

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

In the Matter of )
)
Amendment of Parts 0, 1, 2, 15 and 18 of the ) ET Docket No. 15-170
Commission's Rules regarding Authorization of )
Radiofrequency Equipment )
)
Request for the Allowance of Optional Electronic ) RM-11673
Labeling for Wireless Devices )
)

NOTICE OF PROPOSED RULEMAKING

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By the Commission: Commissioners Rosenworcel and O'Rielly issuing separate statements.

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**I. INTRODUCTION**

1. The telecommunications sector depends on the variety and utility of radiofrequency (RF) devices. Such devices promote innovation, promote economic growth, and can facilitate modern life. The purpose of this Notice of Proposed Rulemaking (Notice) is to update the rules that govern the evaluation and approval of RF devices. Our proposed improvements to the equipment authorization process will help us keep pace with the accelerating introduction of an ever-expanding breadth of devices and products into the marketplace.

2. Our proposals build on actions we recently took to modify our equipment authorization rules.<sup>1</sup> We have identified additional changes that will enable us to meet the challenges of an RF equipment ecosystem that has significantly expanded since the Commission last comprehensively reviewed its equipment authorization procedures more than fifteen years ago.<sup>2</sup> The manner in which today’s RF equipment is designed, manufactured, and marketed – as well as the sheer number of such devices that need to be authorized – warrant modifications to the rules that specify the equipment subject to our equipment authorization procedures and responsibilities of the various stakeholders. In making our proposals, we remain mindful that the equipment authorization program is one of the primary means that the Commission uses to ensure that RF devices operating in the United States do not cause harmful interference and otherwise comply with our rules.

3. Specifically, we highlight our proposals to:

- Combine two separate product approval programs – Declaration of Conformity and verification – into one product self-approval program;
- Codify and clarify the provisions for certification of modular transmitters – including those in products used for our licensed radio services – and for radios where the RF parameters are controlled by software;

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<sup>1</sup> See Amendment of Parts 0, 1, 2, and 15 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment and Amendment of Part 68 regarding Approval of Terminal Equipment by Telecommunications Certification Bodies, ET Docket No. 13-44, *Report and Order*, 29 FCC Rcd 16335 (2014) (*TCB Order*). The *TCB Order* largely addressed the processes by which certification applications are evaluated.

<sup>2</sup> See Amendment of Parts 2, 15, 18 and Other Parts of the Commission’s Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment, ET Docket No. 97-94, *Report and Order*, 13 FCC Rcd 11415 (1998) (*Equipment Authorization Procedures Order*).

- Clarify responsibilities for compliance when a final product may be comprised of one or more certified modular transmitters;
- Codify existing practices that protect the confidentiality of market-sensitive information;
- Codify and expand existing guidance for electronic labeling;
- Eliminate unnecessary or duplicative rules and consolidate rules from various specific rule parts into the equipment authorization rules in Part 2; and
- Discontinue the requirement that importers file FCC Form 740 with Customs and Border Protection for RF devices that are imported into the United States.

## II. BACKGROUND

4. Section 302 of the Communications Act of 1934, as amended (the Act), permits the Commission to make reasonable regulations governing the interference potential of devices that emit RF energy and can cause harmful interference to radio communications.<sup>3</sup> The Commission carries out its responsibilities under the Act by establishing technical rules.<sup>4</sup> The Commission ensures compliance with the technical rules through the equipment authorization program RF devices, which is codified in Part 2 of the rules.<sup>5</sup> Additionally, RF devices must comply with the Commission's technical and equipment authorization requirements before they can be imported to or marketed in the United States.<sup>6</sup> The Office of Engineering and Technology (OET) administers the day-to-day operation of our equipment authorization program.<sup>7</sup>

5. The current RF equipment authorization procedures have evolved over the course of more than 40 years. Currently, we ensure that RF equipment complies with the Commission's technical requirements by specifying that devices must be authorized in accordance with one of three procedures specified in Subpart J of Part 2 of the rules – certification, Declaration of Conformity (DoC), and verification.<sup>8</sup> This structure was established following the last comprehensive review of the equipment authorization procedures in 1998.<sup>9</sup> At that time, the Commission streamlined the equipment authorization program by eliminating two types of authorization procedures (notification and type acceptance), by relaxing the equipment authorization requirements for certain Part 15 unintentional radiators, specific Part

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<sup>3</sup> 47 U.S.C. § 302a(a).

<sup>4</sup> For example, Part 15 of the Commission's rules sets forth the technical requirements for unlicensed devices; Parts 22, 24, and 27 set forth the technical requirements for transmitters used in various commercial mobile radio services; and Part 90 specifies the technical requirements for transmitters used in the private land mobile radio services. *See* 47 C.F.R. Parts 15, 22, 24, 27 and 90, respectively.

<sup>5</sup> *See* 47 C.F.R. Part 2 Subpart J.

<sup>6</sup> *See* 47 C.F.R. § 2.803. *See also* 47 U.S.C. § 302a(b) (stating that no 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 under the Act).

<sup>7</sup> *See* 47 C.F.R. § 0.241(b) (delegating such authority to OET).

<sup>8</sup> *See* 47 C.F.R. Part 2, Subpart J, § 2.901, *et seq.* There are limited exceptions. Some devices are exempt from the equipment authorization requirements, such as unlicensed digital devices used exclusively in transportation vehicles, utility or industrial plants, test equipment, appliances and medical devices. 47 C.F.R. § 15.103. In addition, most radio receivers that tune only outside the frequency range of 30-960 MHz are exempt from equipment authorization requirements. 47 C.F.R. § 15.101(b). Operation of these exempt digital devices and radio receivers is subject to the condition that the devices may not cause harmful interference to authorized services. 47 C.F.R. § 15.5(b). Additionally, some devices are exempt from equipment authorization requirements by statute, such as equipment intended solely for export or marketed exclusively for use by the Federal Government. 47 U.S.C. § 302a(c) and 47 C.F.R. § 2.807.

<sup>9</sup> *See Equipment Authorization Procedures Order.*

18 consumer industrial, scientific, and medical (ISM) equipment and some transmitters operated in licensed services, and by implementing electronic application filing.

6. Certification represents the most rigorous equipment authorization procedure, and is typically applied to RF equipment employing new technology for which the testing methodology is relatively complex or not well defined, or that otherwise is considered to have the highest risk of harmful interference.<sup>10</sup> Certified devices are uniquely identified by an FCC Identifier (FCC ID), which must be included on the device label.<sup>11</sup> Examples of devices subject to certification include, but are not limited to, mobile phones; wireless local area networking equipment; land mobile radio transmitters; wireless medical telemetry transmitters; and cordless telephones. All certified equipment is listed in a Commission database that includes the application for certification, test report and other material.<sup>12</sup>

7. As part of the 1998 revisions, the Commission began allowing accredited independent certification bodies, called Telecommunication Certification Bodies (TCBs), to approve most types of equipment that require certification.<sup>13</sup> It established the TCB program to provide manufacturers with an alternative to obtaining certification from the Commission, and to facilitate the more rapid introduction of RF equipment into the market. TCBs approve equipment under the certification procedure based on review of an application that provides test reports and all of the other information specified in Part 2 which demonstrate compliance with all the applicable rules.<sup>14</sup> The TCB may re-test a sample of a device to confirm that it complies with the rules before granting certification, and TCBs are required to conduct post-market testing of a sampling from among all devices they approved.<sup>15</sup> Since the inauguration of the TCB program, the number of certification applications has grown from 3,000 per year to more than 21,000 per year, and is growing at a rate of between 10 and 12 percent per year. The TCB program, which accounted for 98 percent of the products submitted for approval under the Commission's RF equipment authorization program in Fiscal Year 2014, is a critical element in meeting the challenges associated with the dramatic and continuing increase in certification applications. The Commission recently provided for all certification applications to be processed by TCBs.<sup>16</sup>

8. The two other equipment authorization procedures – DoC and verification – are self-approval procedures in which the responsible party is required to take specific actions – including testing, documentation, and labeling – to ensure that its equipment complies with our rules. The DoC and verification procedures are permitted for certain types RF devices that operate under Part 15 or Part 18 of our rules. Unlike certification, these procedures do not require submittal of an application to the FCC or a TCB and do not require an explicit grant of certification. Also, unlike a certified device, such equipment does not have an FCC ID, and is not listed in an FCC database.

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<sup>10</sup> See 47 C.F.R. § 2.907.

<sup>11</sup> See 47 C.F.R. §§ 2.925 and 2.926. The FCC ID consists of two elements – a grantee code and an equipment product code.

<sup>12</sup> The Commission's Equipment Authorization System (EAS) can be accessed at <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm>.

<sup>13</sup> See 1998 Biennial Regulatory Review – Amendment of Parts 2, 25 and 68 of the Commission's Rules to Further Streamline the Equipment Authorization Process for Radio Frequency Equipment, Modify the Equipment Authorization Process for Telephone Terminal Equipment, Implement Mutual Recognition Agreements and Begin Implementation of the Global Mobile Personal Communications by Satellite (GMPCS) Arrangements, GEN Docket No. 98-68, *Report and Order*, 13 FCC Rcd 24687 (1998) (*Streamlining II Order*). See also 47 U.S.C. § 302a(e) (providing the authority to delegate equipment testing and certification to private organizations).

<sup>14</sup> See 47 C.F.R. §§ 2.960 and 2.962.

<sup>15</sup> 47 C.F.R. § 2.962(g).

<sup>16</sup> See *TCB Order*.

9. The DoC procedure is used in situations where the Commission is concerned that some of the test procedures are not fully established or the established test procedures require a high degree of technical expertise, and the equipment may pose a risk of causing harmful interference if it is not tested properly. It requires the responsible party, in addition to taking the necessary steps to ensure that the equipment complies with the appropriate technical standards, to use a recognized accredited test laboratory when testing devices.<sup>17</sup> The responsible party also must include a compliance information statement with the product that identifies the product and a responsible party within the United States.<sup>18</sup> A wide variety of devices are currently subject to the DoC procedures, including personal computers and peripherals, consumer ISM equipment such as microwave ovens, radio receivers, and TV interface devices.

10. Verification is used for RF equipment that has a well-understood testing methodology, low interference risk, and high compliance rate. Under verification, the responsible party must also take the necessary steps to ensure that the equipment complies with the appropriate technical standards.<sup>19</sup> However, there are no requirements that the test laboratories used are FCC-recognized or for a compliance information statement to be provided with the product. Examples of devices subject to verification include non-consumer ISM equipment, TV and FM receivers, and business computer equipment.<sup>20</sup>

11. The Commission has general requirements for laboratories that perform compliance testing, and certain specific requirements for laboratories that test equipment under particular rule parts or authorization procedures.<sup>21</sup> We most recently addressed the accreditation of laboratories and the process by which we recognize laboratory accreditation bodies in the *TCB Order*.<sup>22</sup>

12. Additionally, as part of its administration of the equipment authorization rules, OET has developed a substantial body of supplemental guidance that is available via public notices and in our online Knowledge Database (KDB).<sup>23</sup> Equipment authorization topics that relate to new services and devices authorized by the Commission are often addressed in the KDB.<sup>24</sup> This includes, for example,

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<sup>17</sup> See 47 C.F.R. § 2.906. The party responsible for compliance is defined in 47 C.F.R. § 2.909.

<sup>18</sup> See 47 C.F.R. §§ 2.1077, 15.19(a)(3), and 18.209(b). Only Part 15 and Part 18 equipment are currently covered by DoC. For example, Part 15 devices subject to the DoC rules must be labeled with the following statement: “This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.” See also 47 C.F.R. § 2.1075 (describing circumstances in which the responsible party must submit to the Commission records of the original design drawings and specifications, the procedures used for production inspection and testing, a report of RF emission measurements, the compliance information statement, and a sample of the device).

<sup>19</sup> See 47 C.F.R. §§ 2.909(b), 2.953, and 2.955.

<sup>20</sup> See 47 C.F.R. §§ 15.101(a) and 18.203(b).

<sup>21</sup> For example, equipment subject to certification must be tested by a laboratory that is accredited as meeting the requirements of ISO/IEC 17025, *General Requirements for the Competence of Calibration and Testing Laboratories*, by a Commission-recognized accreditation organization. See 47 C.F.R. § 2.948(e). Equipment authorized under verification may be tested by the manufacturer or by an independent testing laboratory that is not required to be accredited. See 47 C.F.R. §§ 2.947 and 2.948(a)(1).

<sup>22</sup> See *TCB Order*, 29 FCC Rcd at 16352-58, paras. 39-53.

<sup>23</sup> Links to all of these can be found at the OET Laboratory Division’s Equipment Authorization Page, <http://www.fcc.gov/labhelp>.

<sup>24</sup> The staff guidance provided in the KDB is intended to assist the public in following Commission requirements. The guidance is not binding on the Commission and will not preclude the Commission from making a different decision in any matter that comes to its attention for resolution.

answers to specific questions from applicants or TCBS<sup>25</sup> and more generally-directed guidance on how to file for authorization of new types of devices<sup>26</sup> or how to conduct compliance testing.<sup>27</sup> Collectively, the three equipment authorization procedures, our compliance testing rules, and KDB guidance form the core of our equipment authorization process.

13. In the past, the Commission has made targeted rule changes to account for advances in technology. For example, in 2000, it permitted manufacturers to obtain certification for modular transmitters that can be installed in other devices (host devices).<sup>28</sup> This action eliminated the need to certify the same transmitter multiple times when it is installed in different host devices.<sup>29</sup> Further, in recognition of the fact that radio transmitters were increasingly relying upon software to set their operating parameters, the Commission adopted rules for the authorization and use of software defined radios (SDRs) in 2001.<sup>30</sup> An SDR is a radio that includes a transmitter in which the frequency range, modulation type, maximum output power or the circumstances under which it transmits can be altered by making changes in software.<sup>31</sup> In 2005, the Commission further modified the rules for SDRs to include cognitive radios.<sup>32</sup> Cognitive radios are a class of SDRs that change their operating parameters based on sensing of changes in their environment.

14. Today's RF devices are evolving more rapidly than ever before, and we anticipate that the evolution will continue and even accelerate. New RF devices embody innovative applications of emerging communications technologies that do not always fit neatly within our traditional ways of classifying and approving devices. Also, the number of types of RF devices subject to our equipment authorization requirements increases substantially every year as existing product lines are expanded and new types of devices and services are introduced to the market. At the same time, because many RF

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<sup>25</sup> See, e.g., KDB Publication [848637](#).

<sup>26</sup> See, e.g., KDB Publication [442812](#).

<sup>27</sup> See, e.g., KDB Publication [965270](#).

<sup>28</sup> See Part 15 Unlicensed Modular Transmitter Approval, *Public Notice*, 15 FCC Rcd 25415 (OET, 2000). The Commission subsequently codified the requirements for unlicensed modular transmitters in Section 15.212 of the rules. See 47 C.F.R. § 15.212.

<sup>29</sup> Modular transmitters need external data and power from the host to operate. Such transmitters, if not approved by the manufacturer, may be sold as sub-assemblies or components to the host device manufacturer. In such instances, the host device manufacturer is responsible for the approval of the final end product including sub-assemblies. Alternately, the manufacturer of a modular transmitter may obtain approval for the modular transmitter under the Commission's rules for certification. In that case, the host device manufacturer can integrate the certified modular transmitters in the final device and does not need additional approval if the certified modular transmitter is used in a manner it has been tested and approved. In many instances, the data interface between the modular transmitter and the host is based on a standard interface like USB (Universal Serial Bus). In that case, such modular transmitters may be sold directly to the end consumer as peripheral devices such as, for example, cellular radio transmitters that are designed to be connected to a USB port on a laptop computer. The Commission has allowed such peripheral devices to be approved as either modular or stand-alone transmitters.

<sup>30</sup> See Authorization and Use of Software Defined Radios, ET Docket No. 00-47, *First Report and Order*, 16 FCC Rcd 17373 (2001) (*SDR Order*).

<sup>31</sup> This broad definition covers both radios that have software embedded on chips or implemented in other ways so that the software cannot be readily changed by the user, as well as radios that are designed so the software can be easily changed after manufacture. See 47 C.F.R. § 2.1. Radios designed such that only the responsible party may modify the software that defines the radio parameters are not required to be approved as an SDR under our rules. If the device is designed in a manner that enables entities other than the responsible party to modify the software-defined parameters, then the device must be approved as an SDR. See 47 C.F.R. § 2.944.

<sup>32</sup> Facilitating Opportunities for Flexible, Efficient, and Reliable Spectrum Use Employing Cognitive Radio Technologies, ET Docket No. 03-109, *Report and Order*, 20 FCC Rcd 5486 (2005).

devices which were considered novel several years ago have been widely deployed without posing an unacceptable risk of interference, it should be possible to reduce the amount of costly compliance testing required for such devices.<sup>33</sup> To accommodate such growth and innovation, we have provided guidance on an ongoing basis as to how the equipment authorization and testing methods should be applied for new types of devices. Further, the manufacturing processes for RF devices have changed significantly to the point that the grantee, manufacturer and host device integrators may be different parties. Also, increasingly many certified modular transmitters are sold directly to consumers as peripheral devices to add on to their existing products. While this practice provides consumers with the flexibility to add new capabilities to their devices, we must still ensure that both the original and updated devices continue to comply with our rules.<sup>34</sup> Accordingly, it is imperative that we update our equipment authorization processes to ensure that they continue to enable growth and innovation in the RF equipment market, while ensuring that devices continue to comply with our rules. We also identify and propose to eliminate unnecessary rules and, where appropriate, to update our rules to reflect guidance that has been provided through the KDB.

15. Our proposals are intended to complement the Commission's recent actions in the *TCB Order, supra*. There, we largely focused on the obligations of TCBs that certify RF equipment and laboratories that test equipment subject to certification. This Notice looks chiefly at the types of authorization procedures used to approve equipment, the effect of changes to authorized equipment, and the responsibilities of parties for complying with our rules. By updating our rules, we can continue to ensure that hundreds of millions of radio transmitters, consumer products, and other electronic devices will continue to share the airwaves successfully. Our objective is to enable innovation and growth in the development and use of RF devices by providing a clear path for products to demonstrate compliance with the FCC rules so that they may be brought to the market expeditiously.

### III. DISCUSSION

16. This Notice is informed by the evolution of the RF device ecosystem. The development of highly integrated circuitry, software-based designs and new production procedures has resulted in the use of substantially more complex RF transmitters, or combinations of transmitters, in increasingly compact devices. For example, today's smart phones typically have the capability to operate in several different radio frequency bands and include 3G, 4G, Wi-Fi, Bluetooth, GPS and, increasingly, near-field communications transmitters.<sup>35</sup> The transmitters may operate individually or simultaneously using

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<sup>33</sup> For example, the compliance requirements for evaluating computer peripherals were developed when such devices were based on desktop computers using large circuit boards. Increasingly such functions are implemented on chips and integrated in much smaller packages. These chips, by nature of their size, have less of an opportunity to radiate than do the traditional larger circuit boards. Thus, modern devices generally have a lower potential to cause RF interference. However, such devices are still required to be evaluated under the DoC procedures.

<sup>34</sup> For example, a USB-based radio modem can be added to any device with a standard USB connection to add new frequency bands of operation not available on the smartphone. This could become an issue if such additions fall outside what the original host device manufacturer initially contemplated accommodating (and tested for) when it filed for approval for its device. Many Commission rules for RF exposure and Hearing Aid Compatibility (HAC) require the final device or the assembly including certified modular transmitters to demonstrate compliance. *See* 47 C.F.R. §§ 2.1093 and 20.19.

<sup>35</sup> 3G (Third Generation) and 4G (Fourth Generation) mobile phone system specifications for communication over cellular network are developed by the 3<sup>rd</sup> Generation Partnership Project (3GPP). *See, e.g.,* <http://www.3gpp.org/about-3gpp/about-3gpp>. Wi-Fi is a registered trademark of Wi-Fi Alliance and is based on IEEE 802.11 standards for local area networks. *See, e.g.,* <http://www.wi-fi.org/> and <http://standards.ieee.org/findstds/standard/802.11-2012.html>. Bluetooth is a wireless technology standard for exchanging data over short distances in the 2.4 GHz band and is developed by the Bluetooth Special Interest Group (SIG). *See* <http://www.bluetooth.com/Pages/Bluetooth-Home.aspx>. The GPS (Global Positioning System) is a space-based satellite navigation system for location information. *See, e.g.,* <http://www.gps.gov>. Near field communications (NFC) uses electromagnetic fields for contactless communication between devices when two

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multiple transmission modes, such as different modulation formats, bandwidths, power levels, etc. Certain of the transmitters may operate under rules for the various licensed radio services, while others operate under the unlicensed device rules, all within a single product. Such devices may be too small to fit a permanently attached label that includes the compliance information – particularly in the case where a finished product includes multiple modular transmitters with each one required to display certain information such as an FCC ID.

17. Some devices have the capability to be modified through software changes made by either the grantee of certification or by another party such as a wireless service provider. In addition, manufacturers may incorporate multiple modular transmitters made by different grantees into a single device that may not have been tested for compliance when operating together. Also, technology has developed to the point where a consumer could purchase and add new radio capabilities. For example, many laptops and tablets are designed to allow the attachment of peripherals that incorporate additional radios enabling transmission in bands in which the original devices were not evaluated. Some parties have announced plans for creating “do-it-yourself” smartphones and tablets by combining modular transmitters that cover commercial radio frequency bands of their own choice.<sup>36</sup> Responsibility for compliance can become uncertain when an individual certified modular transmitter within another device is found to be non-compliant, or when the non-compliance is caused by the interaction or sum of individually certified modular transmitters within a finished product.

18. In this Notice, we propose to address the changes in RF device technology described above by streamlining our authorization rules. First, we address our two current procedures that do not require independent certification by proposing to merge the DoC and verification procedures into a single procedure.

19. Second, we propose to revise and clarify the rules that govern equipment certification, including those specifying when device changes necessitate a new FCC ID. Among other things, we propose to codify our current practice of permitting certification of modular transmitters for licensed services, and to clearly specify the rules for integration of certified modular transmitters and for when the host devices may be subject to certification. Further, we propose to modify our rules for SDRs by incorporating requirements for software used to control RF parameters in our general rules and eliminating restrictions on hardware modifications of such devices. We also seek comment on how to address future devices that may consist solely of certified modular transmitters that are marketed for the direct assembly by consumers into host devices that are nothing more than physical platforms, without the involvement of a third party host device integrator.

20. Third, we propose to codify filing requirements for RF devices that incorporate multiple certified modular transmitters and set forth parties’ responsibilities for the ongoing compliance of such devices. We also propose to replace requirements that apply only to devices specifically classified as “software defined radios” with broadly applicable rules, based in part on the current Commission practices regarding software control of radio parameters. Our proposed rules would require any RF device that uses software to control its defining parameters to incorporate software security features that

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devices are close to each other. See <http://www.nearfieldcommunication.org/about-nfc.html> (websites as of July 10, 2015).

<sup>36</sup> Google’s Advanced Technology and Projects (ATAP) group has initiated Project Ara as a development effort to create a modular hardware ecosystem. Google has posted additional information online at <http://www.projectara.com/faq>. Similarly, device manufacturer ZTE has proposed a modular concept phone called ECO-MOBIUS which can be easily upgraded. Information about ZTE’s 2013 announcement is available on its website at [http://wwwen.zte.com.cn/endata/magazine/mobileworld/2013/5/articles/201310/t20131029\\_411072.html](http://wwwen.zte.com.cn/endata/magazine/mobileworld/2013/5/articles/201310/t20131029_411072.html). In addition, Puzzlephone is working to create phones that are easily repairable and upgradable, and has posted descriptions and illustrations on its website at <http://www.puzzlephone.com/about> (as of July 10, 2015).



permit only those parties that have been authorized by the manufacturer to make changes to the device's technical parameters.

21. Fourth, we propose to modify the rules and procedures that are applicable universally to all types of equipment approval. Specifically, we propose to codify procedures related to electronic labeling, streamline our rules for the measurement procedures that are used to demonstrate device compliance, and re-examine the rules and forms that govern RF device importation. Additionally, we address several other equipment authorization issues that have arisen over time, including the confidentiality of applications, and the public notice of grants.

22. Finally, many of the procedures that we propose to codify require specific issues to be addressed in order for a device to be properly certified. For example, modular transmitters may be authorized only for specific devices or configurations;<sup>37</sup> devices incorporating software controls must address specific security requirements;<sup>38</sup> and modifying certified devices may require applicants to obtain specific permissions in certain filing situations.<sup>39</sup> Accordingly, we seek comment on how to codify any filing or notification requirements that may be necessitated by the adoption of these proposals.

23. We believe that our proposals will better align our equipment authorization procedures with the current state of equipment development, design, and manufacturing practices, which in turn will promote significant cost savings, reduce the burdens, and avoid any unnecessary delay associated with the equipment authorization process – especially for applications involving new technologies and new devices that include multiple technologies. We invite commenters to discuss the costs and benefits of the rule changes proposed below, to provide relevant supporting data that would support such comments, and to offer additional suggestions for enhancing the benefits or reducing the costs associated with our proposals.

#### **A. Unifying self-approval procedures**

24. The current state of RF equipment production makes the existing distinctions between our Declaration of Conformity and verification processes less meaningful, and we accordingly propose to combine elements of DoC and verification into a single self-approval process – “Supplier’s Declaration of Conformity” or “SDoC” – for equipment that has a strong record of compliance and for which there is minimal risk of harmful interference. Both DoC and verification procedures are permitted for certain types of RF devices.<sup>40</sup> The verification rules are contained in Sections 2.951-2.955 of our rules, and the DoC requirements are specified in Sections 2.1071-2.1077. Both sets of rules follow a similar format, although the DoC includes an additional rule titled “Compliance information.”<sup>41</sup> Under our existing rules, the DoC procedure requires that an FCC-recognized accredited laboratory test the equipment, while the verification procedure allows equipment to be tested at unaccredited laboratories (including the manufacturer’s in-house facilities).<sup>42</sup> In addition, the DoC procedure requires the manufacturer to include a written compliance statement, *i.e.*, a “Declaration of Conformity,” with the literature furnished to the user, in part as a means to identify the party responsible for the device’s compliance with the Commission’s regulations; verification has no such declaration requirement.<sup>43</sup> DoC also requires use of an FCC logo on the equipment identification label, chiefly to provide a means for consumers to identify

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<sup>37</sup> See *infra* paras. 39-42.

<sup>38</sup> See *infra* paras. 43-46.

<sup>39</sup> See *infra* paras. 47-57.

<sup>40</sup> See, *e.g.*, 47 C.F.R. § 15.101.

<sup>41</sup> 47 C.F.R. §§ 2.951- 2.955 and 47 C.F.R. §§ 2.1071-2.1077, respectively.

<sup>42</sup> See 47 C.F.R. §§ 2.902 and 2.948(e).

<sup>43</sup> See 47 C.F.R. §§ 2.1077(a), (c).

equipment that meets the Commission's regulations;<sup>44</sup> no such logo is required for equipment subject to verification.<sup>45</sup> Additionally, there are a number of other minor differences between the two procedures related to the authorization of computer technology.<sup>46</sup>

25. The Commission investigated the possibility of combining the DoC and verification procedures in 1998.<sup>47</sup> At that time, the Commission found that DoC provided added safeguards that were necessary for certain types of equipment, such as those about which issues regarding the proper measurement method may arise.<sup>48</sup> The number and variety of devices subject to DoC has grown significantly over the past 17 years. In contrast to 1998, there are now comprehensive and widely used measurement procedures, significant testing expertise and capabilities for devices subject to DoC, and a greater comfort with the use of self-approval procedures. For example, new electromagnetic compatibility (EMC) measurement procedures have been developed to ensure that the latest information technology devices are properly evaluated and are in compliance with Commission standards.<sup>49</sup> At the same time, the development of highly integrated circuits to implement functions which were previously performed by discrete components has resulted in lower typical RF emissions from such devices. This means that today a wider variety and a larger number of devices are tested under the DoC process as compared to 1998, resulting in additional effort and expense, even though the potential for harmful interference has been reduced. We see little benefit in maintaining two distinct procedures or in maintaining the rigor of the Declaration of Conformity procedure given these changes, and recognize the potential for reducing costs for manufacturers. Accordingly, we tentatively conclude that a single process would simplify the equipment authorization requirements and reduce confusion as to which process may apply to any given device, while continuing to adequately ensure compliance with our rules.

26. We believe that the rules we adopt should recognize our increased confidence in self-approval procedures by streamlining the procedures and eliminating elements – such as the mandate to use accredited laboratories that is currently associated with the DoC rules – that serve to increase the costs of complying with our rules and provide benefits that are of only marginal utility. As such, we propose not to require that an accredited testing laboratory be required for performing the testing for any device that is subject to our self-approval process. To make it clear that all devices must be tested for compliance, we also propose to remove the ambiguous reference to “tak[ing] necessary steps” as a potential alternative to testing that is currently part of the verification and DoC rule language.<sup>50</sup>

27. We propose to incorporate elements of our existing SDoC processes used for Telephone Network Terminal Equipment into the combined process.<sup>51</sup> The existing SDoC is a well-established

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<sup>44</sup> See 47 C.F.R. § 15.19(b) and 18.209. DoC applies only to specific Part 15 and 18 equipment.

<sup>45</sup> However, Section 15.19(a) does require that devices subject to verification and certification bear a particular statement as to the device's compliance with Part 15 and its condition of operation. 47 C.F.R. § 15.19(a).

<sup>46</sup> See, e.g., 47 C.F.R. §§ 2.955 and 2.1075. See also Amendment of Parts 2 and 15 of the Commission's Rules to Deregulate the Equipment Authorization Requirements for Digital Devices, ET Docket No. 95-19, *Report and Order*, 11 FCC Rcd 17915, 17924-25 para. 21 (1996).

<sup>47</sup> See *Equipment Authorization Procedures Order*, 13 FCC Rcd at 11420, para. 11.

