

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

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	WT Docket No. 07-250
Governing Hearing Aid-Compatible Mobile	)	
Handsets	)	
	)	
Section 68.4(a) of the Commission's Rules	)	WT Docket No. 01-309
Governing Hearing Aid Compatible	)	
Telephones	)	
	)	
Petition of American National Standards	)	
Institute Accredited Standards Committee C63	)	
(EMC) ANSI ASC C63™	)	

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**COMMENTS OF NOKIA INC.**

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**COMMENTS OF NOKIA INC.**

Nokia Inc. (“Nokia”) respectfully submits these comments in response to the Notice of Proposed Rulemaking in the above-captioned proceeding (“NPRM”).<sup>1</sup> Nokia is the world leader in mobility, driving the transformation and growth of the converging Internet and communications industries. Nokia is the world’s leading manufacturer of mobile devices and provides people with experiences in music, navigation, video, television, imaging, games, and business mobility through these devices. Nokia also provides equipment, solutions and services for communications networks. Headquartered in Espoo, Finland, and with sales in more than 150 countries, Nokia has 68,483 employees of more than 120 nationalities, with over 21,000 of them engaged in research and development (R&D) activities.

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<sup>1</sup> *Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets, Second Report and Order and Notice of Proposed Rulemaking, 22 FCC Rcd 19670 (2007) (“NPRM”).*

## **I. INTRODUCTION AND SUMMARY.**

In the NPRM, the FCC seeks comment on the Joint Consensus Plan (“JCP”) developed jointly by industry and representatives for consumers with hearing loss and submitted by the Alliance for Telecommunications Industry Solutions (“ATIS”) earlier this year.<sup>2</sup> The JCP represents the combined recommendations of all affected stakeholders to best ensure that HAC devices are brought to the marketplace in an efficient and effective manner. Nokia urges the FCC to expeditiously adopt the JCP in its entirety.

The NPRM also seeks comment on a wide range of complex issues, some of which are only tangentially related to the JCP. These issues raise significant, and in many cases novel, questions that must be thoroughly considered by all parties involved, including representatives of those with hearing loss, the wireless industry, and the Commission, before any requirements are adopted. The FCC should focus on promptly adopting the carefully crafted proposals of the JCP and defer consideration of these additional issues until a future date, after the JCP has been adopted.

## **II. THE FCC SHOULD EXPEDITIOUSLY ADOPT THE JOINT CONSENSUS PLAN IN ITS ENTIRETY.**

The FCC should adopt the JCP as proposed. The JCP is a carefully negotiated and structured compromise. Taken together, the JCP will increase HAC options for consumers, including those with the most profound hearing loss, while affording industry the opportunity of continuing to innovate for these and all consumers. Deviating from the plan, or “picking and choosing” parts of it, would threaten this balance, and inject uncertainty into the regime. Nokia,

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<sup>2</sup> See Supplemental Comments of ATIS, WT Docket No. 06-203 (filed June 25, 2007) (“Joint Consensus Plan” or “JCP”).

therefore, urges the Commission to expeditiously adopt this proposal. In particular, Nokia urges the Commission to adopt several specific provisions of the JCP.

*ANSI C63.19-2007 Standard.* First, the FCC should adopt the 2007 ANSI C63.19 Technical Standard.<sup>3</sup> This revision was created with the input of representatives from the telecommunications industry, manufacturers of hearing aids, service providers, consumers, and federal agencies and was adopted by the ANSI Accredited Standards Committee C63™ by a 100 percent affirmative vote.<sup>4</sup> It reflects changes in technology and efficiencies and improvements in testing procedures. As ANSI noted in its June 23, 2007 Petition, “this revision represents a substantial improvement over the 2006 version” as it better promotes the development of hearing aid-compatible handsets for the hearing-impaired.<sup>5</sup>

*Manufacturer Requirements.* Second, the Commission should adopt the proposed modifications to manufacturers’ HAC obligations as detailed in the JCP, including “product refresh.”<sup>6</sup> This proposal significantly advances manufacturers’ ability to provide all consumers a variety of devices with differing features. Under this proposal, manufacturers are given much more flexibility to design, develop, and deploy devices in all interfaces for consumers with and without hearing loss that incorporate a wide variety of popular features by reducing the benchmark for deployment of handsets that meet the M3 (or higher) rating. In addition, by increasing the benchmark for deployment of handsets that meet the T3 (or higher) rating,

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<sup>3</sup> *NPRM* at ¶ 60 (seeking comment on tentative conclusion to adopt the 2007 C63.19 Technical Standard).

