

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

<i>In the Matter of</i>	)	
	)	
Review of Part 15 and other Parts of the Commission's Rules	)	ET Docket No. 01-278
	)	RM-9375
	)	RM-10051
	)	

**COMMENTS OF CISCO SYSTEMS, INC.**

Cisco Systems, Inc., ("Cisco") hereby submits comments in response to the Commission's Notice of Proposed Rule Making ("NPRM").<sup>1</sup> Cisco applauds the Commission's continued efforts to revise its Part 15 rules to keep pace with technological and marketplace changes. As the Commission notes in the NPRM, the Part 15 rules have been a tremendous success in providing for markets not even contemplated ten years ago.

However, as the Commission revises its Part 15 rules, it faces a difficult balancing act. It must protect licensed services. Yet it must also avoid unnecessarily restrictive revisions to Part 15 that would add to the cost of the advanced communications devices now being used for unlicensed services. How well the Commission handles this balance will determine whether the Part 15 concept continues to be a success.

**Background**

Cisco is a leading manufacturer of equipment for both licensed and unlicensed wireless services. As such, Cisco has a keen interest in both fostering the continued growth of unlicensed services, as well as ensuring that unlicensed devices do not cause

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<sup>1</sup> *Review of Part 15 and other Parts of the Commission's Rules*, 59209, 66 FR No. 228 (November 27, 2001).

harmful interference is not caused to licensed services. With these dual interests, Cisco is encouraged by, and generally supports, the Commission's NPRM proposals to streamline certain Part 2, 15, and 18 rules based on its Biennial Review.

### **Discussion**

Cisco supports the thrust of the Commission's NPRM proposals. It believes that, with minor adjustments, the Commission's proposals ought to be adopted because they foster the continued growth of unlicensed services and little discernible risk to licensed services

#### ***I. Part 15 Emission Limits Above 2 GHz***

A. Restricted frequency bands above 38.6 GHz. Cisco strongly supports the Commission's proposal to review the need to designate all frequency bands above 38.6 GHz as restricted bands. As the Commission states in the NPRM, this restriction was adopted years ago simply for administrative convenience because of the limited capability of measurement technology.<sup>2</sup>

With advances in measurement technology, the Commission can be more precise than it once could. It can limit emissions only where and to the extent that it is actually necessary to do so. And by adopting such an approach, of course, the Commission can ensure that the spectrum is more fully and efficiently utilized.

The emission limits applicable in restricted bands are contained in 47 C.F.R. § 15.209. These limits are generally more restrictive than the limits imposed elsewhere in Part 15 rule. As the Commission notes, these lower limits may make sense in those frequency bands above 38.6 GHz which host radio services that are sensitive to unwanted

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<sup>2</sup> NPRM at ¶ 9.

emissions. However, not all frequency bands above 38.6 GHz require such tight emission limits. In those frequency bands where the lower limits are not required, Cisco believes that the restricted designation should be removed.<sup>3</sup>

Finally, in addition to allowing fuller use of the spectrum, removing unnecessarily restrictive Part 15 emission limits allows manufacturers to reduce costs since meeting emissions limits adds cost to transmitters. If there is no reason for such limits, those costs are incurred needlessly and without corresponding benefit. On the other hand, reducing costs increases the affordability of such devices for consumers and, thus, the markets for them. In addition, cost reductions may well spur the development of new unlicensed devices and corresponding benefits for the public.<sup>4</sup>

While Cisco supports the Commission's proposal to remove the restricted band designation from certain bands above 38.6 GHz, it also urges the Commission to go one step further. We believe the Commission should undertake a comprehensive examination of all of the restricted bands above 1 GHz to determine whether there are additional bands from which the restricted designation can be removed. Such an examination would be consistent with the numerous efforts made by this Commission to encourage fuller and

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<sup>3</sup> In this regard, Cisco notes that in another proceeding the FCC, in association with the National Telecommunication and Information Administration ("NTIA"), is proposing to transfer use of the 2385-2390 MHz band from Federal to commercial use. This band is currently designated as a restricted band. *See* IN THE MATTER OF REALLOCATION OF THE 216-220 MHz, 1390-1395MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz, Notice of Proposed Rule Making, 15 FCC Rcd 22657 (2000).

