FCC and International Regulatory Update

Public Safety Communications Report

In late December 2005, the Federal Communications Commission (FCC) provided a report to Congress on recommendations for improvements to public safety communications. The report included FCC staff analysis as well as consideration of comments received for addressing the spectrum needs of traditional public safety entities and other critical first responders. The report noted that consideration was also given to some lessons learned from the impact of hurricanes Katrina and Rita. Key conclusions of the report include:

- Emergency response providers would benefit from the development of an integrated, interoperable nationwide network capable of delivering broadband services throughout the country.
- There may now be a place for commercial providers to assist public safety in securing and protecting the homeland.
- While an effort to address the short-term spectrum needs of public safety is underway, attaining a wholesale assessment of long-term spectrum needs is an ongoing task. The FCC will pursue an examination of whether certain channels within the current allocation of public safety spectrum in the 700 MHz band could be modified to accommodate broadband communications.

Air-Ground Radiotelephone Services

On December 9, 2005 the FCC released an Order on Reconsideration and a new Report and Order that establishes competitive bidding rules for the 400 MHz and 800 MHz Air-Ground Radiotelephone services and resolves Petitions for Reconsideration of an earlier Air-Ground Order adopted in December 2004.

In the December 2004 Order, the FCC adopted an approach to determining the future band plan of the four MHz of spectrum in the 800 MHz band dedicated to commercial Air-Ground service. The order provided for new nationwide licenses for this spectrum to be auctioned in three alternative band plan configurations, with the ultimate band plan being determined by the results of the auction. The Air-Ground Order also renewed the license of Verizon Airfone, the sole incumbent licensee in the 800 MHz Air-Ground band, for a non-renewable five year term, and established a two-year period to transition its narrowband operations from four to one MHz.

In the recent action, the FCC decided to conduct auctions for both the 400 MHz general aviation and 800 MHz Air-Ground services using its Part 1 competitive bidding rules, after dealing with technical and procedural requests made in response to the 2004 Order.

Digital Radio Update

While digital television has gotten significant news coverage, activity in digital radio broadcasting has not been in the public eye. In-band on-channel (IBOC) Digital Radio Broadcasting for AM and FM radio broadcast stations was approved more than a year ago, and is seeing initial implementation by both AM and FM broadcast stations. AM broadcast stations are limited at this time to digital operation during daytime hours. The FCC provides the following basic description of digital radio:

IBOC is a method of transmitting a digital radio broadcast signal centered on the same frequency as the AM or FM station's present frequency. For FM stations, the transmission of the digital signal occupies the sidebands above and below the center FM frequency. AM band transmissions also place the digital signal in sidebands above and below the existing AM carrier frequency. By this means, the AM or FM station digital signal is transmitted in addition to the existing analog signal. In both instances, the digital emissions must fall within the spectral emission mask of the AM or FM channel.

The present IBOC system is referred to as a "hybrid" since it is neither fully analog nor fully digital. During hybrid operation, existing receivers still continue to receive the analog (non-digital) signal. New receivers being developed are expected to incorporate both modes of reception, where receiver will automatically switch to the analog signal if the digital signal cannot be decoded or is lost by the receiver.

IBOC digital radio is expected to provide near CD quality reception for stations operating in the FM broadcast band. For AM stations, it is expected to provide reception approximately equal to today's analog FM reception. Minimal impact is anticipated on reception of existing service.

A "Digital Status" search field has been implemented within the Station Information form in CDBS (the FCC's online database), to help identify which stations are operating in hybrid mode. Also, an AM or FM station itself will announce if it is transmitting the digital signal.

Digital Television Broadcasting

Digital television (DTV) has developed to the point where FCC actions are primarily technical in nature. For example, in November 2005, the FCC advanced the date on which new television receivers with screen sizes 13 to 24 inches and other TV receiving devices such as VCRs and digital video recorders must include the capability to receive broadcast digital television signals. The new date of March 1, 2007 also applies to new receivers with screen sizes smaller than 13 inches. Thus, all new TV receiver equipment sold in the U.S. must include digital reception capability as of March 1, 2007. This is in addition to the previously-established requirement that TV receivers with screen sizes 25 to 36 inches must include digital reception capability by March 1, 2006.