<sup>48</sup> *Id.*, 13 FCC Rcd at 11420, para. 12.

<sup>49</sup> See ANSI C63.4-2014, *American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz*. Numerous changes have been made to the measurement standard over the years to improve the repeatability of measurements and to add clarity to the measurement procedures to be used in evaluating the compliance of Information and Technology Equipment and Systems. See also *TCB Order*, 29 FCC Rcd at 16360-69, paras. 61-84.

<sup>50</sup> See 47 C.F.R. §§ 2.902(a) and 2.906(a) (describing a process by which a party “makes measurements or takes the necessary steps to [e]nsure that the equipment complies with the appropriate technical standards.”)

<sup>51</sup> Under the Commission's Part 68 SDoC procedure, the responsible party makes measurements or takes other necessary steps to ensure that terminal equipment complies with the appropriate technical standards. Part 68 of the

(continued....)

procedure that has been successful for the approval of other types of devices, and it incorporates familiar elements. Under this proposal, the responsible party for equipment subject to rules other than Part 68 would test equipment for compliance to specified standards or requirements and certify to the public, by way of a statement supplied with the product that the equipment is in compliance without securing an independent third-party review or approval of compliance. A similar process is used in the European Union (EU), where a responsible party must prepare a European Commission SDoC when introducing an RF product to that market.<sup>52</sup> Unlike our Part 68 SDoC rules, we do not propose to require that the RF devices be registered in any database. The use of accredited testing facilities would not be required under our proposal. However, compliance information would be required in the equipment's accompanying literature.

28. Appendix A sets out the specific proposed revisions to the existing DoC rules that we believe are necessary to implement an SDoC approach. We seek comment on these rule revisions. As an initial matter, we seek comment on what nomenclature to adopt, and specifically seek comment on the proposed term "Supplier's Declaration of Conformity" or "SDoC" to describe this procedure in Section 2.906 and other relevant rules. Would the use of this general terminology create confusion with the existing use of the term in Part 68, or as used by the EU? Is this term sufficiently distinctive from the existing DoC term to avoid confusion with the process being superseded?<sup>53</sup> Is there a different short-hand reference we should use to refer to this self-approval process?

29. To implement a unified self-approval procedure, we propose to consolidate the existing Section 2.1073, "Responsibilities," into an expanded Section 2.909, "Responsible party," as shown in Appendix A. The provisions of existing Section 2.1073 would be reflected in new subparagraph (b) of Section 2.909, "Responsibilities," which would also include rules for equipment subject to Certification (which we discuss below). Under our proposal, we would consolidate existing Sections 2.909(c)(4) and 2.1073(e) (each of which address modifications to existing equipment) into a broadly applicable section that includes provisions that address Certification and the new self-approval procedure.<sup>54</sup> We would likewise consolidate existing Section 2.1075, which addresses records retention, into a revised Section 2.938 that would apply broadly to all equipment subject to our equipment authorization procedures.

30. We otherwise propose to retain the other DoC rules (*i.e.* those within Sections 2.1071 through 2.1077) in their current location, and to apply them to the new approval procedure. This includes

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Commission's rules applies to terminal equipment connected to the public switched telecommunications network (PSTN). Part 68 was established more than three decades ago to facilitate competition in the telecommunications equipment industry and to expand the options available to telecommunications customers for the connection of customer premises equipment and wiring to the PSTN. Through Part 68, the Commission has standardized the interfaces between customer premises equipment and the PSTN while protecting the PSTN from harm that might be caused by the connection of telecommunications terminal equipment. Part 68 rules also ensure that persons with hearing aids are afforded reasonable access to the telecommunications network. Before equipment may be imported into the United States or connected to the PSTN, it must be registered in accordance with Part 68. The Part 68 registration program requires that terminal equipment be tested for compliance either by the manufacturer or a competent test laboratory and that it be registered with the Administrative Council for Terminal Attachments (ACTA). *See* 47 C.F.R. § 68.1; Part 68, Subparts C, D. Terminal equipment regulated by Part 68 does not have to be tested by an accredited laboratory but is registered in a privately maintained database. *See* 47 C.F.R. §§ 68.3, 68.160, 68.320, and 68.324.

<sup>52</sup> *See* "A Guide to EU Standards and Conformity Assessment" at page 26 (available at [http://gsi.nist.gov/global/docs/EU\\_Stds&CA\\_2000.pdf](http://gsi.nist.gov/global/docs/EU_Stds&CA_2000.pdf)).

<sup>53</sup> In conjunction with the adoption of the proposed unified self-certification procedure, we recognize that we would need to make changes to the terminology used throughout the entirety of our rules. Accordingly, under our proposal, we would make the appropriate non-substantive amendments to our current rules to update terminology referencing equipment authorization processes and ensure its consistent use.

<sup>54</sup> We discuss this in greater detail, *infra*, in the context of our Certification procedures.

Section 2.1077, for which there is not an analogous verification rule, and which describes the information that must be supplied with a product at the time of its marketing or importation. We seek comment on our proposed revisions to Section 2.1077 that would require all equipment include a compliance statement with the product literature that identifies for consumers who is responsible for the device's compliance with the Commission's technical regulations. Should we also require a statement to include additional information when equipment has been modified, but is nevertheless still subject to the self-approval process?<sup>55</sup> Would such a requirement, in conjunction with our proposed modifications to Section 2.1077, provide an adequate mechanism for identifying and contacting responsible parties? If not, what information is needed and how should we collect it?

31. We also propose to modify several requirements in conjunction with the adoption of a new self-approval procedure. For example, we would not require the use of an accredited laboratory for the testing of equipment authorized (Section 2.948). In addition, we would not require the use of a specific logo (Sections 15.19(b) and 18.209), but instead expand use of the statement of compliance with the Part 15 rules that currently applies to devices subject to verification and certification (Section 15.19(a)) to include its use as part of the new procedure. We would do so by moving the Part 15 statement of compliance to Part 2 of our rules. We seek comment on this approach. To what extent do buyers, consumers, and other parties rely on this logo as a mark of device approval? What would happen if we no longer had this requirement? Should we allow the use of such a mark on a voluntary basis and, if so, should we set forth particular guidelines in our rules? Commenters should also address whether removing the logo requirement will make it more difficult to identify unauthorized devices, particularly in conjunction with the proposals we make below in our discussion of importation matters.<sup>56</sup>

32. We propose to apply our new SDoC process to all equipment currently subject to our DoC and verification procedures. Are there any categories of equipment covered by the DoC and verification procedures that should be subject to the more rigorous certification procedure or, alternately, any categories covered by the certification procedure that would be more appropriately addressed under the new self-approval process? If so, how would we reconcile changing a particular device's equipment authorization process with our decisions in the previous proceedings that established rules for new services and prescribed the current equipment authorization requirements for the associated equipment? We also note that, under Parts 15 and 18 of our rules, a responsible party can choose to use the certification process in lieu of DoC for the approval of certain unintentional radiators (*e.g.*, Class B personal computers and peripheral devices).<sup>57</sup> Is there a need to modify these rules, and if so, how? The option to obtain certification was originally made available because some foreign countries recognized FCC certification as satisfying their technical requirements. In addition, there are some countries with few or limited regulatory requirements, and evidence of adherence to FCC's standards is seen as an indicator of a level of performance. Is there a need to maintain this option? Should we allow devices that would be subject to our new SDoC requirements to optionally be certified?<sup>58</sup> Is there any reason to limit such voluntary certification to certain types of products?

## **B. Updating certification procedures**

33. Certification differs from our other equipment authorization processes in that a grant of

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<sup>55</sup> For modified equipment, such a statement could be based on the language currently set forth in Section 2.909(d) (stating that "This product has been modified by [insert name, address and telephone number of the party performing the modifications].") *See* 47 C.F.R. § 2.909(d).

<sup>56</sup> *See infra* paras. 117-121.

<sup>57</sup> *See, e.g.*, 47 C.F.R. §§ 15.101 and 18.203.

<sup>58</sup> Today the vast majority of electronic devices are made for world-wide markets. Many countries have come to accept devices approved under Commission's authorization procedures as acceptable for marketing in those countries without additional domestic approval. Such effectively international approval provides manufacturers with great savings in time and money.

certification signifies that a party other than the manufacturer or compliance testing laboratory, and qualified by the Commission, has found that the equipment can be marketed in compliance with the technical and administrative requirements of the rule part(s) under which it will be operated.<sup>59</sup> Thus, the integrity of the certification process is critical, as it provides an additional check on the reliability of RF equipment that has a greater risk of non-compliance (such as equipment employing new technology for which the testing methods are not well defined), or a higher risk of causing harmful interference or non-compliance with the RF exposure or HAC rules if non-compliant equipment is introduced into the marketplace. The procedure also requires submission of compliance information to a TCB as a part of the approval process, and the grant of certification is published on the Commission's website. This process allows other parties to become aware of such grants and associated FCC IDs. We recently streamlined our certification procedures by modifying the rules that address the roles, responsibilities, and requirements for the parties associated with the TCB review of certification applications.<sup>60</sup> We now turn to simplifying and clarifying the procedures that apply to the parties responsible for submitting certification applications.

34. An RF device is any device that is capable of emitting RF energy by radiation, conduction, induction or other means. As defined in our rules, this includes radio communication transmitting devices and any device that includes a part or component that can act as an RF device.<sup>61</sup> While RF devices generate RF energy, many devices do not generate it intentionally – that is they are not communications devices but they generate RF emissions as a byproduct of their design. Such devices are defined as incidental or unintentional radiators.<sup>62</sup>

35. Many RF devices that intentionally generate RF energy are subject to certification requirements. Parties intending to market RF devices subject to certification must complete the authorization process prior to marketing within the United States.<sup>63</sup> Each certified RF device that is marketed must be labeled with the unique FCC ID number that is associated with its grant of certification.<sup>64</sup> While the FCC ID number is specific to the certified RF device, it does not need to be changed to allow marketing under different trade names or variations in model number, provided that the models are “electrically identical” or within limited variation of certain specific parameters.<sup>65</sup> Additionally, under certain circumstances, the FCC ID number may be maintained when the name, ownership, or control of the original grantee of certification is modified.<sup>66</sup> From an engineering standpoint, there are certain limited changes in parameters that may be made without a change in FCC ID number. Some of these changes must be made with approval of a TCB by filing a modification application, while other changes can be made without any further application or approval.<sup>67</sup>

36. The widespread adoption of new technologies has affected how RF devices are designed. Traditionally, most certifications were granted for complete devices (*i.e.* devices that do not require additional equipment to be capable of functioning). Such devices have typically been manufactured

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<sup>59</sup> See 47 C.F.R. § 2.915(a).

<sup>60</sup> See generally *TCB Order*, *supra* n.1.

<sup>61</sup> See 47 C.F.R. § 2.801.

<sup>62</sup> See 47 C.F.R. § 15.1.

<sup>63</sup> For our purposes, “marketing” includes “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.” See 47 C.F.R. § 2.803.

<sup>64</sup> See 47 C.F.R. § 2.803(b)(1).

<sup>65</sup> See 47 C.F.R. § 2.924.

<sup>66</sup> See 47 C.F.R. § 2.929.

<sup>67</sup> See 47 C.F.R. §§ 2.932 and 2.1043. We describe these different situations in greater detail below.

entirely by one entity. Today's RF equipment increasingly uses components manufactured by different parties, including modular transmitters. Modular transmitters are not intended for standalone use, and can be designed to broadly comply with the appropriate Commission rules, or be certified for operation and/or installation in a host device provided that they comply with certain specific conditions, including any conditions listed on the grant of certification.<sup>68</sup> Increasingly, devices such as personal computers, mobile wireless devices, and utility meters embody complex designs and incorporate numerous previously certified modular transmitters made by other manufacturers. An entity that designs an end product that incorporates certified modular transmitters may be able to rely on the compliance testing of the certified modular transmitters in some cases, but in other cases may need to perform further testing to ensure compliance of the host device or end product.<sup>69</sup> Additionally, manufacturers are increasingly designing transmitters in which the operating parameters such as the output power, frequency of operation, type of modulation, and circumstances under which the device transmits, are set by software. Such RF-controlling software can allow adjustment of individual parameters or enable a device to operate in different modes. Typically, such devices may not have all the possible modes of operation fully tested at the time of initial certification, and the manufacturer may provide software upgrades in the field to enable new capabilities. Also, software may be designed for modification either by only the grantee of certification or by a third party (such as a wireless carrier) to enable new functions or frequency bands.

37. Such trends are testing the limits of our existing certification rules, and parties are increasingly encountering situations that are not clearly accounted for under our current procedures. For example, software-control functions, new and relatively uncommon when we first established our SDR rules, are now commonplace. Although the OET Lab has provided substantial equipment authorization guidance, many of the underlying rules warrant clarification and revision. Based upon our knowledge of the ongoing changes in RF device design and manufacturing, we are proposing amendments to the certification rules to provide RF equipment manufacturers with a clear understanding of the application requirements and their compliance responsibilities for a variety of design scenarios. We also propose to streamline certain application procedures to reduce the need to file new applications in many cases. We seek comment on these amendments, as described in detail below, as well as general comment on the observations above.

### **1. Approval of certified equipment**

38. We propose to amend our basic certification rule<sup>70</sup> to acknowledge and account for the different device design scenarios that we typically encounter within the existing equipment certification process. The new rule would clearly state that certification may be obtained for three types of RF devices: a device capable of independent operation, (the traditional type of device that is already addressed by our certification rules), a modular transmitter that is designed for installation into a host device or as a peripheral to another device, and a host device consisting of one or more modular transmitters certified by other parties. Additionally, we propose to provide for the certification of a group of related devices that are certified under a single FCC ID.<sup>71</sup> We also seek comment on whether we need a distinct rule or rules for devices that are completely user assembled from a variety of separately

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<sup>68</sup> Modular transmitters are described in section 15.212 of our rules. 47 C.F.R. § 15.212. *See also supra* notes 28 and 29. Although we have been authorizing modular transmitters for more than 15 years, their widespread adoption and use is a more recent development.

<sup>69</sup> Once a device is certified as a modular transmitter, it may be incorporated into a number of different host devices that have been separately authorized. The completed product is generally not subject to requirements for further certification unless the installation of modular transmitters in a particular host raises compliance concerns such as the RF safety of the end product. *See also supra* note 29.

<sup>70</sup> 47 C.F.R. § 2.907.

<sup>71</sup> *See infra* para. 55.

authorized devices, possibly along with devices that may not need authorization, but whose installation may affect whether the combined device complies with our rules.

**a. Modular transmitters**

39. We propose to relocate the rule governing certification of modular transmitters from Part 15, which covers only unlicensed device operation, to our Part 2 rules, which broadly apply to all RF devices regulated by the Commission. This is reflected in the new rule Section 2.1042 proposed in Appendix A. This change would acknowledge the increasing reliance on modular transmitters in RF devices designed for use in licensed radio services as well as those designed to operate under our Part 15 rules for unlicensed devices. Currently, Section 15.212 of our rules contains requirements for modular transmitters that ultimately are integrated into a host device.<sup>72</sup> While there are no rules elsewhere addressing modular transmitters in RF devices that are used in licensed services, such devices are not prohibited under our rules. Accordingly, OET has provided guidance in KDB Publication 996369 addressing the certification of licensed modular transmitters.<sup>73</sup> Our proposed Part 2 rule provisions are consistent with this existing guidance. The proposed new rules would apply to the use of modular transmitters broadly, while also carrying over certain specific requirements that are currently in Part 15 that apply to modular transmitters for unlicensed devices only. Furthermore, as it is often desirable to incorporate multiple modular transmitters into a device, a single Part 2 rule will better account for host devices that contain both licensed and unlicensed certified modular transmitters.<sup>74</sup> We seek comment on this proposal.

40. Section 15.212 specifies eight requirements for modular transmitter approval,<sup>75</sup> but also provides means for a grantee to obtain a “limited modular approval” for a transmitter that does not comply with all eight requirements.<sup>76</sup> We propose to retain this concept. To receive a limited modular transmitter approval, the manufacturer must demonstrate in the certification application that the transmitter will comply with our rules only under specific circumstances.<sup>77</sup> The certification is consequently limited in that the specific design specifications and installation and/or operation instructions on which the certification is based are included as conditions on the grant of certification.

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<sup>72</sup> See 47 C.F.R. § 15.212.

<sup>73</sup> See KDB Publication [996369](#). The guidance for modular transmitters used in licensed services generally provides that: the Part 15 unlicensed modular approval rules may be used as additional guidelines for good engineering practice; a grantee must include clearly documented instructions with the devices; a grantee is responsible for full compliance of the equipment; conditions will be listed on the grant of certification listing the maximum antenna gain to ensure compliance with rules, RF exposure requirements, and host product limitations; the devices must be labeled in the same manner as unlicensed modular devices; and the devices must be compliant with all applicable licensed radio service rules.

<sup>74</sup> While certified modular transmitters can be installed in a host or attached to a host as a peripheral, the final assembly of the host and the certified modular transmitter must be compliant with all the applicable rules for the operation of such device. In many instances it is not permissible to attach an external amplifier or modify the operating parameters of the devices. See 47 C.F.R. §§ 2.815 and 15.204. Restrictions in the rules apply to host and certified modular transmitters).

<sup>75</sup> See 47 C.F.R. § 15.212(a).

<sup>76</sup> See 47 C.F.R. § 15.212(b).

<sup>77</sup> For example, manufacturers have flexibility with respect to requirements such as modular transmitter shielding, buffered modulation/data inputs, and power supply regulation, because compliance with these requirements may not be necessary in specific modular transmitter installations. The manufacturer must demonstrate that it will retain control over the final installation of the device such that compliance of the end product is assured. A limited modular approval is subject to conditions such as: the device(s) into which the modular transmitter can be installed; a requirement for professional installation; the antenna separation distance from persons; or, the locations where it may be used (*e.g.*, outdoors only).

KDB Publication 996369 also provides similar limited modular transmitter approval guidance for devices used in the licensed services. We propose to incorporate the Part 15 rules and KDB guidance for limited modular approvals into our revised Part 2 rule. In reorganizing the rules for modular transmitters, we also propose to remove the paragraph addressing RF exposure. The existing reference in this rule could be mistakenly construed to suggest that RF exposure requirements are unique to modular transmitters or that RF exposure compliance need not be demonstrated for a limited modular approval. However, our comprehensive RF exposure rules apply to all devices. Thus, no specific RF exposure requirements for modular or limited modular transmitters are necessary.<sup>78</sup> We seek comment on these proposals.

41. While we propose to continue to grant certification of limited modular transmitters, we propose to eliminate the rule provision that permits authorization of modular transmitters that are “split” into the “radio front end” (the radio elements) and the “transmitter control element” (the hardware on which the software that controls the radio operation resides).<sup>79</sup> When the Commission adopted the rules for split modular transmitters, it expected that the transmitter control elements would be either hardware or firmware, allowing for flexible approval of the two split components and ability for the manufacturers to introduce new implementations of control elements.<sup>80</sup> However, this device configuration has not been widely implemented. In practice, the industry has used our more general equipment authorization rules for nearly all of its devices of this type, and there have been only nine requests for approval of such “split module” arrangements to date.<sup>81</sup> We believe that the flexibility of allowing software-based control of RF parameters and highly integrated implementations of modular transmitters have reduced the need for such arrangements and account for the general disinterest in this approval option, and that it would be more beneficial for us to focus our efforts on updating our general equipment authorization rules instead of retaining the narrow and little-used split module provisions.<sup>82</sup> Doing so will result in rules that provide more clarity and are simpler to implement. In particular, our proposals to allow software-based control and to allow certification of a “family of products,” as discussed in sections III(B)(1)(b) and III(B)(2), respectively, would allow the same flexibility for all modular transmitters as contemplated in the current rules without requiring any specific authorization procedures for split modular transmitters. Additionally, we propose to permit certification of modular transmitters that consist of a single chip which has been tested to demonstrate compliance in a typical installation provided that the grantee includes detailed instructions for integration into other RF devices (*i.e.* host devices) to ensure that the ultimate configuration is consistent with the significant parameters for which it was tested. We seek comment on these proposals.

42. We anticipate the possible development of devices that are nothing more than physical platforms (form factors) into which individual modular transmitter components can be inserted in an almost limitless variety of combinations.<sup>83</sup> To ensure compliance of the final device, we propose that an applicant for certification of a modular device or a form factor that includes its own RF characteristics provide design guidelines, interface specifications, and authentication requirements that would guarantee

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<sup>78</sup> See 47 C.F.R. §§ 1.1307(b), 1.1310, 2.1091 and 2.1093.

<sup>79</sup> 47 C.F.R. 15.212(a)(2).

<sup>80</sup> See Modifications of Parts 2 and 15 of the Commission’s Rules for Unlicensed Devices and Equipment Approval, ET Docket No 03-201, *Second Report and Order*, 22 FCC Rcd 8028 (2007).

<sup>81</sup> There have been three approvals for split modular approvals and six for limited split modular approvals. None of these devices have been subsequently modified to include other control arrangements.

<sup>82</sup> See also *infra* paras. 43-46.

<sup>83</sup> Possible examples could be a wide variety of transmitters for various wireless service providers, unlicensed operations like Wi-Fi and Bluetooth, and other wireless links to remote devices; any or several of various antennas; different camera modular transmitters; sports and medical and entertainment apps with external connectivity. In addition, non-RF elements could be configured such as to affect the placement of RF-emitting elements and thus affect the emissions strength and patterns of the final unit as configured by the consumer. See also *supra* n. 36.



that a module can operate on the form factor only with other modules whose collective RF emissions meet our rules' requirements. We seek comment on whether this regulatory regime will enable the development of this kind of product while ensuring compliance with our rules – including those related to interference, RF exposure, and hearing aid compatibility.<sup>84</sup> Can practical reference specifications be developed to be used to approve modular transmitters that can be expected to comply with our rules when used in conjunction with other modular transmitters that meet the same or another set of reference specifications? Can requirements be developed to ensure only modular transmitters that are compatible and tested in various representative configurations with respect to such standards are combined through some internal authentication procedures?<sup>85</sup> Can authentication requirements or the specification of physical elements ensure that the configuration of certain modular transmitters does not compromise the compliance with our rules of a user-configured device? What other difficulties are likely and are solutions available? Can the necessary provision be easily incorporated into other modular transmitter rules, or are these issues so specific that separate rule sections would be more practical? This issue directly affects our consideration of responsible parties for compliance with our rules, discussed in section III(B)(3)(a), insofar that these types of devices are sold directly to consumers who may be creating new devices that must be properly authorized under our equipment authorization rules.

**b. Devices with software-based capabilities**

43. The SDR rules were intended to allow manufacturers to obtain approval for changes to the RF operating parameters of a radio resulting from software changes without the need to physically re-label a device with a new FCC ID number in the field.<sup>86</sup> For a device to be certified as an SDR, in addition to demonstrating that the device complies with the applicable technical requirements, the applicant must also demonstrate that the device contains security features to prevent the loading of software that would allow the radio to operate in violation of the Commission's rules.<sup>87</sup> The applicant generally has the option of whether to declare a device an SDR.<sup>88</sup> Once the grantee of a device that is classified as an SDR makes any hardware modifications that require approval, the rules do not permit any subsequent software changes absent the filing of an application to obtain a new FCC ID.<sup>89</sup>

44. Our rules appear to have discouraged many manufacturers from choosing to certify devices as SDRs. In the few cases where manufacturers have chosen to obtain approvals for SDRs, they had to carefully plan their product evolution to avoid making hardware changes limiting their flexibility for future products or incur expense of requiring new FCC ID when making minor hardware modifications. In addition, as the use of software to control devices generally has become widespread,

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<sup>84</sup> RF exposure rules apply to the final device or the end product handset. *See* 47 C.F.R. § 2.1093. Also, to be certified as “hearing aid compatible,” an end product handset must meet the requirements of Section 20.19. *See* 47 C.F.R. § 20.19(b). We do not propose in this Notice to modify these requirements.

<sup>85</sup> Manufacturers can ensure that modular transmitters operate only with “authenticated” host devices by means including, but not limited to, coding hardware and electronic signatures in software. Such methods must be described in the application for certification. *See* KDB Publication [996369](#).

<sup>86</sup> A grantee of certification or other party must obtain approval to load new or modified software into a previously certified SDR if the software changes will alter the operating parameters of the radio. *See* 47 C.F.R. § 2.1043(b)(3). A radio in which the software is designed or expected to be modified by a party other than the manufacturer must comply with the SDR requirements. *See* 47 C.F.R. § 2.944(b).

<sup>87</sup> *See* 47 C.F.R. § 2.944(a).

<sup>88</sup> The Commission made the SDR classification permissive, rather than mandatory, with one exception: The manufacturer must seek approval of a device as an SDR when the software is specifically designed to allow a third party to modify the device.

<sup>89</sup> *See* 47 C.F.R. § 2.1043(b)(3). “Class III changes are permitted only for equipment in which no Class II changes have been made from the originally approved devices.” This requirement restricts any minor hardware changes to such radios requiring a new FCC ID for the device and limiting the flexibility of the rules. *See infra* para. 48.

our equipment authorization procedures have evolved to include guidance for devices which are completely controlled by the manufacturers to take advantage of most of the capabilities originally attributed to SDR devices. Further, the security requirements for software-controlled devices have been incorporated in many of the Commission's other rules for some types of devices.<sup>90</sup>

45. Accordingly, we propose to simplify our rules by removing the SDR designation from grants of certification and incorporating any necessary requirements for software control of RF parameters and software security for all devices in our general certification rules and guidance. The use of software upgrades to change RF operating parameters of certified devices has been beneficial to both manufacturers and consumers, since it allows manufacturers to obtain approval of products with an initially limited set of capabilities and then enable new frequency bands, functions and transmission formats to be added to already-approved equipment.<sup>91</sup> However, the existing SDR rules have proven to be insufficiently flexible to meet the growing use of software-defined control elements in RF devices. At the same time, OET staff has provided guidance to allow more flexibility for upgrades of devices when a manufacturer maintains control of the software.<sup>92</sup>

46. We propose to modify the SDR-related requirements in Part 2 of our rules based in part on the current Commission practices regarding software configuration control.<sup>93</sup> To minimize the potential for unauthorized modification to the software that controls the RF parameters of the device, we propose that grantees must implement well-defined measures to ensure that certified equipment is not capable of operating with RF-controlling software for which it has not been approved. Our proposed rules would require that *all* manufacturers of devices that have software-based control of RF parameters must provide specific information about the software capabilities of their devices. The proposed rules would also make it easier for manufacturers to implement software changes, either under the initial grant of certification or through subsequent changes. We propose to require that an applicant for certification must explicitly describe the RF device's capabilities for software configuration and upgradeability in the application for certification. This description would include all frequency bands, power levels, modulation types, or other modes of operation for which the device is designed to operate, including modes not enabled in the device as initially marketed. Currently our rules require such a description only for devices approved under SDR rules or for devices operating in specific bands. We further propose that an applicant for certification must specify which parties will be authorized to make software changes (*e.g.*, the grantee, wireless service provider, other authorized parties) and the software controls that are provided to prevent unauthorized parties from enabling different modes of operation. This information would be included as part of the operational description information required in the application for certification. We seek comment on these proposals.

## 2. Changes to certified equipment

47. We also propose to revise the filing requirements for applications to make changes to certified equipment to more closely reflect the way in which RF devices are designed, manufactured and marketed. Under our current rules, the grantee of an equipment authorization may market devices having different model/type numbers or trade names without additional authorization from the Commission, provided that the devices are electrically identical and the equipment bears an FCC ID validated by a grant of certification.<sup>94</sup> We believe that the current concept of electrically identical is not appropriate to

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<sup>90</sup> See 47 C.F.R. § 2.1033(b)(13).

<sup>91</sup> See, *e.g.*, *SDR Order*.

<sup>92</sup> See KDB Publication [178919](#).

<sup>93</sup> See KDB Publication [594280](#).

<sup>94</sup> 47 C.F.R. §2.924. The FCC Identifier is described in Section 2.926 of our rules. 47 C.F.R. §2.926. For purposes of our rules, "electrically identical," which relates to permissible modification under one FCC ID, is distinct from the term "identical," which describes variations in the manufacturing process.

modern radio designs and that strict application of this concept can result in outcomes that unnecessarily burden manufacturers and constrain design flexibilities, or that otherwise do not advance the primary purposes of the equipment authorization program.

48. Section 2.1043 of our rules, which describes what actions are required when a party makes changes to certified equipment, is based on the “electrically identical” concept as well as the idea that no changes may be made to the frequency determining and controlling circuits or the maximum power without first obtaining a new FCC ID.<sup>95</sup> This rule categorizes three broad classes of permissive changes. Class I changes are characterized by equipment modifications that do not degrade the characteristics reported by the manufacturer upon which the initial certification was granted.<sup>96</sup> Class II changes are those modifications that degrade the performance characteristics as reported in the initial certification application.<sup>97</sup> Class III changes are software changes to SDR grants of certification. Because Class III changes relate to modifications to devices originally specifically certified as SDRs, our proposal to eliminate the SDR-specific certification would effectively moot the Class III change category.<sup>98</sup> For Class II and Class III changes, the grantee can file an abbreviated application for certification under the same FCC ID. A change that falls outside the permissive change definitions requires a new FCC ID issued in conjunction with a new grant of certification based on a complete certification application.