<sup>4</sup> Petition of American National Standards Institute Accredited Standards Committee C63 (EMC) ANSI ASC C63™, WT Docket No. 01-309, RM-8658, at 2 (filed June 23, 2007).

<sup>5</sup> *Id.*

<sup>6</sup> *NPRM* at ¶¶ 37-57.

consumers with the most severe hearing loss will have a greater number of handset options from which to choose.

While this proposal allows manufacturers to flexibly control their product lineup, the proposal also ensures consumers with hearing loss have access to new and innovative devices with a variety of features. Specifically, under the product refresh requirement, manufacturers have committed to meeting radiofrequency interference reduction thresholds for acoustic coupling compatibility in several of their new models each year.<sup>7</sup> While this requirement will impose significant burdens on manufacturers in the design and development phase of new devices, Nokia fully supports this proposal and is committed to ensuring consumers with hearing loss are able to receive the benefits of these new and innovative devices. Because individuals with hearing loss will have a myriad of HAC-compliant handsets to choose from under this proposal, including some of the hottest new devices and more basic favorites, further requirements are not necessary. Nokia supports this policy based on its understanding that the number of new compliant models produced be at least 50 percent of the total required number of compatible models, as opposed to 50 percent of the total number of compatible models actually produced by a handset manufacturer.<sup>8</sup>

*Manufacturer Reporting Requirements.* Third, the FCC should adopt the proposed reporting requirements set forth in the JCP as well as several of the modifications set forth in the

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<sup>7</sup> *Id.* at ¶ 54; Joint Consensus Plan at C-2.

<sup>8</sup> *NPRM* at ¶ 54 (“To make this calculation, the number of new compliant models to be produced would be 50 percent of the total required number of compliant models, rounded up to the nearest whole number.”); Joint Consensus Plan at C-2 (“For manufacturers that produce four or more total models per air interface, at least one-half of the minimum required M3 or better models shall be new models introduced during the calendar year.”).

NPRM.<sup>9</sup> Consumers with hearing loss, the Commission, industry, and others must have ready access to information regarding the variety HAC-compliant handsets available in the wireless marketplace. The JCP's proposed modifications to manufacturers' current reporting obligations will improve these individuals' and entities' ability to access important and relevant information on HAC. In particular, the inclusion of testing, product labeling, product refresh, and outreach information will facilitate the Commission's ability to monitor the availability of HAC-compliant devices and consumers' and service providers' ability to access information on the specific devices being made available. The inclusion of model numbers, air interfaces, and frequency bands in this reporting requirement as proposed in the NPRM would also facilitate these abilities.

The FCC also should maintain the existing requirement that manufacturers submit reports on an annual basis.<sup>10</sup> This requirement has proven effective and sufficient in facilitating the Commission's and the public's access to this information. More frequent reporting would be extremely burdensome to manufacturers and would not result in any commensurate benefit to the Commission or to consumers.

*De Minimis* Exception. The FCC should maintain the existing *de minimis* exception.<sup>11</sup> When this exception was first implemented, the Commission acknowledged that its HAC requirements could have a disproportionate impact on both small manufacturers and those manufacturers that sell only a small number of digital wireless handset models over a single air

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<sup>9</sup> *NPRM* at ¶¶ 63-64 (seeking comment on proposed requirements relating to manufacturers hearing aid compatibility reports that are filed with the Commission).

<sup>10</sup> *Id.* at ¶ 70.

<sup>11</sup> *Id.* at ¶ 85.

interface.<sup>12</sup> This continues to be the case today. In addition, the *de minimis* exception allows manufacturers to experiment with air interfaces and technologies that are new to them. It also provides manufacturers with the flexibility to slowly reduce production of devices utilizing a particular air interface. Without the flexibility afforded manufacturers by this exception, fewer manufacturers will innovate using new technologies and more manufacturers will abruptly cease production of all devices utilizing an air interface.

**III. THE FCC'S OTHER HAC-RELATED PROPOSALS SHOULD NOT BE ADOPTED AT THIS TIME.**

The FCC should not adopt the substantive proposals set forth in the NPRM that are only tangentially related to the JCP. The NPRM sets forth and seeks comment on a number of broad proposals, including the application of HAC requirements to new technologies, open platforms, and multi-mode handsets. These proposals, if adopted, could have long-ranging impacts for the wireless industry and consumers and must be thoroughly considered prior to adoption. Given the impending February 2008 deadline by which issues related to the JCP must be resolved, the Commission should not adopt these proposals at this time.

*Emerging Technologies.* The Commission should not impose HAC requirements on any new technologies at this time.<sup>13</sup> Such application poses many new questions and issues that must be thoroughly considered and reviewed. To address all of these issues at this time could unnecessarily delay the adoption of the JCP.

