

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
)	

To: The Commission

**COMMENTS OF
THE BOEING COMPANY**

The Boeing Company (“Boeing”) files these comments in response to the Commission’s Notice of Proposed Rulemaking (“*NPRM*”) considering updates to the rules that govern the evaluation and approval of radiofrequency (“RF”) devices.¹ Boeing is a world leader in the aerospace sector, involved in the manufacture and maintenance of a substantial portion of the aircraft currently in operation, as well as the development of systems for the next generation of aircraft. As a major innovator and manufacturer, Boeing depends on reliable equipment authorization, import, and modification procedures. Boeing imports tens of thousands of FCC-regulated devices every year, resulting in extensive compliance and record keeping obligations. The proposed rule changes have the potential to streamline the Commission’s procedures and reduce the administrative burden for companies and for the Commission, but must be carefully

¹ 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, Notice of Proposed Rulemaking, FCC 15-92 (rel. Jul. 21, 2015) (“*NPRM*”).

implemented to avoid disrupting established industry processes and critical research. Boeing provides the following comments to restate its general support, with some cautions, for the rules proposed in the *NPRM*.

I. BOEING SUPPORTS DISCONTINUING THE REQUIREMENT THAT IMPORTERS FILE FCC FORM 740

Boeing supports the proposal to eliminate Form 740, which represents an administrative burden while providing little, if any, unique information not recorded elsewhere in the import process.² In Boeing’s experience, the contents of the Form 740 are entirely captured in the information collected by Customs and Border Protection (“CBP”) during its routine information collection for all imported goods.³ Thus, Boeing agrees that the continuation of the requirement of filing Form 740 is no longer justified and that the proposed rule modifications will reduce a substantial administrative burden for importers of RF devices.⁴

The existence of some official government collection of this information continues to serve a valuable role for importers, however, as a compliance tool or administrative checkpoint to ensure that United States import and electronic device regulations are being followed. For example, Boeing routinely reviews the information that is reported to CBP regarding RF devices that are being imported by foreign suppliers for ultimate delivery to Boeing. Thus, although Boeing urges the Commission to eliminate the requirement to separately file this information with the Commission, Boeing recommends that the Commission continue to maintain an explicit requirement in its rules that the relevant compliance information be filed with the Federal

² *Id.*, ¶ 120.

³ *Id.*, ¶ 119.

⁴ *Id.*, ¶ 120.

government for all importations of RF devices, be it with the CBP or—should the CBP ever suspend collection of this information—with the Commission or some other federal agency. This would reduce the administrative burden on importers and the Commission while retaining sufficient compliance and enforcement tools to ensure that parties continue to comply with the Commission’s equipment authorization and importation requirements.

II. BOEING SUPPORTS COMBINING THE DECLARATION OF CONFORMITY AND VERIFICATION PROCEDURES

Boeing concurs that the existing distinctions between the Declaration of Conformity and verification processes have become less meaningful over time, and agrees with the Commission’s proposal to unify the self-approval process into a single requirement for a “Supplier’s Declaration of Conformity” (“SDoC”).⁵

One important benefit of the proposed unified procedure would be that all devices, including devices previously subject only to verification, would have the equipment compliance statement supplied with the product. The inclusion of a definitive compliance statement with the device would be helpful for companies such as Boeing that acquire many devices from overseas suppliers and importers. Ascertaining whether the appropriate equipment authorization procedures have been completed is often a protracted and uncertain process, as the ultimate supplier or importer may be many steps removed from the device manufacturer, and may be uninformed or misinformed about the actual compliance status of the device. The Commission’s proposal that devices subject to SDoC must include a compliance statement within the box (and possibly also online, see Section III, below) would compel manufacturers to definitively address this issue at the time of packaging and initial sale, and allow later

⁵ *Id.*, ¶ 24.

confirmation by importers and distributors. This in turn would assist end users in ensuring that the RF devices they are using are compliant with the Commission's rules.

