Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of
Request for the Allowance of Optional
Electronic Labeling for Wireless Devices

) )
) ) Docket No. _________
)

PETITION FOR RULEMAKING BY THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Danielle Coffey
Vice President, Government Affairs

Mark Uncapher
Director, Regulatory and Government Affairs

Brian Scarpelli
Manager, Government Affairs

TELECOMMUNICATIONS INDUSTRY ASSOCIATION
10 G Street N.E.
Suite 550
Washington, D.C. 20002
(202) 346-3240

Its Attorneys

August 6, 2012
Table of Contents

I. INTRODUCTION AND SUMMARY ................................................................. 2

II. BACKGROUND ............................................................................................ 5

III. ANALYSIS .................................................................................................. 8
    A. The Commission Has the Authority to Allow for an Electronic Labeling Option for Wireless Devices ............................................................. 8
    B. Electronic Labeling is More Effective in Meeting the Commission’s Goals of Informing Consumers ................................................................. 10
    D. Current Generation RF Devices are Capable of Clear and Effective Electronic Labeling .................................................................................. 13
    E. New, Innovative Designs have made Physical Labeling Requirements Costly and Burdensome .......................................................... 14
    F. Electronic Labeling Will Enable Greater Production Efficiencies and Logistical Flexibility ............................................................................. 15
    G. Additional Steps to Facilitate Effective and Safe Electronic Labeling ............ 17

IV. CONCLUSION ............................................................................................. 19
PETITION FOR RULEMAKING BY THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION

Pursuant to Section 1.401 of the Commission’s rules, the Telecommunications Industry Association (“TIA”) urges the Federal Communications Commission (“Commission” or “FCC”) to ease technical and logistical burdens on manufacturers while increasing end user access to useful information about their devices by allowing for the non-exclusive option of electronic labeling. We particularly believe that because the Commission is currently planning to undertake future rulemakings aiming to improve the equipment authorization process, as noted when the Commission adopted its recent rulemaking which allowed five-digit grantee codes, that the time to consider a broad rule change to allow for the option of electronic labeling is now.

We note at the outset that this e-labeling must be optional, as there will be cases where keeping the existing physical label will be necessary, such as for non-display products and radios.

1 47 C.F.R. § 1.401.

2 TIA represents the global information and communications technology (“ICT”) industry through standards development, advocacy, tradeshows, business opportunities, market intelligence and world-wide environmental regulatory analysis. Its hundreds of member companies manufacture or supply the products and services used in the provision of broadband and broadband-enabled applications. Since 1924, TIA has enhanced the business environment for broadband, mobile wireless, information technology, networks, cable, satellite and unified communications. TIA’s standards committees create consensus-based voluntary standards for numerous facets of the ICT industry.

I. INTRODUCTION AND SUMMARY

Current FCC regulations require that most wireless devices be permanently affixed with a label providing identifying information including a device specific FCC number and other regulatory symbols.\(^4\) The purpose of the FCC’s label requirement is to enable the FCC and consumers to readily determine whether a device has been properly certified and to obtain additional information about a device from the FCC’s equipment authorization database.\(^5\) Because of the challenges faced by manufacturers and increased benefits to end users that would be experienced, TIA believes that this goal can be accomplished more efficiently and effectively by allowing an electronic labeling option for wireless devices.\(^6\)

Several factors have combined to make the physical labeling requirement increasingly challenging for manufacturers of smartphones, Push-to-Talk (“PTT”) Mobiles and Portables, Base Stations, and other RF devices. First, there are a growing number of regulators across the globe that require some sort of markings on mobile phones.\(^7\) This presents numerous challenges for manufacturers, as there is a limited amount of space on devices where it is possible to place markings or labels. Further, these requirements force manufacturers to inscribe many different

\(^{4}\) 47 C.F.R. § 2.925.


\(^{6}\) For the purposes of this Petition, we intend “wireless devices” to mean both commercial handsets as well as two-way radios.

