

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

**REPLY COMMENTS OF THE
CONSUMER ELECTRONICS ASSOCIATION**

I. INTRODUCTION

The Consumer Electronics Association (“CEA”)¹ respectfully submits these reply comments in response to initial comments on the above-captioned Notice of Proposed Rulemaking.² As explained in its initial comments,³ CEA applauds the Commission’s many efforts to facilitate deployment of new products and services, including steps to allow optional electronic labeling and to streamline and modernize the agency’s equipment authorization program for radiofrequency (“RF”) devices. CEA represents both longstanding innovators and disruptive startups; its members require the full range of options to create the latest technologies,

¹ The Consumer Electronics Association is the technology trade association representing the \$285 billion U.S. consumer electronics industry. More than 2,000 companies enjoy the benefits of CEA membership, including legislative and regulatory advocacy, market research, technical training and education, industry promotion, standards development, and the fostering of business and strategic relationships. CEA also owns and produces CES – The Global Stage for Innovation. All profits from CES are reinvested into CEA’s industry services.

² *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment*, Notice of Proposed Rulemaking, 30 FCC Rcd 7725 (2015) (proposing to update rules governing the evaluation and approval of radiofrequency devices).

³ Comments of the Consumer Electronics Association, ET Docket No. 15-170 (dated Oct. 9, 2015) (“CEA Comments”). All comments cited herein, unless otherwise noted, refer to comments submitted to ET Docket 15-170 and dated Oct. 9, 2015.

and to bring these technologies to consumers. The proposed electronic labeling rule changes will preserve the awareness and safety of the American public, and maintain protections against potentially harmful interference. Likewise, the Commission should ensure that its actions preserve the dramatic and crucial innovation occurring in the open source community, while keeping radios in-band.

II. THE COMMISSION SHOULD SWIFTLY IMPLEMENT THE CONGRESSIONAL MANDATE TO TRANSITION TO FLEXIBLE ELECTRONIC LABELING

The opening comments reflect broad support for implementation of the E-LABEL Act⁴ to allow optional e-labeling for regulatory information.⁵ CEA and others consistently have explained how e-labeling will promote innovation in product design, reduce environmental impact, decrease administrative burdens, and ultimately better reflect today's globalized market. Permissive digital delivery of required labeling better ensures that *all* consumers are made aware of relevant information than does physical labeling because e-labeling enables more accessible and more familiar formats.⁶ In addition, e-labeling increases speed to market, while reducing manufacturing costs.⁷

⁴ Enhance Labeling, Accessing, and Branding of Electronic Licenses Act of 2014, Pub. L. No. 113-197, 128 Stat. 2055 (Nov. 26, 2014) (“E-LABEL Act”).

⁵ *See, e.g.*, Cisco Systems, Inc. Comments at 20 (“Cisco reiterates its support for the codification of the proposed e-labeling rules.”) (“Cisco Comments”); the CTIA – The Wireless Association® Comments at 9-12 (“CTIA Comments”); Garmin International, Inc. Comments at 4-5 (“Garmin Comments”); Google Inc. Comments at 18-20 (“Google Comments”); Intel Corporation Comments at 5; International Business Machines Corporation Comments at 5-6 (“IBM Comments”); Samsung Electronics America, Inc. Comments at 1-3 (“Samsung Comments”).

⁶ *See, e.g.*, CEA Comments at 5 (e-labeling permits manufacturers “to provide identification and other ‘markings’ in a more complete, attractive, user-friendly, accessible format”); CTIA Comments at 9 (“electronic labels are more effective in providing information to consumers who are used to receiving information electronically”) (internal quotation marks omitted); Shure Incorporated Comments at 8 (“codifying multiple means by which this statement can be delivered to end users, including over electronic displays and other means, will provide additional regulatory flexibility to device manufacturers, while ensuring that consumers continue

Given the many benefits of e-labeling, the Commission should move beyond the E-LABEL Act's requirements to permit exclusive electronic display for *other* required regulatory information, such as device warnings and hearing aid compatibility (“HAC”) disclosures.⁸ Likewise, the Commission should extend permissive e-labeling to unauthorized, prototype, and test devices,⁹ and to devices without an integrated display screen that can present e-labeling information through a host device display screen connected via physical or wireless connection, if the connection to a device with a display is mandatory for use.¹⁰

Finally, to avoid undermining the E-LABEL Act's goals and the benefits of electronic labeling, the Commission should refrain from adopting additional physical labeling or packaging requirements. Cisco aptly observed that “[p]hysical labeling is costly to maintain in today's

to see the relevant device compliance information under this rule”); IBM Comments at 6 (“As proposed by the Commission, implementation of electronic labeling should not have any detrimental effect on ... notification of such compliance to consumers.”).

