,<sup>22</sup> private-operational fixed,<sup>23</sup> and broadcast auxiliary radio services.<sup>24</sup> They also include the Upper Microwave

<sup>15</sup> See 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7.” See also Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>16</sup> See U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes Local Governments by Type and State\_2017.

<sup>17</sup> See *id.* at Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>18</sup> See *id.* at Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>19</sup> See *id.* at Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes Special Purpose Local Governments by State Census Years 1942 to 2017.

<sup>20</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>21</sup> This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

<sup>22</sup> See 47 CFR part 101, subparts C and I.

<sup>23</sup> See 47 CFR part 101, subparts C and H.

<sup>24</sup> Auxiliary Microwave Service is governed by part 74 of title 47 of the Commission’s rules. See 47 CFR part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between

(continued...)

Flexible Use Service,<sup>25</sup> Millimeter Wave Service,<sup>26</sup> Local Multipoint Distribution Service (LMDS),<sup>27</sup> the Digital Electronic Message Service (DEMS),<sup>28</sup> and the 24 GHz Service,<sup>29</sup> where licensees can choose between common carrier and non-common carrier status.<sup>30</sup> There are approximately 66,680 common carrier fixed licensees, 69,360 private and public safety operational-fixed licensees, 20,150 broadcast auxiliary radio licensees, 411 LMDS licenses, 33 24 GHz DEMS licenses, 777 39 GHz licenses, and five 24 GHz licenses, and 467 Millimeter Wave licenses in the microwave services.<sup>31</sup> The Commission has not yet defined a small business with respect to microwave services. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite)<sup>32</sup> and the appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>33</sup> For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.<sup>34</sup> Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.<sup>35</sup> Thus, under this SBA category and the associated size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

11. The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 36,708 common carrier fixed licensees and up to 59,291 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies discussed herein. We note, however, that the microwave fixed licensee category includes some large entities.

12. *Other Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).<sup>36</sup> Examples of such manufacturing include fire detection and alarm systems manufacturing, Intercom systems and

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two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

<sup>25</sup> See 47 CFR part 30.

<sup>26</sup> See 47 CFR part 101, subpart Q.

<sup>27</sup> See 47 CFR part 101, subpart L.

<sup>28</sup> See 47 CFR part 101, subpart G.

<sup>29</sup> See *id.*

<sup>30</sup> See 47 CFR §§ 101.533, 101.1017.

<sup>31</sup> These statistics are based on a review of the Universal Licensing System on September 22, 2015.

<sup>32</sup> See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

<sup>33</sup> See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

<sup>34</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series, Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, [https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012\\_EC1251SSSZ5&hidePreview=false&vintage=2012](https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012_EC1251SSSZ5&hidePreview=false&vintage=2012).

<sup>35</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>36</sup> See U.S. Census Bureau, *2017 NAICS Definitions*, "334290 Other Communications Equipment Manufacturing," <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=334290&search=2017+NAICS+Search&search=2017>.

equipment manufacturing, and signals (e.g., highway, pedestrian, railway, traffic) manufacturing.<sup>37</sup> The SBA has established a size standard for this industry as all such firms having 750 or fewer employees.<sup>38</sup> U.S. Census Bureau data for 2012 show that 383 establishments operated in that year.<sup>39</sup> Of that number, 379 operated with fewer than 500 employees and 4 had 500 to 999 employees.<sup>40</sup> Based on this data, we conclude that the majority of Other Communications Equipment Manufacturers are small.

13. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.<sup>41</sup> Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.<sup>42</sup> The SBA has established a size standard for this industry of 1,250 employees or less.<sup>43</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>44</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>45</sup> Based on this data, we conclude that a majority of manufacturers in this industry are small.

#### **D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

14. The Notice proposes rules that may affect reporting, recordkeeping, and other compliance requirements for small entities. Regarding marketing of RF devices, the Notice would require that the seller of a conditionally-purchased RF device advise the conditional purchaser that the device is subject to FCC rules, and that delivery of the device to the purchaser is contingent upon device compliance with applicable FCC equipment authorization and technical requirements. Regarding importation of RF devices into the United States prior to equipment authorization for pre-sale activities—including imaging, packaging, and delivery to retail locations—the Notice would require that each imported RF device display a label stating that it cannot be marketed to consumers or sold prior to proper FCC equipment authorization being obtained, and would further require that importing manufacturers have processes in place to retrieve any equipment transferred to a conditional purchaser, in the event that such authorization

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<sup>37</sup> *Id.*

<sup>38</sup> See 13 CFR § 121.201, NAICS Code 334290.

