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| Summary: | | | |
| This ECO Bulletin provides a summary update on aspects of progress in spectrum management outside the CEPT. The items in this bulletin include:   1. Japan – new Japanese spectrum utilisation charts and Technical Regulations Conformity Certification System in Japan; 2. Brasil publishes decree formalising the allocation of 700MHz spectrum for 4G. Other Latin American countries such as Chile, Colombia and Mexico going also in the same direction; 3. Canada – 700 MHz auction; 4. CITEL Report (e.g. new CITEL Recommendation 41 on BB-PPDR and L-band survey); 5. Preparation of APT Common Proposals for WRC-15; 6. India – Auctions and spectrum Trading; 7. Echostar purchase of Solaris (2GHz MSS spectrum) (relates to/similarities with the INMARSAT initiative for an ‘Aero-CGC’); 8. USA - New proposals to help emergency responders better locate calls to Emergency Services originating on mobile networks; 9. FCC on NGSO system ‘O3b’; 10. FCC – Incentive auction (600 MHz plans); 11. ITS America - US regulatory overview; 12. FCC actions regarding 3550-3650 MHz (Spectrum Access System ‘SAS’); 13. FCC: increased in-flight mobile wireless services to passengers; 14. FCC Receiver Performance Considerations. | | | |

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| Proposal: |
| This bulletin is to note by the ECC. More detailed input on some of the subjects covered is being input to the groups dealing with the respective subjects.  Several of the raised issues should be noted or discussed at the respective WG/ PT level, e.g. information related to NGSO ESOMPs or location information of calls to emergency services.  Some topics were covered in the ECC-ECC-IC liaison meeting in September 2013, but this bulletin provides more comprehensive detail and an update (e.g. postponement of 600 MHz incentive auction in the US). |
| Background: |
| The Office brings to each ECC meeting a bulletin on activities in radio communications in other world regions, where a regulatory dimension is raised (e.g. by innovative services or technology).  The primary objective is to identify whether the ECC needs to investigate further or consider possible new actions. A secondary but more frequently addressed objective is to enable comparison to be made with the regulatory approach in other regions to subjects already treated by the ECC (including, where relevant, to the work of the CPG). |

1. **Japan - new Japanese spectrum utilisation charts and Technical Regulations Conformity Certification System in Japan**

The Japanese Ministry of Internal Affairs and Communications (MIC) has released the new Japanese spectrum charts recently and information about spectrum utilisation in Japan can be found on the following website: [Japanese Spectrum Charts](http://www.tele.soumu.go.jp/e/adm/freq/search/myuse/0002/index.htm). These charts also include supplementary information about changes and ‘out-phasings’ (refarming) in frequency utilisation in the future. Particularly interesting is the . UHF RFID move to 916.7-920.9 MHz from 952-956.4 MHz to 916.7-920.9 MHz in 2012/18, hence the same sub-band as new UHF RFID frequencies recently added in ERC-REC70-03 in Europe.

On 21 January 2014, the MIC also released changed rules on its website for the [Technical Regulations Conformity Certification System](http://www.tele.soumu.go.jp/e/sys/equ/tech/index.htm). The rules show many similarities with the European R&TTE Directive (declaration of conformity/ self-declaration) and include a self-Confirmation system (Article 38-33). A manufacturer or an importer of the radio equipment, in consideration of the technical regulations, usage modes, etc. of radio equipment among specified radio equipment, may confirm by itself that the construction type (including the methods to verify that each equipment conforms to the type) of the special specified radio equipment conforms to the technical regulations, and thus rarely causes interference or other disturbance that severely jam the operation of other radio stations (special specified radio equipment)

A manufacturer or an importer shall conduct verification and shall then conduct the confirmation (self-confirmation of technical regulations conformity).

1. **Brazil publishes decree formalising the allocation of 700MHz spectrum for 4G**

Brazil’s national telecoms industry regulator Anatel published on 13 November 2013 a decree in the federal gazette (Diario Oficial da Uniao), to formally confirm its plan to license the use of the 700MHz band for the provision of 4G mobile broadband services in the country. Anatel intends to allocate 10+10MHz (or a maximum of 20+20MHz, if required) of frequency blocks in the 698MHz to 806MHz range via a competitive tender (currently assigned for use by analogue TV channels). There are also blocks of spectrum, which are being set aside for public security and safety (PPDR), national defence and infrastructure services. The auctioning off of the bands in question is intended to take place sometime in 2014 or 2015, after the publication of the tender terms.

