

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

In the matter of )  
 )  
Recommendations Approved by the ) IB Docket No. 04-286  
Advisory Committee for the 2007 World )  
Radiocommunication Conference )

**COMMENTS OF  
THE SATELLITE INDUSTRY ASSOCIATION**

**SATELLITE INDUSTRY ASSOCIATION**  
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The Satellite Industry Association (“SIA”) offers here comments in response to the FCC Public Notice issued on January 9, 2007 (“*January 2007 PN*”), addressing several recommendations of the WRC-07 Advisory Committee (“WAC”).<sup>1</sup> In particular, SIA addresses the matters pertaining to Agenda Item 1.4 and related to the frequency range 3650-3700 MHz.<sup>2</sup>

SIA is a U.S.-based trade association providing worldwide representation of the leading satellite operators, service providers, manufacturers, launch services providers, remote sensing operators, and ground equipment suppliers. SIA is the unified voice of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business.<sup>3</sup>

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<sup>1</sup> *FCC Seeks Comments on Recommendations Approved by the Advisory Committee for the 2007 World Radiocommunication Conference, Public Notice, IB Docket No. 04-286, DA 07-26 (rel. Jan. 9, 2007) (hereinafter “January 2007 PN”).*

<sup>2</sup> *See January PN at 34-39.*

<sup>3</sup> SIA Executive Members include: Arrowhead Global Solutions; Artel Inc.; The Boeing Company; The DIRECTV Group; Globalstar, Inc; Hughes Network Systems LLC; ICO Global Communications; Integral Systems, Inc.; Intelsat, Ltd.; Iridium Satellite LLC; Lockheed Martin

## Background

An FCC Public Notice issued on October 12, 2006 contains WAC recommendations and draft proposals developed by the Executive Branch Agencies and provided by the National Telecommunication and Information Administration (“NTIA”) addressing Agenda item 1.4 and in particular the frequency range 3400-4200 MHz.<sup>4</sup>

The draft proposal provided by NTIA<sup>5</sup> states that “[a] number of ongoing sharing studies submitted to the ITU-R have indicated that sharing in the 3400-3700 MHz band between the radiolocation service and IMT-Advanced systems operating in the mobile service is not feasible due to significant levels of interference into both the radar systems and IMT-Advanced devices”.<sup>6</sup> However, the proposal itself<sup>7</sup> addresses only the band 3400-3650 MHz and proposes no change to the ITU table of frequency allocations in this frequency range (*i.e.*, no identification of this band for IMT systems). The reasons given for the proposal were the difficulties of sharing between radiolocation and IMT systems, as well as between the fixed satellite service (“FSS”) and IMT systems.

The WAC recommendation contained in the October 2006 PN addresses the band 3700-4200 MHz. No change to the ITU table of frequency allocations is

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Corp.; Loral Space & Communications Inc.; Mobile Satellite Ventures LP; Northrop Grumman Corporation; SES Americom, Inc.; and TerreStar Networks Inc.; and Associate Members include: ATK Inc.; EMC Inc.; Eutelsat Inc.; Inmarsat Inc.; IOT Systems; Marshall Communications Corp.; SES NEW SKIES; Spacecom Corp.; Spacenet; Stratos Global Corp.

<sup>4</sup> *FCC Seeks Comments on Recommendations Approved by the Advisory Committee for the 2007 World Radiocommunication Conference, Public Notice, IB Docket No. 04-286, DA 06-2013 (rel. Oct. 12, 2006) (hereinafter “October 2006 PN”).*

<sup>5</sup> *See October 2006 PN at 43-47.*

<sup>6</sup> *See id. at 44.*

<sup>7</sup> *See id. at 46.*

proposed for this frequency range (*i.e.*, no identification of this band for IMT systems).<sup>8</sup>

Although the FSS proponents<sup>9</sup> wanted to extend the “no change” proposal so as to include the band 3650-3700 MHz, the WAC was unable to reach agreement on this issue at that point in time. The matter was sent back to the Informal Working Groups for further discussion and still no agreement could be reached. As a result, the January PN addressed herein contains two different views with respect to the possible identification of the band 3650-3700 MHz for IMT systems.