<sup>39</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334290, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334290&tid=ECNSIZE2012.EC1231SG2&hidePreview=false&vintage=2012>.

<sup>40</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>41</sup> See U.S. Census Bureau, *2017 NAICS Definition*, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing,” <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=334220&search=2017>.

<sup>42</sup> *Id.*

<sup>43</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>44</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

<sup>45</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

is denied by the FCC. Moreover, importing manufacturers would be required to maintain, for a period of 60 months, records identifying the recipients of RF devices imported for pre-sale activities.

15. The Notice also requests comment on a number of issues that could impact reporting, recordkeeping, and other compliance requirements for small entities. For example, the Notice requests comment on whether particular recordkeeping requirements should be imposed on RF manufacturers so that RF equipment that is conditionally sold can be accounted for if equipment authorization is ultimately not granted or enforcement action needs to be taken, and—if such recordkeeping requirements are imposed—the period of time that manufacturers should be required to retain those records and provide them to the FCC upon request. Additionally, the Notice requests comment on whether a manufacturer that imports an RF device should be required to document (and provide such documentation to the FCC upon request) the basis for its belief that the FCC will authorize that device.

**E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

16. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>46</sup>

17. The proposed rules set forth in the Notice are minimal, and we believe would significantly assist RF equipment manufacturers, some of which may be small entities, to market and import RF equipment. Although we believe that our proposed rules are not unduly burdensome, we seek comment on a number of alternatives or supplements to those rules and procedures, such as whether we should require marketing disclosures at all or just some points of the pre-authorization process, whether we should require specific language or instead permit parties to choose how they word their disclosures, and whether all or only certain importation safeguards are needed.

18. We believe that the regulatory burdens that we have proposed are necessary in order to ensure that the public receives the benefits of innovative products and technologies in a prompt and efficient manner, and those burdens apply equally to large and small entities, thus without differential impact. We seek comment on any alternatives that will assist in reaching the best outcomes. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant impact on small entities.

**F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

19. None.

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<sup>46</sup> See 5 U.S.C. § 603(c).

**STATEMENT OF  
CHAIRMAN AJIT PAI**

Re: *Allowing Earlier Equipment Marketing and Importation Opportunities*, ET Docket No. 20-382, RM-11857.

As we enter the apex of the holiday season, I'm sure that—like me—you've seen a broad array of advertisements, displays, and listicles featuring the latest in technological gadgetry. From cutting-edge smartphones to fitness trackers to connected home appliances, this year, as in years past, the (virtual) shelves will dazzle the imagination with the latest must-have devices. It's peak nerd—and it's fantastic.

A closer look at many of these soon-to-be-gifted items may reveal an FCC logo or other identifier. That's because such devices are subject to the FCC's equipment authorization procedures and rules for marketing and operation of radio frequency devices. FCC rules regulate the sale, lease, importation, shipment, and distribution of any device which is capable of emitting radiofrequency energy. These regulations allow the FCC to carry out its responsibilities under the Communications Act and various international treaties.

However, as important as these rules are to protecting consumers, preventing harmful interference, and promoting efficient spectrum use, it's equally important that our rules keep pace with technological innovation and rapid product development. In that spirit, the Commission has regularly reviewed its equipment authorization regulations and eliminated or modernized those that are unnecessary or outdated. Most recently, in 2017 we streamlined our rules by combining two self-approval procedures into a simplified Supplier's Declaration of Conformity, codifying contemporary e-labeling practices, increasing the number of devices that may be imported for demonstration purposes at trade shows, and eliminating an outdated and burdensome filing requirement for imported devices, all while still ensuring proper accountability for these devices.

Today's Notice of Proposed Rulemaking builds upon prior reforms to our equipment authorization regulations. We propose two changes that, if adopted, would help to bring products to market faster. And we seek public input on each.

First, we propose to permit the conditional sale of radiofrequency devices to consumers before a device receives authorization. This rule change would extend to consumers the exception for conditional sales contracts that already exists for wholesalers and retailers, and would recognize the importance of pre-launch orders, crowdfunding, and other alternative marketing and distribution methods for bringing new equipment to market. However, it is important to note that, under this proposal, products would not actually be delivered to consumers unless and until the product receives an equipment authorization.

Second, we propose modernizing the Commission's rules to permit the importation, for pre-sale activities, of a small number of devices prior to them being certified. This would allow manufacturers to package and ship devices to retail locations for limited purposes, as well as load devices with software to demonstrate the device's features and capabilities.