The imposition of HAC requirements on emerging technologies to guard against

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<sup>12</sup> Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, Report and Order, 18 FCC Rcd 16753, ¶ 69 (2003). See also Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, Order on Reconsideration and Further Notice of Proposed Rulemaking, 20 FCC Rcd 11221, ¶ 51 (2005).

<sup>13</sup> NPRM at ¶¶ 89-94.

interference is premature. There is no evidence that new technologies such as Wi-Fi and WiMax inhibit the ability of consumers with hearing aids to use wireless handsets. The imposition of HAC requirements on all new technologies as a result is a solution in search of a problem. FCC requirements regarding HAC should be based on scientific investigations and demonstrations of known interference, not untested and unconfirmed ideas. Finally, and perhaps most importantly, the application of HAC requirements to these devices in this context could have long-ranging, unanticipated implications for new technologies.

*Open Platforms.* The FCC also should refrain from imposing additional HAC requirements on manufacturers in the context of open platform networks.<sup>14</sup> The idea of open platform networks has only become mainstream over the last year. Although the Commission is correct that the development of open platforms could fundamentally alter the wireless industry and the paradigm in which HAC rules apply, there is no way to know how open platforms in fact will develop.<sup>15</sup> The imposition of HAC requirements now, before this development and deployment has occurred, could result in unnecessary regulations or, worse, stifling of new and innovative technological development. The Commission therefore should monitor the development of open platform networks and consider the impact on its HAC regulations at some future point, once the open platform regime has had sufficient time to develop.

*Multi-Mode Handsets.* The Commission should not prohibit multi-mode devices that

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<sup>14</sup> *Id.* at ¶ 95. As the Commission notes, it has imposed open platform obligations on winners of certain 700 MHz licenses. *Id.* The quiet period for the 700 MHz auction, during which potential bidders are prohibited from discussing any issues that may impact bidding or bidding strategies, is currently underway. As a result, 700 MHz bidders are severely limited in their ability to discuss the implications of open platforms at this time. Accordingly, the FCC should delay consideration of the application of HAC requirements in an open platform environment until after the 700 MHz auction has been completed and the anti-collusion period is lifted.

<sup>15</sup> *Id.* at ¶ 95.

incorporate a technology or air interface for which standards have not been developed from being considered HAC-compliant. The NPRM tentatively concludes that “multi-mode phones should not be counted as compatible in any mode if they operate over air interfaces for which technical standards have not been established.”<sup>16</sup> If adopted, this approach will result in significant public harms that the Commission likely has not considered. In particular, this approach will result in delayed deployment of new technologies and converged devices. Consumers with hearing loss also may be inhibited from taking advantage of new multi-mode devices that incorporate a HAC-compliant air interface and new air interfaces. Until tested, the industry, the Commission, and consumers cannot know whether a particular air interface will cause interference to a hearing aid. A blanket prohibition on multi-mode devices being considered HAC-compliant therefore would cause significant harm to all consumers, including those with hearing loss.

Instead, Nokia urges the Commission to allow industry to investigate and evaluate each new technology on a case-by-case basis for interference issues. This will ensure consumers with hearing loss are not misled in believing that a particular handset will be HAC-compliant while also allowing all consumers to take advantage of these new devices. Nokia is fully committed to resolving HAC interference problems where they exist,<sup>17</sup> and allowing manufacturers to investigate each new technology on a case-by-case basis will ensure that interference issues are fully considered and dealt with in a concrete and affirmative manner.

*Additional Milestones.* The Commission should not adopt additional deadlines or

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<sup>16</sup> *Id.* at ¶ 84.

<sup>17</sup> A demonstration of industry’s commitment is the on-going work in standards bodies addressing HAC including both ANSI and TIA. Both of these groups have on-going studies. In addition there are studies of other related issues (e.g., volume control) in the ATIS Incubator.

deployment milestones at this time.<sup>18</sup> The JCP already incorporates significant milestones for the deployment of HAC devices, and these agreed to deadlines represent significant commitments by manufacturers to bring HAC-compliant mobile devices to the marketplace. Moreover, there is no evidence indicating that additional deadlines or milestones are necessary. Similarly, no need has been demonstrated for M4/T4 requirements. Hearing aids increasingly are showing improved performance in their own interference immunity. In fact, anecdotal evidence continues to suggest that hearing aid wearers in many instances are able to use M2 devices successfully. As a result, the Commission should adopt the JCP milestones, while of course continuing to monitor developments in preparation for the HAC review the JCP recommends be initiated in the 2010 timeframe.

