Questions & Answers

Planning for the World Radiocommunication Conference 2015 (WRC-15)

An interview with Oscar Giovanni León Suárez, Director General, Agencia Nacional Del Espectro (the national spectrum regulator), Colombia
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The World Radiocommunication Conference in Geneva in November 2015 will provide a rare opportunity for governments from around the world to agree new international spectrum allocations for the mobile service. Mexico is the fourth largest mobile market in Latin America and is an active participant in current WRC-15 discussions.

1. **How important is mobile broadband in Colombia?**
   In Colombia, the Plan Vive Digital is committed to increasing internet adoption all over the country. Many studies link increased internet penetration with economic growth. In Colombia we are committed to strengthening all aspects of the digital ecosystem (including infrastructure, users, content and applications) in order to develop an ICT market that benefits everyone.

   Mobile broadband is a very important "partner" in this project. Mobile broadband helps to rapidly increase the number of subscribers because it is faster to develop and install than cable solutions. In addition, the nature of mobility powers a wider range of applications and services which also promotes innovation and new business models.

2. **How much of a challenge is rising mobile data traffic?**
   Data traffic is rising tremendously. This rise presents a huge challenge to governments which need to establish a set of policies to support this growth without restricting innovation or user demand.

3. **Why is making more mobile spectrum at WRC-15 important?**
   More mobile spectrum is important in order to support the expected needs of IMT applications. In Colombia we conducted our own IMT spectrum demand projection and the result (that we will update on an annual basis) was that by 2023 it will be necessary to make available between 1040 and 1380MHz. This must take into account that it takes several years to make the band and equipment available after the identification process. Decisions at WRC-15 will have a tremendous impact on all future spectrum planning and management in all countries.

4. **What are the risks if insufficient mobile spectrum is made available?**
   Since Internet connections and IMT applications (telephony and video etc) have a big impact on the economy and the lives of all citizens, insufficient mobile spectrum could leads to delays in the introduction of new technologies and negatively impact the quality of mobile services.

5. **What is your view on calls to support a mobile broadband identification in part of the sub-700MHz band (i.e. 470-698MHz)?**
   In CITEL[1], Colombia has proposed an additional primary allocation to the mobile service in the 614-698MHz band – as well as an IMT identification. This proposal is the result of an assessment of broadcast TV planning, IMT spectrum projections and to meet the needs of the Vive Digital Plan. This proposal is based on the specific needs in our country and we are open to share our conclusions and work with all administrations within CITEL or the WRC.

6. **How important is having flexibility to use the band for broadcast and mobile?**
   What is fast now, will be faster tomorrow. Currently ICTs are deeply involved in driving powerful social-economic development, including job creation, innovation and disaster relief, among others. Also, new technology is appearing almost every year. For these reasons it is very important that administrations have as much flexibility as possible in order to take the right decisions at the right time.

   In Colombia we are aware of the spectrum requirements of both TV broadcast and mobile services. Only one thing is sure in technology: you can never be sure. So, flexibility will be key in order to ensure the ICT ecosystem can rapidly respond to new challenges created by convergence and new disruptive technologies (in all radio services). Of course, flexibility must be aligned with suitable measures to protect existing services.

7. **Why is creating the potential for mobile broadband in the L-band important (ie. part of 1350-1400MHz & 1427-1518MHz)?**
   L-band provides a very interesting trade-off between coverage and capacity. There are many possible applications for this band and we know that the standardization process is quite advanced. We found that is possible to have part of the band (i.e. 1427-1518MHz) available to IMT in the medium term. In CITEL, there is an Inter-American Proposal (IAP), to identify this range.

1. CITEL = Inter-American Telecommunication Commission (the regional regulatory body for the Americas)

8. **How do you think the spectrum can be made available and existing users accommodated?**
Spectrum reorganization is a multi-stakeholder process which is usually conducted in a reactive way. However, in Colombia we executed a project intended to outline all activities required to guarantee IMT spectrum availability for the next 10 years. This project asked current incumbents about their planned future spectrum use, the cost of their equipment and the year of installation (in order to have an estimated migration cost) and their options in case that they have to move from the band in the future. These activities help us to understand the real needs for each band and the activities required to free spectrum while also protecting existing users. Making spectrum available is a long term planning process that should involve all the interested parties. The success of this process will depend on anticipating future requirements, clear communication and open discussion.