And once again, our goal here is clear: We're aiming to reform our equipment authorization rules to benefit consumers without undermining the original purpose of these rules, namely, consumer protection.

I want to thank Commissioner O'Rielly for his vocal advocacy on this issue. And I want to thank the following FCC staff for their work on this item (they deserve more than coal in their holiday stockings for their efforts): From the Office of Engineering and Technology: Brian Butler, David Duarte, Ira Keltz, Siobahn Philemon, Jamison Prime, Ron Repasi, Tom Struble, Jim Szeliga, George Tannahill, Alfonso Tarditi, and Ron Williams; from the Consumer and Governmental Affairs Bureau: Ed Bartholme and Kim Wild; from the Enforcement Bureau: Daniela Arregui, Matt Gibson, Jason Koslofsky, Shannon Lipp, Jeremy Marcus, and Neal McNeil; from the Office of Economics and Analytics: Kate Matraves, Michelle Shaefer, and Patrick Sun; from the Office of General Counsel: David Horowitz, Doug Klein, and Bill

Richardson; and from the Wireless Telecommunications Bureau: Wes Platt.

**STATEMENT OF  
COMMISSIONER MICHAEL O'RIELLY**

Re: *Allowing Earlier Equipment Marketing and Importation Opportunities*, ET Docket No. 20-382, RM-11857.

I thank the Chairman for bringing this notice to fruition on today's agenda. It contains proposals for which I have strongly advocated, both publicly and in private conversations with the Chairman and his staff. While I will not be here to vote on future items that will bring it to completion, I will be cheering from the sidelines as the Commission makes these commonsense updates to its equipment authorization process, after reviewing the requisite record, of course. All indications are that, by early next year, this item's conclusion will result in a bipartisan FCC moment, endorsed by Capitol Hill, including by Senator Moran and Congresswoman Clarke.

As outlined in the presentations, the simple and justified proposed fixes to our equipment authorization process address two distinct problems. First, this item would eliminate the Commission's prohibition on pre-sale of electronic devices that have not received prior authorization, and second, it proposes to allow the importation of a set number of devices prior to final authorization.

Buying goods before they reach store shelves is an immensely popular practice, and many Americans are more than comfortable doing so in today's consumer marketplace. It's commonplace for there to be pre-sale periods for the next best-selling novel, movie to be streamed, car model, and gaming console, not to mention every concept that has appeared on Kickstarter. It is not a great leap to suggest that this practice can and should be permitted for communications devices, allowing consumers and manufacturers to benefit from a true pre-sale process that occurs before every regulatory "p" is crossed and "i" is dotted. The benefits of allowing this practice will be many: beyond getting technology into the hands of consumers faster, it will help innovators and manufacturers gauge interest in their products, providing insight into what resources will be needed, how many devices and products should be manufactured to cover demand, and whether there is even demand in the first place to justify a business case for the product.

As I highlighted in my June blog, developing new products is a story of feast or famine, especially when it comes to the latest electronic devices. Making it from the creative, research, and development phases to the final product stage is arduous, time consuming, and takes significant capital investment. And, for every Alexa, there are many 3D TVs that fail to win over the public. Anything that can reduce the costs of bringing innovation to the market, especially in the complex and competitive communications sector, should be pursued vigorously.

Appropriately, the item suggests certain safeguards and seeks comment on ways to ensure these products do not end up in the hands of consumers before the appropriate equipment authorization is received. While some of these ideas are more regulatory than I would like, I trust that the Commission will adopt only those that are absolutely necessary.

In addition to allowing for pre-sale of devices, today's notice similarly proposes to tweak the Commission's rules to allow a set number of devices to be imported prior to equipment authorization. Currently, a very limited number of devices can be imported for trade shows, testing, and other specific purposes, but not for retail display, advertising, and preparation for public sale. Expanding our importation rules will allow manufacturers to advertise and plan marketing campaigns, increasing the chances of a successful product rollout, even if the equipment authorization is delayed. As with the pre-sale of devices, similar safeguards can be put in place to protect against consumer harms or instances of harmful interference if the equipment authorization is not ultimately received. Further, this small exception will have a negligible effect on the overall importation of foreign devices and will not disadvantage the success of U.S.-made products in any way.

Admittedly, in the grand scheme of things, these may not seem to be the most significant or monumental proposals to be contemplated by this Commission. While I have certainly focused the bulk

of my FCC work on the most far-reaching decisions, I have also tackled less prominent matters like this one, which, despite its low-profile, would tremendously benefit consumers. It's therefore rewarding, and somewhat fitting, to bookend the first FCC item I led, e-labeling, with these proposals for fixing equipment authorization.