This is based on Brazil and other Latin American countries’ (such as Chile, Colombia and Mexico) adoption of the APT 700 MHz band plan. Brazil will not be using the precise APT band plan for IMT. The bottom of each block – 703-708 MHz and 758-763 MHz – has been allocated for public security, national defence and infrastructure services (PPDR) (see also item 4: CITEL Report).

As part of the legislative settlement that was agreed in November, broadcasters will continue to have priority in the band until a date that will be set later by Anatel. Many of the broadcasters use analogue signals, which will be only be turned off once the three year migration process from analogue to digital is complete in December 2018. The regulator had originally planned for the entire transition to take place in 2015.

1. **Canada – 700 MHz auction**

Results of the recent spectrum auction (went over 22 business days) and background information has been provided on 19 February 2014 by Industry Canada on this webpage:

[Canadian auction FAQs](http://www.ic.gc.ca/eic/site/icgc.nsf/eng/07398.html#f19)

A total of 68 MHz of spectrum was available in this band. The spectrum was divided into seven licence blocks in 14 service areas, for a total of 98 licences. Eight Canadian companies won spectrum licences in the auction, raising CA$5.27 billion. This is equivalent to CA$2.32 per MHz per capita for a 20-year licence. For comparison: the United States' 700 MHz wireless auction, which took place in 2008, before the existence of smartphones and tablets, was CA$1.11 per MHz per population for a 10-year licence term.

1. **CITEL Report**

The XXII Meeting of Permanent Consultative Committee II: Radiocommunications including Broadcasting (PCC.II) took place on 4-8 November 2013 and the final report is embedded here:



On BB-PPDR, CITEL agreed some recommendations, see page 17-18: BB-PPDR (Recommendation 41)

For OAS/CITEL administrations that wish to deploy broadband networks to meet Public Protection and Disaster Relief (PPDR) needs in the 700 MHz band, the following bands make up the channel plan they have adopted for the 700 MHz band:

* 703-748/758-803 MHz (A5 scheme of Recommendation ITU-R M.1036-4)

In administrations that wish to define a particular frequency range for PPDR, it is recommended to preferably use the lower portion of this band.

* 758-768/788-798 MHz (A4 scheme of Recommendation ITU-R M.1036-4).

The explicit CITEL Recommendation 41 on **PPDR BASED ON IMT SYSTEMS i**s embedded here:



Note: this item is of interest in WGFM/ FM49.

CITEL also started a survey amongst its members about the ‘USE OF THE BANDS 1 350-1 400 MHZ AND 1 427-1 525 MHZ BY THE OAS/CITEL ADMINISTRATIONS FOR SATELLITE AND TERRESTRIAL SERVICES’.

1. **The 4th APT Preparatory Meeting for WTDC-14 (WTDC14-4)**

The APT organised the 4th APT Preparatory Meeting for WTDC-14 (WTDC14-4) from 21 to 24 January 2014 in Pattaya, Thailand, bringing 75 participants from 21 APT member countries to discuss the APT preparation and develop APT Common Proposals (ACPs) for the World Telecommunication Development Conference (WTDC-14) to take place in Dubai from March 31 to April 11, 2014.

In WTDC-14 Preparatory, APT developed APT Common Proposals related to new BDT (Telecommunication Development Bureau) study questions in the spectrum area. This is attached here for your reference, dated 25 February 2014.



APT Members consider that there are a number of matters that would benefit from further study, in the Study Period 2014-2018. APT Members’ proposals to WTDC-14 for matters for inclusion in study questions for the period 2014-2018, is detailed in the embedded Annex.

1. **India – Auctions and spectrum Trading**

The Indian government completed a ten-day auction of spectrum in the 900 MHz (an extension to previous allocations) and 1800 MHz bands in India's three biggest cities and the 1800 MHz band in an additional 19 regions. The auction was staged by the independent regulator TRAI.