The FCC is also considering rules governing the implementation of Distributed Transmission Systems (DTS) by digital television stations. DTS serves a function now performed by translators and repeaters, which allow a broadcaster to reach those portions of its service area that have the directly-transmitted signal blocked by terrain. As currently proposed, DTS would be achieved entirely with on-channel repeater stations rather than using translators operating on different channels.

In another DTV action, the FCC has announced a May 1 to May 12, 2006 filing window for low power television (LPTV) and translator stations to apply for digital channels, either converting their current analog channel to a digital channel, or obtaining a companion digital channel. The FCC notes that digital channels are not guaranteed for these licensees, and that they must identify a digital channel that complies with the interference requirements contained in the Rules.

European Digital Terrestrial Television (DTT)

At the end of August, 2005, the European Union concluded an extensive study into the development of digital television broadcasting, focusing on the experience of those EU member states that have implemented DTT, of which the U.K. has the most extensive deployment and the most viewers.

The report does not establish a pan-European policy for DTT, but rather was meant to provide the type of information on markets, technology and user response that is essential for making high-level policy decisions. A major concern for DTT is competition with other program delivery methods, including digital cable, satellite broadcasting, high-speed Internet and DVD or other recording media.

As an example, the experience in the U.K. suggests that traditional "free" broadcasting is preferred, although a one-time expense for a set top box is quite acceptable. Also, the value of DTT versus other services might be its ability to provide either a single HDTV program or multiple programs in lower-resolution video, audio or data formats (as the U.S. DTV system can also provide).

U.K. Spectrum Re-Farming Study

In mid-January, 2006, the U.K. Office of Communications (Ofcom) initiated a study on a subject of great importance to all countries implementing digital television—how to handle the "Digital Dividend" of spectrum that will become available when present analog television channels are released from service.

The stated purpose of the study, which will be conducted by an outside consultant, is to examine potential future uses of this spectrum, which are wide ranging and include (but not limited to broadband wireless access, cellular mobile (for example, 3G and systems beyond IMT-2000), private mobile radio, further terrestrial digital television services (including standard definition television, high definition television and local digital TV), mobile digital multimedia (including mobile television), and Program Making and Special Events ("PMSE").

Ofcom notes that the key issues it will consider are the potential uses of the available spectrum; technical limits on spectrum use to prevent potential interference; options for packaging frequencies to give maximum flexibility to the market; and options for the design of an efficient award/allocation process which aims to maximize the value of the available spectrum to the economy and society over time. Results of the study are expected in late 2006.

EU Review of Electronic Communications Policy

For the first time since 2002, the European Union will conduct a required review of all five Directives that cover electronic communications. This potentially far-reaching review will include these General Topics:

- What are the strengths and weaknesses of the framework?
- To what extent has the framework achieved its objectives?
- What impacts has the framework produced to date?
- How can the framework be improved?
- How can the framework contribute further to the Lisbon goals of growth and jobs?

Among the more interesting Specific Topics to be addressed are:

- Do changes in technology, markets and society call into question the scope of the EU regulatory framework as set out in the Framework Directive?
- Does the regulatory framework allow technological development and convergence to be adequately accommodated?
- What are the changes required to the current regulatory package concerning the management of the radio spectrum in the Community, so as to consolidate the internal market for wireless electronic communication services and equipment and to optimize the use of this resource?
- The current framework requires national regulatory authorities to promote competition in networks and services, and to encourage efficient investment in infrastructure. Should there be any changes in the provisions of the Directives that deal with access and related regulation, in order to achieve these objectives?
- Is the current system of national authorizations an appropriate model going forward? Is there a need for further harmonization in the management of number-

ing, naming and addressing and radio spectrum resources? To what extent does the existing model affect the emergence of trans-national, European-wide services?

- Do current provisions provide an adequate legal framework to protect citizens' privacy and security, and to promote consumer trust and confidence in the information society while contributing to the development of the internal market?
- Are the mechanisms designed to ensure harmonization between the Member States (Communication Committee, Radio Spectrum Commit-tee, Radio Spectrum Policy Group, European Regulators Group) working efficiently with respect to the development of the Internal market?

Although such periodic reviews of policy do not always result in major changes, the rapidly-changing technology and usage patterns in electronic communications may result in some significant changes in EU policies and regulatory activities. The report is due to be completed by mid-2006.

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