



## PRESS RELEASE

### **NATIONAL & REGIONAL SUPPORT INCREASES WORLDWIDE TO PRESERVE SATELLITE SERVICES DELIVERED USING ESSENTIAL 'EXTENDED C-BAND' SPECTRUM**

**As ITU World Radiocommunication Conference Commences, Many Nations Confirm  
Opposition to Identification of 3400 - 4200MHz Spectrum Band for Mobile Broadband  
Networks**

**25 October 2007**

**GENEVA, Switzerland** – A global consensus of national administrations and inter-governmental groups have signalled their support for preservation of 'C-band' spectrum for use in delivering mission-critical satellite services worldwide.

The strong demonstration of support comes as delegations to the International Telecommunication Union's (ITU's) World Radiocommunication Conference (WRC) make crucial decisions about use of the radio spectrum during the coming month in Geneva, Switzerland.

In a joint statement issued by an international coalition of eight non-profit associations representing the global satellite communications sector, the show of national and regional support was strongly commended: "This high level of support from administrations should bring to an end any further consideration by the terrestrial-wireless industry to use satellite frequencies in the C band for high-end mobile devices."

Most regional and sub-regional groups have now reached conclusions on whether some or all of the 3400-4200 MHz band ("C band") should be identified for IMT and, with the notable exception of Europe, there is a clear trend towards 'no change' ('NOC') to the current uses of the band. Specifically:

- **Asia's APT:** Common position for NOC in 3400 – 4200 MHz
- **The America's CITEL:** Common positions for NOC in 3400 – 4200 MHz
- **RCC:** Common position for NOC in 3400 – 4200 MHz
- **Africa's ATU:** Common position for NOC in 3400 – 4200 MHz

"Some administrations may be under a misimpression," the coalition statement continued. "It is not necessary to support IMT identification if they have already authorized WiMax or other terrestrial wireless services. An identification for IMT is not required to make WiMax or other authorizations comply retroactively with ITU rules. No ITU rule change is required at the WRC in order to enable national deployments of WiMax or other wireless services."

## Background

### **1. IMT's 'spectrum requirement' is unusually high and may be based on a significant overestimation of mobile user needs.**

It is important to take a historical view of projections about the growth of terrestrial mobile services. Looking at projections over the last ten to twelve years – notably Wireless Local Loop (WLL), 3G (advanced cellular or GSM) and WiMax – it becomes clear that the gap in actual development of these markets is very significant. Further, aggregating demand for most mobile services creates a significant distortion of the predicted demand for these services. In particular, the following lessons may be drawn from experience over the past years:

- there are no clear-cut technology winners, but stifling one technology in favour of another creates many losers,
- no one single technology is suited to every user community,
- technology migration tends to be evolutionary rather than revolutionary, and users and markets must be allowed to migrate when they are ready.

Moreover, there is no consistency within the mobile community on what future spectrum requirements will be. Indeed, a very recent WiMax Forum Report suggests that certain external market forecasts for WiMax are significantly above internal WiMax Forum forecasts, and, that as recent subscriber numbers suggest, initial adoption may occur at a lower rate than many independent forecasts.<sup>1</sup>

### **2. Realistic solutions to protect existing satellite links in C band have not been identified; migration of IMT services to this band may cause extreme harm to the satellite sector.**

It is clear from the most recent reports and studies from the ITU, CEPT and the WiMax Forum itself, that mitigation techniques, such as separation distance, earth station shielding, or the use of filters on satellite receive antennas, to block interference from IMT networks into satellite networks would be far too severe to be justifiable from a technical or economic perspective.<sup>2</sup> This means that in practice, mitigation measures would not be effectively implemented. Furthermore current IMT proposals offer no protection for FSS receive-only earth stations which are deployed broadly and on a licence-exempt basis in many countries.

Within the last few weeks, the satellite sector has experienced further degradation of its services in some parts of the world due to terrestrial mobile operations using the same C band frequencies. For example, a large oil company reported installation delays, changes of site, and higher installation costs to its VSAT networks due to interference from

<sup>1</sup> Source: TeleCompetition Group, A Review of Spectrum Requirements for Mobile WiMAX Equipment to Support Wireless Personal Broadband Services, WiMAX Forum, September 2007

<sup>2</sup> See the ITU WP4A Preliminary Draft New Report on compatibility between BWA and FSS (June 2007), the ITU SG8 Report (June 2007), the Wimax Forum White paper (March 2007), and the CEPT/ECC Report 100 (February 2007) – all documents available from: <http://www.no-change.info> (section Global Consensus)



mobile services in Nigeria and Congo. They have also experienced interruption of service in Cameroon and Uganda. These are not isolated incidents - disruption of C-band satellite services from terrestrial wireless interference has been taking place around the world over the last three years.

It is understood that this has been the result of Broadband Wireless Access (BWA) systems being deployed in the C band. However, the negative effects will be far more wide-reaching in the case of terrestrial mobile IMT broadband services, which have large coverage requirements and are expected to transmit at very high rates.

### **3. Alternative spectrum bands do exist for IMT, but not for satellite.**

Proposals to identify all or parts of the C band for IMT are not the solution. They do not take into account that C band has unique characteristics which make it ideal for the delivery of satellite services. By contrast, it is far from optimal for mobile terrestrial services. It is therefore unsurprising that WRC-2007 is considering the identification of several candidate frequency bands for IMT services.

Some of the candidate bands that will be considered by WRC-07 are supported by the vast majority of ITU member states and therefore could be well-suited to supporting IMT services, notably those below 3 GHz.

### **4. C band is proving increasingly important for satellites, even in Europe.**

C band is used by satellite operators to provide inter-continental connectivity between Europe and the rest of the world, as well as for the provision of a whole variety of critical services worldwide. Just in Europe, there are already more than 1000 registered C-band earth stations plus many more licence-exempt TV receive-only earth stations in operation. The European Commission is itself a large user of C band satellite capacity (for connections with Africa & Latin America).

Satellite operators are also investing in new C band services in Europe (e.g. Inmarsat, which has installed a new hub in the Netherlands which entered into service in 2006 and SES, through customer agreements to support global maritime services). Furthermore, the Galileo project includes the development of a network of satellite earth stations used as centers (the so-called 'GDDN' for Global Data Dissemination Network) which will depend on very high-reliability C band satellite links within Europe and between Europe and the rest of the world in order to support this critical infrastructure project.

### **5. Conclusion**

New and existing C band satellite services are actually bridging the digital divide. It is the duty of the international community to safeguard these services. The effects of failing to do so fall disproportionately on the developing world. IMT should be directed to other, more appropriate bands.



**Editor's Note:**

*This press release has been prepared by the Cable and Satellite Broadcasting Association of Asia (CASBAA), the Global VSAT Forum (GVF), the Asia Pacific Satellite Communications Council (APSCC), the Satellite Users Interference Reduction Group (SUIRG), the European Satellite Operators' Association (ESOA), European Satellite Action Plan Regulatory Group (SAP-REG), (U.S.) Satellite Industry Association (SIA), World Teleport Association (WTA), and other international associations of the satellite industry.*

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