The 900 MHz band spectrum in New Delhi, Mumbai, and Kolkata was auctioned for about 3 billion euros to Airtel, Vodafone and Idea Cellular. Spectrum in the 1800 MHz band was auctioned in 19 regions across India as well as the above three cities for more than 4 billion euros to the three above mentioned operators and also Reliance Jio. Tata Teleservices gained no spectrum at all.

The auction followed failed auctions in 2012 and 2013 that were ignored by many network operators due to apparently too-high minimum bid prices. Over the last year, the reserve price has been the subject of negotiations between the independent regulator TRAI and the government's Department of Telecommunications.

In addition, an auction of the 850 MHz band for 3G services will take place soon in India.

India also allows for the first time spectrum trading. The document, ‘Recommendations on Working Guidelines for Spectrum Trading’, sets out the details of TRAI's proposals and was released in October 2013. Notably, it says that spectrum can only be traded if it has been acquired at auction after 2010 and that the trade must happen two years after the spectrum was originally assigned. Spectrum that was administratively assigned to operators cannot be traded. Additionally, the document states that spectrum leasing is not permitted and that trading is only permitted on a "pan Licensed Service Area" basis. It also proposes a transaction fee of one per cent of the transaction's value.

1. **Echostar purchase of Solaris (2GHz MSS spectrum)**

The US satellite services provider EchoStar has acquired on 6 January 2014 the S-band spacecraft payload for mobile satellite services (MSS) from operator Solaris SES of Luxembourg and Eutelsat of Paris. Echostar already earlier purchased from bankruptcy the S-band mobile satellite assets of two U.S. companies (TerreStar and DBSD S-band satellites, another one, TerreStar-2, under construction and scheduled for launch in 2015 or 2016, with possibility to re-purpose for service provisioning in Europe). The purchase of 100 percent of the Solaris Mobile Ltd. joint venture of Dublin, which has one S-band payload in orbit, is according Echostar to be followed by deployment of another satellite for Solaris to cover Europe. Solaris has a licence to operate a mobile S-band satellite service in Europe but has so-far struggled to find a market. Its large S-band antenna was launched on a Eutelsat telecommunications satellite in mid-2009 but a defect was discovered during its antenna’s unfurling that limited its coverage and power.

Note: the second operator in the S-band MSS is Inmarsat who recently came forward with the Aero-CGC proposal currently under study in WGSE and EC.

In addition to the aforementioned spacecraft, EchoStar has mostly completed construction of an S-band mobile satellite, called CMBStar, which was to have been sold to a Chinese operator. The deal collapsed and EchoStar has been unable to find another use for the satellite until now.

EchoStar Satellite Services indicated to use Solaris for the provision of ‘access to a next-generation MSS which will support a wide range of innovative services across the European Union. The acquisition was a venture to do “DISH-like things” outside the US, a plan for an integrated terrestrial and satellite communications network, i.e. take satellite spectrum and use it for terrestrial services. Echostar emphasised that ‘EU rules permit satellite services to have a terrestrial component’.

Echostar is also begun recently the monitoring of activities in the ECC sub-groups on ‘Aero-CGC’.

It is proposed that this development should be considered in WGFM and PT FM44.

1. **USA - New proposals to help emergency responders better locate calls to Emergency Services originating on mobile networks**

The Federal Communications Commission (FCC) on 20 February 2014 proposed new rules to help emergency responders to better locate mobile callers to 911, especially from indoors. The proposed updates to the FCC’s Enhanced 911 (E911) are a response to the increasing use of mobile phones to make emergency services calls within the USA. Similar to recent trends experienced in Europe, many Americans are replacing landlines with mobile phones, and calling patterns are changing. The FCC indicated that nearly 73% of emergency calls in California are made from mobile phones, and approximately 80% of all smartphone use occurs indoors.

This development is of considerable interest to the ECC as its Working Group Numbering and Network’s Project Team Emergency Services (PT ES) is currently preparing an ECC Report on the accuracy and reliability of caller location information for calls to the emergency services. It is expected that this ECC Report will be used by the European Commission for a future policy direction or recommendation on this critically important subject.

During its analysis PT ES has found, through a comprehensive survey of policy makers, law enforcement agencies, emergency call handing operators and other relevant stakeholders in the CEPT area, that there are two very challenging environments for providing accurate and reliable caller location information. The first is when calls originate in rural areas where the cell size is very big and the second is where calls originate indoors, mainly in dense urban areas with multi-story and multi-occupancy buildings.