III. BOEING OPPOSES REPLACING TRADITIONAL PERMANENT LABELING OF ELECTRONIC DEVICES UNLESS ELECTRONIC LABELING IS SUPPLEMENTED WITH RELIABLE ONLINE DISCLOSURE

Boeing acknowledges that the E-LABEL Act requires the Commission to implement electronic labels as an option in lieu of physical labeling.⁶ As a practical matter, however, physical labeling is far superior to electronic labeling at providing an indelible, reliable, and easily referenced summary of the rules applicable to a particular piece of equipment. The existing physical labeling is valuable to importers, distributors, and end users, who must be able to reliably determine that a particular device is properly authorized and which rules it is authorized under. In contrast, electronic labeling requires powering on, operating, and navigating through the interface of a device to locate the labeling information, a process that may differ significantly from device to device. This information may be difficult or impossible to access if the device is separated from the user manual, not to mention if it is damaged, partially assembled, lacking a power source, or in a foreign language.

Like other major companies, Boeing imports and distributes tens of thousands of devices and components that are manufactured by third parties and are subject to the Commission's labeling rules, including intentional, unintentional, and incidental radiators. Boeing also uses and manages such FCC-regulated devices in various applications throughout the organization. Boeing must be able to reliably confirm that a device has been approved under the applicable process long after the device has been separated from its packaging and without individually interacting with each potential device.

⁶ *Id.*, ¶ 93.

One way to bridge the gap created by the loss of definitive and accessible physical labels would be to ensure that the information is readily available online. The Commission's existing FCC ID Search portal contains information on certified devices, but is keyed to the FCC ID and does not easily permit a device to be identified based simply on its make and model.⁷ If compliance with the E-LABEL Act will make permanent labels less common, the Commission should ensure that online access to this information is more reliable, either through improvements to the Commission's FCC ID Search portal, a standardized form on the manufacturer's website, or both.

Information on devices that are currently subject to the Commission's Declaration of Conformity or Verification procedures (and are proposed to be subject to SDoC) is not available through the FCC ID Search portal, and so may become even more difficult to access if electronic labeling becomes common. The Commission's rules currently require a unique identifier permanently displayed on the device, such as the manufacturer name and model number, and adequate supporting records to facilitate positive identification of each device and identify the responsible party.⁸ Boeing hopes that even after electronic labeling becomes commonplace, devices will continue to bear such unique identifiers. Boeing therefore recommends that, regardless of whether manufacturers opt for permanent labels or electronic labeling, the Commission should require manufacturers or the responsible party to make information about the equipment available online in a standardized format, which can be located via Internet search by using as search terms any permanent markings (such as manufacturer name and model

⁷ See FCC Equipment Authorization Search at <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> (providing for search by "Product Description" but no explicit criteria for external markings such as make or model).

⁸ 47 C.F.R. §§ 2.954; 2.1074.

number) that are on the device. For devices subject to certification, this information should include a copy of the equipment certification, the user manual, and a copy of all information that is provided on the electronic label. For devices subject to the Commission’s newly proposed SDoC, the information should include the compliance information statement and the manual.

Such a standardized disclosure for each RF device, whether certified or self-approved, would be a valuable resource for importers, distributors, and users of such devices. Further, such a requirement would appear to be consistent with the language of the E-LABEL Act, which directs the Commission to permit manufacturers to use electronic labeling “in place of” physical labeling, but does not appear to preclude the Commission from supplementing this change with additional online disclosure requirements.

IV. BOEING RECOMMENDS EXPANDING THE PERSONAL USE IMPORTATION EXCEPTION TO INCLUDE PROFESSIONAL USE

Boeing concurs with the Commission as to the value of a single, blanket rule that would provide a personal use exception for all devices, both licensed and unlicensed.⁹ An expanded exception would substantially streamline the import process for travelers hand carrying uncertified—but otherwise compliant—devices. Likewise, Boeing concurs with the Commission’s suggestion that it may be appropriate to increase the current three-device limit to reflect the ubiquity and necessity of electronic devices, as well as the expanded categories addressed under the proposed rule change.¹⁰ Individual travelers rely on licensed and unlicensed personal electronics such as personal and business smart phones, laptops, and tablets, and should not be subject to increased scrutiny for bringing these necessary items with them. A

⁹ *NPRM*, ¶ 125.