49. When the Commission originally adopted the permissive change rules, RF devices were primarily hardware-based with large, discrete components. The current rules are difficult to apply to modern equipment, which is often designed using chips with a high level of integrated functions and with the capability to use software to control and/or add functions that modify the RF parameters reported at the time of certification. Thus, the current rules require a grantee to obtain a new approval with a different FCC ID and label its equipment accordingly when minor electrical component changes are made that have no effect on the overall functionality or compliance of the device.<sup>99</sup> On the other hand, with

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<sup>95</sup> 47 C.F.R. §2.1043. *See* Amendment of Part 0 and 2 of the Rules Relating to Equipment Authorization of RF Devices, Docket No. 19356, *Memorandum Opinion and Order*, 47 FCC 2d 1192, 1201 (1974). The requirement in Section 2.1043(a) concerning the types of changes that require a new application for certification was originally codified in Section 2.1001, which applied only to transmitters used in licensed services. In 1989 the Commission added this requirement to Section 2.1043(a), which applied to changes in unlicensed devices, to make it consistent with the requirements in Section 2.1001. *See* Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License, GEN Docket No. 87-389, *Report and Order*, 4 FCC Rcd 3493 (1989). The Commission merged Section 2.1001 into Section 2.1043 in 1998 and made this section applicable to both licensed and unlicensed devices. *See* Amendment of Parts 2, 15, 18 and Other Parts of the Commission’s Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment, ET Docket No. 97-94, *Report and Order*, 13 FCC Rcd 11415 (1998).

<sup>96</sup> *See* 47 C.F.R. § 2.1043(b)(1). The rules do not specifically define the term “degrade.” However, in using the term in connection with the permissive change rules for equipment certification, we refer to deterioration in performance when compared to the performance relative to compliance reported at the time of approval. For example, we would typically consider performance to be degraded if the equipment modification increases the potential for harmful interference, increases RF exposure, or reduces hearing aid compatibility ratings. Additionally, any increase in fundamental power or spurious emission is considered a degradation. (*See* “Permissive Change Policy” (OET, 2014) at n.3 (available within KDB Publication [178919](#)).

<sup>97</sup> *See* 47 C.F.R. § 2.1043(b)(2).

<sup>98</sup> We do not permit Class III changes to an SDR that has been modified by an approved Class II change, which limits the advantages of the existing SDR classification.

<sup>99</sup> Current devices can use highly-integrated circuits in their designs. Occasionally in manufacturing it may be necessary to select an alternative supplier for such circuits. While it is possible that the two component integrated circuits perform the same function, each may have a slightly different circuit board layout. In such cases, the functions of the approved device may not have changed but the new device would not be considered “electrically identical” under our current rules. Under this scenario, the manufacturer is required to file a new application for

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software-based changes, a device may add a completely new set of RF operating parameters from the already approved device – and yet both devices are electrically identical under the rules and can currently be authorized under one FCC ID.<sup>100</sup>

50. Because grantees have experienced difficulties in determining how their proposed changes are processed under the three existing categories of permissive changes, the OET Lab has issued KDB Publication 178919 describing when it is necessary to file a permissive change application or a new application for certification.<sup>101</sup> This guidance does not resolve the fundamental problem that the existing electrically identical concept and the permissive change rules are ill-suited for modern RF device design.

51. We propose to replace the “electrically identical” benchmark with a new standard that considers how the device differs from what was evaluated at the time of equipment certification and whether those differences could affect how the modified device complies with our rules. We propose two broad categories of changes – those that do not require a new FCC ID and those that do. Under this proposal, a manufacturer or other responsible party would evaluate the scope of changes and potentially test its modified device to determine the applicable change category. As discussed below, each category would have different filing requirements. We seek comment on these proposals.

52. *Changes that do not require a new FCC ID.* We propose that certain changes in layout, included components, operating software, or variations in overall electrical or mechanical constructions that do not substantially change the overall function of the device do not require a new FCC ID. Within this category, we propose to retain a distinction between changes that may be made without an additional filing and those changes that require an application for certification. Thus, we propose to continue to permit two classes of permissive changes to devices under the same FCC ID.

53. We propose to continue to permit Class I permissive changes (which do not require a new application for a grant of certification) for those changes that do not degrade the device parameters normally reported in an equipment authorization application to demonstrate compliance with our rules.<sup>102</sup> Under this standard, we would permit a decrease in the fundamental emissions that does not increase spurious emissions, an improved spurious emission performance, minor variations in the enclosure or components (including, for example, minor electrical component changes), and software changes that do not affect RF parameters. We emphasize that such changes could not cause the fundamental emissions to increase, the spurious emissions to deteriorate, RF exposure to increase or HAC ratings to change.<sup>103</sup>

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certification and obtain a new FCC ID. Because this requirement results in a new FCC ID, it significantly affects the production, manufacturing and marketing logistics for the manufacturers, distributors and retailers. In the cases of products made for international markets, this may also result in additional approval requirements by other regulatory bodies.

<sup>100</sup> For example a Wi-Fi router may have hardware capable of supporting 20 MHz, 40 MHz, 80 MHz and 160 MHz channels. However all the software functionality to properly operate on all the channels may not be available at the time of the initial grant. Under our current rules, since there are no changes to the actual hardware, the manufacturer can request the addition of missing channels by filing a request for change under the existing FCC ID. This allows such devices to add substantially new capabilities under the current rules without having to apply for a new FCC ID (which would not be possible for a device requiring a hardware change).

<sup>101</sup> See KDB Publication [178919](#) (providing guidance on the application of the permissive change rules for five categories of changes to certified devices: 1) antennas, 2) printed circuit board and hardware, 3) enclosures, 4) software, and 5) miscellaneous changes).

<sup>102</sup> These parameters normally reported to the Commission typically include frequency of operation, bandwidth of emission, fundamental transmitted power, and, if applicable, RF exposure parameters and HAC ratings.

<sup>103</sup> Our rules generally set limits on the levels of spurious emissions permitted at each frequency. An increase in the level at any frequency is considered deterioration, and it could potentially create a greater risk of harmful interference. We have typically considered this to be a significant change that requires evaluation and approval.

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Because there is negligible risk that these types of minor changes would make the device noncompliant with our rules, we propose that the manufacturer or responsible party would be able to make the change without notifying the Commission or a TCB.<sup>104</sup> We believe that the proposed clarification of Class I permissive changes would provide greater flexibility to create device modifications without the need to submit a new application for certification.<sup>105</sup> Are there other circumstances where we should allow Class I permissive changes to be made under the same FCC ID and not require an application for a grant of certification?

54. We also propose to modify our rules for Class II permissive changes maintaining the same FCC ID, but subject to filing and approval requirements. We believe that there are circumstances under which a device manufacturer should be able to make certain hardware or software changes to devices despite degrading the device parameters normally reported in an equipment authorization application to demonstrate compliance with our rules. We propose to permit changes that would increase the fundamental emissions or degrade spurious emissions or other parameters reported to the Commission from what was evaluated at the time of certification, as long as rules compliance is maintained and the overall layout, major frequency determining components and circuitry, or function of the device have not changed. Under this proposal, any modification to component layout must have the same device circuit design as that approved initially, and the replaced components for RF determining functions must have similar capabilities.<sup>106</sup> We envision that parties would make these types of changes to enable new capabilities such as new frequency bands or transmission formats mostly through software changes. Application of this standard would allow for component changes, including depopulating certain components like power amplifiers from the RF section of a device, without requiring a new FCC ID.<sup>107</sup> Where the grantee adds such capabilities through software changes, it would have to demonstrate the controls it will use to prevent unauthorized software modifications.<sup>108</sup> To ensure that the modified device continues to comply with our rules, the changes would require an application for certification, as a permissive change, under the same FCC ID.<sup>109</sup> Such applications would need to clearly identify the changes made to the device and any revisions of the operational description associated with such changes, and demonstrate the modified device's compliance with the rules. If the grantee of a certified modular

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KDB Publication [178919](#) is a resource for additional useful information about how changes in emissions can affect a device's authorization.

<sup>104</sup> The responsible party would still need to confirm by testing that the product is compliant with the emission limits and requirements. It is possible, for example, that changes in enclosures may have different RF shielding characteristics that result in changes in RF emission from the device. Also, if an integrator incorporates multiple certified modular transmitters in a host, the total fundamental and spurious emission from the final product would need to be compliant with our rules.

<sup>105</sup> This is similar to existing self-approval practices, and we emphasize that we would require parties to maintain records of such changes under our existing equipment authorization recordkeeping rules. Because this additional flexibility is only available for devices that have already received a grant of certification, we will already have contact information for the manufacturer.

<sup>106</sup> In many designs, variations to RF power amplifiers or filters are necessary to meet different operating conditions. While the main RF circuits may remain the same there may be variations in the ancillary circuit components for different operating conditions.

<sup>107</sup> Consistent with our current practice, we would allow a party to voluntarily request a new FCC ID if it so chooses. For example, parties have previously opted, for marketing reasons, to place distinct model numbers and FCC IDs on similar products, even though our rules would have permitted the use of the same FCC ID.

<sup>108</sup> See *supra* para. 46.

<sup>109</sup> Such a filing would be an abbreviated filing, analogous to the type of submission currently made in conjunction with Class II permissive changes where a lesser amount of information is required than for a new application for certification.

transmitter wants to use the transmitter for applications for which it has not been approved, for example in cases of approval as a limited modular transmitter, the grantee would have to also obtain a new grant of certification under the same FCC ID by filing an application for change with data to show compliance with all the technical standards for that type of operation. Are there other circumstances where we should allow changes under the same FCC ID and require a new grant certification?

55. Under our proposed approach, we could recognize the concept of a “family of products” existing under a single FCC ID. The Commission already receives requests for approval under a single FCC ID for multiple similar devices that are not strictly electrically identical but have fundamental functional similarities. However, under our current rules such variations are not contemplated, and in these situations separate FCC IDs are required for each device.<sup>110</sup> Under this proposal, a group of devices that are essentially similar, based upon the overall design of the devices, their functions, components and layout, could be viewed simply as variations of a single device. Thus, a manufacturer could create a family of products under the same FCC ID without having to obtain distinct approval from a TCB for each device that falls within the family classification. We seek comment on this proposal. Appendix A includes a proposed new Section 2.924(b) that defines a family of products. We propose to permit a manufacturer to determine what constitutes a family of products. Under such an approach, what review and oversight mechanisms should we implement to ensure that we and the TCBs can identify those cases where a grouping of products under one FCC ID is not appropriate? For example, we propose to require that a manufacturer include in its initial filing or updated filing specific information about the variations in the products within a family, and that the manufacturer also identify any variations due to removal of some components. Should we also require the manufacturer to specify different model numbers for each variation of the product? We seek comment on this matter.

56. *Changes that require a new FCC ID.* We believe that certain device modifications are substantial enough to require the issuance of a new FCC ID that has been validated by the issuance of a new grant of certification. Such modifications involve major changes in the design, layout or replacement of the components.<sup>111</sup> By effectively treating such modified equipment as new devices, we can be confident that the devices have been thoroughly evaluated for compliance with our rules and that transformed devices are more easily distinguishable.<sup>112</sup>

57. To implement these changes, we propose to revise Section 2.1043 as shown in Appendix A. We also propose to remove the “electrically identical” definition from Section 2.924 of the rules.<sup>113</sup> We propose to add rules, as shown in Appendix A, that address the modular transmitters, software-defined radio, and device change matters discussed above.<sup>114</sup> We believe that our revised rules will benefit equipment manufacturers by establishing simpler and more easily understood procedures for making hardware and software changes to previously certified equipment, and reducing any unnecessary

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<sup>110</sup> The staff has previously permitted approval of products with a single FCC ID under a narrow set of circumstances: the differences between products are due to variations in components obtained from different sources, such differences are identified in the initial application, and test results show that all the variations comply with all the applicable rules.

<sup>111</sup> Such changes would include modification of frequency determining and modulation circuits as well as changes in components impacting bandwidth capabilities unless all of these are done through software.

<sup>112</sup> There are other situations where a new FCC ID will be required even though the device has not been changed, such as when a party files an application to become the responsible party for a previously approved device. We discuss those cases under our discussion of responsible parties *infra*.

<sup>113</sup> In the context of manufacturing, Section 2.908 defines the term “identical” as within the variation that can be expected to arise as a result of quantity production techniques. See 47 C.F.R. § 2.908. This definition remains appropriate and we are not proposing to change it.

<sup>114</sup> We are modifying our rules for equipment authorization applications to ensure that the software security descriptions that are required under the old SDR rules will remain confidential. See *infra* paras. 80-89.

burden of compliance, while still ensuring the integrity of our equipment authorization procedures. We seek comment on these proposals.

### 3. Responsible parties for certified equipment

58. Our current rules designate the grantee of certification as the party responsible for the compliance of the certified equipment. When a party other than the grantee of certification modifies a device through either hardware or software changes without the authority of the original grantee, or incorporates a certified device into another host device, then that party becomes responsible for the modified device's compliance of the equipment with the Commission's rules.<sup>115</sup> In accordance with this responsibility, the modifying party must obtain a new FCC ID for its product.<sup>116</sup> When a party other than the grantee of certification modifies a device under the authority of the original grantee, the party must obtain a new certification under either the original FCC ID with the original grantee's approval pursuant to Section 2.1043 of our rules or with a new FCC ID pursuant to Section 2.933 or Section 2.1033.

59. We propose to clarify the parties responsible for ensuring the compliance of devices in different scenarios, and to make sure that all devices requiring authorization are properly tested for compliance and clearly identify the responsible party.<sup>117</sup> These proposals recognize that RF devices may include components manufactured or assembled into end products by multiple parties, and be modified via software. They also recognize the effect of our proposals to move rule provisions governing modular transmitters into our Part 2 rules and make them broadly applicable to both devices used in licensed services and devices operating under the Part 15 unlicensed rules.<sup>118</sup>

#### a. End products incorporating certified modular transmitters

60. Manufacturers commonly market certified modular transmitters that are designed to function only when installed in another device. We propose to codify rules to clarify the responsible party for the certification of modular transmitters (including limited modular transmitters) and to relocate the certified modular transmitter requirements of Part 15 into our Part 2 rules. Modular transmitters are certified as compliant with the Commission's rules based upon specific data about the intended device configuration and use that are provided by the grantee in its certification application. For example, a certified modular transmitter may have been approved as a limited modular transmitter for operation in a particular end product, or it may require a specific type of enclosure to comply with the RF exposure rules. Further, limitations may be required to ensure that a particular host device, modular transmitter, or combination of modular transmitters used in an end product complies with our rules.<sup>119</sup>

61. Complications can arise when a certified modular transmitter has not been certified for use with a specific host device or it is being used in a manner that was not evaluated at the time it was

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<sup>115</sup> This applies to all changes made by a party other than the current grantee, even those that may be made without a change in FCC ID or complete certification application under our current or proposed equipment change procedures. *See, e.g., supra* para. 52-55.

<sup>116</sup> *See* 47 C.F.R. § 2.909(a). In the case of equipment authorized under the verification or DoC procedure (where there is no FCC ID), the manufacturer is responsible for compliance of equipment manufactured in the United States, and the importer is responsible for the compliance of imported equipment. *See* 47 C.F.R. §§ 2.909(b) and (c).

<sup>117</sup> The variety of such devices is extensive and can include, for example, stand-alone certified devices, devices assembled from modular transmitters (including those assembled directly by consumers), devices that include software controls, and devices that are modified with or without the original grantee's approval.

<sup>118</sup> *See supra* para. 39.

<sup>119</sup> For example, radio transmitters in a smartphone are installed in such a small enclosure that it is not easy to test the RF exposure or HAC compliance of the smartphone based on modular approval. In such cases such smartphones have to be specifically tested for compliance with these requirements and the manufacturer must submit the test data in a new application for grant of certification.

certified. In cases where consumers can purchase and directly install certified modular transmitters into their devices, they may not be aware that they could be modifying the device in a manner that requires a new certification application. We propose to continue to apply the general principle that a party that creates an end product is responsible for the compliance of the end product it creates, and to establish rules for two general scenarios involving end products that incorporate certified modular transmitters.

62. *Certified modular transmitter installed – no certification application required.* Certified modular transmitters are typically tested only in specific configurations. If an integrator uses a certified modular transmitter in the authorized configuration, it must first confirm that the host device was manufactured in compliance with its own equipment authorization.<sup>120</sup> Under existing OET Lab guidance, to ensure that the end product that incorporates the certified modular transmitter complies with Commission rules, the party installing a certified modular transmitter (or multiple certified transmitters) into a device must follow all instructions provided by the manufacturer(s) concerning the installation of the modular transmitter(s), the type and layout of the transmit antenna(s), and any other steps that must be taken to ensure the compliance of the end product. The party installing a certified modular transmitter must also ensure that the end product is of a type that has been tested for use under the modular transmitter's certification(s). If the host device already contains transmitters which may not have been certified separately, or the party is installing multiple certified modular transmitters, then each transmitter must have been certified for use in such a combination and the modular transmitters may only be installed in an approved configuration.<sup>121</sup> We propose to codify this existing practice. If a certified modular transmitter is installed in a host and if the modular transmitter is installed in compliance with all of the conditions tested and established as part of certified modular transmitter's grant of certification, then a new certification would not be required for the resulting end product.<sup>122</sup> We further propose to clarify that the installer is responsible for ensuring that the host device complies with the Commission's rules and was properly authorized prior to the installation of the modular transmitter. We seek comments on our proposals. Are there other conditions which should not require a new grant of certification?

63. *Certified modular transmitter installed – additional certification application(s) required.* The installer must take additional steps to demonstrate the compliance of the end product if the certified modular transmitter is installed in a manner that differs from any configuration associated with its current certification; the combination of certified modular transmitters would result in a configuration that is not consistent with any of the modular transmitters' certifications; or host device-specific tests are required. Specifically, our current guidance provides that the installer should ensure that the end product is tested to demonstrate compliance with all applicable technical requirements, including RF exposure and HAC, as appropriate. Such tests must be conducted with the installed configuration of certified modular transmitters including any host-based non-certified modular transmitters. Information associated with the grant of certification of certified modular transmitter (or the host, when applicable) must be updated accordingly.<sup>123</sup> We propose to codify two methods for submitting the information required for a grant of certification to ensure that an end product is properly authorized in compliance with Part 2 of the rules: 1) the installer could apply for a grant of certification for the complete end product (*i.e.* the host device and the certified transmitter(s)); or 2) the grantee(s) of the certified modular transmitter(s) could modify the original grant(s) of certification to allow for such an integration into a host device under the original FCC ID(s).

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<sup>120</sup> A host device may be subject to either verification or DoC requirements without the modular transmitter under the current rules or a self-approval procedure under proposed rules. Also, if the host device has additional transmitters subject to certification, then such authorization may be necessary independent of the requirement that attaches to modular transmitters.

<sup>121</sup> See KDB Publication [996369](#).

<sup>122</sup> In this case, the end product would retain the FCC ID of the host device, if it has one; and include appropriate labels identifying the certified modular transmitter.

<sup>123</sup> See KDB Publication [996369](#).



64. Under the first scenario, the party installing a previously certified modular transmitter into an end product would submit an application for certification and obtain a new FCC ID for the end product. If the party installing the previously certified modular transmitter has obtained the consent of the original certified modular transmitter grantee(s), then its application could reference the test data associated with the modular transmitter(s)' current certification, supplemented by data obtained from any additional tests necessary to demonstrate compliance of the end product. The grantee of certification for any installed certified modular transmitter(s) would continue to be responsible for compliance of its certified modular transmitter(s); the end product manufacturer would be responsible for compliance of the additional capabilities of the certified modular transmitter(s) approved under the new FCC ID and for the end product.

65. In the second case, the original grantee of the certified modular transmitter would submit a new certification application. This application would include any supplemental data necessary to demonstrate, for example, that the previously certified modular transmitter would comply with the rules when appropriately installed in the specific host device, or that certain combinations of modular transmitters will comply with the rules when installed in the specific host device. Depending on the nature and scope of the modifications, the original grantee would either retain the existing FCC ID for the certified modular transmitter and submit a new certification application pursuant to Section 2.1043, or submit a new certification application pursuant to Section 2.1033 and receive a new FCC ID.<sup>124</sup> The party installing the modular transmitter could then effectively proceed under the no certification application required scenario. We seek comment on these proposals.

66. Certified modular transmitters may be sold directly to consumers to be integrated into host devices or independently combined to create an almost limitless variety of new devices.<sup>125</sup> The resulting end products may require additional actions to ensure compliance with our rules. In such cases, application of the principles we have outlined above would make the consumer, acting as the integrator, the responsible party for these end products. We do not believe it would be prudent or practical to do so. Rather, we propose to designate the certified modular transmitter grantee or the host provider as responsible for the end products that can be created by consumers who purchase such equipment.<sup>126</sup> We seek comment on this proposal. Should we place limits or conditions on grants of certification when equipment may be directly sold to consumers for assembly or integration?<sup>127</sup> Such conditions could include providing detailed instructions to the end user for proper installation and use of the device, as well as including certain electrical or mechanical locks to limit authorized operation. Are there other conditions that would help ensure compliant operation in such cases?

67. In other cases, a modular transmitter may be modified from its authorized parameters because hardware or software changes have been made to the device, resulting in the filing of a permissive change application for certification for the modular transmitter. Parties that make end products that incorporate the modular transmitter may have already referenced the original modular

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<sup>124</sup> The grantee could also request a new FCC ID, if it opts to do so.

<sup>125</sup> See, e.g., *supra* para. 17.

<sup>126</sup> For products where the host is simply a physical platform for certified modular transmitters, the developer of the reference design or the manufacturers of products using the reference design would be responsible for providing the proper design guidelines, interface specifications, and authentication requirements to the manufacturers of modular transmitter components. We will require parties filing for certification based on these reference designs to include the reference designs and show how they meet the requirements of such designs to ensure device compliance. See *supra* para. 42.

<sup>127</sup> Our current guidance does not advise manufacturers of certified modular transmitters against selling directly to consumers, but we recommend that the grantee evaluate the transmitter in the most likely usage conditions or make it difficult to use the transmitter in a way that would make the end product noncompliant. Certified modular transmitters are subject to all the rules for providing proper information to end user to ensure compliance. See, e.g., 47 C.F.R. §§ 2.1093, 15.19, and 15.21.

transmitter certification in their applications and been issued a grant of certification for their end product. Thus, when a modular transmitter has multiple certified configurations under one FCC ID, it can be confusing to know which configuration is being installed in an end product. In this scenario, the existing certification for the end product would remain valid without further action, consistent with our current practice.<sup>128</sup> However, we seek comment on ways in which both manufacturers of certified end products and the FCC can better distinguish among the different versions of certified modular transmitters that may be incorporated into their products from that point forward. Short of requiring a permissive change application for certification of the end product, what, if anything, should we do to track such changing relationships and ensure that an end product continues to use only those version(s) of modular transmitters that have been certified for use in that end product? Also, how should we ensure that the manufacturer of the end product is using the version of the certified modular transmitter which was approved with the original filing? Should we continue to rely on the manufacturers of end products to make sure that their products continue to comply if there are variations in the certified modular transmitters?

68. We believe that these proposals will clarify the responsibility for compliance of end products in which certified modular transmitters are integrated into a host device or modified through either hardware or software changes. We also believe that they will help ensure that RF equipment complies with the Commission's technical standards to minimize the likelihood of harmful interference as well as ensure compliance with other requirements for RF exposure and HAC, while providing manufacturers, assemblers, and installers with greater flexibility in developing new and innovative products. We recognize that the application of our proposal may require parties to perform additional compliance testing on the end product with one or a combination of modular transmitters installed. However, we tentatively conclude that such costs are outweighed by the benefits of more clearly defining responsibilities prior to certification and marketing products and better ensuring compliance with the Commission's rules. We also seek comment on whether our proposal constitutes the least burdensome and most efficient ways to clearly identify the responsibilities of each party that is associated with a particular RF device while ensuring compliance with the Commission's rules. Are there alternatives to or modifications of the proposal that would strike a better balance?

**b. Modification of certified equipment by third parties**

69. To ensure that the party responsible for the modification of a certified device is clearly identified, we believe modifications by third parties should not be permitted unless the third party receives its own certification. Accordingly, we propose two revisions of our current rules in order to eliminate two exceptions to this principle. First, we propose to revise Section 2.909(d), which allows a new party that performs device modifications without the consent of the original grantee to become responsible for the compliance by simply labeling the device with a statement indicating it was modified. We propose to instead require that such parties must obtain a new grant of certification for the modified device. The new grant of certification could use the same FCC ID with the consent of the original grantee pursuant to Section 2.1043 or obtain a new FCC ID pursuant to Section 2.1033 if consent is not obtained.<sup>129</sup> We seek comment on this proposal. If this change is adopted, should parties that currently market devices with modified certification labels be required to obtain a new grant of certification for existing products?

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<sup>128</sup> We distinguish this case from the situation where a modular transmitter is incorporated into third-party devices and then the grant for the modular transmitter is set aside or dismissed. In that case, any end product incorporating the modular transmitter would be noncompliant, as there would not be a valid underlying grant of certification for the device.

<sup>129</sup> To obtain a new FCC ID, a party must file a completely new application for certification with all the appropriate information.

70. Second, we propose to codify a uniform application process that applies in instances where parties other than the original grantee wish to make changes to certified devices. Currently, under Section 2.1043(f), a party other than the grantee is permitted to make a Class II permissive change modification to equipment that does not operate under rule Parts 15 or 18, if such a party files a certification application that includes the data specified by the rules. For all other devices, Section 2.1043(d) requires a new application to be filed for any changes. We propose to require that all parties making changes without the authorization of the original grantee of certification must obtain a new grant of certification and a new FCC ID. Many end products incorporate transmitters for use under rules for licensed services and as unlicensed transmitters. Also, in the few applications have been filed pursuant to Section 2.1043(f), associating the supplemental information with the device and identifying the new responsible party has been difficult, and we believe that changing our rules as proposed would effectively clarify the compliance requirements. We seek comment on this proposal.

71. We also propose that an application from a third party that would result in a new FCC ID for a previously approved device must include documentation substantiating that the original grantee has given permission to the new applicant to reference its original filing. This proposal would provide the original grantee with the opportunity to ensure that only authorized changes are made to its products and that any subsequent changes to the original approval are properly tracked. If the changes were made without the approval of the original grantee, we propose to require the submission of a new, complete application that does not reference the original grant of certification. We seek comment on this proposal, and ask specifically what documentation would be sufficient to establish that the required permission had been actually obtained.

72. Finally, while we propose to remove SDR-specific certification procedures from our rules, we believe that we must continue to address the unique issues regarding the responsibility for changes to devices with software-based capabilities for controlling RF parameters. We therefore propose to permit third-party RF-controlling software modifications to previously certified devices under the same procedures that currently apply to grantee modifications of SDRs.<sup>130</sup> When a software change allows operations outside of the RF parameters approved in the device's grant of certification, then the party making the software changes must obtain a new grant of certification. The new grant of certification may use the same FCC ID with the consent of the original grantee as a Class II permissive change pursuant to Section 2.1043 or must have a new FCC ID pursuant to Section 2.1033 if such consent is not obtained. Similarly, we propose to incorporate the technical requirements currently specified in Section 2.944 requiring an applicant to describe the software controls it is using to prevent unauthorized device tampering into our broadly applicable application processing rule, Section 2.1033.<sup>131</sup> We seek comment on these proposals.

### **c. Repaired and refurbished devices**

73. We propose to clarify our procedures for the repair and refurbishing of certified devices. Specifically, we propose to formally adopt our current practice whereby a third party that repairs or refurbishes certified equipment to the device's original specification does not need to submit an application for certification if the equipment continues to operate as specified in its current grant.<sup>132</sup> In this case, the FCC ID remains on the device and the original grantee continues to be the responsible party. When a party repairs or refurbishes certified equipment but does not return the equipment to its original specification, we would continue to treat this as a modification to a certified device. If the grantee or a

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<sup>130</sup> See 47 C.F.R. § 2.944. Currently, except for devices certified as SDRs, software changes can be made only by the grantee of certification.

<sup>131</sup> Existing Section 2.944(b) indicates that when the RF-controlling software is designed or expected to be modified by a party other than the manufacturer, the application for certification must demonstrate compliance with the SDR software security requirements in current Section 2.944(a). 47 C.F.R. § 2.944.

<sup>132</sup> KDB Publication [568086](#).

third party makes the change with the consent of the grantee, then the modification rules of Section 2.1043 would apply. If a new grant of certification were required, it could be obtained under the same FCC ID as a Class II permissive change or a new FCC ID, depending on the scope of the change.<sup>133</sup> If a third party modifies the device without the consent of the grantee, it would become the new party responsible for the compliance of the equipment and a new FCC ID would be issued for the modified device.<sup>134</sup> We seek comment on this proposal.

74. We also propose that when third parties repair or refurbish certified equipment to the device's original specification without the grantee's permission, we should require an application for certification for the equipment or take other action that would allow us to readily identify the third party and be assured that the repair does not serve to impermissibly modify the device. This proposal would make these rules consistent with other rules we propose for any changes to devices by third parties without the permission of the original grantee.<sup>135</sup> Are there particular refurbishing services that would make such a requirement unduly onerous – for instance repairing enclosures made to the same specifications, or replacing an antenna with another similar antenna with identical technical properties, or repairing broken controls? We further propose that replacement or installation of parts that are commonly changed by users or personnel at retail stores, such as battery packs, hard drives and memory would not be considered modifications of the device's grant of certification. We seek comment on these proposals.

#### **d. Imported equipment**

75. Our rules currently prohibit the importation of devices that require an authorization, and for which no specific authorization has been obtained.<sup>136</sup> Under the current rules, the importer of a certified device is not the party responsible for compliance with our rules; this is in contrast to equipment authorized under the verification or DoC procedures where the importer is held responsible.<sup>137</sup> Since many certified devices are manufactured outside the United States, there may be no party within the United States other than the importer that the Commission could readily contact in case a device is found to be non-compliant. We propose to require that all applications for certification include the contact information of a party located in the United States that is responsible for compliance. Are there other options that we should consider that would meet our objective of ensuring jurisdiction over the party responsible for the compliance of the equipment? Do we need to amend our rules to more specifically address this situation?

76. We seek comment on how to best discourage and prevent the entry into U.S. markets of non-compliant devices — and to deal with those that do enter the country — when a foreign-based entity markets and ships a device directly to a United States customer without an intervening importer. Should we treat the company that ships a non-compliant device from another country as an importer under FCC rules, and hold that party responsible for the violation? Alternatively, should we treat the United States customer who orders a non-compliant device as an importer who is violating these prohibitions?<sup>138</sup> We propose to enforce our importation rules against both the seller and the buyer. As the sales and marketing

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<sup>133</sup> See *supra* para. 54.