The current accuracy standard for caller location information in the USA can be met solely on the performance of outdoor emergency calls. The new proposals include indoor location accuracy requirements particularly in relation to challenging indoor environments where first responders are often unable to determine the floor or even the building where the 911 call originated.

Innovation and technological developments in this area are making it easier to locate mobile devices wherever they are. The FCC proposes interim location accuracy metrics that would be sufficient to identify the building for most indoor calls. The proposal also includes requirements for vertical location information (i.e. altitude) that would enable first responders to identify the floor level for most calls made from multi-story buildings. In the longer term, the FCC seeks to develop more granular indoor location accuracy standards that would require identification of the specific room, office, or apartment where a mobile call is made. The FCC is also seeking comment on whether to revisit its timeframe for replacing its current handset- and network-based location accuracy standards with a single standard in light of technological developments.

PT ES is also looking at the issue of network-provided versus handset-provided location information and the challenge here is to find a solution that complements one with the other in order to deliver caller location information with a high degree of accuracy and reliability in a cost effective manner. The ECC Report is due to be completed in 2014 and you can find more information on the work of PT ES [here](http://www.cept.org/ecc/groups/ecc/wg-nan/pt-es). You can find more information on the FCC announcement [here](http://www.fcc.gov/document/fcc-acts-help-emergency-responders-locate-wireless-911-callers).

Note: Not outside of Europe, but spectrum related is the initiative in ETSI concerning for the development of a future-proof eCall. The current eCall is based on a CS (circuit-switched) emergency call in GSM and UMTS networks. LTE spectrum auctions are taking place in the EU and there will be extensive LTE coverage before the implementation of eCall becomes mandatory in 2015. The longevity of GSM networks in the EU over the lifetime of vehicles is uncertain and GSM spectrum is likely to be re-allocated for UMTS and/or LTE. There is no CS emergency call in LTE. The applicability of the existing technical solution for eCall (in-band modem) is currently assessed for VoIP/VoLTE, as well as new technical solutions to be developed that are suitable for packet switched (UMTS and LTE) and offer better performance for eCall for VoIP. Longer term strategies are considered and guidance (probably for further work) provided in respect of the long term migration of eCall to support over packet switched networks, and the co-existence and possible integration of eCall and other ITS communication equipment installed in vehicles (action on-going in ETSI MSG, creation of ETSI TR 103 340).

Note: information especially to note in WG NaN PT ES.

1. **FCC on NGSO system O3b**

This information may relate to the WGFM#79 decision to task FM PT 44 to address in the NGSO ESOMPs ECC Report under development also the issue of sharing capabilities of NGSO ESOMPs candidates with future GSO and NGSO applications’ and the on-going work on NGSO ESOMPS. This was motivated by ‘the duty to preserve equitable access to radio-frequency spectrum and satellite orbits in the future’..

In this regard, two items are of interest

1. The FCC granted on 24 February 2014 to the company O3b a permit for test operations on two (non-US registered) vessels operating in US territory ([DA 14-64](http://www.fcc.gov/document/o3b-limited)). Because the FCC has not adopted technical rules governing satellite operations in the Ka-band NGSO FSS bands aboard maritime vessels yet, O3b’s requested a waiver of the FCC NTFA in the Ka-band Plan. In considering requests for non-conforming spectrum uses, the Commission has indicated it would generally grant such waivers when there is little potential for interference into any service authorised under the NTFA and when the non-conforming operator accepts any interference from authorised services. O3b is considered that its testing operations will not cause harmful interference to present or future users. In particular, O3b provided an analysis that it will not cause interference to any GSO satellite network operating in these bands and will accept interference from any terrestrial users. At the present, there are no other NGSO FSS satellite systems operating in these bands. No parties commented on its proposed operations before the FCC. Based on the information on file with the FCC, the limited tests planned do not pose a risk of interference to other users of the band. Consequently, the FCC granted O3b’s waiver request, terminating six months from the date that O3b received the letter, conditioned on operations on an unprotected, non-interference basis in the 28.6-29.1 GHz (Earth-to-space) and 18.8-19.3 GHz (space-to-Earth) bands. Accordingly, O3b’s testing operations must accept interference from any authorised users in these bands and may not cause harmful interference to any authorised user in these bands. O3b also has pending an application for authority to operate earth stations aboard U.S.-registered maritime vessels that will communicate with O3b’s Ka-band NGSO FSS system (Blanket Application).
2. The above mentioned NGSOP ESOMPS operations work together with gateway earth station operations in the USA (The Haleiwa, Hawaii, earth station provides gateway and telemetry, tracking and command (TT&C) services and the Vernon, Texas, earth station provides gateway and back-up TT&C services)
3. The FCC also considers spectrum availability as a factor in determining whether to allow a foreign-licensed satellite to serve the U.S. market.