<sup>4</sup> For example, the Commission has previously taken action to permit unlicensed devices in the 40 GHz, 54 GHz and 74 GHz frequency ranges. However, these bands still fall under the restricted designation and, therefore, are subject to the low emission limits of 47 C.F.R 15.209. Removing the restricted designation could make these bands attractive for more extensive use.

more efficient use of available spectrum. Moreover, Cisco notes the American National Standards Institute committee C63 (ANSI C63) and the International Special Committee on Radio Interference are developing spurious emission limits and test procedures to protect licensed services while easing burdens on manufacturers of unlicensed devices. The Commission can and should to take advantage of this work as it reviews and revises Part 15 emission limits.

Receivers operating above 960 MHz. In the NPRM, the Commission notes that it has received a number of reports of interference caused by police radar detectors.<sup>5</sup> Police radar detectors are receivers that tune above 960 MHz and thus are not covered by the Commission's radiated emission limits for radio receivers. Historically, these limits apply only to receivers in the 30-960 MHz range and to Citizen's Band receivers.<sup>6</sup> As a remedy, the Commission is considering adopting radiated emission limits for radar detectors. It also seeks comment on whether radiated emission limits should apply to other types of receivers that tune above 960 MHz.<sup>7</sup> We support the adoption of radiated emission limits on radar detectors. But we believe the Commission should, indeed, go further.

Nothing -- other than the conscience of the manufacturer -- limits the radiated emissions of receivers that operate above 960 MHz. Cisco is concerned that cheap receivers with high levels of radiated emissions could cause interference with high-tech transceivers it and its competitors manufacture for use in various frequency bands above

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<sup>5</sup> Receiver circuits contain local oscillators that generate RF emissions as a by-product of tuning received signals. If sufficiently high, these receiver emissions can cause interference to other equipment.

<sup>6</sup> See 47 C.F.R. § 15.101(b).

<sup>7</sup> NPRM at ¶ 14.

1 GHz. Consequently, Cisco supports radiated emission limit requirements for all receivers that operate above 960 MHz – not just for radar detectors. Specifically, Cisco proposes that the Commission apply the current radiated emission limits of 47 C.F.R. § 15.109 for unintentional radiators operating above 960 MHz to receivers operating above 960 MHz. Cisco also proposes that the Commission adopt the Declaration of Conformity procedures to demonstrate compliance with radiated emission limit requirements.

## ***II. Data Transmissions by Remote Control Devices***

Currently, 47 C.F.R. § 15.231(a) of the Commission’s rules prohibit data transmissions. In the NPRM, the Commission states its belief that this prohibition is an unnecessary constraint that may impede the development of new types of devices. Further, the Commission notes that its current rules constraining the field strength and duration of transmission for devices authorized pursuant to Section 15.231(a) are sufficient to control interference – regardless of the information being transmitted. Consequently, the Commission proposes to remove the prohibition on data transmission in Section 15.231(a).

Cisco supports the Commission’s proposal to eliminate the prohibition on data transmission by devices authorized pursuant to Section 15.231(a). Simply put, there is no need to prohibit, or benefit from prohibiting, data transmissions from such devices. The potential interference from devices authorized pursuant to Section 15.231(a) is a function of the permitted field strength levels and the permitted transmission duration - not a function of the type of information being sent.