⁷ See Samsung Comments at 2 (explaining that “increased reliance on e-labeling will enable manufacturers to commence commercial distribution of products immediately after regulatory approvals are secured and without having to wait for physical labels to be designed and affixed”).

⁸ See, e.g., Google Comments at 20 (E-labeling should be permitted for “guidance about remediation of potential interference and cautions against modifications that would void a device's warranty.”); Telecommunications Industry Association Comments at 27 (“TIA Comments”); CTIA Comments at 10.

⁹ Google Comments at 20; Intel Comments at 5; see also TIA Comments at 26 (supporting “expanding the labeling options for small unauthorized devices”).

¹⁰ Garmin Comments at 5 (noting that Garmin's success with e-labeling “in contexts other than FCC requirements” for devices that “rely on a wireless or remote connection and have no electronic display capability themselves”); see also Intel Comments at 5 (“The Commission should allow e-labeling for systems without a built-in terminal which provides the capability to attach to a remote terminal”); Telecommunications Certification Body Council, Inc. Comments at 9 (dated Oct. 5, 2015) (“TCB Council Comments”) (“Recommend expanding e-labeling to devices that do not have an integral display but can only be installed in a device with such a display”); TIA Comments at 26-27.

global supply chains where equipment is being manufactured for sale in multiple jurisdictions.”¹¹ Mandating repetitive physical labels for information already displayed electronically “would reduce many of the benefits achieved via e-labeling.”¹²

III. THE RECORD STRONGLY SUPPORTS COMBINATION OF THE TWO CURRENT SELF-APPROVAL PROCEDURES

Many commenters support the proposal to combine the Declaration of Conformity (“DoC”) and verification equipment authorization procedures into a single self-approval process for unintentional radiating equipment.¹³ EchoStar and Hughes correctly observe that “[t]his approach will reduce administrative burdens and provide greater clarity.”¹⁴ It also will “simplify equipment authorization regimes, reduce confusion concerning the appropriate applicable process, and help ensure compliance with the FCC’s rules.”¹⁵

Any device lawfully self-approved using the existing DoC or verification procedures prior to the end of the transition period should be grandfathered under the current rules.¹⁶ This grandfathering should last for the production life of the device, and should not require any new labeling or the satisfaction of any additional administrative requirements adopted in the new

¹¹ Cisco Comments at 20.

¹² Google Comments at 20.

¹³ *See, e.g.*, Garmin Comments at 2; Hewlett-Packard Company Comments at 3 (dated Oct. 5, 2015) (“Hewlett-Packard Comments”); IBM Comments at 4 (calling the plan “reasonable”); Google Comments at 3; Sony Electronics, Inc. and Sony Mobile Communications (USA) Inc. Comments at 1 (“Sony Comments”); TIA Comments at 7; Wi-Fi Alliance Comments at 4.

¹⁴ EchoStar Technologies LLC and Hughes Network Services, LLC Comments at 3-4 (“EchoStar Comments”).

¹⁵ Garmin Comments at 2; *see also* Information Technology Industry Council Comments at 2 (“ITI Comments”) (noting that the proposed single process would simplify equipment authorization requirements and reduce confusion).

¹⁶ *See, e.g.*, Intel Comments at 2 (noting the burden of changing labels for existing equipment); Sony Comments at 1; Wi-Fi Alliance Comments at 4.

rules.¹⁷ A sufficient transition period “would avoid the need to revisit launch plans, reschedule testing, or revise labels and user manuals for devices already in the design and testing pipeline.”¹⁸ The Commission should also eliminate the requirement for current DoC devices to display a label with the FCC logo, but should allow manufacturers at their option to incorporate the logo into their labels going forward.¹⁹

IV. THE COMMISSION SHOULD MODERNIZE ITS RULES BY ADOPTING OTHER PROPOSED CHANGES WITH MINOR MODIFICATIONS

CEA commends the Commission for planning to streamline and update its administrative rules governing equipment authorization. With minor adjustments to these proposals, the Commission can provide industry and consumers substantially more clarity. Specifically, the record reflects substantial support for the following:

- *Modular approvals.* The Commission should (i) adopt its proposal to relocate the rule governing certification of modular transmitters from Part 15, which covers only unlicensed device operation, to the Part 2 rules, which broadly apply to all RF devices regulated by the Commission,²⁰ and (ii) amend the proposed modular approval requirement to allow for the power regulation to reside off the module.²¹ Doing so would reflect the now “common practice for connection buses to incorporate power regulation.”²²
- *Permissive changes to certified equipment.* The Commission should make its permissive change rules more flexible²³ and permit “all changes to non-radio functionality to qualify

¹⁷ See, e.g., Intel Comments at 2.