## **Discussion**

As reflected in the WAC recommendations contained in the January 2007 PN,<sup>10</sup> SIA supported View A,<sup>11</sup> that there should be a U.S. proposal for “no change” to the band 3650-3700 MHz. This would result in this band not being identified for use by IMT systems. View B, however, is that there should be no U.S. proposal on this band.<sup>12</sup>

### **I. PROPOSAL TO NOT IDENTIFY THE BAND 3650-3700 MHz FOR IMT SYSTEMS IS AN INTERNATIONAL MATTER AND WOULD NOT CONTRADICT DOMESTIC POLICY**

The reasoning behind View B is heavily based on the fact that, domestically, the band 3650-3700 MHz is allocated to the fixed and mobile services and is intended for use by broadband wireless access (“BWA”) systems.

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<sup>8</sup> See *id.* at 11-14.

<sup>9</sup> These proponents include entities operating feeder links to mobile satellite service (MSS) satellites.

<sup>10</sup> See *January 2007 PN* at 34.

<sup>11</sup> See *id.* at 36-37.

<sup>12</sup> See *id.* at 38-39.

Significantly, however, the FCC restricted BWA within 150 km of the grandfathered FSS earth station sites to operating only upon successfully coordinating with the affected earth stations.

SIA, therefore, disagrees with this reasoning because what is being discussed at WRC-07 is an international identification of bands to be used by IMT systems. SIA notes that the absence of such identification did not prevent the FCC from establishing the rules that basically “identified” the band 3650-3700 MHz in the U.S. for BWA systems; however, it recognized the need to both severely limit further FSS deployment in the band in the U.S., while restricting BWA operations in the proximity of existing FSS earth station sites. In other words, these decisions can be taken on a country-by-country basis since, internationally, the 3650-3700 MHz band is already allocated to the fixed and mobile services.<sup>13</sup> Therefore, the outcome of WRC-07 with respect to the band 3650-3700 MHz in Agenda Item 1.4 will not constrain domestic policy one way or the other.

## **II. IDENTIFICATION OF THE BAND 3650-3700 MHz FOR USE BY IMT SYSTEMS WOULD SEVERELY HARM U.S. SATELLITE OPERATORS AND THEIR CUSTOMERS**

What is at stake is whether the U.S. industry and users will be better served by a U.S. position that promotes or does not promote the international use of this band by IMT systems (including BWA and similar systems).

Proponents of View B believe that industry and IMT users would benefit from a harmonization of frequencies but implicitly recognize that the type of use

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<sup>13</sup> *In Region 1 the mobile service allocation is currently on a secondary basis.*

in the U.S., “e.g. low EIRP limits”, does not quite match the characteristics of other types of IMT systems; therefore they choose not to propose identification of this band for IMT systems. It would appear that View B proponents are not convinced of the harmonization benefits that they claim would result from terrestrial use of the band 3650-3700 MHz in other countries.

While the benefits of an international identification of the band to U.S. industry and users appear dubious, the harm is clear. Identification of the band 3650-3700 MHz for use by IMT systems would severely harm U.S.-licensed satellite operators -- and thereby their customers -- because these frequencies are extensively used by FSS operators, as well as by MSS operators for their feeder links.

There are 17 U.S.-licensed satellites that operate the equivalent of more than 120 thirty-six-MHz transponders overlapping with the band 3650-3700 MHz. In addition, there are 4 satellites on the FCC’s Permitted List of Space Stations that also carry these frequencies.<sup>14</sup> Identification of the band 3650-3700 MHz for use by IMT systems will negatively impact the operations of these 21 satellites.