¹⁰ *Id.*

new limit such as ten devices would provide a generous allotment per traveler without creating an opportunity for unregulated import of foreign devices.

Boeing would add, however, that business travelers are equally reliant on their devices, and indeed such devices are often essential tools of the trade. Boeing has increasingly encountered its personnel being delayed in customs due to uncertainty about whether the personal use exception appropriately applies to devices in their possession that are either owned by the individual but are used for professional purposes, or are owned by Boeing but assigned to the individual for their professional use. Such devices are of course used by the individual and, consistent with the Commission's rules, are not intended for resale.¹¹ Boeing therefore urges the Commission to slightly modify the proposed language of the exception to make clear that radiofrequency devices may be imported if "...ten or fewer devices are being imported for the individual's personal or professional use and are not intended for sale."¹² This revised exception, encompassing both personal use by individuals and internal use (without resale) by corporate personnel, would continue to provide adequate protection against harmful interference without unduly restricting access to these devices for the individuals who rely on them at work and at home.

V. BOEING OPPOSES CHANGES THAT WOULD DISRUPT WIRELESS DEVICE RESEARCH AND DEVELOPMENT BY RESTRICTING MODIFICATION OF SDR SOFTWARE

Like many other companies engaged in research and development of wireless technologies, Boeing uses commercial off the shelf ("COTS") Wi-Fi hardware, including Software Defined Radios ("SDR"). These devices are often modified with temporary or

¹¹ 47 C.F.R. § 2.1204(a)(7).

¹² Compare *NPRM*, Appendix A at 2.1204(a)(7).

preliminary software to enable wireless experimentation, such as with new Internet Engineering Task Force (“IETF”) protocols or wireless security. Modified SDRs are used as both testing tools and hardware under test, but are not marketed to the general public. The ability to modify devices in this manner is fundamental to effective and cost efficient research and development. Unfortunately, the NPRM appears to contemplate requiring restrictions on the modification of certified equipment by third parties, which could cause substantial disruption to research and development of wireless technologies.¹³

Under the proposed rules, manufacturers would be required to specify which parties (if any) are authorized to make software changes to SDRs, and what technical measures are in place to prevent changes to the software.¹⁴ Boeing recognizes the Commission’s desire to ensure that SDRs used by consumers are operated consistently with the functions described in their equipment authorization record. At the same time, however, engineers, systems designers, and security researchers require significant flexibility in the operation of SDRs, including in the precise software package that controls the RF parameters of the device. Notably, such devices are operated by Boeing only within shielded laboratories or other internal RF environments by sophisticated users, and are neither mass-produced nor distributed to Boeing customers or the general public.

Boeing therefore urges the Commission to ensure that entities engaged in research and development continue to have ready access to the settings on these devices and be able to freely

¹³ *Id.*, ¶ 46. The Commission has previously expressed a policy goal of crafting rules that create a “more flexible framework to keep pace with the speed of modern technological change [and] provide an environment where creativity can thrive.” 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, Report and Order, FCC 13-15, ¶ 1 (2013).

¹⁴ *Id.*, Appendix A at 47 C.F.R. § 2.1033(a)(4)(i).

modify them. This may be as simple as urging manufacturers to cooperate with research and development entities and include them as authorized parties able to modify the device software. Without such authorization, researchers will be unable to reliably use COTS hardware, slowing innovation and raising the cost of research and product development.

VI. CONCLUSION

Adopting the above recommendations will promote greater administrative efficiency for industry and the Commission, and can do so without disrupting established industry procedures and critical research that relies on the import and use of RF devices. Boeing therefore supports the proposed rules, with the modifications identified.

Respectfully submitted,

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