<sup>134</sup> As such, it would have to obtain a new grant of certification and a new FCC ID for the device by submitting a complete application with all the required documentation for a new filing.

<sup>135</sup> See *supra* para. 70.

<sup>136</sup> 47 C.F.R. § 2.1204(a). There are a number of limited exceptions to this rule. For example, three or fewer receivers, computers, or unintentional radiators may be imported if they will be for personal use and not intended for sale. 47 C.F.R. § 2.1204(a)(7).

<sup>137</sup> See 47 C.F.R. § 2.909(a). Under the rules we are proposing, the importer of equipment subject to a SDoC would have responsibility for compliance of the equipment with our rules. See proposed 47 C.F.R. § 2.909(b)(2).

<sup>138</sup> A United States customer who orders the non-compliant device would be violating Commission regulations when operating the device. See, e.g., 47 C.F.R. § 2.805.

of radio devices from outside the United States becomes increasingly more commonplace, domestic access to non-compliant devices becomes more likely, thus increasing the need for effective enforcement efforts. While overseas vendors and domestic consumers may already be violating other rules,<sup>139</sup> a new basis (*i.e.*, illegal importing) for the FCC to sanction those involved with such devices could further reduce the incentives to introduce unauthorized equipment into the U.S. market.

#### 4. Information included with applications for certification

77. We propose to streamline Section 2.1033 of the rules, which describes the information that must be included when applying for equipment certification. Currently, paragraph (b) of that section lists the information that must be included with applications for certification of unlicensed equipment operating under Parts 11, 15 and 18 of the rules, while paragraph (c) lists the information that must be included with applications for certification of equipment operating in services licensed under other rule parts. Some of the information listed in each of these two paragraphs is the same or similar, including the name and address of the equipment manufacturer, and applicant for certification, the FCC ID, a description of the equipment, photographs of the equipment and a report of measurements demonstrating that the equipment complies with the applicable rules.<sup>140</sup> Other required information is either specific to transmitters used in licensed services, such as the types of emissions, or is specific to devices authorized under particular rule sections such as Part 15 scanning receivers or Part 25 portable earth stations. We propose to combine the duplicative information requirements listed in paragraphs (b) and (c) and reorganize the information required only in specific rule parts or for specific types of operation into a more logical structure. Products increasingly include transmitters that operate under both the rules for licensed services and the rules for unlicensed operation, and we believe that combining the common equipment authorization requirements in one rule section makes practical sense. We also propose to modify our requirements for submission of device's operational description to include information about software used to control RF parameters and security to ensure unauthorized modification.<sup>141</sup> We seek comment on this proposal.

78. We also ask, more generally, about the information required when parties make changes to certified devices or file applications that rely on pre-existing certifications. As previously discussed, certain software changes and incorporation of modular transmitters into a host device may trigger a requirement to file an application for certification and, in some case to obtain a new FCC ID.<sup>142</sup> We are especially interested in the increasing number of modular transmitters that are intended to be installed in end products and RF-controlling software of devices that can be modified to operate pursuant to multiple rule parts. In cases where a third party incorporates a device of either type with the permission of the device's grantee of certification, we propose to allow the third party to reference portions of the original grant of certification that are consistent with the device as integrated in its end product. We seek to minimize the information filing requirements as much as possible, while also ensuring that essential test data is on file and available for inspection. Accordingly, we propose to permit the new responsible parties to refer to test data submitted in the original grantee's filing. We seek comment on what

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<sup>139</sup> For example, a domestic consumer may incur sanctions for purchasing and operating non-compliant devices in violation of FCC regulations, and a foreign vendor who markets and sells non-compliant devices to purchasers in the United States can be held liable for violating FCC prohibitions against such marketing and sale. *See, e.g.*, Notice of Apparent Liability for Forfeiture and Order, Illegal Marketing of Signal Jamming Devices, File No. EB-SED-12-00005692, 29 FCC Rcd 8107 (2014) (finding that foreign-based company's marketing and sales of cellphone jammers to U.S. customers, effectuated abroad over the Internet, constituted an apparent violation of U.S. law and Commission regulations).

<sup>140</sup> Our current rules require manufacturer information to be included. However, in many cases the grantee is not the manufacturer of the device and, in these cases, grantee information must be provided.

<sup>141</sup> *See supra*, para. 46.

<sup>142</sup> *See supra*, paras. 47-57.

additional portions of the original grant of certification the applicant should be able to reference and not have to resubmit with the new application for certification. What portions of the application should the new responsible party always be required to submit to obtain a new grant of certification? Should we codify a general requirement, or specifically identify the elements that the third party may or may not be allowed to reference in its application? While the above requirements would apply to parties who have obtained permission of the original grantee, are there certain parts of the original application that the new responsible parties can refer to without the grantee's permission – for example in cases of certified modular transmitters?

79. We also seek comment on several other filing situations. Parties sometimes file applications for certification or make requests to update documentation in their application file even though they are not required by our rules or procedures to do so. Such filings are intended to document changes, such as minor grant corrections based on erroneous non-substantive information in the original application or changes in model number, that are not subject to our rules regarding modification of certified equipment because device capabilities are not affected.<sup>143</sup> While parties have found our system useful for publicly documenting such information, our rules do not specify filing procedures for these types of situations. We propose to discontinue this practice, except as allowed under our permissive change rules.<sup>144</sup> We seek comment on this proposal. We also seek comment on whether, instead, we should modify our rules. If so, what changes, if any, should we make to our rules? We invite comments on the scope of changes that we should permit and if this should be restricted to a limited time window after a grant has been issued. Also, since the TCB will have to perform the changes, permitting such changes will require review to ensure that the changes are consistent with the pertinent rules. We seek comment about the efforts involved in permitting such changes. Are there additional administrative changes that we should provide for within our rules?

## 5. Confidentiality of certification applications

80. A TCB is required to upload all the information associated with a certification application to the Commission's Equipment Authorization System (EAS).<sup>145</sup> When an equipment certification is granted in EAS, all application material is generally made available on the FCC website. Commencement of marketing can only begin after the grant of equipment certification and associated materials have been published on our website. However, our rules require some information to be held confidential, and applicants may request that certain additional exhibits within an equipment authorization application be given confidential treatment.<sup>146</sup> Our current rules and procedures provide for two types of confidentiality: short-term and long-term.<sup>147</sup> We propose to modify these rules as described below.

81. *Short-term confidentiality.* Short-term confidentiality allows for the preparation for marketing of devices without disclosure of sensitive information to the public prior to actual sale of the devices (*i.e.* during the time period required for shipping and stocking). We note that the commencement of marketing of certain consumer devices has increasingly become a significant public event with a desire by parties to ensure competitive advantage by ensuring that information about the products is not publicly available prior to the marketing events. Short-term confidentiality is typically requested for information

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<sup>143</sup> As discussed *supra* paras. 47-57, substantive changes require the filing of a new application. Section 2.929 of our rules already permits changes to name, address, ownership or control of the grantees. 47 C.F.R. § 2.929.

<sup>144</sup> See *supra* paras. 47-57.

<sup>145</sup> TCB Order, 29 FCC Rcd at 16341-42, para. 13.

<sup>146</sup> See 47 C.F.R. § 0.457(d).

<sup>147</sup> Certain information – including the fact that a grant has been issued and the test data associated with the grant – are always published and not held confidential. Some exhibits, such as internal photos, may be held confidential on a long-term basis under special circumstances, such as when the products are sold to specific parties under non-disclosure agreements. See KDB Publication [726920](#).

that will become discoverable once sales commence and the product and its related literature can be physically examined – *e.g.* external photos, internal photos, and user manuals.<sup>148</sup> This procedure is described in the Commission’s June 15, 2004 public notice concerning short-term confidentiality requests.<sup>149</sup>

82. Short-term confidentiality is granted upon request without the applicant needing to provide a specific justification, and extends for 45 days from the date of the grant of equipment authorization or until an earlier date specified by the applicant. Absent any other action, the application materials given short-term confidentiality will automatically become publicly available at the end of this period. However, if prior to the expiration of the requested short-term-confidentiality period, an applicant engages in public marketing activities or otherwise publicizes a device for which short-term confidential status has been granted, the applicant must notify the Commission or the TCB, whoever issued the grant of certification, so that the subject exhibits can be made publicly available immediately on the FCC website. The Commission may nevertheless reveal the information at any time if a request for inspection is filed and granted under Section 0.461 of the rules, our general provision that governs the release of information not routinely available for public inspection.<sup>150</sup>

83. If an applicant requires a time period greater than the original grant of short-term-confidentiality for material protected under this provision, it can request up to three 45-day extensions of the limited short-term confidentiality, up to a total of 180 days. To do so, the applicant must notify the entity that issued the grant prior to the expiration of the original grant of confidentiality. Within these limits, requests to extend an applicant’s short-term confidentiality period are made electronically on the equipment authorization website, and, as with the original short-term request, are granted without the applicant having to provide a justification.

84. We propose to codify the short-term confidentiality procedure for the types of information described in the June 15, 2004 public notice.<sup>151</sup> Under our proposal, we will grant short-term confidentiality upon the applicant’s request for 45 days, which may be extended with serial requests to a maximum of 180 days. We will immediately end such short-term confidentiality period if the device is marketed to the public or otherwise publicized by the applicant or by an entity acting on the applicant’s behalf prior to the expiration of this period.

85. Presently, we require an applicant to identify the specific exhibits associated with an application for certification for which short-term confidentiality is requested. Consistent with current procedures, we do not propose to grant confidentiality for information such as test reports and test set-up information that demonstrates that the product complies with the Commission’s technical rules.<sup>152</sup> Would there be benefits in making all application exhibits automatically considered part of a short-term confidentiality request, and if so, what are these benefits? In addition, we also seek comment on whether 45 days with extensions up to 180 days total is the proper length of time to allow short-term confidentiality. Furthermore, we also propose to codify our current policy, as set forth in the June 15, 2004 public notice, that the applicant notifies the TCB issuing the grant of certification prior to the device being marketed to the public or otherwise publicized so that the short-term confidentiality period may be immediately terminated. We seek comment on these proposals.

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<sup>148</sup> Short-term confidentiality may also be requested for other application exhibits, including trade secrets and other exhibits included in long-term confidentiality.

<sup>149</sup> See OET Equipment Authorization System Upgrade Permits Electronic Submittal of Short-Term Confidentiality Requests, *Public Notice*, 19 FCC Rcd 10647 (OET, 2004).

<sup>150</sup> 47 C.F.R. § 0.461.

<sup>151</sup> See proposed amendment of 47 C.F.R. § 0.457 in Appendix A.

<sup>152</sup> See KDB Publication [726920](#).

86. Alternately, should short-term confidentiality automatically be granted for some or all exhibits without being specifically requested by the applicant, given the reality that short-term confidentiality has become the *de facto* method for safeguarding market-sensitive information during the period before equipment becomes available to the public? If we adopt this proposal, which application exhibits should automatically be held under short-term confidentiality?

87. *Long-term confidentiality.* Long-term confidentiality is intended to safeguard trade secrets.<sup>153</sup> This type of confidentiality is intended for information that is not readily discoverable upon release of the device, and can last indefinitely.<sup>154</sup> Long-term confidentiality is governed by our rules of general applicability for requests that materials submitted to the Commission be withheld from routine public inspection – specifically Sections 0.457(d) and 0.459 of the rules.<sup>155</sup> Such information will be held confidential by the Commission unless a request for inspection is filed and granted per Section 0.461 of the rules. A request for long-term confidentiality of material must reference Sections 0.457(d) and 0.459 of the Commission’s rules; describe the reasons why the material should be withheld from public inspection; identify the specific information by exhibit type, name, and description; state whether this information is publicly available elsewhere; and explain why the information is a trade secret.

88. We propose to provide long-term confidentiality automatically (*i.e.* without specific justification) for certain application exhibits for all equipment authorizations.<sup>156</sup> We make this proposal because the vast majority of equipment authorization applications are accompanied by requests for long-term confidentiality for certain types of exhibits. Because these requests are routinely granted, continuing to require applicants to file long-term confidentiality requests for these exhibits may no longer serve a useful purpose. We propose to automatically and indefinitely withhold from public inspection application the following types of exhibits: (1) schematics, (2) block diagrams, (3) operational descriptions, and (4) parts list / tune-up information.<sup>157</sup> This proposal is consistent with the process reform goals identified in the FCC staff report in GN Docket 14-25 – specifically, Recommendation 5.42 (“Hold Application Information Confidential Automatically”).<sup>158</sup> We seek comment on this proposal. Should some of these exhibits not be automatically be given long-term confidential treatment? Should other exhibits beyond those listed be given long-term confidentiality?

89. In proposing changes to our short-term and long-term confidentiality procedures for equipment certification materials, we are cognizant of our responsibilities under the Freedom of Information Act (FOIA) and the Trade Secrets Act. FOIA generally requires that a government agency make records available upon request from the public unless an exception applies.<sup>159</sup> FOIA makes an

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<sup>153</sup> Many courts define a trade secret “as a secret, commercially valuable plan, formula, process, or device that is used for the making, preparing, compounding, or processing of trade commodities and that can be said to be the end product of either innovation or substantial effort.” *Public Citizen Health Research Group v. FDA*, 704 F.2d 1280, 1288 (D.C. Cir. 1983); *See also* The Department of Justice Guide to the Freedom of Information Act (2009 Ed.) at.264, available at <http://www.justice.gov/oip/doj-guide-freedom-information-act> (*DOJ Guide*).

<sup>154</sup> Long-term confidentiality is generally requested for information like schematics, operational description, tuning parameters and software operation of the device. For materials afforded long-term confidentiality, the Commission holds the information confidential as long as it retains the information in accordance with the FCC Records Retention schedule. These records are deleted or destroyed when the record retention period expires.

<sup>155</sup> 47 C.F.R. §§ 0.457, 0.459.

<sup>156</sup> *See* proposed amendment of 47 C.F.R. § 0.457 in Appendix A.

<sup>157</sup> These exhibits are specified as eligible for long-term confidentiality in KDB Publication [726920](#). Certain exhibits pertaining to software security descriptions and scanning receivers that are currently automatically treated under long-term confidentiality would continue to be held confidential.

<sup>158</sup> Report on FCC Process Reform, GN Docket 14-25, 29 FCC Rcd 1341 at 1418. (Staff Working Group, D. Cornell, leader, 2014).

<sup>159</sup> 5 U.S.C. § 552(a)(3); *DOJ Guide* at 2-3.



exception for “trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential.”<sup>160</sup> In addition, the Trade Secrets Act prohibits government agencies from divulging trade secrets or certain other information unless provided by law.<sup>161</sup> We believe that our proposals, which permit parties to file a request to obtain information held short-term or long-term confidential per Section 0.461 of our rules, comply with our obligations under FOIA and the Trade Secrets Act. We seek comment on this conclusion.

## 6. Timeframe for Requesting Review of Certification Grants

90. We propose to adopt rules to specify that the “release date” for the grant of a certification is the date that the grant is published on the Commission’s website. The release date for a document determines the “public notice” date for non-rulemaking documents,<sup>162</sup> which is significant here because it begins the thirty-day period during which parties aggrieved by the grant of an equipment certification may file a petition for reconsideration or application for review of the grant.<sup>163</sup> We believe that the date that the grant is published on our website is the appropriate public notice date as it is the date that the grant of the certification becomes known to the public and is the effective date of the certification grant.<sup>164</sup> While this release date should be the date that will appear on any electronic or hard copies of the grant, we propose to specify the date of publication on our website to avoid any confusion should a mistake or other circumstance occur in which the dates do not match.

91. Our proposals regarding confidentiality discussed above could affect the ability of parties to contest a certification grant. To what extent does the unavailability of materials subject to short-term confidentiality disadvantage parties who may be interested in challenging a certification grant? Does the information that is always made immediately available (such as notice of grant and test data) provide notice to the public of the substance of a final Commission action that is adequate to determine whether and how to contest a grant? If we adopt our proposal to codify our current practice for granting short-term confidentiality, should we require the applicant requesting confidentiality to provide a summary or a redacted version of the exhibits for which they are requesting short-term confidential treatment, place that material on our website at the time of the grant?

92. Should we instead issue a “provisional” certification grant for a device which otherwise is deemed to meet all the certification requirements. Such provisional certification could be used for legal importation and distribution through the supply chain of devices prior to sale. When the device is sold to the public, the final certification grant would be made public, and that would constitute the public notice date. This process would preserve the commercial and competitive reasons for short-term confidentiality. At the same time, it would be the date at which the information critical to contesting the decision is available to the public, and accordingly would appear to represent the most relevant date to begin the thirty-day period allotted for contesting Commission actions. Should a different consideration hold for determining the start of the thirty-day period in which the Commission can set aside an action on its own

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<sup>160</sup> 5 U.S.C. § 552(b)(4).

<sup>161</sup> 18 U.S.C. § 1905.

<sup>162</sup> For non-rulemaking documents that are not released, but a document labeled “Public Notice” describing the action is released, the public notice date is the date that this descriptive document is released. If a document is not published in the Federal Register or released and no descriptive “Public Notice” describing the action is released, then the public notice date is the date appearing on the document sent to the person affected by the action. 47 C.F.R. § 1.4(b). Because, the TCB issues the certification grant, the Commission does not release a document issuing the grant, issue a public notice announcing the grant, or send a document to the grantee.

<sup>163</sup> 47 C.F.R. §§ 1.106(f) and 1.115(d).

<sup>164</sup> 47 C.F.R. § 2.915(d) (as adopted in the *TCB Order*) (stating that “Grants will be effective from the date of publication on the Commission website and shall show any special condition(s) attaching to the grant. The official copy of the grant shall be maintained on the Commission website.”)

motion?<sup>165</sup> We seek to balance our interest in maintaining an open and transparent process with our desire to avoid hindering economically important business and commerce activities. Alternately, we could specify that a provisional grant constitutes a “grant” for purposes of our importation rules. We seek comment on these proposals, as well as any other options we should consider.

### C. Updating procedures applicable to both certification and self-approval

#### 1. Labeling

93. The recently adopted Enhance Labeling, Accessing, and Branding of Electronic Licenses Act (E-LABEL Act) requires the Commission, by August 26, 2015, “to promulgate regulations or take other appropriate action, as necessary, to allow manufacturers of radiofrequency devices with display the option to use electronic labeling for the equipment in place of affixing physical labels to the equipment.”<sup>166</sup> The E-LABEL Act applies to all radiofrequency devices authorized by the Commission that have the “capability to digitally display labeling and regulatory information.” Under the E-LABEL Act, electronic labeling is broadly defined as “displaying required labeling and regulatory information electronically.” We propose to amend our regulations to comply with the provisions of the E-LABEL Act. In addition, we propose to amend our labeling regulations to address devices that are too small to be legibly labeled with an FCC ID.

94. The Commission’s rules impose a number of different labeling requirements on radio devices. For example, Section 2.925 of our rules requires each device subject to certification to have a label permanently affixed to the equipment and readily visible to the purchaser at the time of purchase.<sup>167</sup> The label must show the FCC ID number and any other statements or labeling required by the rules governing the operation of the specific class of equipment. Part 15 devices are subject to additional labeling requirements related to a device’s equipment authorization, as specified in Section 15.19.<sup>168</sup> Several other sections of our rules require warning labels or other information to be attached to particular types of devices.<sup>169</sup> These labels provide specific instructions or warnings to the users, and can help consumers make decisions about the products.

95. Our rules and guidance already permit electronic labeling in certain circumstances. Software defined radios may use electronic labels,<sup>170</sup> and our Part 15 rules permit electronic labeling of

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<sup>165</sup> 47 C.F.R. § 1.108.

<sup>166</sup> Enhance Labeling, Accessing, and Branding of Electronic Licenses Act of 2014, Pub. L. No. 113-197 (Nov. 26, 2014).

<sup>167</sup> 47 C.F.R. § 2.925.

<sup>168</sup> 47 C.F.R. § 15.19. We propose to eliminate the requirement that devices subject to DoC be identified with a specific logo. Under our proposal, all Part 15 devices – whether they are subject to certification or SDoC – would instead have to be labeled with the statement specified in Section 15.19(a). We likewise propose to eliminate the existing requirement in Section 18.209 that Part 18 devices subject to DoC be identified with a specific logo.

<sup>169</sup> *See, e.g.*, 47 C.F.R. § 15.19 (intentional, unintentional, or incidental radiator operation without individual licenses), 47 C.F.R. § 15.121 (scanning receivers), 47 C.F.R. § 15.212 (modular transmitters), 47 C.F.R. § 15.214 (cordless telephones), 47 C.F.R. § 18.209(b) (industrial, scientific, and medical (ISM) equipment), 47 C.F.R. § 20.18 (911-only handsets), 47 C.F.R. § 20.21(f) (consumer and industrial signal boosters), 47 C.F.R. § 80.231(b) (automatic identification system (AIS) equipment), 47 C.F.R. § 80.271 (portable survival craft radios), 47 C.F.R. § 80.1061(f) (406-406.1 MHz emergency position indicating radiobeacon (EPIRB) stations), 47 C.F.R. § 80.1103 (global maritime distress and safety systems(GMDSS)), 47 C.F.R. §§ 87.147(b), 87.199(f) (emergency locator transmitters), 47 C.F.R. § 90.219 (private land mobile radio service signal boosters), 47 C.F.R. § 95.1017 (low power radio service (LPRS) transmitting device), 47 C.F.R. § 95.1217 (MedRadio devices), and 47 C.F.R. § 95.1402(f) (personal locator beacons).

<sup>170</sup> 47 C.F.R. §§ 2.925(e) (providing that the information must be readily accessible and the user manual must describe how to access the electronic display).

certified modular transmitters, which can have their own display or rely on the device in which they are incorporated for display of the label information.<sup>171</sup> OET has provided additional guidance regarding when and how a device's electronic display may be used to convey certain required label information. KDB Publication 784748 allows for the electronic display of the FCC ID, the FCC logo currently required under the DoC procedures, and/or any other information that is required by our equipment authorization rules to be provided on the surface of the product.<sup>172</sup> Such devices must allow for simple steps to access the information and must have removable labels indicating the FCC ID or the FCC logo, as appropriate, placed on the device available at the time of purchase and importation.<sup>173</sup> The same document also provided guidance for electronically displaying a modular transmitter's FCC ID.<sup>174</sup>

96. Our electronic labeling proposal also is consistent with an industry request. In 2012 the Telecommunications Industry Association (TIA) filed a rulemaking petition asking the Commission to permit the use of electronic labels as a substitute for physical labels.<sup>175</sup> TIA claimed that physical labeling is becoming more challenging to manufacturers because of the large number of regulations in different countries as well as the single-case design and smaller size of many products.<sup>176</sup> TIA stated that electronic labels would be more effective in providing information to consumers who are used to receiving information electronically.<sup>177</sup> The Information Technology Industry Council (ITI) further suggested that TIA's electronic labeling proposal should be expanded to include all Part 15 devices with built-in displays.<sup>178</sup> Because we are proposing rules that effectively satisfy TIA's request, we dismiss TIA'S rulemaking petition as moot.

97. As directed by the E-LABEL Act, we propose to add a new section to our rules to codify electronic labeling procedures.<sup>179</sup> The new rule will generally allow a radiofrequency device with an integrated electronic display to electronically display any labels required by our rules. This will include the FCC ID required by our certification rules, as well as any warning statements or other information that our rules require to be placed on a physical label on the device. The rule will require that this electronic labeling information is secured in order to prevent modification by a third-party.

98. The E-LABEL Act applies to devices that have "the capability to digitally display required labeling and regulatory information." If a device cannot display the labeling and regulatory information to the intended recipient in a manner that affects its purpose, we do not believe the device can be considered to be capable of "digitally displaying the required labeling and regulatory information" as required by E-LABEL Act. Merely having the ability to electronically display information is meaningless if the user cannot determine how to access the information, the electronic information is illegible, or the information is not available when needed. Our proposed rule contains a number of additional provisions to ensure that the labeling and regulatory information is provided in an effective manner to the intended recipient. The proposed rule requires that the user be provided with prominent instructions on how to access the required labeling and regulatory information, in either the packaging material or another easily

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<sup>171</sup> 47 C.F.R. § 15.212(a)(1)(vi). The device in which the modular transmitter is installed may nevertheless need to display a label referring to the enclosed modular transmitter. *See* 47 C.F.R. § 15.212(a)(1)(vi)(B).

<sup>172</sup> KDB Publication [784748](#).

<sup>173</sup> *Id.* at 2.

<sup>174</sup> *Id.* at 10-12.

<sup>175</sup> Telecommunication Industry Association Petition for Rulemaking, RM-11673 (filed August 6, 2012) (*TIA Petition*).

<sup>176</sup> *Id.* at 2-3.

<sup>177</sup> *Id.* at 3-4.

<sup>178</sup> ITI comments in RM-11673 at 2 (filed Oct. 3, 2012).

<sup>179</sup> See proposed amendment of 47 C.F.R. Part 2 to add a new Section 2.935 in Appendix A.

accessible format, at the time of purchase, and that these instructions be available on the product-related website, if one exists. We also propose that accessing the labeling and regulatory information not require any special codes or permissions. Furthermore, we propose that accessing the labeling and regulatory information should require no more than three steps.<sup>180</sup> When the labeling information is electronically displayed, it must be clearly legible without the aid of magnification. We seek comment on these proposals. Are there any additional requirements that we should include in the rule to make the labeling and regulatory information more accessible?

99. The content of these labels is an important means for providing consumers with information about RF devices.<sup>181</sup> The label also notifies consumers, Customs and Border Protection (CBP) officials, and our Enforcement Bureau investigators that the devices meet the technical requirements of our rules. When a consumer is considering purchasing a device they cannot usually turn on the device and use the electronic display to access the labeling and regulatory information. Likewise, when CBP officials are examining radiofrequency devices upon importation, they most likely cannot access the electronic display. To provide information prior to purchase, to avoid a hazard or when devices are imported, we propose that devices displaying labeling and regulatory information electronically must also place this information either on the product packaging or on a physical label placed on the device at the time of importation, marketing, and sales. If a physical label is used, it may be a removable label, or, for devices in protective packaging, a label on the protective packaging.<sup>182</sup> These alternatives may be useful when placing the information on the product packaging is not feasible, such as when devices are not individually packaged. We tentatively conclude that this proposal complies with the E-LABEL Act because devices with electronic displays are not usually capable of electronically providing this information in an effective manner when the devices are typically inside packaging and uncharged. The devices therefore do not have “the capability to digitally display required labeling and regulatory information.” We seek comment on this proposal.

100. Our proposed rule would not change the requirements in our rules to place warning statements or other information on device packaging or in user manuals or make information available at the point of sale.<sup>183</sup> We tentatively conclude that these requirements are outside the scope of the E-LABEL Act, which addresses only the replacement of physical labels affixed to devices. Our proposal would not allow other forms of electronic labeling such as Radio Frequency Identification (RFID) tags or Quick Response (QR) codes to substitute for the on-screen information display, or otherwise permit displays that require the use of special accessories, supplemental software, or similar plug-ins.<sup>184</sup> We believe that the use of such features could potentially frustrate our efforts to ensure the ready and intuitive access to effective labeling information. We are also not proposing to require parties to display any information that is not already required by our rules as part of an electronic label, nor are we proposing to eliminate the ability of manufacturers to continue to physically label devices if they wish to do so.

101. We seek comment on our proposed electronic labeling rule and associated tentative conclusions. We believe that this rule meets the requirements of the E-LABEL Act and it will provide flexibility to manufacturers, while enabling consumers to continue to receive the information required by

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<sup>180</sup> This requirement was initially advanced by TIA in seeking staff guidance on e-labeling. Letter from Brian Scarpelli, Senior Manager, Government Affairs, Telecommunications Industry Association to Rashmi Doshi, OET, at 3 (filed in RM-11673 on April 14, 2014).

<sup>181</sup> For example, these labels may inform consumers that the device is compatible with hearing aids or is required to not cause harmful interference to other devices. Consumers need access to this information prior to purchase.

<sup>182</sup> TIA proposed the use of removable labels in its electronic labeling rulemaking petition. *TIA Petition* at 13.

<sup>183</sup> See, e.g., 47 C.F.R §§ 15.204(d)(2), 18.212, 18.213, 20.19(f), 20.21(f), 68.224, 74.851, and 90.219(e)(5).

<sup>184</sup> See ITI comments in RM-11673 at 2 (suggesting such options).

our rules.<sup>185</sup> While we presume that allowing the use of electronic labeling will decrease cost for device manufacturers, since they will no longer have to affix permanent labels to devices, we seek comment on the cost and benefits of our proposals.

102. We recognize that devices increasingly are controlled through software applications running on a smartphone, a web interface, or via network connection.<sup>186</sup> We propose to continue to require that devices that rely on a wireless or remote connection and have no display have a physical label. Without such a physical label, there would not be an identification of the device available on the device itself. We believe this conclusion is consistent with the explicit terms of the E-LABEL Act because these devices do not have an electronic display. Alternatively, should we allow such devices to use an electronic label that is accessible via the connected smartphone, web interface, or other network connection? If we allow this option, should we place any additional requirements on how the labeling requirement is implemented?

103. Other labeling rules ensure that important safety-of-life information or warnings about illegal use of equipment is made prominently available to users of equipment. For example, labels with safety and registration advisories are prescribed to ensure the effectiveness of emergency locator beacons in sections 87.147 and 95.1402 of our rules.<sup>187</sup> Section 15.121 of our rules requires a label for scanning receivers warning that modification of those receivers is illegal.<sup>188</sup> Would provision of these types of warning statements using an electronic display provide the information to the intended recipient in an effective manner when safety or illegal activity is at issue, or would the size and/or makeup of displays on these devices make visual communication of these warnings ineffective? In this case, would continuing to require physical labels for these warnings be consistent with the E-LABEL Act? If the E-LABEL Act does permit us to require physical labels for these warnings, for which specific labeling requirements in our rules should we continue to require physical labels?