\(^{7}\) “A jumble of symbols have been trying to communicate with us from the back of the iPhone since it launched, and indeed, from a number of other non-Apple communication devices. What distinction do they mean? Compatibility with different radio frequencies? Recyclability? Edibility? The truth is a bit more boring. Most of these symbols indicate only that the iPhone has received approval to use the various frequency spectra reserved for mobile and wireless communications and that it has passed various safety checks. \textit{We dove into hundreds of pages of regulations to see what the iPhone’s various tramp stamps mean.}” (Emphasis added). Casey Johnston, \textit{Ask Ars: What are those symbols on the back of the iPhone?}, Ars Technica (Feb. 12, 2011), \url{http://arstechnica.com/apple/guides/2011/02/ask-ars-what-do-the-symbols-on-the-back-of-iphones-mean.ars}. 
markings on their devices before being able to market them, thereby greatly increasing costs and
decreasing production efficiency. In addition, in order to compete effectively in the increasingly
competitive smartphone market, manufacturers are progressively looking towards innovative
industrial designs. Specifically, smartphones created with a single-case design and non-
removable batteries are becoming increasingly prevalent and desirable. These designs provide
manufacturers a way to differentiate and improve the performance of their products. This has
required manufacturers to either etch or print mandatory regulatory markings on the exterior of
devices, which increases costs, limits industrial and aesthetic design options, while proving
ineffective in conveying this information to consumers. These innovative designs have left far
less space on devices where external labels can be placed, requiring more sophisticated and
costly machinery to complete the task. As such, the present device-labeling obligation has
become burdensome, expensive, and outdated. There is however, a sensible solution to this
problem that presents an opportunity to reduce the technical and logistical burdens on
manufacturers, while simultaneously improving consumer access to important information about
their handsets. That solution is electronic labeling.

Electronic labeling is becoming a natural progression from hard copy labels which
would help in streamlining manufacturing processes, lower cost, and eliminate typographical
errors which sometimes appear on hard copy labels. With a framework already in place for
certain types of radio devices, electronic labeling is the natural progression of device labeling in
the age of graphical interfaces. Electronic labeling will allow consumers to access easily readable
and prominently displayed information about each device. This will include not only equivalent

8 47 C.F.R. § 2.925(e); See also In re Authorization and Use of Software Defined Radios, ET Docket No. 00-
not to extend electronic labeling to non-SDR devices without stating the specific reasoning for limiting electronic
labeling to only SDRs.
information as found on an etching or sticker, but would permit any required additional
information to be made available. Manufacturers could also display valuable information about
proper device care, recycling programs and warranties. In contrast, most end-users, particularly
consumers of commercial mobile devices, are likely unaware of the existence of regulatory
information under the current labeling requirements and if they are aware of them, the physical
labels provide limited information to consumers as most information is set forth in instruction
manuals. This dynamic exists because physical labeling was implemented prior to the advent and
widespread implementation of the graphical interface and the development of the easy-to-
navigate menus of today’s mobile phones. Therefore, electronic labeling can be both efficiently
implemented and beneficial to consumers and manufacturers while continuing “to provide a
systematic method to identify equipment, which has been approved by the Commission.”

---

9 In re Authorization and Use of Software Defined Radios, First Report and Order, 16 FCC Rcd 17373,
17383-84 (Sept. 13, 2001) (“Manufacturers may design their equipment to display any additional information they
wish beyond what we require.”). While this only applied to electronic labeling for software defined radios, there is
no reason that manufacturers would not want to provide consumers with useful information if it could help prevent
unneeded returns and repairs.

10 In re Revisions of Parts 2, 15, 18, and 83 of the Rules and Regulations to set up a single system of
identification for all devices covered under the equipment authorization program, Report and Order, 70 F.C.C.2d
2346 (Feb. 28, 1979).