### **III. Declaration of Conformity (DoC) Labeling**

The Commission proposes to simplify the labeling requirements of 47 C.F.R. §15.19 by eliminating the requirement that the phrase “For Home or Office Use” appear on the label for devices authorized subject to the Commission’s Declaration of Conformity (DoC) procedure.<sup>8</sup> The Commission points out that the phrase was intended to indicate that a device that met the more stringent technical limits for residential use (i.e., it is a Class B device) and was, thus, suitable for both home or office use. However, the Commission now reasons that since a Class B device can be used anywhere, the phrase is completely unnecessary. The Commission also notes that as device become smaller, wordy labeling requirements become burdensome.<sup>9</sup>

Cisco supports the Commission’s proposal. First, Cisco agrees with the Commission that the continuing reduction in the size of Part 15 devices makes labeling more challenging – particularly if the text of the label is to actually be read. Second, Cisco notes that, increasingly, low power RF devices are being developed for global application. In some cases, additional labeling requirements must be met to market those devices outside the United States. Consequently, any simplification in labeling requirements – and a concomitant decrease in label “real estate” – is helpful.

In the NPRM, the Commission also notes that there are two label variants for equipment authorized by the DoC procedure. One variant is a label for equipment that was tested for compliance as a complete unit. The other variant is a label for personal

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<sup>8</sup> As the Commission notes in the NPRM, the DoC procedure was established to relieve the burden on manufacturers of Class B devices by not requiring Commission approval prior to marketing equipment. The DoC is a self-approval mechanism where an accredited laboratory tests equipment for compliance with the Commission’s rules. Once a device is found to comply with the Commission’s rules, it can be marketed with no additional Commission action. *See* NPRM at ¶¶ 27, 30.

<sup>9</sup> *See* NPRM at ¶ 30.

computers that were assembled from components that were tested separately for compliance. Currently, Section 15.19 requires a statement on the label that indicates whether the device was tested as a complete unit or whether it was assembled from individually tested components.<sup>10</sup> The Commission now proposes to eliminate the statement that a complete device was tested for compliance. However, it will continue to require that personal computers assembled from individually tested components so indicate on their labels. The Commission states its belief that its proposal will further reduce the labeling burden on manufacturers, but will still provide information on certain types of equipment that may be necessary for enforcement purposes. The Commission also seeks comment on whether electronic labeling should be permitted for equipment authorized under the DoC procedure and what criteria should be adopted for electronic labeling.<sup>11</sup>

As noted, real estate on Part 15 devices is increasingly scarce. Thus, Cisco supports the Commission's proposal to further simplify DoC labeling. In addition, Cisco agrees that the Commission should retain the requirement that personal computers assembled from components individually tested for compliance state that fact on a label. As the Commission notes, in cases of interference, this knowledge could help it determine the source of and resolve interference that may originate with such devices.

Cisco also fully supports the Commission's proposal to permit the use of electronic labeling for devices authorized by the DoC procedure. This type of flexibility appears to be tailor-made for DoC devices since they are self-approved. As running production changes are made to devices subject to DoC procedures, real-time label

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<sup>10</sup> NPRM at ¶ 29.

<sup>11</sup> NPRM at ¶ 31.

changes could be easily made. With regard to the Commission's query on how best to accomplish electronic labeling, Cisco suggests that the Commission explore with industry and relevant industry groups appropriate criteria or guidelines for electronic labeling.

#### ***IV. Information to the User***

Part 15 rules require that certain warning information be supplied to users of Part 15 devices.<sup>12</sup> The Commission states that traditional thought holds that warning information is included in a paper instruction manual supplied with a product. But it also notes that manufacturers are increasingly providing instruction information electronically and that the Commission has permitted warning information to be supplied by other means, such as on a CD-ROM. The Commission proposes that manufacturers be permitted to supply warning information in whatever form the product instruction manual is supplied.<sup>13</sup> However, the Commission also seeks comment on whether electronically delivered instruction manuals and warning statements could create information access problems for some consumers.<sup>14</sup>

Cisco supports the Commission's proposal to allow product instruction manuals and warning statements to be delivered by alternate means – and in particular over the Internet. The truth is that Internet delivery of such literature is quickly becoming the industry norm. This is because online Internet support of products is beneficial to both manufacturers and consumers. It is simply better and more efficient than more traditional

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<sup>12</sup> Specifically, 47 C.F.R. § 15.21 requires that instruction manuals for Part 15 devices warn users against unauthorized modifications to the device. 47 C.F.R. § 15.105 requires that instruction manuals for digital devices warn consumers about the possibility of interference being caused by digital devices and also that the manual lists actions that could eliminate interference.