104. We also address how the FCC ID may be communicated for small devices. Our current rule requires that the FCC ID on the label of a certified device be large enough to be readily legible, but does not specify what the device manufacturer should do if the device is too small to display a legible label.<sup>189</sup> The OET Lab has issued KDB Publication 784748, which states that the FCC ID may be placed in the device user manual if the device is too small for the FCC ID to be readable (smaller than 4-6 point font size). We propose to codify this KDB guidance. The proposed rule would allow the FCC ID to be placed in the user manual if the device is so small that it is impractical to label it with the FCC ID in a font that is four-point or larger, and the device does not have a display for electronic labeling. For these small devices the FCC ID would also have to either be placed on the device packaging or on a removable label attached to the device. We seek comment on this proposal.

105. The Information Technology Industry Council (ITI) has suggested that we permit the FCC logo to be placed in the instruction manual for Part 15 devices that are too small to display the

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<sup>185</sup> We believe that codification of the electronic labeling procedures would further the FCC process reform goals identified in GN Docket 14-25 – specifically, Recommendation 5.41 (“Update Labeling and Identification of Approved Products”), Report of FCC Process Reform, GN Docket 14-25, 29 FCC Rcd 1341 (2014) at 1418.

<sup>186</sup> For example, a Bluetooth headset for use with a smartphone could be controlled via a software interface that runs on the smartphone or a Wi-Fi router may be controlled via a webpage interface running on a computer that is connected to the router.

<sup>187</sup> 47 C.F.R §§ 87.147 and 95.1402.

<sup>188</sup> WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW. 47 C.F.R § 15.121; 47 U.S.C. § 302a(d).

<sup>189</sup> 47 C.F.R § 2.925(g). Our rules do provide that if a permanently affixed nameplate is not desirable or feasible, an alternative method of identifying the equipment may be used if approved by the Commission. 47 C.F.R § 2.925(f).

logo.<sup>190</sup> We have proposed to eliminate the requirement for Part 15 devices to be labeled with the FCC logo, which would make ITI's request moot.<sup>191</sup> Nonetheless, we seek comment on ITI's suggestion if we were to maintain the requirement for display of the FCC logo for such devices. As with ITI's request, we recognize that other proposals we make may affect our labeling requirements. We intend to match the labeling rules we adopt to the equipment authorization rules that we ultimately adopt. Accordingly, we invite commenters, in discussing other elements of our proposals, to identify the implications for device labeling and propose any further rule modifications that may be necessary.

106. We also seek comment on how our proposed modifications to the rules governing modular transmitters would affect our labeling requirements. Our rules currently require that when a modular transmitter is installed inside a host device so that its FCC ID is not visible, the outside of the host device must display a label referring to the modular transmitter.<sup>192</sup> Our rules also currently permit the use of electronic labeling for displaying the FCC ID of a modular transmitter.<sup>193</sup> As we have done with our other rules for modular transmitters, we propose to move our rule concerning labeling of modular transmitters from Part 15 to Part 2 of our rules and seek comment on this proposal.<sup>194</sup> While our rules permit changes in the FCC ID of certified modular transmitters, we also recognize that it can be difficult in practice to modify the labels on the actual device. We seek comment on alternative approaches that would still accomplish our goal of providing sufficient identification of the certified modular transmitter. For example, should we propose to permit a modified label to be placed on the host device that reads "contains FCC ID xxxyyy changed from FCC ID aaabbb"? Are there other approaches we should consider?

## 2. Measurement procedures

107. Section 2.947 of our rules states that the Commission will accept data which have been measured in accordance with three types of standards or measurement procedures: 1) those in bulletins or reports issued by OET; 2) those acceptable to the Commission and published by national engineering societies; and 3) any measurement procedure acceptable to the Commission.<sup>195</sup> We propose to modify Section 2.947(a)(3) to specifically include a reference to the advisory information that are available in the Commission's online KDB publications. Doing so will assist manufacturers and the public by providing a clear reference to an existing resource that provides technical guidance.<sup>196</sup> We also note that devices increasingly have to demonstrate compliance not only with industry standards or Commission guidance, but also service-specific procedures described in other parts of our rules. For example, Section 15.31 references industry standards to be used in performing measurements on unintentional radiators, intentional radiators and Unlicensed Personal Communications Service (UPCS) devices. We see this as the first step in consolidating references to measurement procedures into Part 2, to the extent practicable. In the meantime, should we further modify Section 2.947 to state that other rule parts may specify additional measurement procedures?

108. The measurement procedures for RF devices operating under the Part 15 rules are described in Sections 15.31, 15.32, 15.33, and 15.35.197. The measurement procedures for Industrial,

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<sup>190</sup> ITI comments in ET Docket No. 06-155 at 5 (filed Sept. 1, 2006).

<sup>191</sup> See *supra* para.31.

<sup>192</sup> 47 C.F.R. § 15.212(a)(1)(vi).

<sup>193</sup> *Id.*

<sup>194</sup> See proposed amendment of 47 C.F.R. § 2.925(d) in Appendix A.

<sup>195</sup> 47 C.F.R. § 2.947(a).

<sup>196</sup> See *supra* note 24 and accompanying text.

<sup>197</sup> See 47 C.F.R. § 15.31 Measurement standards, § 15.32 Test procedures for CPU boards and computer power supplies, § 15.33 Frequency range of radiated measurements, and § 15.35 Measurement detector functions and

Scientific, and Medical (ISM) Equipment operating under Part 18 are described in Section 18.311, with section 18.309 discussing the frequency range for measurements.<sup>198</sup> We propose to revise these sections, as shown in Appendix A, to reference procedures that will be published by OET as KDB Publications to support the measurement procedures and to provide clarifying text. For example, we propose to remove the procedures for CPU boards and computer power supplies in Section 15.32 and publish them as a KDB guidance document. This will allow us to clarify such procedures that may not be adequately addressed in referenced measurement standards but do not need to be specifically detailed in our rules. We seek comment on this proposal, as well as on further consolidating these rules to simply cross-reference Section 2.947. We believe that our proposal will help clarify how the measurement standards should be applied in order to demonstrate compliance with our rules, allow for streamlining of the rules when measurement procedures are already addressed by one of the referenced standards, and make it easier for staff to provide advisory guidance when appropriate situations arise.

109. We also seek comment on whether the measurement procedures specified in Section 15.31(a)(3) and (4) (referencing ANSI C63.4-2014 and ANSI C63.10-2013) are sufficient to address compliance testing for devices subject to the Part 15 requirements such that the specific measurement procedures in Sections 15.31-15.35 can be revised to remove any redundancy. For example, we propose to replace the text in Section 15.33(a) regarding the frequency range of measurements for intentional radiator with a reference to ANSI C63.10-2013 clause 5.5, which provides the same procedure as currently in our rules. Further, we propose to modify Section 15.35 to clarify the measurement detector functions and bandwidth requirements and to replace an old reference to CISPR Publication 16 in Section 15.35 with an updated reference to the measurement instrumentation procedures in ANSI C63.4-2014. We also propose to eliminate the note associated with Section 15.35(a) and instead rely on the emission measuring instrumentation specifications in ANSI C63.4-2014. We seek comment on this proposal as well as other ways we can further clarify and streamline the measurement procedures in our rules.

110. In addition, Sections 15.31(h) and 15.31(k) of the rules addresses appropriate measurement procedures for the certification of composite systems.<sup>199</sup> Increasingly many products include devices operating both under rule sections that do not require licenses and under service rules where a license is required. Because the current Part 2 rule provisions are well suited for addressing devices subject to multiple rule parts, we propose to introduce provisions for composite systems in Part 2. At the same time, we propose to retain certain specific requirements for Part 15 devices in Sections 15.31(h) and 15.31(k). We seek comment on these proposals.

111. The wireless industry is working on a new standard to address measurement procedures for compliance testing of transmitters used in licensed radio services. The standard, ANSI C63.26, is being developed by ANSI-ASC C63.<sup>200</sup> Once this standard is complete, it will provide detailed measurement procedures that will assist manufacturers and test laboratories to perform consistent and

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bandwidth. Section 15.31(a) references specific standards, and the other rule parts provide additional measurement guidance.

<sup>198</sup> See 47 C.F.R. §§ 18.309-311. In particular, Section 18.3011 provides that FCC Measurement Procedure, MP-5, “Methods of Measurement of Radio Noise Emissions from ISM Equipment,” sets forth the measurement techniques the FCC uses to determine compliance with the Part 18 technical requirements.

<sup>199</sup> 47 C.F.R. §§ 15.31(h), 15.31(k).

<sup>200</sup> See ANSI C63.26™ Draft American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services ([http://www.c63.org/documents/misc/matrix/c63\\_standards.htm](http://www.c63.org/documents/misc/matrix/c63_standards.htm)). This new standard is still under development and not yet publically available. It is intended to cover the procedures for testing a wide variety of licensed transmitters; including but not limited to transmitters operating under Parts 22, 24, 25, 27, 90, 95 and 101 of the FCC Rules, transmitters subject to the general procedures in Part 2 of the FCC Rules and procedures for transmitters not covered in the FCC Rules. The standard will also address specific topics; e.g., ERP/EIRP, average power measurements and instrumentation requirements.

reliable measurements needed to demonstrate compliance with the Commission's technical requirements for licensed radio transmitters. References to the applicable measurement procedures in ANSI C63.26 could potentially replace measurement procedures in Part 2 for RF power output, modulation characteristics, occupied bandwidth, spurious emissions at antenna terminals, field strength of spurious radiation, frequency stability, and frequency spectrum.<sup>201</sup> Similarly, references to Part 2 (and, by extension, ANSI C63.26) could replace the specific measurement procedures and details that are presently contained in many of the individual service rules. Are changes needed to the measurement procedures in Part 2 to clarify these procedures, such as a modification to § 2.1053 to provide for the direct measurement method of radiated emissions or as an alternative the use of the substitution test method? Many products today incorporate both licensed and unlicensed transmitters and there may be value in providing for the same test method to be used for a device that is subject to technical requirements in different rule parts.<sup>202</sup> We ask parties to take the ANSI C63.26 standards development into account when drafting their comments. This is because we anticipate that we will soon have to consider whether we should allow for the use of ANSI C63.26 once it has been adopted by ANSI-ASC C63 and published as an ANSI standard. To facilitate this process, we propose to seek comment on incorporating the ANSI C63.26 into our rules as soon as the standard becomes final. We seek comment on this approach, as well as any other actions that will help us reference the best and most up-to-date standards for making measurements on equipment used in the Commission's licensed radio services.

112. Finally, we seek comment on whether there are alternatives to our proposed rules for measurement procedures that would better promote clarity and accommodate future technological developments. We seek comment on the relative costs and benefits of adopting our proposals, as well as those associated with alternative approaches.

### 3. Rule consolidation and modification

113. We propose to modify Section 2.1043 of our rules and to delete Section 2.813 of our rules. Section 2.1043(g)-(l) addresses changes to previously approved broadcast equipment.<sup>203</sup> Such equipment previously required approval by the Commission but is now subject to verification.<sup>204</sup> Because verified equipment may be modified by any party that is capable of taking the necessary steps to ensure its compliance, these provisions are no longer necessary. We propose to add a new paragraph to Section 2.1043 advising that parties may modify previously-approved broadcast transmitters, provided the modified transmitter complies with our authorization procedures or is otherwise shown to comply with the Part 73 rules.<sup>205</sup> We further propose to state that a previously approved broadcast transmitter that was later modified must either be labeled with a statement indicating that it was modified after approval, or the original FCC ID number must be permanently covered or removed. We seek comment on these proposals. In addition, Section 2.1043(e) describes the conditions under which parties may modify

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<sup>201</sup> See 47 C.F.R. §§ 2.1041, 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, and 2.1057.

<sup>202</sup> See ANSI C63.10-2013 for a description of the test method used to make radiated emission measurements on a validated test site ("direct method"). See TIA-603-D, *Land Mobile FM or PM Communications Equipment Measurement and Performance Standards* and TIA-102.CAAA-D, *Project 25 Digital C4FM/CQPSK Transceiver Measurement Methods* for examples of the substitution measurement method for radiated emissions.

<sup>203</sup> See 47 C.F.R. § 2.1043(g)-(l).

<sup>204</sup> See Amendment of Parts 2, 15, 18 and Other Parts of the Commission's Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment, ET Docket No. 97-94, *Report and Order*, 13 FCC Rcd 11415 (1998) (changing the authorization requirement to verification for certain broadcast equipment).

<sup>205</sup> For example, Section 73.1690(e) permits electrical and mechanical modification to authorized transmitting equipment without FCC notification or authorization, provided equipment performance measurements are made within ten days after completing the modifications. A statement or diagram describing the modification must be retained at the transmitter site for as long as the equipment is in use. 47 C.F.R. § 73.1690(e).



equipment approved for use in the Amateur Radio Service.<sup>206</sup> We propose to retain these provisions (re-lettered as Section 2.1043(h)) because they provide a means for non-manufacturer amateur radio users to modify equipment that had previously been certified or type accepted. We nevertheless seek comment on whether the rule should be amended for clarity or to promote better consistency between our Part 2 equipment authorization provisions and our Part 97 service rules.

114. We also propose to delete Section 2.813 of the rules, which describes when transmitters used in the former Instructional Television Fixed Service (ITFS) are not subject to the authorization requirements of Section 2.803.<sup>207</sup> The former ITFS rules allowed the operation of transmitters without an equipment authorization when they met criteria specified in Part 74, and Section 2.813 provided the necessary cross-reference. In 2004, the Commission moved the ITFS into a new Educational Broadband Service (EBS) under Part 27 of the rules and removed the ITFS rules from Part 74.<sup>208</sup> Because there are no provisions in Part 27 comparable to the former Part 74 rules that allowed the operation of an EBS transmitter without an equipment authorization, we tentatively conclude that Section 2.813 of the rules is no longer applicable and should be removed. We seek comment on this conclusion.

115. Finally, we propose to delete Section 15.239(d) of the rules.<sup>209</sup> We believe that the rule, which permits an educational institution to conduct experimentation in the 88-108 MHz band using a custom built telemetry intentional radiator but requires the institution to submit an operational description no longer serves a useful purpose. Our experimental licensing rules provide a means for such experimentation.<sup>210</sup> While the requirements imposed by Section 15.239(d) may have been useful in an era of paper filings, today's use of electronic records makes it easier to identify and address such situations because the record of the transmission is now easily available to all. We seek comment on this proposal.

#### **D. Importation rules**

116. Subpart K of Part 2 of the rules sets out the conditions under which RF devices that are capable of causing harmful interference to radio communications may be imported into the United States.<sup>211</sup> This subpart requires the importer to declare that the RF device has been tested and approved using the applicable equipment authorization procedure or is being imported under one of the exceptions specified in Section 2.1204(a). These rules are designed to provide assurance that equipment that is brought into the United States complies with the technical standards that the Commission has developed for RF devices and will not interfere with existing services and users. We examine certain aspects of these rules and ask whether they remain the most appropriate way to ensure that we meet these important objectives. Our intent is to lessen or eliminate the filing burdens associated with our importation rules to the extent possible, while not undermining their effectiveness and fundamental purpose.

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<sup>206</sup> 47 C.F.R. § 2.1043(e).

<sup>207</sup> 47 C.F.R. § 2.813. Section 2.803 of the rules generally requires that RF devices be authorized before marketing, although this section provides certain limited exceptions to the authorization requirement.

<sup>208</sup> See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, WT Docket No. 03-66, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165 (2004).

<sup>209</sup> 47 C.F.R. § 15.239(d).

<sup>210</sup> Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules, ET Docket No. 10-236; 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology (OET), ET Docket No. 06-155; *Report and Order*, 28 FCC Rcd 758 (2013); *Erratum*, 28 FCC Rcd 3096 (2013).

<sup>211</sup> See 47 C.F.R. § 2.1201(b).

## 1. Importation Declaration

117. Section 2.1203 of our rules states that no RF device may be imported unless the importer or ultimate consignee (or their designated customs broker) declares that the device meets the conditions of entry set forth in our importation rules subpart.<sup>212</sup> Section 2.1205 provides two ways to make this declaration. At ports of entry where electronic filing with U.S. Customs and Border Protection is available, an electronic FCC declaration must be submitted to CBP, in addition to the electronic entry summary required by CBP.<sup>213</sup> At ports of entry where electronic filing with CBP is not available, the party must complete FCC Form 740 and attach it to the CBP-required entry papers.<sup>214</sup> Section 2.1204 lists the particular conditions of import.<sup>215</sup> Today, nearly all this information is filed electronically.

118. The entry information submitted to CBP has been intended to allow the FCC and CBP to prevent RF devices which are not properly authorized from being marketed to the public, thereby mitigating the potential for purchasers and users to cause harmful interference to authorized communications.<sup>216</sup> FCC Form 740 was adopted in the 1970s, before Wi-Fi and Bluetooth transmission technologies, widespread internet access, and cellphones and the host of other connected devices. At that time, fewer than 100 forms a month were submitted and few violations were found. We estimate that the number of devices subject to importation information collection today accounts for approximately 2 million records annually.<sup>217</sup> These filings now cover such things as cars, mattresses with Bluetooth transmitters, and intelligent cookware – and are likely to expand as the Internet of Things continues to evolve.<sup>218</sup>

119. Today the Internet provides a much more effective enforcement tool. Most equipment is advertised or available for sale on the Internet, and there is often a wealth of information available as to

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<sup>212</sup> 47 C.F.R. § 2.1203, “General requirements for entry into the U.S.A.”

<sup>213</sup> See 47 C.F.R. § 2.1205(b). To assist this process, the FCC in agreement with CBP has established FCC regulatory codes that are linked to the entry tariff codes used with the Harmonized Tariff Schedule of the United States (HTS). Certain HTS codes establish that an FCC declaration is required (FCC regulatory code FC4), and other HTS codes establish that an FCC declaration may be required (FCC regulatory code FC3). The current CBP Automated Commercial System (ACS) does not permit an entry to be completed without an FCC declaration if an HTS code triggers an FC4 code. If an FC3 code is triggered, then the FCC declaration can be submitted or, if not applicable, must be explicitly declined. If no FCC code is triggered, then the importer is responsible for determining whether to make a declaration.

<sup>214</sup> 47 C.F.R. § 2.1205(a). A copy of FCC Form 740 may be found at <http://transition.fcc.gov/Forms/Form740/740.pdf>.

<sup>215</sup> 47 C.F.R. § 2.1204. The vast majority of devices require an equipment authorization; exceptions are provided, for example: for equipment used for demonstration at industry trade shows, imported solely for export, used by the U.S. federal government, imported for personal use in limited quantities for certain purposes, imported for repair and not to be offered for sale or marketed, and used as an implanted medical device.

<sup>216</sup> See 78 FR 9910 (February 12, 2013) (summarizing FCC’s information collection submission to the Office of Management and Budget). The information in the entry summary (electronic filings) and Form 740 (paper filings) also allows the Commission to contact the importers and ask for additional compliance information depending on the type of authorization required.

<sup>217</sup> *Id.*

<sup>218</sup> According to research made by advisory firms such as Gartner and ABI Research, there will be at least 26 billion devices that will be wirelessly interconnected through the internet, making up a collection of embedded computing devices loosely referred to as Internet of Things (IoT) or Internet of Everything by 2020. See *Gartner Says the Internet of Things Installed Base Will Grow to 26 Billion Units By 2020* at <http://www.gartner.com/newsroom/id/2636073>; see also, *More Than 30 Billion Devices Will Wirelessly Connect to the Internet of Everything in 2020*, at <http://www.abiresearch.com/press/more-than-30-billion-devices-will-wirelessly-conne> (websites last checked July 10, 2015).

the supplier of the equipment. Additionally, much of the information that was required on FCC Form 740 is currently collected by CBP in its routine information collection for all imported goods.<sup>219</sup> The additional information required by FCC Form 740 relates to the Section 2.1204 conditions under which the devices are imported. Many parties have raised concerns about the need to file some of this information since many of the imported devices include multiple transmitters, each of which must be acknowledged in the filing. We also question whether the Form 740 requirement continues to be useful for us to identify non-compliant RF devices and take appropriate follow-up action. The continuation of the burden of filing Form 740 no longer appears justified and we propose to eliminate the requirement. We seek comment on this conclusion and the observations on which it is based. Parties are invited to identify any benefits we could derive by continuing to collect the Form 740 information, in its current form or a modified form, and specifically to comment on whether and how any of the underlying objectives of our equipment authorization program would go unmet if we eliminate our existing means of collecting this data.

120. Among our proposed rule changes, we propose to eliminate Section 2.1205 and delete Section 2.1203(b) to remove the Form 740 filing requirements. Since compliance with our importation rules is implicitly addressed by the information already required by CBP, we propose to eliminate the explicit importation declaration requirement from our rules.<sup>220</sup> In particular, importers would no longer have to file information with the FCC specifying the import condition upon which they are relying.<sup>221</sup> We believe that modifying our importation rules and procedures in this manner will reduce substantial administrative burdens and that we will retain sufficient enforcement tools to ensure that parties continue to comply with our equipment authorization and importation requirements. We seek comment on these proposals, as well as on additional rule modifications that would support our goals.

121. We ask commenters to consider these proposals in light of the possibility that we might begin issuing provisional grants if we adopt our proposal for greater short-term confidentiality, as well as the potential that we would delay publication of any information about equipment authorization grants on our website for a short time. Would these proposals collectively increase the potential for importation of uncertified and improperly certified devices? Would a continued requirement for an FCC Form 740 declaration have an appreciable deterrent effect on illegal importation sufficient to warrant its retention? Are there other steps we can take to further our interest in preventing the importation of unauthorized and potentially harmful RF devices, while reducing importation burdens and marketing limitations? Are there additional steps, such as self-certification or required recordkeeping that would be necessary to ensure that parties continue to comply with our overall Part 2 importation? How would these considerations be affected if we require identification of a domestic responsible party?

## **2. Modification of Customs bonded warehouse requirement**

122. Both ITI and HP have asked that we address a particular situation involving the importation of unauthorized devices that are awaiting certification. Under our existing rules, to help facilitate the importation of RF devices, such devices are permitted to be stored in a Customs-bonded warehouse while waiting for the equipment to be certified or exported to another country.<sup>222</sup> We recognize that even though this provision may allow devices to be imported into the U.S. prior to equipment authorization, it lengthens the time and expense it takes to bring equipment to market by

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<sup>219</sup> CBP Forms 7501 (Entry Summary) and 3461 (Entry/Immediate Delivery) collect the same information as Form 740 Part I. (See [http://www.cbp.gov/sites/default/files/documents/CBP%20Form%207501\\_0.pdf](http://www.cbp.gov/sites/default/files/documents/CBP%20Form%207501_0.pdf)). This information is not required where the entry summary is filed electronically. Only additional information for electronic filing is specified in § 2.1205(b). See 47 C.F.R. § 2.1205(b).

<sup>220</sup> Under this scenario, it would no longer be necessary to retain Form 740.

<sup>221</sup> We would adjust our information collection submissions with OMB to reflect the corresponding reduction in filing burdens.

<sup>222</sup> See 47 C.F.R. § 2.1201(c).

adding an additional step to the distribution chain.<sup>223</sup> However, we also recognize that the use of a bonded warehouse furthers the objective of limiting the potential for unapproved equipment to cause harmful interference within the United States or that it may otherwise become difficult to locate or retrieve if they are moved from the point of entry. As discussed above, in conjunction with our proposals related to the confidentiality of applications, we have raised the possibility of providing provisional grants of certification applications, which would allow the importation of RF devices that have been provisionally granted prior to the final issuance of the certification.<sup>224</sup> We seek comment on whether issuing provisional grants of certification would reduce or eliminate the need for using bonded warehouses and, if so, whether we would effectively meet the importation and marketing needs identified by ITI and HP. Under this scenario, should we retain the option to use a bonded warehouse for any imported devices which are unauthorized and that have not received provisional approval? If not, what should we do to ensure that unauthorized devices are not widely distributed? Our proposed rules in Appendix A remove the explicit bonded warehouse requirement in Section 2.1201(c).

### 3. Increasing the number of trade show devices

123. The Commission recently modified Section 2.1204(a)(3) of the rules to increase the number of devices that can be imported for testing and evaluation purposes prior to equipment authorization from 2,000 to 4,000.<sup>225</sup> We propose to modify Section 2.1204(a)(4) in a similar manner, by increasing the number of devices that can be imported for demonstration purposes at a trade show from 200 to 400 for devices that are used in licensed services and from 10 to 400 for other products, thus applying a single limit to all types of devices for trade show demonstration purposes.<sup>226</sup> We believe that the current limit is insufficient to accommodate the needs of modern trade shows and conventions, based on our recent experience with requests for waivers of the current rule, which typically seek to bring in 200-300 devices for demonstration and evaluation purposes. The increased limit will reduce the administrative burden on both manufacturers and importers by eliminating these filings in virtually all instances. We also believe that a single limit is appropriate because many devices include a mix of licensed and unlicensed transmitters. This change is similar to that adopted by the Commission in the Experimental Licensing Order. While the modest increase in the device importation limits will alleviate many waiver requests, we nevertheless propose to maintain a severely restricted limit on the number of such devices. We believe that this limit, in conjunction with the usage restriction on this equipment, will result in no appreciable risk of these devices causing harm, while providing significant relief from a regulatory burden. We seek comment on our proposal, and the relative costs and benefits of modifying our rules.

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<sup>223</sup> Although equipment that is manufactured domestically is not subject to the importation requirements and can be distributed and staged without the same import restrictions, the vast majority of RF devices are now imported and thus subject to the bonded warehouse requirements. Thus, most RF equipment is subject to staging delays prior to the marketing and launch activities.

<sup>224</sup> See *supra* para. 92.

<sup>225</sup> See Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules and 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology (OET), ET Docket Nos. 10-236 and 06-155, *Report and Order*, 28 FCC Rcd 758 (2013) (*Experimental Licensing Order*). The modified rules increased the number of devices that can be imported for testing and evaluation purposes prior to equipment authorization from 2000 to 4000 for devices operating in licensed services and from 200 to 4000 for devices operating in unlicensed bands.

<sup>226</sup> These are limited to 200 devices that are used in licensed services, or 10 devices for all other products. See 47 C.F.R. § 2.1204(a)(4). Our proposal is consistent with the Commission's recent action which doubled the number of devices that can be imported for testing and evaluation purposes and applied a single limit for all types of devices.

#### 4. Excluded devices

124. Section 2.1202 lists types of devices that are exempt from the importation provisions in Subpart K.<sup>227</sup> We propose to remove the list of battery-powered unintentional radiators that are exempt from complying with the importation conditions contained in Section 2.1202(a) – specifically, cameras, musical greeting cards, clocks and watches, and hand-held calculators and video games. We believe that these examples are outdated because at the time this rule was adopted in 1991, devices of the types listed were typically simple, stand-alone devices.<sup>228</sup> These types of devices are now significantly more sophisticated, and often contain circuitry that increases the risk of harmful interference.<sup>229</sup> Also, they are often combined with other RF devices, and no longer can be considered to categorically qualify as exempt.<sup>230</sup> We seek comment on this proposal, while noting that this issue will be moot if we eliminate our Form 740 data collection.

#### 5. Devices imported for personal use

125. Currently, our rules permit up to three unlicensed Part 15 devices intended for personal use to be imported without demonstrating compliance with our equipment authorization procedures.<sup>231</sup> However, no such general exception exists for devices used in licensed services. For example, foreign smart phones capable of roaming must be certified prior to entry into the U.S.<sup>232</sup> We propose to expand our exception on devices imported for personal use. Specifically, we propose to adopt a blanket rule that provides a personal use exception for all devices, both licensed and unlicensed. Under such an approach, are there targeted exceptions within our existing rules that should also be updated or removed?<sup>233</sup> In addition, is the three-device limit still appropriate, especially if we expand the types and characteristics (*i.e.*, licensed and unlicensed) of the devices that the rule would cover? Would a different limit provide adequate protection against harmful interference without unduly restricting individuals who import the devices only for personal use?

#### E. Updating and modifying rule sections

126. Our proposals to streamline and simplify our equipment authorization processes will necessitate significant revisions to several of our rules – in particular the equipment authorization procedures contained in Part 2, Subpart J. We propose to comprehensively reorganize and simplify that subpart as shown in Appendix B, and to make modifications to other related rule sections. We seek comment on these proposals. We further recognize that there are many additional references to the equipment authorization procedures throughout the Commission's rules, and propose to make the

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<sup>227</sup> 47 C.F.R. § 2.1202.

<sup>228</sup> See Amendment of Part 2 of the rules concerning the importation of radio frequency devices capable of causing harmful interference, GEN Docket No. 89-349, *Report and Order*, 6 FCC Rcd 3296 (1991).

<sup>229</sup> For example, the inclusion of digital logic in many such devices increases the possibility that they could become a source of harmful interference.

<sup>230</sup> Other rules would continue to address the importation of certain types of exempted devices. See, e.g., 47 C.F.R. § 15.103. (exempting a number of different categories of devices from compliance with the Part 15 technical standards, including battery powered devices that generate and use frequencies of less than 1.705 MHz, and devices with a power consumption that does not exceed 6 nanowatts) and 47 C.F.R. § 2.1202(b) (stating that unintentional radiators exempt from compliance with the Part 15 technical requirements under Section 15.103 of the rules are also exempt from the importation requirements). See also 47 C.F.R. § 2.1204(a)(7) (permitting individuals to bring in up to three unintentional radiators for personal use).

<sup>231</sup> 47 C.F.R. § 2.1204(a)(7).

<sup>232</sup> See 47 C.F.R. § 2.1204(a)(5).