11 In re Amendment of Part 2 of the Commission’s Rule Regarding Equipment Authorization procedures,
II. BACKGROUND

The physical labeling requirements in the Commission’s rules, described in Section 2.925, have become an aging relic of the pre-digital world. Current labeling rules were first standardized in 1973 and further refined in 1988 to eliminate some unnecessary labeling requirements. At this time, mobile phones were very large by today’s standards and graphical interfaces were essentially non-existent. Therefore, there was no feasible alternative to a physical labeling system. In 2001, the Commission adopted rules to allow electronic labeling for software-defined radios. However, the Commission declined to extend electronic labeling to non-SDR devices. As mentioned previously, Subsection (f) allows for an alternative method of labeling when a permanently affixed nameplate is not desirable. This approach requires a case-by-case application and an ad hoc FCC approval process. The spirit of this exception is to provide an accommodation for when a physical label is undesirable. This demonstrates that the Commission has already contemplated a time when physical labeling would become obsolete. However, in order to utilize such an approval process for widespread implementation of electronic labeling, manufactures would need to flood the FCC with administrative requests without any guarantee of success. By allowing for electronic labeling across all mobile devices,

---

12 See 47 C.F.R. § 2.925.
13 In re Revisions of Parts 2, 15, 18, and 83 of the Rules and Regulations to set up a single system of identification for all devices covered under the equipment authorization program, Report and Order, 70 F.C.C.2d 2346 (Feb. 28, 1979).
17 Id. at ¶ 35.
the Commission could decrease the potential administrative burdens of having to consider proposed justifications for foregoing physical labeling.

The adoption of electronic labeling in the US will create a global model that other countries are likely to follow. In fact, electronic labeling has already been adopted in several countries, most notably in Australia.\textsuperscript{18} The Australian Communications and Media Authority allows manufacturers to “choose to use electronic labeling for their device if the device has a built-in display.” Additionally, “[s]uppliers who choose to use electronic labeling are required to explain in the documentation accompanying the device how the user can display the electronic label,” and “[s]uppliers must ensure that it is difficult to prevent the display of the electronic label when the method specified in the documentation is used.”\textsuperscript{19} The Australian model is a good first step towards global harmonization of regulatory labeling requirements. If more countries adopt this model, congruent with spectrum harmonization, manufacturers will more easily be able to develop smartphones that can seamlessly traverse international borders, decreasing costs and increasing access to new technologies.

Discussions are also currently underway within Europe regarding provision being made for electronic labelling in the revision of the European Parliament and Council Directive 1999/5/EC Radio and telecommunications terminal equipment (R&TTE).\textsuperscript{18} These discussions, being held between the European Commission and Industry, are seen as a necessary response to technological advancement. Within the standards setting environment, the mobile industry is also working towards a common method for accessing electronic labeling on mobile handsets and has recently adopted a proposal to standardize the procedure for mobile equipment to display

\textsuperscript{18} See Australian Communications and Media Authority, \textit{Electronic Labeling}, http://www.acma.gov.au/WEB/STANDARD...PC/pc=PC_312101

\textsuperscript{19} \textit{Id.}
electronic labeling.\textsuperscript{20}

\textsuperscript{20} Samsung, NEC, Nokia, RIM, Motorola Mobility, “Adding to the presentation of e-marking”, S1-122440, 3GPP TSG-SA WG1 Meeting #59, Chicago, USA, 30 July – 3 August 2012.
III. ANALYSIS

A. The Commission Has the Authority to Allow for an Electronic Labeling Option for Wireless Devices

Section 302 of the Communications Act of 1934, as amended, authorizes the Commission to make reasonable regulations, consistent with the public interest, governing the interference potential of equipment which emits radio frequency energy.\(^{21}\) This has enabled the Commission to establish and administer an authorization program to ensure that equipment reaching the market complies with the technical requirements, which includes device labeling.\(^{22}\) Devices are required to have a nameplate or label listing the device’s FCC identifier consisting of the grantee code and the equipment product code.\(^{23}\) Subsection (d) of section 2.925 states: “[T]he nameplate or label shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.”\(^{24}\)