¹⁸ Google Comments at 4.

¹⁹ See CEA Comments at 9-10; Garmin Comments at 2; Hewlett-Packard Comments at 2; Sony Comments at 1, TCB Council Comments at 2 (“[T]he logo is a minimal indication of compliance. We believe that the use of the FCC logo should be allowed, on a voluntary basis.”).

²⁰ See Cisco Comments at 8; Google Comments at 5, 7; Intel Comments at 3; ITI Comments at 6; TIA Comments at 8-9.

²¹ See Intel Comments at 3; ITI Comments at 6-7 (observing that modules have “limited available real estate” and “host systems generally have existing power regulation”).

²² Intel Comments at 3.

²³ See, e.g., Cisco Comments at 13-14; Lectrosonics, Inc. Comments at 1-2 (dated Oct. 6, 2015) (“Lectrosonics Comments”); Sony Comments at 2; Wi-Fi Alliance Comments at 9.

as Class I permissive changes, as long as the responsible party confirms and maintains compliance with the general RF emissions and HAC requirements, and the reported RF parameters of the device do not change.”²⁴ This enhances manufacturers’ abilities “to react to supply chain problems or make improvements to products already certified.”²⁵

- *Family of products.* The proposal to allow similar devices to be authorized as a “family of products” will lower prices, reduce paperwork, and speed the introduction of new products.²⁶ The Commission should maintain sufficient flexibility for manufacturers, however, to dictate what constitutes a family of products (*i.e.*, if there is a rational basis for the products to be related, then this blanket type of certification should be available).²⁷
- *Repaired and refurbished devices.* A party making repairs without grantee permission should become the new responsible party, per the Commission’s proposal.²⁸
- *Confidentiality.* Confidentiality is crucial “to preserving innovation and competition.”²⁹ The Commission should make the process for requesting and maintaining confidentiality as easy as possible while providing the public with important testing and compliance information.³⁰ For example, the Commission should automatically grant both long-term and short-term confidentiality for certain materials and short-term confidentiality for entire application.³¹

²⁴ Sony Comments at 2 (emphasis omitted).

²⁵ Lectrosonics Comments at 1-2.

²⁶ *See* Alcatel-Lucent USA, Inc. Comments at 4 (“Alcatel-Lucent Comments”) (observing that the family proposal will reduce paperwork); Cisco Comments at 15; CTIA Comments at 3-4 (noting that a family of products would increase the efficiency of bringing new products into the marketplace); IBM Comments at 4 (“Adding the ability to certify a group of related devices under a single FCC ID will be beneficial to manufacturers who rely on combining multiple devices into a single, complex, integrated solution to meet consumer demands and needs.”).

²⁷ Google Comments at 11; *see also* Alcatel-Lucent Comments (observing that “a manufacturer often designs a product for one or multiple customers which own and/or operate in different frequent [sic] spectrum,” yet the products “usually have similarity in their electrical, physical and functional design and share the same block diagram, external photos and user’s installation manual.”).

²⁸ Cisco Comments at 15 (“Third party vendors doing repairs or refurbishing products without the authorization/approval of the manufacturer of record should be required to verify compliance.”).

²⁹ Google Comments at 14.

³⁰ *See generally* Cisco Comments at 18-19, CTIA Comments at 6; Garmin Comments at 3-4; ITI Comments at 10; Lectrosonics Comments at 3; TIA Comments at 21-22.

³¹ Google Comments at 15; *see also* CTIA Comments at 6 (“all application exhibits, by default, should be granted short-term confidentiality protection”).

- *Provisional grants of certification.* The Commission should grant provisional certifications of devices that can be used for legal importation and distribution through the supply chain prior to sale and posting of the final certification grant on the Commission’s website.³²
- *Importation.* The Commission should eliminate FCC Form 740,³³ allow “importers the option to manage the importation of such unauthorized devices in the importer’s facility,”³⁴ and extend the personal use exception by number of devices and dimension.³⁵
- *Uncertified devices imported for trade shows.* Innovators would benefit from increasing the existing limit of prototype devices they can import to demonstrate at trade shows.³⁶

V. THE COMMISSION SHOULD ENSURE THAT ITS INTERFERENCE PREVENTION PROPOSALS CONTINUE TO ENABLE INNOVATION, PARTICULARLY WITH RESPECT TO OPEN SOURCE SOFTWARE