<sup>233</sup> See, e.g., 47 C.F.R. § 2.1204(a)(10) (allowing three or fewer portable earth station transceivers to be as part of a traveler's personal effects); 47 C.F.R. § 2.1204(a)(8) (allowing the importation of medical implant devices).

necessary conforming revisions to those rules. These edits include, inter alia, updating specific rule section cross-references, modifying terminology that would become outdated under our proposals, and eliminating other outdated references such as “notification” and “type acceptance.” We list in a separate appendix these rule sections by number, and invite commenters to identify any additional rules that would require such revisions.

#### **F. Transition period**

127. If adopted, the proposed rule changes would generally streamline or relax existing requirements and would not impose any significant new compliance burdens. We acknowledge, however, that the adoption of the new self-approval process proposed to replace the DoC and verification processes may cause some manufacturers to reassess their design and production processes. Accordingly, we propose to make any rule changes adopted as a result of this Notice effective immediately upon their publication in the Federal Register; we further propose to permit manufacturers to continue to self-approve products using the existing DoC or verification procedures for up to one year from the effective date of the rules if they so choose. We seek comment on these proposals.

### **IV. PROCEDURAL MATTERS**

#### **A. Ex parte rules – Permit-but-disclose**

128. The proceeding this Notice initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.<sup>234</sup> 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. 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 rule 1.1206(b). In proceedings governed by rule 1.49(f) 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.

#### **B. Comment period and procedures**

129. 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: <http://fjallfoss.fcc.gov/ecfs2/>.
- 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.

<sup>234</sup> See 47 C.F.R. §§ 1.1200 *et seq.*

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.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U. S. Postal Service first-class, Express and Priority mail must be addressed to 445 12<sup>th</sup> Street, S.W., Washington, DC 20554.

130. 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 Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

131. For further information on this Notice of Proposed Rule Making, contact Brian Butler at (202) 418-2702, Office of Engineering and Technology; or via the Internet at [Brian.Butler@fcc.gov](mailto:Brian.Butler@fcc.gov).

#### **C. Initial Regulatory Flexibility Analysis**

132. As required by the Regulatory Flexibility Act, *see* 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IFRA) of the possible significant economic impact on small entities of the policies and rules proposed in the Notice. An Initial Regulatory Flexibility Analysis is included in Appendix C.

#### **D. Paperwork Reduction Act**

133. This document contains proposed modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

### **V. ORDERING CLAUSES**

134. IT IS ORDERED that pursuant to Sections 1, 4(i), 7(a), 301, 303(f), 303(g), 303(r), 307(e), 332, and 622 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 151, 154(i), 157(a), 301, 303(f), 303(g), 303(r), 307(e), 332, and 622, and Sections 0.31(g), 0.31(i), and 0.31(j) of the Commission's rules, 47 C.F.R. Sections 0.31(g), 0.31(i), 0.31(j), this Notice of Proposed Rule Making IS ADOPTED.

135. IT IS FURTHER ORDERED that the Petition for Rulemaking filed by the Telecommunications Industry Association (RM-11673) on August 6, 2012 is DISMISSED.

136. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rule Making, 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 Parts 0, 1, 2, 15 and 18 of Title 47 of the Code of Federal Regulations as follows:

**PART 0 COMMISSION ORGANIZATION**

1. The authority citation for Part 0 continues to read as follows:

**Authority:** Secs. 5, 48 Stat. 1068, as amended; 47 U.S.C. 155, 225, unless otherwise noted.

2. Section 0.457 is amended by revising paragraph (d)(1)(ii) to read as follows:

**§ 0.457 Records not routinely available for public inspection.**

\* \* \* \* \*

(d) \* \* \*

(1) \* \* \*

(ii) Applications for equipment authorizations and materials relating to such applications are not routinely available for public inspection prior to the effective date of the authorization. The effective date of the authorization will, upon request, be deferred to a date no earlier than that specified by the applicant.

(A) Following the effective date of the equipment authorization, material in the application and related materials (including technical specifications and test measurements) will be made available for public inspection by placement in the Commission's public database except as specified in paragraphs (d)(1)(ii) (B), (C), and (D).

(B) Portions of applications for equipment certification of scanning receivers and related materials will not be made available for inspection.

(C) The following exhibits from an equipment authorization application will not be made available for public inspection except upon grant of a request under § 0.461 of this Part: schematics, block diagrams, operational descriptions, and parts lists/tune-up procedures.

(D) Upon requests by the applicant, the following exhibits from an equipment authorization application will not be made available for public inspection for a period of 45 days after the effective date of the equipment authorization except upon grant of a request under § 0.461 of this Part: external photos, test setup photos, user's manual, and internal photos. The 45-day time period may be extended in 45-day increments up to a maximum of 180 days upon request. These exhibits will immediately be made available to the public if the device is marketed to the public or otherwise publicized by the applicant or by an entity acting on the applicant's behalf prior to the expiration of this period. The applicant must notify the Telecommunication Certification Body (TCB) issuing the equipment authorization prior to the device being marketed to the public or otherwise publicized.

\* \* \* \* \*

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

3. The authority citation for Part 2 continues to read as follows:

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

4. Section 2.1(c) is amended by revising the definition of “Software Defined Radio” as follows:

*Software defined radio.* A radio that includes a transmitter in which the operating parameters of frequency range, modulation type or maximum output power (either radiated or conducted), or the circumstances under which the transmitter operates in accordance with Commission rules, can be altered by making a change in software without making any changes to hardware components that affect the radio frequency emissions.

5. Section 2.813 is removed.

**§ 2.813 Transmitters operated in the Instructional Television Fixed Service.**

[Removed.]

6. Section 2.901 is revised to read as follows:

**§ 2.901 Basis and purpose.**

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated. In addition to the technical standards provided, the rules governing the service may require that such equipment be authorized under a Supplier’s Declaration of Conformity or receive a grant of certification from a Telecommunication Certification Body.

(b) The following sections describe the procedure for a Supplier’s Declaration of Conformity and the procedures to be followed in obtaining certification and the conditions attendant to such a grant.

7. Section 2.902 is removed.

**§ 2.902 Verification.**

[Removed.]

8. Section 2.906 is revised to read as follows:

**§2.906 Supplier’s Declaration of Conformity.**

(a) Supplier’s Declaration of Conformity is a procedure where the responsible party, as defined in § 2.909, makes measurements to insure that the equipment complies with the appropriate technical standards. Submittal to the Commission of a sample unit or representative data demonstrating compliance is not required unless specifically requested pursuant to § 2.945.

(b) Supplier’s Declaration of Conformity attaches to all items subsequently marketed by the manufacturer, importer, or the responsible party which are identical, as defined in §2.908, to the sample tested and found acceptable by the manufacturer.

(c) The responsible party may, if it desires, apply for Certification of a device subject to the Supplier’s Declaration of Conformity. In such cases, the rules governing certification will apply to that device.

9. Section 2.907 is revised to read as follows:

**§ 2.907 Certification.**

(a) Certification is an equipment authorization approved by the Commission, or issued by a Telecommunication Certification Body (TCB) and authorized under the authority of the Commission that is based on representations and test data submitted by the applicant or parties authorized by the applicant.

(b) Certification attaches to all units subsequently marketed by the grantee which are identical, as defined in §2.908, to the sample tested except for changes or other variations authorized by the Commission or a TCB pursuant to §§ 2.924 and 2.1043.

(c) Certification may be obtained for a device capable of independent operation, a device or a group of devices authorized under a single FCC Identifier, a modular device capable of operation only upon installation into another device, or an end product containing one or more devices that were previously certified.

10. Section 2.909 is revised to read as follows:

**§ 2.909 Responsible Party.**

(a) For radio frequency equipment subject to certification, the party responsible for the compliance of the equipment with the applicable standards is specified as follows:

(1) The party to whom that grant of certification is issued (*i.e.*, the grantee) is the responsible party.

(2) When a new grant of certification is based on an existing grant of certification, the party to whom the new grant of certification is issued is the responsible party for the equipment produced under new certification; the original grantee remains responsible for equipment produced under the original grant of certification.

(3) If the equipment is assembled from components that includes certified modular transmitter(s) authorized pursuant to § 2.1042, then the assembler is responsible for following the installation guidelines provided by the grantee of each modular transmitter and for obtaining additional approvals necessary for the overall compliance of the final end product, and the party who obtained the grant of certification for the modular transmitter(s) remains the responsible party for those transmitters. However, the assembler or integrator may become the new grantee for individual modular transmitters or the assembled product by submitting an application for certification pursuant to §2.1033. The host device may also be subject to Supplier's Declaration of Conformity procedures as described in paragraph (b) below.

(4) Retailers, original equipment manufacturers or assemblers may enter into an agreement with the responsible party designated in paragraph (a)(1) or (a)(2) of this section to assume the responsibilities to ensure compliance of equipment and become the new responsible party by applying for a grant of certification to request a new FCC Identifier.

(5) If the radio frequency equipment is modified by any party not working under the authority of the responsible party, the party performing the modifications, if located within the U.S., or the importer, if the equipment is imported subsequent to the modifications, becomes the new responsible party. The new responsible party must file for a new grant of certification pursuant to §2.1033.

(b) For equipment subject to Supplier's Declaration of Conformity the party responsible for the compliance of the equipment with the applicable standards is set forth as follows:

- (1) The manufacturer or, if the equipment is assembled from individual component parts and the resulting system is subject to authorization under a Supplier's Declaration of Conformity, the assembler. If the resulting system is subject to certification, the assembler becomes responsible party as required in subsection (a), above.
- (2) If the equipment, by itself, or, a system assembled from individual parts and the resulting system is subject to the Supplier's Declaration of Conformity procedures and that equipment is imported, the importer.
- (3) Retailers or original equipment manufacturers may enter into an agreement with the responsible party designated in paragraph (b)(1) or (b)(2) of this section to assume the responsibilities to ensure compliance of equipment and become the new responsible party.
- (4) The importer of equipment subject to Supplier's Declaration of Conformity procedures may, upon receiving a written statement from the manufacturer that the equipment complies with the appropriate technical standards, rely on the manufacturer or independent testing agency to verify compliance. The test records required by §2.938 must be in the English language and made available to the Commission upon a reasonable request, in accordance with §2.945(c). If the radio frequency equipment is modified by any party not working under the authority of the responsible party, the party performing the modifications, if located within the U.S., or the importer, if the equipment is imported subsequent to the modifications, becomes the new responsible party.
- (c) If the end product or equipment is subject to both certification and Supplier's Declaration of Conformity, all the requirements of paragraphs (a) and (b) apply.
- (d) A party that repairs or refurbishes certified equipment with the permission of the grantee is not required to obtain a new grant of certification if the equipment continues to conform to the specifications of its previously approved grant of certification. Repairs or refurbishment of equipment performed by a party not acting under the permission of the grantee are modifications that will make the repairing/refurbishing party responsible for the compliance of the equipment pursuant to paragraph (a)(5), and will require the party to obtain a new grant of certification for the equipment. Replacement or installation of parts that are commonly changed by users, retailers or refurbishers, such as battery packs, hard drives, memory or enclosures which do not impact device compliance and as permitted in §2.1043(b)(1), would not be considered modifications to a device.
- (e) In the case of transfer of control of equipment, as in the case of sale or merger of the responsible party, the new entity shall bear the responsibility of continued compliance of the equipment.

11. The heading preceding Section 2.911 is removed:

### **Application Procedures for Equipment Certification**

[Removed.]

12. Section 2.911 is amended to redesignating existing paragraphs (d)(3)through (4) as (d)(4) through(5) and by adding a new paragraph (d)(3) to read as follows:

### **§ 2.911 Application Requirements.**

(d)(3) The applicant shall provide the contact information of a party located in the United States that is responsible for compliance.

\* \* \* \* \*

13. Section 2.924 is amended to read as follows :

**§ 2.924 Use of a single FCC Identifier for equipment having multiple trade names, models or type numbers, or functional similarities.**

(a) The responsible party may market devices having different model/type numbers or trade names without additional authorization, provided that such devices are identical and the equipment bears an FCC Identifier validated by a grant of certification. For the purposes of this section, a device will be considered to be identical if no changes are made to the authorized device, or if the changes were made to the device pursuant to §2.1043.

(b) A family of products (a group of devices that are clearly similar, based upon the overall design of the devices, their functions, components and layout, may be viewed as being a single authorized device or a series of similar devices that have been subjected to minor modifications) may be marketed pursuant to one grant of certification under a single FCC Identifier. For a device to be certified as a family of products, the initial application for certification shall contain a declaration of the intent to include and/or to develop a family of products. Each variation of the product shall be evaluated for compliance and include appropriate data (*e.g.* radio frequency exposure or Hearing Aid Compatibility) as required by the Commission's rules for each model variation.

14. Section 2.925 is revised by amending paragraphs (a) through (f) and deleting paragraph (g) to read as follows:

**§2.925 Identification of equipment.**

(a) Each equipment covered in an application for equipment authorization shall bear a label listing the following:

(1) FCC Identifier consisting of the two elements in the exact order specified in §2.926. The FCC Identifier shall be preceded by the term FCC ID in capital letters on a single line.

(2) Any other statements or labeling requirements imposed by the rules governing the operation of the specific class of equipment, except that such statement(s) of compliance may appear on a separate label at the option of the applicant/grantee.

(3) The information required may be provided electronically pursuant to § 2.935

(4) Equipment subject only to registration will be identified pursuant to part 68 of this chapter.

(b) Any device subject to more than one equipment authorization procedure may be assigned a single FCC Identifier. However, a single FCC Identifier is required to be assigned to any device consisting of two or more sections assembled in a common enclosure, on a common chassis or circuit board, and with common frequency controlling circuits. Devices to which a single FCC Identifier has been assigned shall be identified pursuant to paragraph (a) of this section.

(1) Separate FCC Identifiers may be assigned to a device consisting of two or more sections assembled in a common enclosure, but constructed on separate sub-units or circuit boards with independent frequency controlling circuits. The FCC Identifier assigned to any transmitter section shall be preceded by the term *TX FCC ID*, the FCC Identifier assigned to any receiver section shall be preceded by the term *RX FCC ID* and the identifier assigned to any remaining section(s) shall be preceded by the term *FCC ID*.

(2) Where terminal equipment subject to part 68 of this chapter, and a radiofrequency device subject to equipment authorization requirements are assembled in a common enclosure, the device shall be labeled in accordance with the requirements published by the Administrative Council for Terminal Attachments and shall also display the FCC Identifier in the format specified in paragraph (a) of this section.

(3) For a transceiver, the receiver portion of which is subject to Supplier's Declaration of Conformity pursuant to § 15.101 of this chapter, and the transmitter portion is subject to certification, the FCC Identifier required for the transmitter portion shall be preceded by the term FCC ID.

(c) In order to validate the grant of certification, the label shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase unless the label is in electronic form pursuant to §2.935.

(1) As used here, *permanently affixed* means that the required information is etched, engraved, stamped, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment enclosure. Alternatively, the required information may be permanently marked on a nameplate of metal, plastic, or other material fastened to the equipment enclosure by welding, riveting, etc., or with a permanent adhesive. Such a nameplate must be able to last the expected lifetime of the equipment in the environment in which the equipment will be operated and must not be readily detachable.

(2) As used here, *readily visible* means that the required information must be visible from the outside of the equipment enclosure. It is preferable that it be visible at all times during normal installation or use, but this is not a prerequisite for grant of equipment authorization.

(d) Modular transmitters certified pursuant to §2.1042 must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC Identifier pursuant to §2.935.

(1) If using a permanently affixed label, the modular transmitter must be labeled with its own FCC Identifier, and, if the FCC Identifier is not visible when the modular transmitter is installed inside another device, then the outside of the device into which the modular transmitter is installed must also display a label referring to the enclosed modular transmitter. This exterior label can use wording such as the following: "Contains certified modular transmitter FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the modular transmitter which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment certification.

(2) If the modular transmitter uses an electronic display of the FCC Identifier, the information must be readily accessible and visible on the modular transmitter or on the device in which it is installed. If the modular transmitter is installed inside another device, then the outside of the device into which the modular transmitter is installed must display a label referring to the enclosed modular transmitter or provide the information electronically pursuant to §2.935. This label can use wording such as the following: "Contains certified modular transmitter(s) FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The user manual must include instructions on how to access the electronic display. A copy of these instructions must be included in the application for equipment authorization.

(3) If a party installing a certified modular transmitter obtains a new grant of certification for the modular transmitter, it can use an exterior label or provide the information electronically pursuant to § 2.935 using wording such as "Contains certified modular transmitter FCC ID:XYXMODEL1 changed to FCC ID:ABCXXXX". Any similar wording that expresses the same meaning may be used.

(e) Where it is shown that a permanently affixed label is not desirable or is not feasible, an alternative method of positively identifying the equipment may be used if approved by the Commission. The proposed alternative method of identification and the justification for its use must be included with the application for equipment authorization.

Note: As an example, it would be possible to show that an alternate method of identification would be necessary for a device intended to be implanted within the body of a test animal or person.

(f) The FCC Identifier including the term “*FCC ID*” shall be in a size of type large enough to be readily legible, consistent with the dimensions of the equipment and its label. However, the type size for the FCC Identifier is not required to be larger than eight-point. If a device is so small that it is impractical to label it with the FCC Identifier in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the FCC Identifier shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

15. The heading preceding Section 2.927 is removed:

### **Conditions Attendant to an Equipment Certification**

[Removed.]

16. Section 2.927 is amended by revising paragraph (a) to read as follows:

#### **§ 2.927 Limitations on grants.**

(a) A grant of certification is valid only when the device is labeled in accordance with § 2.925 of this subpart and remains effective until set aside, revoked or withdrawn, rescinded, surrendered, or a termination date is otherwise established by the Commission.

\* \* \* \* \*

17. Section 2.931 is revised to read as follows:

#### **§ 2.931 Responsibilities.**

(a) The responsible party warrants that each unit of equipment marketed under its grant of certification and bearing the identification specified in the grant will conform to the unit that was measured and that the data (design and rated operational characteristics) filed with the application for certification continues to be representative of the equipment being produced under such grant within the variation that can be expected due to quantity production and testing on a statistical basis.

(b) A party integrating and marketing end products by installing or assembling certified modular transmitters into a host device must follow all the instructions provided concerning the installation of the modular transmitter, the type and layout of the transmit antenna, and any other steps that must be taken to ensure the compliance of the end product. The installer must ensure that the host device is of a type that is permissible for use under the approved modular transmitter(s) certification. If the installer confirms that the requirements are met, then no further equipment authorization is required except for retention of records pursuant to § 2.938. If the installer cannot show that these requirements are met or end product specific compliance requirements as specified are met, then the integrator/installer must perform additional testing to demonstrate that the end product complies with all applicable technical requirements, including RF exposure and Hearing Aid Compatibility (HAC), as appropriate, with the installed combination of modular transmitters. When additional testing is required, the installer must obtain a new grant of certification for the end product pursuant to § 2.1033, or alternatively either the installer or the

grantee of certification for the modular transmitter must file additional test data to supplement the original modular transmitter's test data pursuant to § 2.1043(e) or file for an application for a new equipment certification for the modular transmitter pursuant to § 2.1033.

(c) A party marketing a certified modular transmitter(s) to be installed by the end user must demonstrate compliance with all Commission requirements under all the likely installation and use configurations an end-user may deploy pursuant to § 2.1042 (b)(6). The evaluation must ensure that the final assembly will comply with all the applicable rules for such assembly.

(d) In determining compliance for devices subject to Supplier's Declaration of Conformity, the responsible party warrants that each unit of equipment marketed under the Supplier's Declaration of Conformity procedure will be identical to the unit tested and found acceptable with the standards and that the records maintained by the responsible party continue to reflect the equipment being produced under such Supplier's Declaration of Conformity within the variation that can be expected due to quantity production and testing on a statistical basis.

(e) For equipment subject to Supplier's Declaration of Conformity, the responsible party must reevaluate the equipment if any modification or change adversely affects the emanation characteristics of the modified equipment. The responsible party bears responsibility for continued compliance of subsequently produced equipment.

18. Section 2.932 is removed:

**§ 2.932 Modification of equipment.**

[Removed.]

19. Section 2.933 removed

**§ 2.933 Change in identification of equipment.**

[Removed.]

137. A new Section 2.935 is added as follows:

**§2.935 Electronic labeling of radiofrequency devices.**

Any radiofrequency device equipped with an integrated electronic display screen may display on the electronic display the FCC Identifier, any warning statements, or other information that the Commission's rules would otherwise require to be shown on a physical label attached to the device.

(a) Devices displaying their FCC Identifier, warning statements, or other information electronically must make this information readily accessible on the electronic display. Users must be provided with prominent instructions on how to access the information in the operating instructions, inserts in packaging material, or other easily accessible format at the time of purchase. The access instructions must also be available on the product-related website, if such a website exists, and a copy of these instructions must be included in the application for equipment certification.

(b) Devices displaying their FCC Identifier, warning statements, or other information electronically must permit access to the information without requiring special codes, accessories or permissions and the access to this information must not require more than three steps in the menu.

(c) The electronically displayed FCC Identifier, warning statements, or other information must be displayed electronically in a manner that is clearly legible without the aid of magnification;



(d) The necessary label information must be programmed by the responsible party and must be secured in such a manner that third-parties cannot modify it.

(e) Devices displaying their FCC Identifier, warning statements, or other information electronically must also display this information on the product packaging or on a physical label placed on the product at the time of importation, marketing, and sales. If a physical label is used, it may be a removable label, or, for devices in protective bags, a label on the protective bag. Any removable label shall be of a type intended to survive normal shipping and handling and must only be removed by the customer after purchase.

21. Section 2.938 is revised to read as follows:

**§ 2.938 Retention of records.**

(a) For equipment subject to the equipment authorization procedures in this part, the responsible party shall maintain the records listed as follows:

(1) A record of the original design drawings and specifications and all changes that have been made that may affect compliance with the standards and the requirements of § 2.931.

(2) A record of the procedures used for production inspection and testing to ensure conformance with the standards and the requirements of § 2.931.

(3) A record of the test results that demonstrate compliance with the appropriate regulations in this chapter.

(b) For equipment subject to Supplier's Declaration of Conformity procedures, the responsible party shall, in addition to the requirements in paragraph (a), maintain a record of the measurements made on an appropriate test site that demonstrates compliance with the applicable regulations in this chapter. The record shall:

(1) Indicate the actual date all testing was performed;

(2) State the name of the test laboratory, company, or individual performing the testing. The Commission may request additional information regarding the test site, the test equipment or the qualifications of the company or individual performing the tests;

(3) Contain a description of how the device was actually tested, identifying the measurement procedure and test equipment that was used;

(4) Contain a description of the equipment under test (EUT) and support equipment connected to, or installed within, the EUT;

(5) Identify the EUT and support equipment by trade name and model number and, if appropriate, by FCC Identifier and serial number;

(6) Indicate the types and lengths of connecting cables used and how they were arranged or moved during testing;

(7) Contain at least two drawings or photographs showing the test set-up for the highest line conducted emission and showing the test set-up for the highest radiated emission. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must clearly show the test configuration used;

(8) List all modifications, if any, made to the EUT by the testing company or individual to achieve compliance with the regulations in this chapter;

- (9) Include all of the data required to show compliance with the appropriate regulations in this chapter;
- (10) Contain, on the test report, the signature of the individual responsible for testing the product along with the name and signature of an official of the responsible party, as designated in §2.909; and
- (11) A copy of the compliance information, as described in §2.1077, required to be provided with the equipment.
- (c) The provisions of paragraph (a) of this section shall also apply to a manufacturer of equipment produced under an agreement with the original responsible party. The retention of the records by the manufacturer under these circumstances shall satisfy the grantee's responsibility under paragraph (a) of this section.
- (d) For equipment subject to more than one equipment authorization procedure, the responsible party must retain the records required under all applicable provisions of this section.
- (e) For equipment subject to rules that include a transition period, the records must indicate the particular transition provisions that were in effect when the equipment was determined to be compliant.
- (f) For equipment subject to certification, records shall be retained for a one year period after the marketing of the associated equipment has been permanently discontinued, or until the conclusion of an investigation or a proceeding if the responsible party (or, under paragraph (c) of this section, the manufacturer) is officially notified that an investigation or any other administrative proceeding involving its equipment has been instituted. For all other records kept pursuant to this section, a two-year period shall apply.
- (g) If radio frequency equipment is modified by any party other than the original responsible party, and that party is not working under the authorization of the original responsible party, the party performing the modifications is not required to obtain the original design drawings specified in paragraph (a)(1) of this section. However, the party performing the modifications must maintain records showing the changes made to the equipment along with the records required in paragraphs (a)(3) of this section. A new equipment authorization may also be required.

22. Section 2.941 is amended by revising paragraph (a) to read as follows:

**§2.941 Availability of information relating to grants.**

(a) Grants of equipment authorization are available in the Commission's public database.

\* \* \* \* \*

23. Section 2.944 is removed.

**§ 2.944 Software defined radios.**

[Removed.]

24. Section 2.947 is amended by revising paragraph (a)(3) and (f) to read as follows:

**§ 2.947 Measurement procedure.**

(a) \* \* \*

(3) Any measurement procedure acceptable to the Commission may be used to prepare data demonstrating compliance with the requirements of this chapter. Advisory information regarding

measurement procedures can be found in the Commission's Knowledge Database, which is available at [www.fcc.gov/labhelp/](http://www.fcc.gov/labhelp/).

\* \* \* \* \*

(f) A composite system is a system that incorporates different devices contained either in a single enclosure or in separate enclosures connected by wire or cable. If the individual devices in a composite system are subject to different technical standards, each such device must comply with its specific standards. In no event may the measured emissions of the composite system exceed the highest level permitted for an individual component. Testing for compliance with the different standards shall be performed with all of the devices in the system functioning. If the composite system incorporates more than one antenna or other radiating source and these radiating sources are designed to emit at the same time, measurements of conducted and radiated emissions shall be performed with all radiating sources that are to be employed emitting.

\* \* \* \* \*

25. The heading preceding Section 2.951 is removed.

### **Verification**

[Removed.]

26. Section 2.951 is removed.

### **§ 2.951 Cross reference.**

[Removed.]

27. Section 2.952 is removed.

### **§ 2.952 Limitation on verification.**

[Removed.]

28. Section 2.953 is removed.

### **§ 2.953 Responsibility for compliance.**

[Removed.]

29. Section 2.954 is removed.

### **§ 2.954 Identification.**

[Removed.]

30. Section 2.955 is removed.

### **§ 2.955 Retention of records.**

[Removed.]

31. Section 2.1033 is revised to read as follows:

### **§ 2.1033 Application for grant of certification.**

(a) An application for certification shall be filed electronically through the Commission's Equipment

Authorization System (EAS) with all required information. Items that do not apply shall be so noted. Except as otherwise noted in this section, all applications for certification shall be accompanied by documentation containing the following information:

- (1) The full name, mailing address, electronic mail address, and telephone number of the responsible party for certification.
- (2) FCC Identifier and label information as required pursuant to § 2.925.
  - (i) For devices where the FCC Identifier label is presented electronically, the application must include instructions for accessing the information.
  - (3) A copy of the installation and operating instructions. A draft copy of the instructions may be submitted if the actual document is not available. The actual document shall be furnished to the FCC when it becomes available and prior to marketing the end product. The user's manual or instruction manual for an intentional or unintentional radiator shall prominently caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
    - (i) If the application is for a modular transmitter, the installation instructions must clearly document the proper procedures for installing the modular transmitter as well as any limitations on the end product necessary to ensure compliance. If the conditions of use require any specific instructions to the end user, this information must also be included in the manual in a conspicuous location.
    - (ii) In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.
    - (iii) The manual must include all the necessary advisories and information to be provided to the users as specified in the rules in this chapter.
  - (4) A brief description of the circuit functions, a functional block diagram of the RF circuitry of the device along with a statement describing how the device operates including software or firmware used to control such functions. This statement should contain a description of the ground system and antenna, if any, used with the device.
    - (i) For devices including modular transmitters which are software defined radios and use software to control the radio or other parameters subject to the Commission's rules, the description must include details of the equipment's capabilities for software modification and upgradeability, including all frequency bands, power levels, modulation types, or other modes of operation for which the device is designed to operate, whether or not the device will be initially marketed with all modes enabled. The description must state which parties will be authorized to make software changes (*e.g.*, the grantee, wireless service providers, other authorized parties) and the software controls that are provided to prevent unauthorized parties from enabling different modes of operation. Manufacturers must describe the methods used in the device to secure the software in their application for equipment authorization and must include a high level operational description or flow diagram of the software that controls the radio frequency operating parameters. The applicant must provide an attestation that only permissible modes of operation may be selected by a user.
    - (ii) For modular transmitters that can be placed in a physical platform that will not itself be certified (*i.e.* a form factor), the description must include reference designs for the physical platform and a showing of how the modular transmitter will meet the requirements of such designs.