The rules also allow for electronic labeling on software defined radios as long as the radio is “equipped with a means such as a user display screen to display the FCC identification number normally contained in the nameplate or label.”\(^{25}\) Further, “[t]he information must be readily accessible, and the user manual must describe how to access the electronic display.”\(^{26}\) The rules also allow an “alternative method of identification” for when a “permanently affixed

\(^{22}\) See 47 C.F.R. § 2.925.
\(^{23}\) See Id.
\(^{24}\) 47 C.F.R. § 2.925(d).
\(^{25}\) 47 C.F.R. § 2.925(e).
\(^{26}\) Id.
nameplate is not desirable or feasible.”27 The Commission has carved out exceptions to allow “electronic” labeling for both software defined radios and modular transmitters.28 In addition, products with modular transmitter devices incorporated in them must also include a label indicating that such a modular transmitter is installed inside the product.29

The Commission has already initiated rulemakings under its authority with the goal of reducing burdens of the equipment authorization program on manufacturers, and has stated that such reforms “greatly benefit both large and small manufacturers and encourage the development of innovative products that best meet consumer’s needs.”30 Further, electronic labeling has already been allowed for modular transmitters, where the Commission stated that it made this allowance to “provide additional flexibility to manufacturers.”31 This flexibility will increase innovation, benefiting the public interest. TIA therefore believes that creating an option for electronic labeling, consistent with the specifics below, is consistent with the Commission’s charge to further the public interest.

---

27 See 47 C.F.R. § 2.925(f). This is a narrow exception, as the example the FCC gives is a device implanted in animals or humans.

28 See 47 C.F.R. § 2.925(e); 47 C.F.R. § 15.212(a)(1)(vi).


31 See 2007 Equipment Approval Order at ¶ 12.
B. Electronic Labeling is More Effective in Meeting the Commission’s Goals of Informing Consumers

Electronic labeling would enable manufacturers of mobile handsets, PTT Mobiles and Portables, Base Stations, and other RF devices to provide valuable information to consumers beyond the information required in Section 2.925. This is in stark contrast to physical labeling, which only displays the device’s FCC identifier, providing little context or information to the consumer. In practice, device owners’ pay little attention to the numbers etched onto the backs of their devices and even less attention to labels glued into their device’s battery compartment. It is likely that most consumers don’t even know they are there or what they are.32 Electronic labeling that is prominently displayed in a device’s UI, on the other hand, would allow consumers to easily find additional information beyond the device’s FCC identifier. The electronic label could include device recycling and take-back programs, warranty information, device care instructions, and links or phone numbers for customer service websites and call centers. In fact, some of these features are already implemented on a voluntary basis by many manufacturers of mobile handsets, PTT Mobiles and Portables, Base Stations, and other RF devices. Overall, this method of device labeling better fits consumers’ practices in a world where most people expect to obtain information electronically and would be a far more effective means of meeting the Commission’s goals for labeling.

32 Tech blog Ars Technica had to sift through “hundreds of pages of regulations” to determine the meaning of the various symbols on the back of the iPhone. See supra note 3.
We believe that the allowance of electronic labeling consistent with this petition would also be consistent with the rationale the FCC recently gave for requiring broadcasters place their public files online. In that Order, the Commission stated:

“This updating of our rules harnesses current technology to make information concerning broadcast service more accessible to the public and, over time, reduce broadcasters’ costs of compliance. This Order is another step in our modernization of the Commission’s processes to transition from paper filings and recordkeeping to digital technology. Without imposing any new reporting obligation, it will help bring broadcast disclosure into the 21st Century.”

