

**BEFORE THE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE
WASHINGTON, D.C. 20005**

In re)
)
Notice of Inquiry Regarding Preventing) Docket No. 100504212-0212-01
Contraband Cell Phone Use in Prisons)

COMMENTS OF MOTOROLA, INC.

Motorola, Inc. (“Motorola”) hereby submits comments in response to the National Telecommunications and Information Administration’s (“NTIA”) Notice of Inquiry (“*NOI*”) regarding technical approaches to preventing contraband cell phone use in prisons.¹ The *NOI* requests information on technologies that would significantly eliminate or reduce contraband cell phone use without negatively affecting commercial wireless and public safety services.² Motorola supports the goal of combating contraband cell phone use in prisons, but urges the NTIA to consider both the negative effects of jammers and the existence of safer alternatives.

Jamming of wireless signals raises serious concerns that must be taken into account as the NTIA addresses the issue of contraband cell phone use in prisons. Jammers block signals blindly and can therefore impede legitimate users and emergency calls. Jammers are also imprecise and may cause interference to neighboring services such as public safety. These negative effects are not justified, particularly given jammers’ limited effectiveness. Motorola appreciates the security concerns raised by prisoners’ illicit use of wireless phones, but cannot support the use of cell phone jammers.

¹ *Preventing Contraband Cell Phone Use in Prisons*, National Telecommunications and Information Administration, Notice of Inquiry, Docket No. 100504212-0212-01, 75 Fed. Reg. 26,733 (May 12, 2010) (“*NOI*”).

² *Id.*

Jammers take an indiscriminate approach to blocking cell phone calls, relying on brute force. As the *NOI* notes, “jamming devices do not discriminate among cell phones within range of the jamming signal—both contraband and legitimate cell phones are disabled.”³ This is particularly troubling if the legitimate cell phone user is attempting to dial 911 in an emergency. The Association of Public-Safety Communications Officials-International (“APCO”) has stated that it is “deeply concerned” that the devices will inadvertently block 911 calls and create “a serious threat to the safety of life and property.”⁴ Even calls made outside of the prison could easily be affected, as jamming devices cannot limit their effects to precise geographic areas.⁵ The NTIA recognizes that preserving emergency calls from cellular phones is of paramount importance, as wireless telephone users account for nearly half of all calls to 911.⁶ Jammers cannot be utilized if they will jeopardize these vitally important communications.

Public safety communications are also put at risk by the use of jammers. Interference from jammers is likely because public safety radio communications occur frequency bands adjacent to those used for commercial mobile communications. For example, the 800 MHz public safety band is adjacent to the 800 MHz cellular band. If an emergency occurred at or a

³ *NOI* at 26734.

⁴ Letter from Chris Fisher, President, Association of Public-Safety Communications Officials-International, Inc. to Acting Chairman Michael Copps, Federal Communications Commission (Mar. 13, 2009). *See also* Letter from Brian Fontes, CEO, National Emergency Number Association, to Acting Chairman Michael Copps, WT Docket No. 09-30 (Mar. 17, 2009) (stating that methods besides jammers better balance the public interest in deterring criminal activity and protecting lawful communications).

⁵ National Telecommunications Information Administration (“NTIA”) Report TR-10-466, *Emission Measurements of a Cellular and PCS Jammer at a Prison Facility*, at xi (May 2010) (showing jammer power at a distance of 127 meters from the prison); Petition to Deny of CTIA – The Wireless Association, WT Docket No. 09-30 at 7-8 (Mar. 13, 2009) (documenting cases in various countries where jammers used in prisons have caused substantial interference to commercial wireless subscribers).

⁶ *NOI* at 26737.

near a prison using a jammer, public safety radio communications could be impaired. Moreover, the interference is presented as undesired energy on the desired frequency and therefore cannot be filtered at the victim receiver. To be effective, signal jammers will have to be deployed in all bands with sufficient transmit power levels to effectively overcome mobile operations at all locations within the facility. Such a deployment can combine in the public safety receivers and cause IM (Intermodulation) products that can impact many frequencies outside those intended to be jammed with devastating effects. Other services operating in adjacent bands would be similarly at risk. This would be especially damaging to nascent commercial services, which are helping meet the growing demand for broadband services such as WCS, MSS/ATC, and 3650 MHz band that can ill-afford customer dissatisfaction as they enter the market.

Jammers have many shortcomings as a solution to the problem of contraband cell phones that will limit their effectiveness in curtailing such use. Techniques to block or intercept calls must duplicate network coverage. It would be difficult to fully cover all areas of a prison with a jamming signal and prisoners will undoubtedly find the areas where the jammers do not reach. Coupled with the harmful impact on legitimate users, the limited effectiveness of jammers should lead the NTIA and the FCC to consider more effective and safer solutions to the prisoner cell phone use problem.

Motorola believes that a combination of detection methods and managed access solutions are the preferred approach to address this problem as they are far less likely to interfere with public safety and other adjacent services while providing more effective security for prisons. In managed access solutions, access to the telecommunications network is restricted to specific, authorized users. In addition, managed access solutions can be easily designed to allow and pass through all 911 calls from both authorized and non-authorized users. By controlling access at the

network level, the difficulty of deploying jammers with sufficient power to effectively cease operation within all areas of a prison facility while not harming any operation outside the prison facility is avoided. Detection plays an important role in combination with managed access solutions in tracking down when and where contraband devices are being used. This information can be of great assistance in directing the focus of future enforcement actions. Detection is also the most effective way to measure the effectiveness of other techniques and to determine if there continues to be contraband use of mobile devices.

Motorola therefore urges the NTIA to consider detection and managed access solutions as a means of disrupting voice, text messages and any myriad of wireless broadband applications as directed by Congress.⁷

Respectfully submitted,

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⁷ See Conference Report to the Department of Commerce FY 2010 Appropriations , H.R. Conf. Rep. No. 111-336 (2009), Division B, Title 1, Page 619.