CEA appreciates the Commission’s role as the steward of private-sector spectrum and recognizes the creativity facilitated by a flexible, but clean, spectrum environment.³⁷ In that

³² See Intel Comments at 10, 12 (noting that provisional grants of certification “can be highly beneficial to the industry” and urging the Commission to allow importation of devices with a provision grant of certification); Google Comments at 21 (noting that the FCC should permit delivery to Customs-bonded warehouses or importers’ facilities prior to certification); Sony Comments at 2; TIA Comments at 23 (observing that provisional grants “would give companies greater flexibility to meet customer demand for product immediately after product launch by allowing them to stage new products close to the point of sale prior to a new product launch announcement”); Wi-Fi Alliance at 12-13 (“provisional certifications would bring RF devices to market more quickly, ensuring that American consumers have access to cutting edge technologies”).

³³ See, e.g., Sony Comments at 3 (“Form 740 ... no longer serves a useful purpose” and should be eliminated); The Boeing Company Comments at 2-3 (“Boeing Comments”); EchoStar Comments at 6; Garmin Comments at 5-6; Google Comments at 20-21.

³⁴ TIA Comments at 32.

³⁵ Boeing Comments at 7; Intel Comments at 11-12; ITI Comments at 18; TIA Comments at 34-35; Wi-Fi Alliance Comments at 13.

³⁶ Cisco Comments at 20-21, CTIA Comments at 12-13, IBM Comments at 7, Intel Comments at 11; Hewlett-Packard Comments at 3, ITI Comments at 18; Sony Comments at 3; TIA Comments at 33-44; Wi-Fi Alliance Comments at 13.

³⁷ For example, CEA consistently has demonstrated in various Commission proceedings that unlicensed spectrum is a hotbed for innovation and integral in addressing the spectrum crunch. See generally Comments of the Consumer Electronics Association, ET Docket 15-105 (dated June 11, 2015); Comments of the Consumer Electronics Association, GN Docket No. 12-126 (dated Jan. 25, 2013); Reply Comments of the Consumer Electronics Association, GN Docket

vein, CEA understands that the Commission intends to safeguard spectrum by requiring, through the equipment certification process, that radios stay “within their authorized parameters.”³⁸

However, as CEA explained in its initial comments, the software security proposals may lead to unintended consequences – namely making firmware updates more difficult and hampering manufacturers’ ability to repair software glitches in the field.³⁹ The record also reflects concern by hundreds of individuals that manufacturers will act with hammers rather than scalpels, complying with the new security requirements by “locking down” their devices.⁴⁰

Open source software benefits consumers in numerous ways: the “ability to review publicly available source code in order to verify the security and behavior of RF-enabled devices; guaranteed access to timely updates, security patches, and enhancements; support for advanced network and protocol features ... and the ability to run experimental code in support of

No. 12-268 (dated Mar. 12, 2013); *see also* Julius Knapp, *Securing RF Devices Amid Changing Technology*, FCC BLOG (Oct. 8, 2015, 3:56 PM), <https://www.fcc.gov/blog/securing-rf-devices-amid-changing-technology> (“The cornerstone of a flexible use spectrum regime is interference prevention”) (“Knapp Blog”).

³⁸ Knapp Blog.

³⁹ CEA Comments at 12; *see also* Google Comments at 7-8; Mozilla Comments at 3; Center for Democracy and Technology Comments at 1-3 (noting that the Commission’s proposal may prevent unauthorized parties from enabling different modes of operation that could improve the adaptability and security of firmware controlling routers and other RF devices).

⁴⁰ *See, e.g.*, Karl Bode, *No, The FCC Is Not (Intentionally) Trying To Kill Third-Party Wi-Fi Router Firmware*, TechDirt, Sept. 3, 2015, <https://www.techdirt.com/blog/wireless/articles/20150831/07164532118/no-fcc-is-not-intentionally-trying-to-kill-third-party-wi-fi-router-firmware.shtml> (quoting Harold Feld explaining, “The real worry is that major chip manufacturers will respond by saying ‘the easiest thing for us to do is lock down all the middleware rather than worry about where to draw the line.’”); Kyle Wiens, *Hey FCC, Don’t Lock Down Our Wi-Fi Routers*, Wired, Sept. 25, 2015, <http://www.wired.com/2015/09/hey-fcc-dont-lock-wi-fi-routers> (observing that many individuals have urged the FCC to preserve the role of open source software in RF-devices and providing information on how readers could comment on the proceeding).