- (5) A schematic diagram showing the frequency of all oscillators in the device. The signal path and frequency shall be indicated at each applicable location. The tuning range(s) and intermediate frequency(ies) shall be indicated.
- (6) A report of measurements showing compliance with the pertinent FCC technical requirements. This report shall identify the test procedure used (*e.g.*, specify the FCC test procedure, or industry test procedure that was used), the date the measurements were made, the location where the measurements were made, and the device that was tested (model and serial number, if available). The report shall include sample calculations showing how the measurement results were converted for comparison with the technical requirements.
- (i) For devices required to provide radiofrequency exposure evaluation pursuant to the requirements of this chapter, the report must identify the evaluation procedures and include all the necessary measurements or calculations necessary to demonstrate compliance. If the test reports are provided to show compliance of host products incorporating specific certified modular transmitters approved pursuant to § 2.1042, the information must include host-specific testing and appropriate guidance to ensure that the device will operate in a compliant manner.
- (ii) For devices operating in licensed radio services the following must be provided:
- A. The data required by §§ 2.1046 through 2.1057, inclusive, measured in accordance with the procedures set out in § 2.1041.
- B. Type or types of emission.
- C. The dc voltages applied to and dc currents into the several elements of the final radio frequency amplifying device for normal operations over the power range.
- D. The tune up procedure over the power range or at specific operating power levels.
- E. Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.
- (7) Frequency or frequency range.
- (8) Maximum power rating as defined in the applicable part(s) of the rules.
- (9) A sufficient number of photographs to clearly show the exterior appearance, the construction, the component placement on the chassis, and the chassis assembly. The exterior views shall show the overall appearance, the antenna(s) used with the device (if any), the controls available to the user, and the required identification label in sufficient detail so that the name and FCC Identifier can be read. In lieu of a photograph of the label, a sample label (or facsimile thereof) may be submitted together with a sketch showing where this label will be placed on the equipment.
- (i) For devices where the FCC Identifier label is presented electronically, the application must include a screen shot or equivalent representation of the display containing the information and the steps required to access that display.
- (10) If the equipment is certified as a modular transmitter pursuant to § 2.1042 and can only be certified for a specific host or can be approved for limited types of use, a list of such limitations.
- (11) If the equipment for which certification is being sought must be tested with peripheral, accessory devices or host devices connected or installed, a brief description of those peripherals or accessories. The peripheral or accessory devices shall be unmodified, commercially available equipment.

(12) At least one drawing or photograph showing the test set-up for each of the required types of tests applicable to the device for which certification is requested. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must clearly show the test configuration used.

(13) All applications must be accompanied by the anti-drug abuse certification required under § 1.2002 of this chapter.

(b) In addition to the information listed above, the following information must be submitted for specific categories of devices:

(1) For equipment subject to the provisions of part 15 of this chapter, the application shall indicate if the equipment is being authorized pursuant to the transition provisions in § 15.37 of this chapter.

(2) Applications for the certification of scanning receivers shall include a statement describing the methods used to comply with the design requirements of all parts of § 15.121 of this chapter. The application must specifically include a statement assessing the vulnerability of the equipment to possible modification and describing the design features that prevent the modification of the equipment by the user to receive transmissions from the Cellular Radiotelephone Service. The application must also demonstrate compliance with the signal rejection requirement of § 15.121 of this chapter, including details on the measurement procedures used to demonstrate compliance.

(3) Applications for certification of transmitters operating within the 59.0-64.0 GHz band under part 15 of this chapter shall also be accompanied by an exhibit demonstrating compliance with the provisions of § 15.255 (g) of this chapter.

(4) For equipment employing digital modulation techniques, a detailed description of the modulation system to be used, including the response characteristics (frequency, phase and amplitude) of any filters provided, and a description of the modulating wavetrain, shall be submitted for the maximum rated conditions under which the equipment will be operated.

(5) The application for certification of an external radio frequency power amplifier under part 97 of this chapter need not be accompanied by the data required by paragraph (a)(6)(ii)(A) of this section. In lieu thereof, measurements shall be submitted to show compliance with the technical specifications in subpart C of part 97 of this chapter and such information as required by § 2.1060 of this part.

(6) An application for certification of an AM broadcast stereophonic exciter-generator intended for interfacing with existing certified, or formerly type accepted or notified transmitters must include measurements made on a complete stereophonic transmitter. The instruction book must include complete specifications and circuit requirements for interconnecting with existing transmitters. The instruction book must also provide a full description of the equipment and measurement procedures to monitor modulation and to verify that the combination of stereo exciter-generator and transmitter meet the emission limitations of § 73.44.

(7) Applications for certification required by § 25.129 of this chapter shall include any additional equipment test data and information required by that section.

(8) Applications for certification of equipment operating under part 20 of this chapter, that a manufacturer is seeking to certify as hearing aid compatible, as set forth in § 20.19 of this chapter, shall include a statement indicating compliance with the test requirements of § 20.19 of this chapter and indicating the appropriate M-rating and T-rating for the equipment. The manufacturer of the equipment shall be responsible for maintaining the test results.

(9) Applications for certification of equipment operating under part 27 of this chapter, that a manufacturer is seeking to certify for operation in the:

- (i) 1755-1780 MHz, 2155-2180 MHz, or both bands shall include a statement indicating compliance with the pairing of 1710-1780 and 2110-2180 MHz specified in §§27.5(h) and 27.75 of this chapter.
- (ii) 1695-1710 MHz, 1755-1780 MHz, or both bands shall include a statement indicating compliance with §27.77 of this chapter.
- (iii) 600 MHz band shall include a statement indicating compliance with §27.75 of this chapter.
- (10) Applications for certification of U-NII devices in the 5.15-5.35 GHz and the 5.47-5.85 GHz bands must include a high level operational description of the security procedures that control the radio frequency operating parameters and ensure that unauthorized modifications cannot be made.
- (11) Applications for certification of equipment operating under part 90 of this chapter and capable of operating on the 700 MHz interoperability channels (See § 90.531(b)(1) of this chapter) shall include a Compliance Assessment Program Supplier's Declaration of Conformity and Summary Test Report or, alternatively, shall include a document detailing how the applicant determined that its equipment complies with § 90.548 of this chapter and that the equipment is interoperable across vendors.
- (c) A single application for certification may be filed to authorize an end product that incorporates devices subject to certification under multiple rule parts or under multiple sections within a rule part. The application must include all the information required in this section for each applicable rule parts or sections within a rule part. The end product must be labeled with a single FCC Identifier if a single application is filed. Separate applications must be filed if different FCC Identifiers will be used for each device in the end product.
- (d) A single application for certification may be filed to authorize a family of products, as described in §2.929(b), under a single FCC Identifier. The devices must be clearly similar, based upon their overall design of the devices, their functions, components and layout. The applicant for certification must provide a clear description of the devices that would be included in the family of products and the differences between them.
- (e) A grant of certification must be modified by a new application whenever there is a change in the design, circuitry, construction or other characteristics of a device reported at the time of previous certification (including the original application and any subsequent updates as permitted by the provisions of §2.1043). The application must include:
- (i) A description of the changes;
- (ii) Documentation pursuant to (a) or (h) of this section to update any of the originally submitted information that was affected by the modification of the device; and
- (iii) If the application includes a request to change the FCC Identifier, an applicant that is not the original grantee must provide documentation that the original grantee has given the new applicant permission to reference the original filing, if applicable.
- (f) A grant of certification must be modified by a new application whenever there is a change in the FCC Identifier without changes in design, circuitry or construction of the certified device(s). The application is not required to include the measurement or test data specified in paragraph (a) of this section, although such data may be later requested by the TCB or the Commission. The following information shall be filed with such application:
- (i) An application that is not from the original grantee must provide with its application documentation confirming the grantee's consent to reference the original filing.
- (ii) The original identification used on the equipment prior to the change in identification.

- (iii) The date of the original grant of the equipment authorization.
- (iv) How the equipment bearing the modified identification differs from the original equipment.
- (v) Whether the original test results continue to be representative of and applicable to the equipment bearing the changed identification.
- (vi) The photographs required by paragraph (a)(9) of this section showing the exterior appearance of the equipment, including the operating controls available to the user and the identification label. Photographs of the construction, the component placement on the chassis, and the chassis assembly are not required to be submitted unless specifically requested by the Commission.
- (g) A grant of certification must be modified by a new application whenever an assembler or integrator incorporates one or more certified modular transmitters into a new host device where additional testing and a new FCC Identifier is requested. In such cases, the requirements of paragraph (e) of this section apply.
- (h) For certified modular transmitters that are incorporated in additional devices authorized under new FCC Identifier(s), the following applies: if the original grantee of certification receives approval for a change pursuant to § 2.1043(c) subsequent to the grant of an application for a new FCC Identifier, and the change will be incorporated into the equipment bearing the new FCC Identifier, then the grantee that received approval for a new FCC Identifier must also file for change in its equipment pursuant to § 2.1043(c).

32. A new Section 2.1042 is added to read as follows:

**§ 2.1042 Certified modular transmitters.**

- (a) A certified modular transmitter consists of a radiofrequency transmitter device that is incorporated or attached to another product, host, or a device for data and power and that satisfies the requirements to obtain a modular transmitter certification. A certified modular transmitter may also consist of a single chip package, provided it is authorized in accordance with all the requirements of this sub-part.
- (b) Modular transmitters must meet the following requirements to obtain a modular transmitter certification:
  - (1) The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.
  - (2) The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that it will comply with the requirements of the rules under conditions of excessive data rates or over-modulation.
  - (3) The modular transmitter must have its own power supply regulation.
  - (4) The modular transmitter must be tested in a stand-alone configuration, *i.e.*, it must not be inside another device during testing for compliance with the rules.
  - (5) The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the modular transmitter to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.
  - (6) If a modular transmitter is to be installed by the end-user, compliance with all Commission requirements must be demonstrated by the responsible party under all the likely installation and use



configurations an end-user may deploy. Any RF exposure evaluation must include various likely user configurations, including those expected to create the greatest RF exposure.

(7) A modular transmitter operating under Part 15 of this chapter must comply with the antenna and transmission system requirements of §§ 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a “unique” antenna coupler (at all connections between the modular transmitter and the antenna, including the cable). An antenna can be a trace on circuit board when all the characteristics are properly defined. The “professional installation” provision of § 15.203 is not applicable to modular transmitters but can apply to limited modular approvals under paragraph (b) of this section

(8) A modular transmitter operating under Part 15 of this chapter must comply with the AC line conducted requirements found in § 15.207 unless it is battery powered. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see § 15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see § 15.31(i)).

(c) A limited certification may be granted for a modular transmitter that does not comply with all of the requirements listed in paragraph (b), *e.g.*, shielding/enclosures, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation, if the manufacturer can demonstrate by alternative means in the application for equipment certification that the modular transmitter meets all the applicable requirements under the operating conditions in which the transmitter will be used. A limited certification may also be granted in those instances where compliance with RF exposure rules is demonstrated only for limited applications or specific product configurations and installation or user requirements. The applicant for certification must state how control of the end product into which the modular transmitter will be installed will be maintained such that full compliance of the end product is always ensured. Applications for certification for either a new device or changes to an existing device must be filed pursuant to § 2.1033 or 2.1043 if there are changes in the applicable conditions or limitations.

(d) Multiple certified modular transmitters when integrated into an end product and the end product itself must comply with all Commission requirements, including RF exposure requirements pursuant to §§ 1.1307, 2.1091 and 2.1093. The end product manufacturer must perform additional compliance testing with all certified modular transmitters installed and operating in anticipated configurations to ensure the end product’s compliance. The party integrating the modular transmitters into an end product will be responsible for the compliance of the end product pursuant to § 2.909(a).

(e) Manufacturers of any radio including certified modular transmitters which includes a software defined radio must take steps to ensure that only software that has been approved with a particular radio can be loaded into that radio. The software must not allow the installers or end-user to operate the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved. Manufacturers may use means including, but not limited to the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements.

33. Section 2.1043 is revised to read as follows:

**§ 2.1043 Changes in certified equipment.**

(a) Changes may be made to certified equipment in accordance with the provisions of this section.

(b) *New FCC Identifier Not Required.* Two classes of permissive changes are permitted; in both cases, the responsible party must continue to use the original FCC Identifier when it makes changes.

(1) *Class I permissive changes.* A grantee may make minor variations in a device's enclosure or component layout without obtaining an updated grant of certification from a TCB as long as the grantee ensures that the device continues to comply with all applicable rules. A grantee of certification does not need to obtain an updated grant of certification from a TCB for changes to a certified device that do not cause the fundamental emissions to increase, the spurious emissions to deteriorate (i.e., increase in amplitude), RF exposure to increase, changes any other characteristics to be reported to the Commission or that do not add new capabilities such as new frequency bands or transmission formats.

(2) *Class II permissive changes.* A grantee of certification must submit an application to obtain an updated grant of certification from a TCB for changes that increase the fundamental emissions (e.g., the power level or radiated field strength), cause the spurious emissions to deteriorate (i.e., increase in amplitude), affect a device's compliance with the RF exposure, change the hearing aid compatibility (HAC) ratings or change any characteristics to be reported to the Commission. A grantee must obtain an updated grant of certification for the addition of new device capabilities through software changes, such as the addition of new frequency bands or transmission formats, and must demonstrate the controls it will use to prevent unauthorized software modifications. All requests for changes pursuant to this paragraph must be accompanied by the anti-drug abuse certification required under § 1.2002 of this chapter.

(c) *New FCC Identifier Required.* An application for grant of certification with a new FCC Identifier must be submitted when significant changes in the design, layout or functionality of a previously certified device are made. In addition, a party requesting a new FCC Identifier for a previously certified device or that modifies and becomes the responsible party for a previously certified device must submit a new application for certification using a new FCC Identifier.

(d) Changes to certified equipment described in paragraph (b) of this section may be made by the original grantee of certification or a party acting under the authority of the grantee of certification. When a party other than the grantee of certification applies for a change pursuant to paragraph (b)(2) of this section, it must include documentation with its request confirming the grantee's consent.

(e) When a grantee applies for an updated grant of certification pursuant to subparagraph (b)(2) of this paragraph and TCB approves such application, the TCB issuing the update shall supply the Commission, through the EAS, a description of the changes, complete information showing changes from that originally submitted to the Commission, and the results of tests of the characteristics affected by such change. The modified equipment shall not be marketed under the existing grant of certification prior to acknowledgement by the Commission on the Commission's public database that the change is acceptable.

(f) For modular devices that are incorporated in additional devices authorized as permissive changes under the original FCC Identifier(s), if the original grant of certification has prior permissive change approvals pursuant to paragraph (b)(2) of this section all configurations used and marketed must be tested.

(g) For assemblers or integrators incorporating one or multiple certified modular transmitters into a new host device, authorized under the original grant of certification where an additional certification filing is required, the requirements of 2.1033(e) apply.

(h) Equipment that has been certified or formerly type accepted for use in the Amateur Radio Service pursuant to the requirements of part 97 of this chapter may be modified without regard to the conditions specified in paragraph (b)(1) of this section, provided the following conditions are met:

(1) Any person performing such modifications on equipment used under part 97 of this chapter must possess a valid amateur radio operator license of the class required for the use of the equipment being modified.

(2) Modifications made pursuant to this paragraph are limited to equipment used at licensed amateur radio stations.

(3) Modifications specified or performed by equipment manufacturers or suppliers must be in accordance with the requirements set forth in paragraph (b)(1) of this section.

(4) Modifications specified or performed by licensees in the Amateur Radio Service on equipment other than that at specific licensed amateur radio stations must be in accordance with the requirements set forth in paragraph (b)(1) of this section.

(5) The station licensee shall be responsible for ensuring that modified equipment used at his station will comply with the applicable technical standards in part 97 of this chapter.

(i) Transmitters that have been certified or formerly type accepted for use in the Broadcast services may be modified without regard to the conditions specified in paragraphs (b) and (c) of this section, provided that the modified equipment continues to comply with all other equipment authorization and Part 73 rules. If a previously approved broadcast transmitter is modified, it must either be labeled with a statement indicating that it was modified after approval or the original FCC Identifier must be permanently covered or removed.

34. The heading preceding Section 2.1071 is revised to read as follows:

**Supplier's Declaration of Conformity**

35. Section 2.1071 is revised to read as follows:

**§ 2.1071 Cross reference.**

The general provisions of this subpart shall apply to equipment subject to a Supplier's Declaration of Conformity.

36. Section 2.1072 is revised to read as follows:

**§ 2.1072 Limitation on Supplier's Declaration of Conformity.**

(a) The Supplier's Declaration of Conformity signifies that the responsible party, as defined in §2.909, has determined that the equipment has been shown to comply with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated. Compliance with these standards shall not be construed to be a finding by the responsible party with respect to matters not encompassed by the Commission's rules.

(b) A Supplier's Declaration of Conformity by responsible party, as defined in §2.909, is effective until a termination date is otherwise established by the Commission.

(c) No person shall, in any advertising matter, brochure, etc., use or make reference to a Supplier's Declaration of Conformity in a deceptive or misleading manner or convey the impression that such a Supplier's Declaration of Conformity reflects more than a determination by the manufacturer, importer, integrator, or responsible party, as defined in §2.909, that the device or product has been shown to be capable of complying with the applicable technical standards of the Commission's rules.

37. Section 2.1073 is removed

**§2.1073 Responsibilities.**

[Removed.]

38. Section 2.1074 is revised to read as follows:

**§ 2.1074 Identification.**

Devices subject only to Supplier's Declaration of Conformity must be uniquely identified by the party responsible for marketing or importing the equipment within the United States. However, the identification shall not be of a format which could be confused with the FCC Identifier required on certified equipment. The responsible party must maintain adequate identification records to facilitate positive identification for each device.

39. Section 2.1075 is removed.

**§ 2.1075 Retention of records.**

[Removed.]

40. Section 2.1077 is revised to read as follows:

**§ 2.1077 Compliance information.**

(a) If a product must be tested and authorized under a Supplier's Declaration of Conformity, a compliance information statement shall be supplied with the product at the time of marketing or importation, containing the following information:

- (1) Identification of the product, *e.g.*, name and model number;
- (2) A compliance statement as applicable, *e.g.* for devices subject to part 15 of this chapter, as specified in §15.19(a)(3) that the product complies with the rules; and
- (3) The identification, by name, address and telephone number, of the responsible party, as defined in §2.909. The responsible party for a Supplier's Declaration of Conformity must be located within the United States.

(b) If a product is assembled from modular components (*e.g.* enclosures, power supplies and CPU boards) that, by themselves, are authorized under a Supplier's Declaration of Conformity and/or a grant of certification, and the assembled product is also subject to authorization under a Supplier's Declaration of Conformity but, in accordance with the applicable regulations, does not require additional testing, the product shall be supplied, at the time of marketing or importation, with a compliance information statement containing the following information:

- (1) Identification of the assembled product, *e.g.*, name and model number.
- (2) Identification of the modular components used in the assembly. A modular component authorized under a Supplier's Declaration of Conformity shall be identified as specified in paragraph (a)(1) of this section. A modular component authorized under a grant of certification shall be identified by name and model number (if applicable) along with the FCC Identifier number.
- (3) A statement that the product complies with part 15 of this chapter.
- (4) The identification, by name, address and telephone number, of the responsible party who assembled the product from modular components, as defined in §2.909. The responsible party for a Supplier's Declaration of Conformity must be located within the United States.
- (5) Copies of the compliance information statements for each modular component used in the system that is authorized under a Supplier's Declaration of Conformity.

(c) The compliance information statement shall be included in the user's manual or as a separate sheet. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over

the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form. The information may be provided electronically as permitted in §2.935.

41. Section 2.1201 is amended by revising paragraph (b) and removing paragraph (c) to read as follows:

**§2.1201 Purpose.**

\* \* \* \* \*

(b) The rules in this subpart set out the conditions under which radio frequency devices as defined in §2.801 that are capable of causing harmful interference to radio communications may be imported into the U.S.A.

(c) [Removed.]

42. Section 2.1202 is revised to read as follows:

**§ 2.1202 Exclusions.**

The provisions of this section do not apply to the importation of:

(a) Unintentional radiators which are exempted from technical standards and other requirements as specified in §15.103 of this chapter.

(b) Radio frequency devices manufactured and assembled in the U.S.A. that meet applicable FCC technical standards and which have not been modified or received further assembly.

(c) Radio frequency devices previously properly imported that have been exported for repair and re-imported for use.

(d) Subassemblies, parts, or components of radio frequency devices unless they constitute an essentially completed device which requires only the addition of cabinets, knobs, speakers, or similar minor attachments before marketing or use. This exclusion does not apply to computer circuit boards that are actually peripheral devices as defined in §15.3(r) of this chapter and all devices that, by themselves, are subject to FCC marketing rules.

43. Section 2.1203 is revised to read as follows:

**§2.1203 General requirement for entry into the U.S.A.**

(a) No radio frequency device may be imported into the Customs territory of the United States unless the importer or ultimate consignee, or their designated customs broker, determines that the device meets one of the conditions for entry set out in this section.

(b) Failure to satisfy at least one of the entry conditions for importation of radio frequency devices may result in refused entry, refused withdrawal for consumption, required redelivery to the Customs port, and other administrative, civil and criminal remedies provided by law.

(c) Whoever makes a determination pursuant to §2.1203(a) must provide, upon request made within one year of the date of entry, documentation on how an imported radio frequency device was determined to be in compliance with Commission requirements.

44. Section 2.1204 is amended by revising paragraph (a)(1), (a)(4)(i) and (a)(7) to read as follows:

**§ 2.1204 Import conditions.**

(a) \* \* \*

(1) The radio frequency device is compliant and has either received a grant of certification or the responsible party has performed a Supplier’s Declaration of Conformity. However, a radio frequency device that has been issued a provisional grant of certification may be imported prior to the issuance of a grant of certification provided that the importer maintains sufficient control over the device to ensure that it is not marketed as defined in § 2.803(a) prior to the receipt of the grant of certification.

\* \* \* \* \*

(4) \* \* \*

(i) 400 or fewer units, provided the product is designed solely for operation within one of the Commission's authorized radio services for which an operating license is required to be issued by the Commission; or

\* \* \* \* \*

(7) Three or fewer devices are being imported for the individual’s personal use and are not intended for sale.

\* \* \* \* \*

45. Section 2.1205 is removed.

**§ 2.1205 Filing of required declaration.**

[Removed.]

**PART 15—RADIO FREQUENCY DEVICES**

46. The authority citation for Part 15 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303, 304, 307, 336, 544a, and 549.

47. Section 15.1 is amended by revising paragraph (c) to read as follows:

**§15.1 Scope of this part.**

\* \* \* \* \*

(c) Unless specifically exempted, the operation or marketing of an intentional or unintentional radiator that is not in compliance with the administrative and technical provisions in this part, including prior equipment authorization, as appropriate, is prohibited under section 302 of the Communications Act of 1934, as amended, and subpart I of part 2 of this chapter. The equipment authorization procedures are detailed in subpart J of part 2 of this chapter.

48. Section 15.19 is amended by revising paragraphs (a) and (b) to read as follows:

**§ 15.19 Labelling requirements.**

(a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or Supplier's Declaration of Conformity shall be labelled as follows:

(1) Receivers associated with the operation of a licensed radio service, *e.g.*, FM broadcast under part 73 of this chapter, land mobile operation under part 90, etc., shall bear the following statement in a conspicuous location on the device:

*This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.*

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

*This device complies with part 15 of the FCC Rules for use with cable television service.*

(3) All other devices shall bear the following statement in a conspicuous location on the device:

*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is impracticable to label it with the statement specified under paragraph (a) of this section in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the information required by this paragraph shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

(b) [Reserved.]

\* \* \* \* \*

49. Section 15.25 is amended by revising paragraphs (b) and (c) to read as follows:

**§15.25 Kits.**

\* \* \* \* \*

(b) At least two units of the kit shall be assembled in exact accordance with the instructions supplied with the product to be marketed. If all components required to fully complete the kit (other than those specified in paragraph (a) of this section which are needed for compliance with the technical provisions and must be included with the kit) are not normally furnished with the kit, assembly shall be made using the recommended components. The assembled units shall be certified or authorized under the Supplier's Declaration of Conformity procedure, as appropriate, pursuant to the requirements of this part.

- (1) The measurement data required for a TV interface device subject to certification shall be obtained for each of the two units and submitted with an application for certification pursuant to subpart J of part 2 of this chapter.
- (2) The measurement data required for a TV interface device subject to Supplier's Declaration of Conformity shall be obtained for the units tested and retained on file pursuant to the provisions of subpart J of part 2 of this chapter.
- (c) A copy of the exact instructions that will be provided for assembly of the device shall be submitted with an application for certification. Those parts which are not normally furnished shall be detailed in the application for certification.

\* \* \* \*

50. Section 15.27 is amended by revising paragraph (a) to read as follows:

**§15.27 Special accessories.**

(a) Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors, are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, *i.e.*, shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge, at the time of purchase. Information detailing any alternative method used to supply the special accessories shall be included in the application for a grant of equipment authorization or retained in the Supplier's Declaration of Conformity records, as appropriate. The party responsible for the equipment, as detailed in §2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of the text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

\* \* \* \* \*

51. Section 15.31 is amended by adding a note to paragraph (a)(4) and revising paragraphs (b), (d), (f)(4), (h), (j), (k), (l) and (m) to read as follows:

**§ 15.31 Measurement standards.**

\* \* \* \* \*

(4) \* \* \*

NOTE TO PARAGRAPH (a)(4): Digital devices tested to show compliance with the provisions of § 15.109(g) must be tested following the ANSI C63.4 procedure described in paragraph (a)(4) of this section.

(b) All parties making compliance measurements on equipment subject to the requirements of this part are urged to use these measurement procedures. Any party using other procedures should ensure that such other procedures can be relied on to produce measurement results compatible with the FCC measurement



procedures. The description of the measurement procedure used in testing the equipment for compliance and a list of the test equipment actually employed shall be made part of an application for certification or included with the data required to be retained by the party responsible for devices authorized pursuant to a Supplier's Declaration of Conformity.

\* \* \* \* \*

(d) Field strength measurements shall be made, to the extent possible, on an open area test site. Test sites other than open area test sites may be employed if they are properly calibrated so that the measurement results correspond to what would be obtained from an open area test site. In the case of equipment for which measurements can be performed only at the installation site, such as perimeter protection systems, carrier current systems, and systems employing a "leaky" coaxial cable as an antenna, measurements for Supplier's Declaration of Conformity or for obtaining a grant of equipment authorization shall be performed at a minimum of three installations that can be demonstrated to be representative of typical installation sites.

\* \* \* \* \*

(f) \* \* \*

(4) The applicant for a grant of certification shall specify the extrapolation method used in the application filed with the Commission. For equipment subject to Supplier's Declaration of Conformity, this information shall be retained with the measurement data.

\* \* \* \* \*

(h) A device which incorporates a carrier current system shall be tested as if the carrier current system were incorporated in a separate device; that is, the device shall be tested for compliance with whatever rules would apply to the device were the carrier current system not incorporated, and the carrier current system shall be tested for compliance with the rules applicable to carrier current systems.

\* \* \* \* \*

(j) If the equipment under test consists of a central control unit (host device) and an external or internal accessory(ies) (peripheral, sleeve, etc.) and the party declaring compliance of the equipment or applying for a grant of equipment authorization manufactures or assembles the central control unit and at least one of the accessory devices that can be used with that control unit, testing of the control unit and/or the accessory(ies) must be performed using the devices manufactured or assembled by that party, in addition to any other needed devices which the party does not manufacture or assemble. If the party declaring compliance of the equipment or applying for a grant of equipment authorization does not manufacture or assemble the central control unit and at least one of the accessory devices that can be used with that control unit or the party can demonstrate that the central control unit or accessory(ies) normally would be marketed or used with equipment from a different entity, testing of the central control unit and/or the accessory(ies) must be performed using the specific combination of equipment which is intended to be marketed or used together. Only one test using peripherals or accessories that are representative of the devices that will be employed with the equipment under test is required. All possible equipment combinations are not required to be tested. The accessories or peripherals connected to the device being tested shall be unmodified, commercially available equipment.

(k) Composite systems (*i.e.* systems that incorporate different devices contained in a single enclosure or in separate enclosures connected by wire or cable) shall be measured for compliance with the technical standards of this part in accordance with the procedures in § 2.947 (f) of this chapter. For digital devices

which consist of a combination of Class A and Class B devices, the total combination of which results in a Class A digital device, it is only necessary to demonstrate that the equipment combination complies with the limits for a Class A device. This equipment combination may not be employed for obtaining a grant of equipment authorization or declaring compliance a Class B digital device. However, if the digital device combination consists of a Class B central control unit, *e.g.*, a personal computer, and a Class A internal peripheral(s), it must be demonstrated that the Class B central control unit continues to comply with the limits for a Class B digital device with the Class A internal peripheral(s) installed but not active.

(l) Measurements of radio frequency emissions conducted to the public utility power lines shall be performed using a 50 ohm/50  $\mu$ H line-impedance stabilization network (LISN).

(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating. The number of fundamental frequencies shall be investigated as specified in ANSI C63.10-2013, clause 5.7.

\* \* \* \* \*

52. Section 15.32 is amended by to read as follows:

**§ 15.32 Test Procedures for CPU boards and computer power supplies.**

Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall be tested in accordance with the specific procedures published or otherwise authorized by the Commission.

53. Section 15.33 is amended by revising paragraph (a) to read as follows:

**§ 15.33 Frequency range of radiated measurements.**

(a) For an intentional radiator, the spectrum shall be investigated as specified in ANSI C63.10-2013, clause 5.5.

\* \* \* \* \*

54. Section 15.35 is amended to read as follows:

**§ 15.35 Measurement detector functions and bandwidths.**

The conducted and radiated emission limits shown in this part are based on the following, unless otherwise specified in this part:

(a) On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified. The specifications for the measuring instrumentation using the CISPR quasi-peak detector can be found in ANSI C63.4:2014, clause 4. As an alternative to CISPR quasi-peak measurements, the responsible party, at its option, may demonstrate compliance with the emission limits using measuring equipment employing a peak detector function as long as the same bandwidth as indicated for CISPR quasi-peak measurements are employed.

(b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part,

including average emission measurements below 1000 MHz, there also is also a limit on the peak level of radio frequency emissions. Unless otherwise specified, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, *e.g.*, the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

(c) Unless otherwise specified, when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to Supplier's Declaration of Conformity.