The O3b application document is provided here:



It is proposed that this should be considered in PT FM44.

1. **FCC – Incentive auction (600 MHz plans)**

The Federal Communications Commission has announced a postponement to the middle of 2015 of its plans to auction off 600 MHz spectrum licences for use by public mobile operators, based on a preceding incentive auction for TV licensees to give up their licences. The original deadline was in 2014.

The FCC will provide further details on the new timeline and processes for the auction at a January meeting. It will then work towards releasing an auction public notice and procedures public notice in the second half of next year. The incentive auction was [proposed in late 2012](http://www.rcrwireless.com/article/20121001/spectrum_auction/fcc-proposes-incentive-auction-tv-airwaves/) as part of the federal government’s plan to meet President Obama’s mandate to free up 500 MHz of new spectrum for wireless services by 2020.

The auction process starts with a reverse auction, in which television broadcasters which choose to participate give up spectrum holdings The FCC’s advice includes that “we will not know in advance the amount of spectrum we can make available in the forward auction, the specific frequencies that will be available and, perhaps, the geographic location of such frequencies.”

Instead of the traditional auction model that relies on a single band plan with identified frequencies, a set number of spectrum blocks and a uniform set of geographic area licences, the new auction framework must be flexible enough to accommodate varying amounts of spectrum in different locations.

The FCC received general support for the postponement, with many carriers and trade organisations noting the need to make sure the rules for the complicated auction process are clear before bidding begins.

On 29 January 2014, the FCC invited comments on a methodology for predicting potential interference between broadcast television and licensed wireless services ([ET Docket No. 14-14, public notice 14-98](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0129/DA-14-98A1.pdf)).

In the Broadcast Television Incentive Auction NPRM[[1]](#footnote-1), the Commission sought public comment on creating a 600 MHz wireless band plan from the spectrum made available for flexible use through the broadcast television incentive auction.[[2]](#footnote-2)

The FCC expressed a strong interest in establishing a band plan framework that is flexible enough to accommodate market variation (i.e., offering varying amounts of spectrum in different geographic locations, depending on the spectrum recovered) to maximize the amount of spectrum re-purposed.

In response to the NPRM and the 600 MHz Band Plan Supplemental Public Notice, a number of commenters raised concerns about co-channel and adjacent-channel interference between television and wireless services in nearby markets as a result of accommodating market variation. The most common approach commenters propose is to use a pre-defined separation distance between TV and mobile service areas. Commenters proposed distances that varied significantly—ranging from 100 km to 500 km—and generally provided limited technical analysis in support of these proposals. (This issue is addressed in CEPT Report 029)

The Commission has rules in place to control co-channel and adjacent-channel interference from mobile operations to digital television (DTV) reception for the 470–512 MHz (“T-Band”) and 700 MHz bands.[[3]](#footnote-3) However, these rules do not have direct applicability in the incentive auction. The rules were addressing situations where wireless licensees could design their systems to avoid causing interference to television reception by techniques such as reducing power and antenna height or for a transitional period during which relatively few wireless facilities would be constructed. In the “T-band,” the pertinent wireless systems are conventional land mobile facilities that do not utilize cellular architectures used for commercial wireless service. In the case of 700 MHz, the rules were intended as an interim measure for spectrum that was eventually going to be cleared of TV broadcasting. Further, the present rules do not address interference from DTV into wireless systems.

Note: this may be of interest in ECC –TG6.