<sup>13</sup> NPRM at ¶ 35.

<sup>14</sup> The Commission notes in particular access issues that could arise from internet-delivered manuals. *See* NPRM at ¶ 36.

means. For manufacturers online product support and documentation saves the time and cost of producing paper manuals or CD-ROMs. For the consumer, it permits real-time access to the latest product safety and use information. Inevitably, CD-ROMs and printed manuals become outdated soon after they are written. Moreover, there is no reason to believe that permitting online delivery of product warning statements and instruction manuals will limit access to such information. While broadband Internet access may be limited, that is no longer true about Internet access more generally. Moreover, manufacturers can, and do, routinely include contact information for those consumers who desire to obtain product instruction manuals and warning statements by traditional means.

#### ***IV. Accreditation of Test Laboratories***

The Commission notes that Section 2.948 of its rules requires that test laboratories that submit test data for Part 15 and Part 18 file a description of their test facilities with the Commission. It also notes that laboratories accredited by a recognized accrediting organization undergo a thorough review of their physical facilities as well as their technical competency as part of the accreditation process. Thus, the Commission questions whether it is necessary for it to collect descriptions of accredited laboratories. Consequently, it proposes to remove the Section 2.948 description requirement, provided the accrediting organization supplies the Commission with certain information<sup>15</sup> In addition, the Commission proposes to recognize accreditation of non-U.S. laboratories under two conditions: (1) the laboratory has been designated by a foreign authority and recognized by the Commission pursuant to a government-to government Mutual

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<sup>15</sup> NPRM at ¶ 40. The minimum information includes laboratory name, contact information, scope of accreditation, date of accreditation and accreditation renewal date.

Recognition Agreement or Arrangement; or (2) the foreign laboratory has been accredited by an accrediting organization recognized by the Commission.

Cisco supports the Commission's proposal to remove the Section 2.948 description requirement for accredited labs. Since the Commission has entrusted accreditation with qualified accrediting organizations and does not accredit labs itself, Cisco sees no reason for the Commission to collect and unneeded information. In addition, Cisco endorses the Commission's proposal to recognize properly accredited non-U.S. laboratories. Cisco believes that adopting that proposal will be an enormous benefit for companies participating in the global marketplace.

***VI. Cisco's Support for Other Issues in the NPRM***

While not of direct relevance to Cisco, it also supports a number of less critical proposals in the Commission's NPRM. These proposals all reduce unnecessary regulation and will make both industry and the Commission more efficient – and thus will benefit consumers as well.

Test procedure for unlicensed PCS equipment. The Commission notes that it observes a “shift: from its past procedure of developing its own compliance measurement procedures to incorporating by reference industry-developed procedures. For example, the Commission states that ANSI C63.4-1992 is the procedure it uses for testing most intentional and unintentional radiators for compliance. However, unlicensed PCS equipment is not included in that procedure. The Commission goes on to note that the ANSI C63 Committee has recently completed work on a measurement procedure to test unlicensed PCS equipment for compliance: ANSI C63.17-1998. The Commission proposes to incorporate by reference this procedure into its rules.

Cisco supports incorporating by reference ANSI C63.17-1998 into the Commission's rules. As a general matter, Cisco believes that RF technology develops at such a rapid pace and can be so specialized, that it is unrealistic to ask the Commission to devote its limited resources to continually devising new measurement procedures. Moreover, Cisco's position aligns with the "shift" the Commission mentions – let qualified organizations composed of industry experts develop measurement procedures and standards that can be adopted after Commission approval.