(emphasis added).33

Under this reasoning, electronic labeling will make the FCC identifier more readily visible to end-users than it is now. For equipment such as cell phones and tablets, the mass use of cases and covers hides the FCC identifier. An electronic FCC identifier that appears every time the device is powered on brings visibility back to the mark – not just for of cell phones and tablets, but for PTT Mobiles and Portables, Base Stations, and other RF devices as well.

---

C. Electronic Labeling Better Fits Consumer Practices and Expectations

The digital age is here, including digital identification devices such as digital object identifiers and Quick Response (“QR”) Code for identification of bar-code type symbols using electronic readers. In an era where people are adopting smartphones at a rapid pace, consumers are no longer accustomed to receiving information via physical formats. This phenomenon extends across platforms: Books and newspapers are being replaced by ebooks and blogs, CDs are disappearing leaving digital downloads and streaming as the preferred methods of music delivery, consumers look to the Internet for instructions on how to operate their devices before reading user manuals, and government agencies are pushing boldly into the cloud. We believe that American consumers are saavy, and should get credit for already being very familiar with viewing identification information at start-up from use of PCs and laptops, cell phones, tablets, and video games.

However, few consumers know what the FCC identification number represents or how to use it, while many consumers may find it inconvenient to read current labels once the device is put into service as one of the most logical locations for the current label is inside the battery compartment of a device with a removable battery. Electronic labeling would better fit the primary consumer expectation: important information should be available digitally in an easy to read format along with additional helpful material. Allowing electronic labeling consistent with this petition will place the FCC at the forefront of digital evolution, as it already has been in the Online Public File proceeding and with the DTV transition.
TIA understands the concerns that the Commission may have regarding viewing labeling information in circumstances when the phone cannot be turned on. This may arise when a device with a display is newly purchased and uncharged, or when a phone simply loses power. To account for these, we suggest that the Commission allow for the optional use of peel-off labels on new devices with displays which are not charged. Further in the event that a device loses power and the electronic labeling information cannot be accessed, we propose that the Commission allow for the same information to be readily available on the manufacturer’s website and/or the user manual.

D. Current Generation RF Devices are Capable of Clear and Effective Electronic Labeling

At the time of the Commission’s SDR order, mobile phones were used mostly for calling and texting only and most included only small monochrome user interfaces that were capable of displaying only text and numbers. It is understandable that the FCC may have been wary of allowing electronic labeling in 2001, when navigation was limited by the small size and complexity of device displays. Therefore, the scope of information that could be conveyed was also limited. By contrast, mobile phones and other RF devices of today are increasingly touch-based with colorful and interactive user interfaces and large memory capabilities. Modern smartphones can easily display complex information in simply organized menu systems. At this point in history, the potential barriers for excluding non-SDR devices from electronic labeling are virtually non-existent.

E. New, Innovative Designs have made Physical Labeling Requirements Costly and Burdensome

Device manufacturers continue to compete for consumer attention. In order to differentiate their products, manufacturers of mobile handsets and other RF devices look to develop devices that are thinner, sleeker, and more efficient. This includes innovations such as non-removable batteries, single body enclosures, and the utilization of a wide variety of construction materials. Such innovations require different methods for physical labeling including external etching. This etching process is permanent and characterized by a high rate of error and manufacturers may be unable to repurpose already marked devices for shipment elsewhere when the need arises. These factors lead to increased manufacturing times and costs, while preventing larger economies of scale. By adopting electronic labeling for all mobile devices, the Commission could greatly decrease these costs, which in turn would lower to the price of mobile devices for consumers.
F. Electronic Labeling Will Enable Greater Production Efficiencies and Logistical Flexibility

If the Commission adopts electronic labeling as a valid option for mobile phones and other RF devices, manufacturers will be able to eliminate expensive physical labeling processes that will increase logistical flexibility, and free up valuable factory capacity that can be used to increase production levels. As discussed previously, physical labeling requirements require expensive machinery tailored to the particular material being used for each individual device. For example, a manufacturer etching on glass would need a different type of machine than a manufacturer printing onto plastic. Even once the necessary machinery is in place, these procedures are fraught with difficulty. High rates of error cause a loss of production output and a waste of device components. Once the etchings are made or the permanent stickers are applied, the device’s destination is set based on the regulatory information used. If only it were that simple in the global wireless industry.