1. **ITS America US regulatory overview**

In relation to Intelligent Transportation Services (ITS), Road tolling applications and the 5.9 GHz FCC actions (FRCC docket 13-49), the following web-page from ITSA (ITS America) contains up-to-date information about the proceedings in the USA:

[ITS America US regulatory overview](http://connectedvehicle.itsa.wikispaces.net/FCC+Docket+on+DSRC)

Note: this might be helpful in the groups dealing with 5.8/5.9 GHz, ITS, road tolling and other TTT applications in the ECC such as WGSE, WGFM CG 5GHz, SRD/MG.

The U.S. Department of Transportation (DOT) also announced the decision to move forward with vehicle-to-vehicle communication technology (3 February 2014) saying the technology would improve safety by allowing vehicles to "talk" to each other and ultimately avoid many crashes altogether by exchanging basic safety data, such as speed and position, ten times per second.  
  
In this context, it should be noted that the ETSI Board has approved the SAE / ETSI Cooperation Agreement. SAE is the Society of Automotive Engineers (international standardization in the automotive field). As a final step, the ETSI General Assembly will have to approve this Cooperation Agreement at the forthcoming spring meeting. This means that SAE and ETSI can do joint work now.

Note: this item may be of interest in WGFM / WGFM CG 5 GHz and SRD/MG.

1. **FCC actions regarding 3550-3650 MHz (Spectrum Access System ‘SAS’)**

The FCC is moving forward with plans to free up spectrum in the 3550-3650 MHz band for use by small cell network deployments and spectrum sharing, and hosted a technical workshop focused on the band on 14 January 2014.

As part of the workshop, the FCC’s Wireless Telecommunications Bureau and Office of Engineering and Technology looked at “technical requirements, architecture, and operational parameters of the proposed spectrum access system (SAS) for the 3550-3650 MHz band (3.5 GHz band).” The SAS would operate similar to the TV White Spaces database in governing use of the 3.5 GHZ band. The workshop was set to focus on four aspects of SAS implementation:

1. General responsibilities and composition of SAS;

2. Key SAS functional requirements;

3. SAS monitoring and management of spectrum use;

4. Issues related to initial launch and evolution of SAS band planning.

The incumbent users in the USA include authorised federal and “grandfathered fixed satellite service” users currently operating in the 3.5 GHz band and would receive “protection from harmful interference from all other users in the 3.5 GHz band.”

The FCC late last year released a notice of proposed rulemaking in relation to the 3.5 GHz band for use in the deployment of small cells and “spectrum sharing.” The NPRM was set up to look at whether it would be feasible to open up approximately 100 MHz of spectrum in the 3550-3650 MHz bands for small cell technologies, possibly on an unlicensed basis. Currently, the most prolific unlicensed spectrum used for wireless services resides in the 2.4 GHz band that is used for Wi-Fi services.

New priority access users would include “critical quality-of-service needs,” including hospitals, utilities and public safety, and would operate with “some” interference protection. The general authorised access users would be allowed to operate “opportunistically” in certain areas and would have to deal with potential interference issues from other users in that space.

The 3.5 GHz band is now in the hands of the Department of Defense for use in certain radar installations, as well as by “non-federal fixed satellite service earth stations for receive-only, space-to-earth operations and feeder links.”

The FCC is also looking at potentially extending the spectrum allocation an additional 50 megahertz up to the 3700 MHz band. That spectrum band is currently used by the federal government in just a few locations.

In relation to this, under the title ‘the role of sensing for identifying spectrum holes’, a presentation was provided to the recent WGFM workshop on spectrum occupancy measurements, 15 January 2014, by Prof. Martin Weiss of the University of Pittsburgh. This presentation discussed aspects of sharing between the commercial and the federal (governmental) sector in the USA, including services such as meteorological satellite downlinks and maritime coastal ship-radars. The case studies revealed that sensing sometimes were considered as too complex and the result may be frequency fragmentation or the definition of service exclusion zones. In all other cases, where sensing is considered for the spectrum use, this is a very specific band-to-band consideration and depends on the incumbent services and proposed new services (mostly for broadband mobile networks using small cells). A general spectrum occupancy/sensing approach is not possible. Sharing questions are also inter-related to the rights situation and this is also considered as part of the solution in the bands under consideration. This is similar to LSA considerations in Europe.