I request my colleagues' support on this item and help in finishing this proceeding.



**STATEMENT OF  
COMMISSIONER GEOFFREY STARKS**

Re: *Allowing Earlier Equipment Marketing and Importation Opportunities*, ET Docket No. 20-382, RM-11857.

This is a good commonsense proposal, and I look forward to the comments discussing how it should be implemented. Consumer expectations and the market for radiofrequency devices have evolved since the Commission first established its equipment marketing rules, and this NPRM proposes rule changes that update our policies to reflect those changes. But while we're updating our rules on these devices, it's appropriate to note another ongoing change regarding connected devices that also requires examination.

As I've noted before, the expansion of 5G technology will enable the interconnection of massive numbers of IoT devices. According to one study, the number of connected devices worldwide will increase from 9.1 billion in 2018 to more than 25 billion in 2025. Over 3 billion of these devices are expected to use wireless technology.<sup>47</sup> Networks of IoT devices could help reduce carbon emissions and waste, increase productivity, protect public safety, and generally enhance our way of life. At the same time, however, many of these devices originate overseas, including from adversary states like China. Thus, while we should recognize the potential advantages of these devices, we also must take measures to protect the privacy and security of our citizens.

The Commission and other policymakers need to engage on IoT security. Our critical infrastructure networks already contain these devices, and as governments and businesses incorporate smart technology into every aspect of our daily lives, the potential harm from a concerted attack will increase exponentially. Each device could be a potential entry point for a hostile actor to attack connecting networks.

More than four years ago, the world experienced the infamous Mirai cyberattack, in which hackers exploited vulnerabilities in connected devices like routers, surveillance cameras, and DVRs to launch coordinated DDoS attacks on web hosting service providers and journalists. The threat hasn't gone away. Earlier this month a technology news site found suspicious backdoors in affordable Chinese-made internet routers and Wi-Fi extenders sold at several major retailers that would allow an attacker to remotely control not only the devices, but also any devices connected to the same network. Further testing showed that these backdoors were not only potential threats, but that third parties were actively attempting to exploit them.<sup>48</sup>

Industry and government have taken some initial steps in this area. For example, several major telecom providers, tech companies and trade associations have formed a group to develop and advance industry consensus on baseline security capabilities for new devices.<sup>49</sup> The National Institute of Standards and Technology (NIST) has established its Cybersecurity for the Internet of Things program, which supports the development and application of standards, guidelines, and related tools to improve the cybersecurity of connected devices and the environments in which they are deployed.<sup>50</sup> And just last month, the Senate unanimously passed Senator Warner's IoT Cybersecurity Improvement Act, which,

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<sup>47</sup> See GSMA, *The GSMA Guide to the Internet of Things*, at 2 (Sept. 2018), available at <https://www.gsma.com/iot/wp-content/uploads/2018/09/4048-GSMA-IOT-Guide2018-WEB.pdf>.

<sup>48</sup> See "Walmart-exclusive router and others sold on Amazon & eBay contain hidden backdoors to control devices," Cybernews (Nov. 23, 2020), available at <https://cybernews.com/security/walmart-exclusive-routers-others-made-in-china-contain-backdoors-to-control-devices>.

<sup>49</sup> See Council for a Secure Digital Economy, "The C2 Consensus on IoT Device Security Baseline Capabilities" (Sept. 2019), available at [https://securingdigitaleconomy.org/wp-content/uploads/2019/09/CSDE\\_IoT-C2-Consensus-Report\\_FINAL.pdf](https://securingdigitaleconomy.org/wp-content/uploads/2019/09/CSDE_IoT-C2-Consensus-Report_FINAL.pdf).

<sup>50</sup> See NIST Cybersecurity for IoT Program webpage (last updated Oct. 8, 2020), available at <https://www.nist.gov/programs-projects/nist-cybersecurity-iot-program>.

among other things, requires NIST to issue cybersecurity standards for IoT devices and mandates that the federal government purchase only devices meeting those standards. The bill now awaits the President's signature.

But none of these actions address the inexpensive devices that are more likely to be manufactured and imported from adversary states like China and used by our most vulnerable businesses and consumers. The Commission should work with retailers to ensure that all equipment sold on their websites meet NIST security standards. Failing to do so risks harm not only to the consumers and businesses with insecure devices but to our broader networks as a whole. I look forward to continuing the discussion of this important issue.

Thank you to the staff of the Office of Engineering and Technology for their work on this item.