55. Section 15.101 is amended to read as follows:

**§15.101 Equipment authorization of unintentional radiators.**

(a) Except as otherwise exempted in §§15.23, 15.103, and 15.113, unintentional radiators shall be authorized prior to the initiation of marketing, as follows:

<b>Type of Device</b>	<b>Equipment Authorization Required</b>
TV Broadcast Receiver	SDoC or Certification
FM Broadcast Receiver	SDoC or Certification
CB Receiver	SDoC or Certification
Superregenerative Receiver	SDoC or Certification
Scanning Receiver	Certification
Radar Detector	Certification
All other receivers subject to Part 15	SDoC or Certification
TV Interface Device	SDoC or Certification
Cable System Terminal Device	SDoC or Certification
Stand-alone Cable input selector switch	SDoC or Certification
Class B personal computers and peripherals	SDoC or Certification
CPU boards and internal power supplies used with Class B personal computers	SDoC or Certification
Class B personal computers assembled using authorized CPU boards or power supplies	SDoC or Certification
Class B external switching power supplies	SDoC or Certification
Other Class B digital devices & peripherals	SDoC or Certification
Class A digital devices, peripherals & external switching power supplies	SDoC or Certification
Access Broadband over Power Line (Access BPL)	Certification
All other devices	SDoC or Certification

(b) Only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of this section. However, receivers indicated as being subject to Supplier's Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the Supplier's

Declaration of Conformity procedure. Receivers operating above 960 MHz or below 30 MHz, except for radar detectors and CB receivers, are exempt from complying with the technical provisions of this part but are subject to §15.5.

(c) Personal computers shall be authorized in accordance with one of the following methods:

(1) The specific combination of CPU board, power supply and enclosure is tested together and authorized under a Supplier's Declaration of Conformity or a grant of certification;

(2) The personal computer is authorized under a Supplier's Declaration of Conformity or a grant of certification, and the CPU board or power supply in that computer is replaced with a CPU board or power supply that has been separately authorized under a Supplier's Declaration of Conformity or a grant of certification; or

(3) The CPU board and power supply used in the assembly of a personal computer have been separately authorized under a Supplier's Declaration of Conformity or a grant of certification; and

(4) Personal computers assembled using either of the methods specified in paragraphs (c)(2) or (c)(3) of this section must, by themselves, also be authorized under a Supplier's Declaration of Conformity if they are marketed. However, additional testing is not required for this Supplier's Declaration of Conformity, provided the procedures in §15.102(b) are followed.

(d) Peripheral devices, as defined in §15.3(r), shall be authorized under a Supplier's Declaration of Conformity, or a grant of certification, as appropriate, prior to marketing. Regardless of the provisions of paragraphs (a) or (c) of this section, if a CPU board, power supply, or peripheral device will always be marketed with a specific personal computer, it is not necessary to obtain a separate authorization for that product provided the specific combination of personal computer, peripheral device, CPU board and power supply has been authorized under a Supplier's Declaration of Conformity or a grant of certification as a personal computer.

(1) No authorization is required for a peripheral device or a subassembly that is sold to an equipment manufacturer for further fabrication; that manufacturer is responsible for obtaining the necessary authorization prior to further marketing to a vendor or to a user.

(2) Power supplies and CPU boards that have not been separately authorized and are designed for use with personal computers may be imported and marketed only to a personal computer equipment manufacturer that has indicated, in writing, to the seller or importer that they will obtain a Supplier's Declaration of Conformity or a grant of certification for the personal computer employing these components.

(e) Subassemblies to digital devices are not subject to the technical standards in this part unless they are marketed as part of a system in which case the resulting system must comply with the applicable regulations. Subassemblies include:

(1) Devices that are enclosed solely within the enclosure housing the digital device, except for: power supplies used in personal computers; devices included under the definition of a peripheral device in §15.3(r); and personal computer CPU boards, as defined in §15.3(bb);

(2) CPU boards, as defined in §15.3(bb), other than those used in personal computers, that are marketed without an enclosure or power supply; and

(3) Switching power supplies that are separately marketed and are solely for use internal to a device other than a personal computer.

(f) The procedures for obtaining a grant of certification or a Supplier's Declaration of Conformity are contained in subpart J of part 2 of this chapter.

56. Section 15.102 is amended by revising paragraph (b)(4) to read as follows:

**§15.102 CPU boards and power supplies used in personal computers**

\* \* \* \* \*

(b)(4) If the system is marketed, the resulting equipment combination is authorized under a Supplier's Declaration of Conformity pursuant to §15.101(c)(4) and a compliance information statement, as described in §2.1077(b), is supplied with the system. Marketed systems shall also comply with the labelling requirements in §15.19 and must be supplied with the information required under §§15.21, 15.27 and 15.105; and

\* \* \* \* \*

57. Section 15.123 is amended by revising paragraphs (c)(3) and (c)(5)(iii) to read as follows:

**§15.123 Labeling of digital cable ready products.**

\* \* \* \* \*

(b) (3) Subsequent to the testing of its initial unidirectional digital cable product model, a manufacturer or importer is not required to have other models of unidirectional digital cable products tested at a qualified test facility for compliance with the procedures of Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see §15.38) unless the first model tested was not a television, in which event the first television shall be tested as provided in §15.123(c)(1). The manufacturer or importer shall ensure that all subsequent models of unidirectional digital cable products comply with the procedures in the Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see §15.38) and all other applicable rules and standards. The manufacturer or importer shall maintain records indicating such compliance in accordance with the Supplier's Declaration of Conformity procedure requirements in part 2, subpart J of this chapter. The manufacturer or importer shall further submit documentation verifying compliance with the procedures in the Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see §15.38) to the qualified test facility.

\* \* \* \* \*

(c)(5)(iii) Subsequent to the successful testing of its initial M-UDCP, a manufacturer or importer is not required to have other M-UDCP models tested at a qualified test facility for compliance with M-UDCP-PICS-I04-080225, "Uni-Directional Cable Product Supporting M-Card: Multiple Profiles; Conformance Checklist: PICS," February 25, 2008 (incorporated by reference, see §15.38) unless the first model tested was not a television, in which event the first television shall be tested as provided in §15.123(c) (5)(i). The manufacturer or importer shall ensure that all subsequent models of M-UDCPs comply with M-UDCP-PICS-I04-080225, "Uni-Directional Cable Product Supporting M-Card: Multiple Profiles; Conformance Checklist: PICS," February 25, 2008 (incorporated by reference, see §15.38) and all other applicable rules and standards. The manufacturer or importer shall maintain records indicating such compliance in accordance with the Supplier's Declaration of Conformity procedure requirements in part 2, subpart J of this chapter. For each M-UDCP model, the manufacturer or importer shall further submit documentation demonstrating compliance with M-UDCP-PICS-I04-080225, "Uni-Directional

Cable Product Supporting MCard: Multiple Profiles; Conformance Checklist: PICS,” February 25, 2008 (incorporated by reference, see §15.38) to the qualified test facility.

\* \* \* \* \*

58. Section 15.201 is amended by revising paragraphs (a) - (c) to read as follows:

**§15.201 Equipment authorization requirement.**

(a) Intentional radiators operated as carrier current systems, devices operated under the provisions of §§15.211, 15.213, and 15.221, and devices operating below 490 kHz in which all emissions are at least 40 dB below the limits in §15.209 shall comply with the Suppliers Declaration of Conformity procedures in Subpart J of part 2 of this chapter prior to marketing.

(b) Except as otherwise exempted in paragraph (c) of this section and in §15.23 of this part, all intentional radiators operating under the provisions of this part shall be certified by the Commission pursuant to the procedures in subpart J of part 2 of this chapter prior to marketing.

(c) For devices such as perimeter protection systems which, in accordance with §15.31(d), are required to be measured at the installation site, each application for certification must be accompanied by a statement indicating that the system has been tested at three installations and found to comply at each installation. Until such time as certification is granted, a given installation of a system that was measured for the submission for certification will be considered to be in compliance with the provisions of this chapter, including the marketing regulations in subpart I of part 2 of this chapter, if tests at that installation show the system to be in compliance with the relevant technical requirements. Similarly, where measurements must be performed on site for equipment subject to Supplier’s Declaration of Conformity, a given installation that has been found compliant with the applicable standards will be considered to be in compliance with the provisions of this chapter, including the marketing regulations in subpart I of part 2 of this chapter.

\* \* \* \* \*

59. Section 15.212 is removed.

**§ 15.212 Modular transmitters.**

[Removed]

\* \* \* \* \*

60. Section 15.239 is amended by removing paragraph (d) as follows:

**§15.239 Operation in the band 88-108 MHz.**

\* \* \* \* \*

(d) [Removed.]

61. Section 15.615 is amended by revising paragraphs(a)(4) to read as follows:

**§15.615 General administrative requirements.**

\* \* \* \* \*

(4) The manufacturer and type of Access BPL equipment and its associated FCC ID number, or, in the case of Access BPL equipment that has been subject to Supplier's Declaration of Conformity, the Trade Name and Model Number, as specified on the equipment label.

\* \* \* \* \*

## **PART 18—INDUSTRIAL, SCIENTIFIC, AND MEDICAL EQUIPMENT**

62. The authority citation for Part 18 continues to read as follows:

**Authority:** 47 U.S.C. 4, 301, 302, 303, 304, 307.

63. Section 18.203 is revised to read as follows:

### **§ 18.203 Equipment Authorization.**

(a) Consumer ISM equipment, unless otherwise specified, must be authorized under either the Supplier's Declaration of Conformity or certification procedure prior to use or marketing. An application for certification shall be filed with a TCB, pursuant to the relevant sections in part 2, subpart J of this chapter.

(b) Consumer ultrasonic equipment generating less than 500 watts and operating below 90 kHz, and non-consumer ISM equipment shall be subject to Supplier's Declaration of Conformity, in accordance with the relevant sections of part 2, subpart J of this chapter.

(c) Grants of equipment authorization issued, as well as on-site certifications performed, before March 1, 1986, remain in effect and no further action is required.

64. Section 18.209 is revised as follows:

### **§ 18.209 Identification of authorized equipment.**

Each device for which a grant of equipment authorization is issued under this part shall be identified pursuant to the applicable provisions of subpart J of part 2 of this chapter. Changes in the identification of authorized equipment may be made pursuant to §2.1033 of part 2 of this chapter. FCC Identifiers as described in §§2.925 and 2.926 of this chapter shall not be used on equipment subject to Supplier's Declaration of Conformity.

65. Section 18.212 is revised as follows:

### **§18.212 Compliance information.**

(a) Equipment authorized under the Supplier's Declaration of Conformity procedure shall include the following compliance information in lieu of the information required by §2.1077.

(1) Identification of the product, *e.g.*, name and model number.

(2) A statement similar to the following:

*This device complies with Part 18 of the FCC Rules.*

(3) The name and address of the responsible party as defined in §2.909 of the rules. This party must be located within the United States.

- (b) The compliance information may be placed in the instruction manual, on a separate sheet, or on the packaging. There is no specific format for this information.

66. Section 18.311 is revised to read as follows:

**§ 18.311 Methods of Measurement.**

The measurement techniques which will be used by the FCC to determine compliance with the technical requirements of this part are set out in FCC Measurement Procedure MP-5, “Methods of Measurements of Radio Noise Emissions from ISM equipment” or Compliance measurements shall be made in accordance with the specific procedures published or other procedures otherwise authorized by the Commission.



## APPENDIX B

## List of Rules for which Conforming Edits will be Necessary

As described in Paragraph 126 of this Notice of Proposed Rulemaking, the adoption of our proposals will implicate numerous rule sections that reference or describe the Commission's equipment authorization procedures. We propose to update these rules to correspond with the decisions we adopt in this proceeding to, *inter alia*, remove references to specific equipment authorization procedures that are no longer used, describe how certification applications are made in a consistent manner, revised outdated cross-references, and correct typographical errors. A list of the rule sections that that we have identified as meeting these criteria and that are not otherwise been listed within Appendix A follows:

0.31	15.525	74.794	95.221
0.241	15.709	74.795	95.222
0.291	15.713	74.796	95.409
0.406	15.717	74.851	95.411
1.131	18.211	74.852	95.425
1.1103	20.3	74.861	95.549
1.1307	20.21	74.1235	95.603
2.803	22.9	74.1250	95.607
2.911	22.377	74.1251	95.635
2.915	24.9	78.107	95.645
2.921	24.25	80.3	95.653
2.926	24.51	80.201	95.655
2.929	25.144	80.203	95.851
2.945	25.149	80.215	95.1125
2.946	27.9	80.221	95.1221
2.948	27.51	80.251	95.1402
2.956	27.52	80.271	97.315
2.1049	73.44	80.873	101.107
2.1055	73.51	80.874	101.133
2.1076	73.53	80.911	101.139
2.1091	73.128	80.1103	101.141
2.1093	73.166	87.39	101.151
15.5	73.267	87.131	
15.23	73.317	87.133	
15.29	73.319	87.137	
15.37	73.644	87.145	
15.103	73.1590	87.147	
15.115	73.1660	87.189	
15.117	73.1665	87.199	
15.204	73.3538	90.103	
15.214	74.55	90.20	
15.231	74.451	90.35	
15.233	74.452	90.203	
15.253	74.462	90.237	
15.255	74.535	90.241	
15.257	74.550	90.269	
15.305	74.637	90.493	
15.307	74.655	90.543	
15.319	74.661	90.1217	
15.407	74.750	95.129	
15.521	74.751	95.209	

## APPENDIX C

## Initial Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>235</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 *Notice of Proposed Rule Making (NPRM)*. 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* provided in the item. The Commission will send a copy of the *NPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).<sup>236</sup> In addition, the *NPRM* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>237</sup>

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

The purpose of this Notice of Proposed Rulemaking (Notice) is to update the rules that govern the evaluation and approval of radiofrequency (RF) devices. The Commission ensures compliance with its technical rules through the equipment authorization program for RF devices; the technical rules are the means by which the Commission carries out its responsibilities under Section 302 of the Communications Act of 1934, as amended, which permits the Commission to make reasonable regulations governing the interference potential of devices that emit RF energy and can cause harmful interference to radio communications. By updating our rules, we can continue to ensure that hundreds of millions of radio transmitters, consumer products, and other electronic devices will continue to share the airwaves successfully. Our objective is to enable innovation and growth in the development and use of RF devices by providing a clear path for products to demonstrate compliance with the FCC rules so that they may be brought to the market expeditiously.

This Notice addresses the types of authorization procedures used to approve equipment, the effect of changes to authorized equipment, and the responsibilities of parties for complying with our rules. It also addresses the importation of radio devices. The Commission last comprehensively reviewed its equipment authorization procedures more than fifteen years ago.<sup>238</sup> The changes in the way today's equipment is designed, manufactured, and marketed – as well as the sheer number of such devices that need to be authorized – warrant modifications to the rules that specify the equipment subject to our equipment authorization procedures and responsibilities of the various stakeholders. Our proposals complement the recent actions taken by the Commission to modify the equipment authorization rules that address the obligations of Telecommunication Certification Bodies (TCBs) that certify RF equipment and the laboratories that test equipment subject to the certification process.<sup>239</sup>

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<sup>235</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>236</sup> See 5 U.S.C. § 603(a).

<sup>237</sup> See 5 U.S.C. § 603(a).

<sup>238</sup> See *Amendment of Parts 2, 15, 18 and Other Parts of the Commission's Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment*, ET Docket No. 97-94, *Report and Order (Equipment Authorization Procedures Order)*, 13 FCC Rcd 11415 (1998).

<sup>239</sup> See *Amendment of Parts 0, 1, 2, and 15 of the Commission's Rules regarding Authorization of Radiofrequency Equipment and Amendment of Part 68 regarding Approval of Terminal Equipment by Telecommunications Certification Bodies, Report and Order (TCB Order)*, ET Docket No. 13-44, FCC 14-208, rel. December 30, 2014. The *TCB Order* largely addressed the processes by which certification applications are to be evaluated.

## B. Legal Basis

The proposed action is taken pursuant to Sections 1, 4(i), 7(a), 301, 303(f), 303(g), 303(r), 307(e), 332, and 622 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 151, 154(i), 157(a), 301, 303(f), 303(g), 303(r), 307(e), 332, and 622; and Sections 0.31(g), 0.31(i), and 0.31(j) of the Commission's rules, 47 C.F.R. Sections 0.31(g), 0.31(i), and 0.31(j).

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

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>240</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>241</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>242</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>243</sup> The Commission has not developed a definition of small entities applicable to RF Equipment manufacturers. The most analogous definition of small entity is that which is contained in the rules applicable to manufacturers of "Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing." This notice also addresses the repair of devices that are subject to the Commission's equipment authorization rules. For this reason, we also include small entities associated with an additional category, "Communication Equipment Repair and Maintenance," in our analysis.

*Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. 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>244</sup> The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2007, there were a total of 939 establishments in this category that operated for part or all of the entire year. Of this total, 912 had less than 500 employees and 17 had more than 1000 employees.<sup>245</sup> Thus, under that size standard, the majority of firms can be considered small.

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<sup>240</sup> See 5 U.S.C. § 603(b)(3).

<sup>241</sup> 5 U.S.C. § 601(6).

<sup>242</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>243</sup> 15 U.S.C. § 632.

<sup>244</sup> The NAICS Code for this service 334220. See 13 C.F.R 121/201. See also [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-fds\\_name=EC0700A1&-geo\\_id=&-skip=300&-ds\\_name=EC0731SG2&-lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-skip=300&-ds_name=EC0731SG2&-lang=en)

<sup>245</sup> See [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-fds\\_name=EC0700A1&-skip=4500&-ds\\_name=EC0731SG3&-lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-skip=4500&-ds_name=EC0731SG3&-lang=en)

*Communication Equipment Repair and Maintenance.* This industry comprises establishments primarily engaged in repairing and maintaining communications equipment without retailing new communication equipment, such as telephones, fax machines, communications transmission equipment, and two-way radios.<sup>246</sup> The SBA has developed a size standard for this industry which is that any firm whose annual receipts are \$11 million or less is defined as a small business.<sup>247</sup> Census Bureau data for 2007 indicated that in this industry, 1,415 firms operated for the entire year. Of these firms, 1,273 operated with annual receipts of less than \$10 million dollars. Based on this data, the Commission concludes that the majority of firms operating in this industry is small.<sup>248</sup>

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

Currently, the Commission ensures that RF equipment complies with its technical requirements by specifying that devices must be authorized in accordance with one of three procedures specified in Subpart J of Part 2 of the rules – certification, Declaration of Conformity (DoC), and verification. The Notice proposes to update the certification process and replace the DoC and verification processes with a single process.

Certification is typically applied to RF equipment employing new technology for which the testing methodology is relatively complex or not well defined, or that otherwise is considered to have the highest risk of interference.<sup>249</sup> TCBs approve equipment under the certification procedure based on review of an application that provides test reports and all of the other information specified in the Commission’s rules. Certified devices are uniquely identified by an FCC Identifier (FCC ID), which must be included on the device label.<sup>250</sup> All certified equipment is listed in a Commission database that includes the application for certification, test report and other material.<sup>251</sup>

DoC and verification are self-approval procedures in which the responsible party is required to take specific actions to ensure that its equipment complies with our rules. DoC and verification procedures are permitted for certain types RF devices that operate under Part 15 or Part 18 of our rules. DoC requires the responsible party, in addition to taking the necessary steps to ensure that the equipment complies with the appropriate technical standards, to use a recognized accredited test laboratory when testing devices.<sup>252</sup> The responsible party also must include a compliance information statement with the product that identifies the product and a responsible party within the United States.<sup>253</sup> Under verification,

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<sup>246</sup> <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

<sup>247</sup> 13 C.F.R. 121.201, NAICS Code 811213.

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[http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2007\\_US\\_81SSSZ4&prodType=table](http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_81SSSZ4&prodType=table).

<sup>249</sup> See 47 C.F.R. § 2.907.

<sup>250</sup> See 47 C.F.R. §§ 2.925 and 2.926. The FCC ID consists of two elements – a grantee code and an equipment product code.

<sup>251</sup> The Commission’s Equipment Authorization System (EAS) can be accessed at <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm>.

<sup>252</sup> See 47 C.F.R. § 2.906. The party responsible for compliance is defined in 47 C.F.R. § 2.909.

<sup>253</sup> See 47 C.F.R. §§ 2.1077, 15.19(a)(3), and 18.209(b). Only Part 15 and 18 equipment is currently covered by DoC. For example, Part 15 devices subject to the DoC rules must be labeled with the following statement: “This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.” See also 47 C.F.R. §§ 2.1075 and 2.946 (describing circumstances in which

(continued...)

the responsible party must also take the necessary steps to ensure that the equipment complies with the appropriate technical standards, but there are no requirements to use recognized test laboratories and supply a compliance information statement with the product.<sup>254</sup> Unlike certification, the DoC and verification procedures do not require submittal of an application to the FCC or a TCB, the explicit grant of approval, or submission of a test device (unless specifically requested by the Commission). Also, unlike certified devices, this equipment does not have an FCC ID, and is not listed in an FCC database.

The Commission notes that the current state of RF equipment production makes the existing distinctions between the two self-approval processes less meaningful, and, thus, the Notice proposes to combine elements of DoC and verification into a single self-approval process for equipment that has a strong record of compliance and for which there is minimal risk of causing harmful interference (tentatively identified as a “Supplier’s Declaration of Compliance” or “SDoC”). Our objective is to recognize our increased comfort with self-approval procedures by streamlining the procedures and eliminating those elements that serve to increase the costs of complying with our rules and that provide benefits that are of only marginal utility.

We believe that our actions will minimize the compliance costs borne by small entities by, for example, eliminating the mandate to use accredited laboratories that is currently associated with the DoC rules, removing the requirement to display the FCC logo on the equipment identification label, and, potentially, allowing devices that are currently subject to certification to be authorized under the new SDoC procedures. We recognize that manufacturers of devices currently subject to verification may be subject to some minimal additional requirements under SDoC, most notably that the manufacturer include a written compliance statement with the literature furnished to the user that serves to identify the party responsible for the device’s compliance with the Commission’s regulations. We nevertheless believe that, on the whole, the use of the SDoC process will also make it easier for manufacturers to comply with recordkeeping and reporting requirements because we will for the first time adopt a single, streamlined self-approval process that is easy to understand, simple to apply, and that is better aligned with existing international processes. We anticipate minimal costs associated with modifying existing processes and procedures to comply with the proposed rule, and that any such costs will be quickly recouped by the savings realized under use of the new SDoC procedures.

The Notice also proposes amendments to the certification rules that are intended to provide RF equipment manufacturers with a clear understanding of the application requirements and their compliance responsibilities for a variety of design scenarios. Among other things, we propose to permit certification of modular transmitters for licensed services, and to clearly specify the rules for integration of certified modular transmitters and for when the host devices may be subject to certification. We propose to clearly codify requirements related to an RF device’s capabilities for software configuration and upgradeability in the application for certification. We further propose that an applicant for certification must specify which parties will be authorized to make software changes (*e.g.*, the grantee, wireless service provider, other authorized parties) and the software controls that are provided to prevent unauthorized parties from enabling different modes of operation. We do not anticipate that these changes will introduce new costs and, in many cases, will allow device manufacturers greater flexibility in how they comply with our rules and more certainty that their applications will not be returned or rejected.

We are also proposing to streamline certain application procedures which we believe will reduce the need to file new applications in many cases. In this regard, the Notice includes proposals to revise and clarify the rules that govern equipment certification, including specifying when device changes

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the responsible party must submit to the Commission records of the original design drawings and specifications, the procedures used for production inspection and testing, a report of RF emission measurements, the compliance information statement, and a sample of the device).

<sup>254</sup> See 47 C.F.R. §§ 2.909(b), 2.946, 2.953, 2.955 and 2.956.

necessitate a new FCC ID. Such actions will serve to reduce or eliminate existing compliance requirements for device manufacturers. Additionally, we are making proposals that address confidentiality, public notice of grants, the RF device importation rules, and the measurement procedures that are used to demonstrate device compliance. These proposals are designed to reduce overall compliance burdens by better aligning the production, importation and device marketing interests and practices of device manufacturers with our equipment authorization procedures and fundamental interest in ensuring that hundreds of millions of radio transmitters, consumer products, and other electronic devices continue to share the airwaves successfully.

Finally, recently adopted legislation (the E-LABEL Act) requires the Commission to, within nine months after the law's passing, "promulgate regulations or take other appropriate action, as necessary, to allow manufacturers of radiofrequency devices with display the option to use electronic labeling for the equipment in place of affixing physical labels to the equipment."<sup>255</sup> We propose to amend our regulations to comply with the provisions of this legislation. In addition, we propose to amend our labeling regulations to address devices that are too small to be legibly labeled with an FCC ID.

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

The RFA requires an agency to describe any significant, specifically small business, 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 and reporting requirements under the rule for such 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 such small entities."<sup>256</sup>

As discussed above, the overall approach we have taken is to propose to clarify, consolidate, and simplify our equipment authorization of compliance and reporting requirements where possible. Such proposals include, but are not limited to, eliminating use of accredited labs under the SDoC procedure, streamlining importation requirements by, for example, eliminating the use of FCC Form 740, and providing for confidentiality in some cases without the need to file specific confidentiality requests. Given our interest in evaluating the interference potential of devices that emit RF energy and can cause harmful interference to radio communications, we believe that these steps should apply to all device manufacturers, including small entities. In crafting this regulatory relief, we have not identified any additional steps that we could take with respect to small entities that could not also be applied to all device manufacturers.

The Notice also recognizes that there may be existing processes that we have proposed to streamline or eliminate that certain device manufacturers may still find beneficial. These include, for example, filing for certification of devices that may be approved under the SDoC procedures, and placing the FCC logo on devices that would no longer require such marking. Although one approach would be to retain any requirement that has been identified as having value, we have tentatively rejected that approach. Instead, we propose to allow but not require parties to engage in such practices if they find them useful. By doing so, we will not unnecessarily burden small entities that no longer wish to retain such practices.

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<sup>255</sup> Enhance Labeling, Accessing, and Branding of Electronic Licenses Act of 2014, Pub. L. No. 113-197 (Nov. 26, 2014).

<sup>256</sup> 5 U.S.C. § 603(c)(1) – (c)(4).

As directed by the E-LABEL Act, we propose to add a new section to our rules to codify electronic labeling procedures.<sup>257</sup> The new rule will generally allow a radiofrequency device with an integrated electronic display to electronically display any labels required by our rules. This will include the FCC ID required by our certification rules as well as any warning statements or other information that our rules require to be placed on a physical label on the device. The rule will require that this electronic labeling information is secured in order to prevent modification by a third-party. While the E-LABEL Act is not directed at small entities, we recognize that the use of electronic labeling can potentially decrease costs for all device manufacturers because it will provide a means by which manufacturers will no longer have to affix permanent labels to devices. We nevertheless recognize that small entities may not wish to incur the costs associated with changing their processes to produce electronic label displays. As such, we are not proposing to require parties to display any information as part of an electronic label not already required by our rules, nor are we proposing to eliminate the ability of manufacturers to continue to physically label devices if they wish to do so.

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

None.

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<sup>257</sup> See proposed amendment of 47 C.F.R. §2.935 in Appendix A.

**STATEMENT OF  
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment; Request for the Allowance of Optional Electronic Labeling for Wireless Devices, ET Docket No. 15-170, RM-11673*

With the Internet of Things around the bend, we are on the brink of a whole new world of connected wireless devices. To facilitate this powerful shift we are going to need good spectrum policy for both licensed and unlicensed services. But equally as important, though less likely to get the glory, is the need to keep our equipment authorization practices both up-to-speed and up-to-date.

Last year, the Commission got this effort going with its updated practices for Telecommunications Certification Bodies, which help ensure that many of the radiofrequency devices that consumers use every day comply with basic technical requirements. Here, we build on that effort with a rulemaking to update other aspects of our equipment authorization policies. This is important because manufacturers rely on swift, but thorough, equipment review to get their products to market. Existing spectrum users depend on the safeguards in our process to prevent harmful interference. In turn, that means consumers can trust the FCC symbol on the back of so many of their devices, which indicates that those devices make safe and authorized use of our airwaves. But with new devices so much more complex than the radios of old, it's time to make sure that our equipment authorization procedures keep pace—and reflect modern equipment like modular and software-based transmitters.

I look forward to the record that develops in this proceeding—and hope we can update our policies with dispatch. If we do, we can put ourselves on course for less-red tape for new services, more innovation, and a speedier path to the possibilities of the Internet of Things.

In addition, this rulemaking begins the process to implement the E-Label Act, which calls on us to offer manufacturers the option to provide identification numbers and other regulatory information electronically on devices with display screens. This can reduce cost, improve device design, and accelerate the time it takes to get new services to market. This common sense change was championed by Senator Fischer, Senator Rockefeller, Representative Latta, Representative Eshoo, Representative Blackburn, and Representative Welch—and I look forward to seeing it both in our rules and in the marketplace.



**STATEMENT OF  
COMMISSIONER MICHAEL O'RIELLY**

Re: *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment; Request for the Allowance of Optional Electronic Labeling for Wireless Devices, ET Docket No. 15-170, RM-11673*

While this item contains many components, I wish to focus on just a few.

A major function of this proceeding is the implementation of the E-LABEL Act, which Congress enacted to facilitate the optional use of electronic labels, instead of physical ones, on radiofrequency devices. Having spent a considerable amount of time on this particular issue, including working with its lead proponent, the Telecommunications Industry Association, I am pleased to see proposals to update rules to meet the real world needs of electronic device manufacturers. Without sacrificing important functions of our equipment authorization process, e-labels can provide a mechanism to facilitate device shipping, design, and ascetics, and reduce costs. Much credit for the E-LABEL Act is due to Senator Deb Fischer, Former Senator Rockefeller, and Representatives Latta, Eshoo, Blackburn, and Welch.

In addition, the item also proposes rule modifications for radiofrequency-producing modular components. While some claim modular devices may become the next big thing and others argue they will ultimately fail in the laboratory, it is important for the Commission to be ahead of the process. In reality, modularity already exists in some electronic devices, such as desktop and laptop computers. But, this item sets the stage to prevent our rules from becoming a hindrance to innovation and creativity, while at the same time maintaining our ability to prevent harmful interference from radiofrequency emitting devices. I look forward to reviewing the comments received in this proceeding and engaging with stakeholders on ways to further fine tune our equipment authorization process.

I thank the staff of the Office of Engineering and Technology for working with me on a couple of technical issues involving the item and for their overall hard work.