The following recent publication of Gui, Gomez and Weiss provides a good overview on the considerations about sharing, related rights and enforcement issues for several frequency bands in the USA.



1. **FCC: increased in-flight mobile wireless services to passengers**

On 12 December 2013, The FCC initiated a proceeding to consider a proposal that would permit airlines to install equipment on aircraft that could safely expand the availability of in-flight mobile wireless services to passengers.

* Remove existing, narrow restrictions on airborne use of mobile devices in the 800 MHz cellular and Specialized Mobile Radio (SMR) bands, replacing them with a more comprehensive framework encompassing access to mobile communications services in all mobile wireless bands;
* Harmonize regulations governing the operation of mobile devices on airborne aircraft across all commercial mobile spectrum bands;
* Add the authority to provide mobile communications services on airborne aircraft across all commercial mobile spectrum bands to existing Part 87 aircraft station licenses;
* Allow mobile communications services on airborne aircraft only if managed by an Airborne Access System certified by the FAA, which would control the emissions of onboard portable electronic devices (PEDs) by requiring them to remain at or near their lowest transmitting power level; and
* Limit authorisation for mobile communications services to aircraft travelling at altitudes of more than 3,048 meters (approximately 10,000 feet) above the ground. (Note: same as in Europe for MCA)

The Notice also seeks comment on alternative authorisation frameworks, the potential impact of the proposals on public safety and national security, and issues related to the use of voice services onboard aircraft. Note that voice services are so far not permitted in planes in the USA.

The principles set out in the proceeding are that an airline chooses to install new onboard equipment, consumers would be able to use their mobile devices’ full wireless data capabilities in addition to the current choice of access to Wi-Fi on some flights. Airlines would be in total control of what types of mobile services to permit onboard.



1. **FCC Receiver Performance Considerations (ET Docket 13-101)**

Since there are similar on-going considerations in the ECC (e.g. new ECC Report 207), the Office requests to note the proceeding at the FCC concerning recommendations and standardization activities towards improved receiver performance. The FCC in mid-2013 published a white paper on receiver performance:

FCC. (2013). [*Office of Engineering and Technology Invites Comments on Technological Advisory Council (TAC) White Paper and Recommendations for Improving Receiver Performance*](http://apps.fcc.gov/ecfs/document/view?id=7022305447). Public Notice, ET Docket No. 13-101. April 22, 2013.

In this white paper, the FCC recommends the creation of (better) receiver performance standards and, at the same time, asking for feedback about the role of the regulator (FCC) in this, e.g. by providing guidelines and recommendations. The FCC has not finally decided a policy on receiver performance

Below are links to some feed and reference documentation in relation to the whitepaper:

De Vries, J. P. (2013). [*Optimizing receiver performance using harm claim thresholds*](http://dx.doi.org/10.1016/j.telpol.2013.04.008). Telecommunications Policy, 37(9).

FCC TAC Receivers and Spectrum Working Group. (2013). [*Interference Limits Policy: The use of harm claim thresholds to improve the interference tolerance of wireless systems*](http://transition.fcc.gov/bureaus/oet/tac/tacdocs/WhitePaperTACInterferenceLimitsv1.0.pdf). White Paper, FCC Technology Advisory Council.

FCC TAC Spectrum Working Group. (2011). [*Spectrum efficiency metrics*](http://transition.fcc.gov/oet/tac/tacdocs/meeting92711/Spectrum_Efficiency_Metrics_White_Paper_by_TAC_Sharing_Working_Group_25Sep2011.doc). White paper, FCC Technology Advisory Council. (NB material cited in this article is in Appendix C.)

NTIA. (2003). [*Comment*](http://www.ntia.doc.gov/federal-register-notice/2003/comments-standards-non-government-radio-receivers).  Notice of Inquiry, ET Docket No. 03-65 and MM Docket No. 0-39.

PCAST. (2012). [*Report to the President: Realizing the Full Potential of Government-held Spectrum to Spur Economic Growth*](http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf).

1. NPRM: ’Notice of Proposed Rulemaking’ [↑](#footnote-ref-1)
2. *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, 12401-27, paras. 123-98 (2012) (*NPRM*). [↑](#footnote-ref-2)
3. *See* 47 C.F.R. §§ 90.307 and 27.60 [↑](#footnote-ref-3)