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<sup>14</sup> *It is recognized that inclusion in the Permitted List does not allow that these satellite networks can operate in bands below 3700 MHz in the United States.*

### **III. PROPOSAL TO NOT IDENTIFY THE BAND 3650-3700 MHz FOR USE BY IMT SYSTEMS WOULD BE CONSISTENT WITH CITEL'S DRAFT PROPOSAL ON THIS ISSUE**

Approximately 80 geostationary satellites currently in orbit use the band 3650-3700 MHz. Other geostationary satellites under construction will also rely heavily on this band. The number of earth stations currently using these frequencies is significant in many parts of the world, especially in Africa and in Central and in South America. For this very reason, an output of the last meeting of the Permanent Communications Committee II ("PCC II") of the Inter-American Telecommunications Commission ("CITEL") contains a Draft Inter-American Proposal ("IAP") for WRC-07 proposing that the band 3600-4200 MHz not be identified for IMT systems.<sup>15</sup> Whenever consistent with its own interests, the U.S. has always been proactive in supporting common regional positions that are critical for a large number of countries – the current draft IAP is just that – critical to the Americas as well as to many countries in other regions. As such, the U.S. similarly should take the View A position that the band 3650-3700 MHz not be identified for IMT systems.

### **IV. SHARING BETWEEN IMT SYSTEMS AND FSS EARTH STATIONS IS NOT FEASIBLE**

The fact that sharing between FSS and IMT systems is not feasible is now well established; as discussed below the FCC acknowledged this through its restrictions on BWA operations in this band. Although some of the IMT

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<sup>15</sup> A minimum of six countries is required for a proposal to become an IAP. Currently this proposal is supported by Brazil, Argentina, Uruguay, Colombia, Guatemala and Chile.

proponents may be still arguing otherwise in ITU meetings, the separation distances involved are clearly large enough to eliminate any possibility of sharing, especially taking into account that the terrestrial applications will involve very large numbers of terminals.<sup>16</sup>

Even if you ignore the extensive ITU sharing studies, the FCC record and analysis supporting the FCC order that set the rules for operation of terrestrial systems in the band 3650-3700 MHz<sup>17</sup> is evidence that FSS and IMT systems are not compatible. The FCC determined that protection of FSS earth stations in the band 3650-3700 MHz without coordination could only be guaranteed by a separation distance of 150 km.<sup>18</sup> Given that, as recognized by proponents of View B,<sup>19</sup> BWA transmitters in the U.S. are subject to “low EIRP limits”, as compared to power levels expected to be used by IMT systems, it would follow that distances to ensure protection without coordination would exceed 150 km. Such separation distances, however, are not compatible with the deployment of terrestrial systems involving a large number of terminals, such as IMT systems.

## **Conclusion**

Given all the above, SIA strongly supports a U.S. proposal to WRC-07 that consists of “no change” in the band 3650-3700 MHz with respect to Agenda Item

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<sup>16</sup> See October 2006 PN at pp. 11-14.

<sup>17</sup> *Wireless Operations in the 3650-3700 MHz Band, Rules for Wireless Broadband Services in the 3650-3700 MHz Band, Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3GHz Band, Amendment of the Comm'n's Rules With Regard to the 3650-3700 MHz Government Transfer Band, Report and Order and Memorandum Opinion and Order, 20 FCC Rcd 6502 (2005).*

<sup>18</sup> See 47 C.F.R. § 90.1331(a)(1).

<sup>19</sup> See January 2007 PN at 38.

1.4. In other words, the band 3650-3700 MHz should not be identified for IMT systems.

In view of the previous WAC recommendations and draft proposals provided by NTIA for “no change” in the bands 3400-3650 MHz and 3700-4200 MHz, SIA supports a consolidated U.S. proposal addressing the band 3400-4200 MHz. This proposal should state that this frequency range should not be identified for IMT systems and, therefore, with respect to Agenda Item 1.4, no change should be introduced to the ITU table of frequency allocations in 3400-4200 MHz.

Respectfully submitted,  
SATELLITE INDUSTRY ASSOCIATION

A handwritten signature in black ink, appearing to read "David Cavossa". The signature is fluid and cursive, with a large loop at the end.

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