Frequently, customers from all over the world change or cancel their purchase order. Devices destined for one country must be pulled off of shipping pallets, unwrapped, and changed to reflect the necessary regulatory information. This process consumes an unnecessary amount of labor, storage space, and production capacity and is therefore exceedingly wasteful and costly. These added expenses not only take a toll on production costs, they also impact the environment. Making changes to the physical labels or etchings wastes materials and energy, and may require the use of additional chemical adhesive. In addition, recalling products with incorrect label information can be a logistical nightmare. Some product re-calls would be eliminated because there would no longer be a need to correct information on hard copy labels due to typographical
errors, changes in regulatory requirements, or damages due to aggressive environmental conditions.

Creating a rule providing for an electronic labeling alternative to physical labeling can easily rectify these problems. Electronic labeling will allow manufacturers of mobile handsets, PTT Mobiles and Portables, Base Stations, and other RF devices to avoid costly labeling and etching procedure, avoiding mistakes in the process. When a shipment of devices must be rerouted, manufacturers will be able to perform a simple memory wipe and reprogramming to apply a new electronic label.

Electronic labeling also holds the potential to aid in increased effectiveness of customs and counterfeit law enforcement. With respect to device identification concerns, a number of options exist that would supplement electronic labeling means, such as a separate written indication that accompanies the devices through customs. Industry stands ready to work with the Commission on this issue to address any concerns.
G. Additional Steps to Facilitate Effective and Safe Electronic Labeling

There are several potential concerns regarding electronic labeling that can be easily remedied through systematic implementation of electronic labeling with preemptive measures to address any future issues.

One concern regarding electronic labeling is that it would not be effective when a device is no longer functioning. This would only become a problem if there were a recall where devices continue to be a threat to consumers even after they are non-functional. This issue is limited in scope because devices will continue to be marked with the manufacturer’s name and the device model number for marketing purposes. Any device recalls would be able to rely on these markings as a way to communicate a recall notice to consumers. The manufacturer name and model number are more readily available and easily identifiable and therefore operate as the main point of reference for consumers regardless of the presence of a physical FCC number label.

To add an extra layer of protection for consumers and to prevent counterfeiting, manufacturers and their OS partners could create a database of FCC identifiers so that consumers could continue to access information about their device if it no longer functions. This database could be available to consumers when they register their device online. Registration is already required in order to use most smartphones and implementing such a system would be relatively inexpensive compared to the costs of physical etchings and stickers. This system would also allow consumers to be confident that the device they hold is authentic. When an individual
registers its device, it could be matched to a database of device numbers created after manufacturing is completed, thereby authenticating the device.
IV. CONCLUSION

Technology has once again outpaced regulatory requirements designed for rotary dialed phones. The FCC has shown great flexibility in recognizing the phenomenon of rapid technological change. In this spirit, we ask that the Commission move forward with making electronic labeling for all wireless devices a default option for mobile handsets, PTT Mobiles and Portables, Base Stations, and other RF devices. Electronic labeling is the natural evolution of device labeling. Not only does it more effectively meet end-user expectations while continuing the FCC’s comprehensive device labeling framework, it also will streamline manufacturing processes, lower costs, reduce prices, and encourage innovation.

Respectfully submitted,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

By: /s/ Danielle Coffey

Danielle Coffey
Vice President, Government Affairs

Mark Uncapher
Director, Regulatory and Government Affairs

Brian Scarpelli
Manager, Government Affairs

TELECOMMUNICATIONS INDUSTRY ASSOCIATION
10 G Street N.E.
Suite 550
Washington, D.C. 20002
(202) 346-3240

August 6, 2012