Exemption for very low-powered devices. In the NPRM, the Commission states that there are a number of unlicensed devices that operate at very low power levels and are intended to communicate at distances measured in inches. Currently these devices are subject to certification procedures that require them to be tested for compliance and approved by the Commission. Citing the low interference potential of these devices and the burden the certification process places on their manufacturers, the Commission proposes to exempt these devices from Certification. Specifically, the Commission proposes that devices operating below 490 kHz that exhibit a maximum field strength that is 40 dB below applicable Part 15 limits would be exempt from Certification.<sup>16</sup>

Cisco agrees with the Commission that these very low-powered devices have little chance of causing interference to other devices or services. Therefore, Cisco supports the Commission's proposal to exempt these devices from certification requirements.

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<sup>16</sup> NPRM at ¶ 34.

**VII. Clarification of Measurement Procedures of 47 C.F.R. 15.31(a)(6)**

As the Commission uses this proceeding to improve its Part 15 regulation, there is one additional change – in measurement procedures -- that Cisco believes would be helpful.

Section 15.31(a)(6) of the Commission’s rules specifies the measurement procedure to be used for testing compliance of digital devices: ANSI C63.4-1992, (“Methods of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz”). The Commission does not, however, require that Section 5.7, Section 9 or Section 14 of the procedure be completed in order to obtain a grant of equipment authorization.<sup>17</sup>

Cisco believes that section 8.2.2 of ANSI C63.4-1992 should also be added to the list of excluded sections in Section 15.31(a)(6). ANSI C63.4 -1992, section 8.2.2 addresses the use of a calibrated rod antenna for performing data measurements below 30 MHz. However, the use of a calibrated rod antenna for obtaining data measurements below 30 MHz is not accepted for obtaining certification by the FCC lab or by a Technical Certification Body, nor is acceptable to demonstrate compliance under the Declaration of Conformity procedure. Therefore, Cisco requests that as part of this proceeding the Commission address this apparent oversight by adding section 8.2.2 of ANSI C63.4-1992 to the list of excluded sections in 47 C.F.R. 15.31(a)(6) or by

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<sup>17</sup> In footnote 52 of the NPRM the Commission states that the successor to ANSI C63.4-1992 – ANSI C63.4-2000 – is now available. However, in the NPRM the Commission did not propose to incorporate by reference this new version. If the Commission incorporates ANSI C63.4-2000 in the rules, it should clarify, in 47 C.F.R. § 15.31(a)(6), which sections are not relevant for obtaining equipment authorization.

clarifying in that section that calibrated rod antennas are not acceptable for obtaining data measurements for devices that operate below 30 MHz.<sup>18</sup>

### **Conclusion**

This Commission is to be commended for its efforts to remove from Part 15 unnecessarily restrictive and unneeded regulations. The Commission's progressive, approach not only benefits manufacturers by cutting cost and time-to-market penalties incurred by adherence to unnecessary rules, but also benefits consumers through a wider range of competitive products from which to choose.

Cisco believes that with minor adjustments to the Commission's primary proposals, not only will the regulatory environment improve for current generation Part 15 devices, but an environment that spawns innovative, next-generation products will be created as well.

Respectfully submitted,

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<sup>18</sup> In this regard, Cisco notes that equipment approval or rejection is often based on policies that are not codified or easily accessible. For example, reference to the FCC lab policy on rod antennas can be found, but only in the "Rules Interpretation" function on the Office of Engineering and Technology's ("OET") Equipment Authorization website. There are other policies even more difficult to unearth. It is imperative that OET develop its policies in an open and transparent manner. Further, policy decisions should be published in a timely manner and be easily accessible by the public. A thorough understanding of all equipment approval policies is a critical factor in manufacturers' investment decisions.