*Volume Controls and Smart Phone Displays.* Volume controls and smart phone display requirements should not be incorporated into the Commission's HAC rules.<sup>19</sup> Adoption of these requirements at this point would be premature. Volume control issues are currently being addressed by the ATIS Incubator. In addition, there is no substantiated evidence that demonstrates smart phone displays cause interference to hearing aids. Regulation therefore is unnecessary at this time.

**IV. OUTREACH IS CRITICAL TO ENSURING CONSUMERS WITH HEARING LOSS RECEIVE THE FULL BENEFITS OF HAC.**

Nokia is fully committed to providing consumers with hearing loss access to as much information as possible regarding HAC. To date, Nokia has created and distributed a variety of printed brochures that provide consumers with information on HAC generally and specific HAC-compliant handsets. HAC information, including historical and current HAC ratings, product

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<sup>18</sup> *NPRM* at ¶ 99.

<sup>19</sup> *Id.* at ¶¶ 87-88.

features for accessibility, and background information, is also available on a Nokia website specifically dedicated to accessibility issues.<sup>20</sup> Nokia's customer care representatives are fully trained in HAC and are available to answer questions and offer assistance. Contact information for these customer care representatives is located on all printed materials and on the company's website. Nokia's outreach efforts demonstrate a high commitment to ensuring consumers receive the benefits of its HAC equipment. Finally, Nokia is active in a variety of organizations so that it may distribute as much information as possible to those with hearing loss. For example, Nokia has participated in the Hearing Loss Association of America convention. These efforts will continue into the future.

Although consumers with hearing loss already have many resources through which they can obtain HAC information, the Commission can do more to facilitate this access.<sup>21</sup> Specifically, the FCC's databases should be made more searchable and user friendly. This action, combined with the increased reporting requirements discussed above, should provide consumers with more than enough means of obtaining information on HAC.

Additional actions by the Commission are not necessary.<sup>22</sup> Specifically, manufacturers should not be required to comply with Section 255's reporting requirements in the HAC context. The industry's openness in the provision of HAC-compliant equipment and services and its annual HAC reports renders the imposition of Section 255 reporting requirements on manufacturers unnecessary. Indeed, the application of such requirements to manufacturers would serve only as a burdensome obligation with no commensurate benefit or purpose. In

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<sup>20</sup> Nokia Accessibility, [www.nokiaaccessibility.com](http://www.nokiaaccessibility.com) (last visited Dec. 21, 2007).

<sup>21</sup> *NPRM* at ¶ 72.

<sup>22</sup> *Id.* at ¶¶ 73-77.

addition, the Commission should not impose a mandate that manufacturers post HAC models and ratings on their websites. Such a step is unnecessary as the industry already has committed to this practice in the JCP and, indeed, has every marketplace incentive to do so. Rather than a rigid regulatory requirement in this instance, the Commission should afford industry an opportunity to utilize its commercial expertise in devising precisely how best to make this information available to consumers. Similarly, the Commission should not develop a single location or website where hearing aid users can find offerings and ratings of compliant handsets since the open availability of HAC information by individual manufacturers makes such a requirement unnecessary.

In any decisions the Commission makes in this proceeding regarding outreach obligations, the Commission should endeavor to provide industry with the flexibility to be creative. As detailed by Nokia's extensive outreach efforts, the industry is working to ensure consumers have easy access to extensive information on HAC and HAC-compliant devices. Flexibility will allow industry's outreach efforts to evolve as technology changes and improves.

**V. THE FCC SHOULD CONTINUE TO MONITOR THE EVOLUTION OF HAC OVER TIME.**

The Commission should continue to monitor HAC issues even after this rulemaking is completed.<sup>23</sup> As technologies evolve, other solutions for the consumer with hearing loss will continue to develop. Nokia believes that that the collective efforts of the Commission, industry, and representatives of consumers with hearing loss to improve the availability and operation of HAC-compliant devices represent a landmark in the evolution of communications and technology for those with hearing loss. Today's technologies, however, are sure to give way to other and better opportunities. Nokia urges the Commission to monitor HAC matters in the

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<sup>23</sup> *Id.* at ¶ 86.

years following this rulemaking to ensure that its HAC rules remain efficient and effective, and strike the right balance between promoting certainty for consumers and fostering an environment conducive to open and furious technological innovation.

**VI. CONCLUSION.**

For the reasons discussed herein, Nokia urges the FCC to expeditiously adopt the JCP in its entirety. The Commission should defer consideration of the other policy questions raised by the NPRM until a future date, after a sufficient period of time has allowed a thorough record to develop. Prompt adoption of the JCP will provide industry with the certainty needed to continue bringing new and exciting products to all consumers.

Respectfully submitted,

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