9. **How important is it that the Americas harmonise with the rest of the world where there is growing support for a mobile broadband identification in the L-band?**
The process of harmonization is always very important in all radiocommunication services. It allows interoperability, minimises the risk of interference and promotes economies of scale. Harmonization gives the right signal to the industry to develop a wide range of good value equipment and devices in less time. However we have to be aware that in some cases the reality of the how spectrum is used could differ significantly among the regions. For now, we are focused on promoting consensus within CITEL.

10. **Does Colombia currently use the 2.7-2.9GHz band heavily?**
This band is currently used for radiolocation, in particular proximity coast radar, but the information we have is that it is not heavily used.

11. **What do you think of the prospects of segmenting the band so mobile could use a portion with incumbents in the remaining portion?**
The possibility of segmentation has to be studied in detail. To date, our studies have concluded that co-channel sharing is not feasible. As such, segmentation is the only way to allow the band to be used for IMT. We will continue evaluating current use of the band and the possibility of segmentation. However, it is important to be aware that radiolocation services have priority and studies will have to take into account the possible future needs of radiolocation applications in this band. Beyond this, it is notable that the band is contiguous to the 2.6GHz band that was licensed for mobile services in Colombia in a very successful process. This proximity of the 2.6GHz band with the 2.7-2.9GHz could allow benefits such as re-use of the same base stations.

12. **What is your view on a mobile broadband identification in a portion of the C-band (ie. 3.4-3.8GHz & 3.8-4.2GHz) and why?**
In Colombia we have experience of using the 3.4-3.6GHz band for terrestrial broadband services. Colombia had one of the largest fixed WiMAX networks in the world. However, the current allocation in 3.4-3.6GHz in Colombia is only to the fixed terrestrial service – not the mobile service. Contrastingly, the 3.4-3.6GHz range is already identified for IMT in Regions 1 and 3 and our studies show that there are many mobile networks currently working in this frequency range. For all these reasons, Colombia is pursuing an identification for IMT of the range 3.4-3-6GHz at WRC-15**.**

13. **Do you feel the Americas may align around 3.4-3.7GHz for future potential mobile use?**
It is hard to predict what is going to happen - sometimes it is not easy to reach consensus on issues like this one. We understand the concerns of all other radiocomunications services, and all their concerns will be discussed and addressed in the best way. Trends in users' habits are changing and their desire to consume more mobile data traffic is continuously growing. Upper bands like this range (or its sub-ranges) will help to address this challenge. As administrations, we should guarantee the development of all services, including mobile. Administrations should have some flexibility to provide enough spectrum, depending on their particular needs.

14. **What do you say to countries that oppose a mobile broadband identification in the C-band?**
I would say that it is necessary to look at some very nice examples of cooperation. Here is one: in CITEL, Canada supported the 3-4-3.6GHz mobile proposal even when they know that their current use of the band could make it difficult to develop a mobile network in the entire frequency range in the medium term. Cooperation is the key issue in all international spectrum management decisions. There are many mobile proposals which are looking to protect existing services in order to find the best way forward and help relieve concerns from countries which are especially reliant on incumbent services.

15. **How important is harmonising this band for mobile services worldwide?**
This band will be helpful to address growing broadband capacity requirements. IoT, WiFi, smart cities as well as growing mobile subscribers will drive data growth that could even exceed current traffic forecasts.

    Higher bands are hugely important to provide capacity mostly in densely populated urban areas. Above 2GHz, there is not much new spectrum to identify for IMT at WRC-15. 2050-2100MHz is not feasible, so the 2.7-2.9GHz band should be discussed more. Beyond this, the only range that could be identified is 3.3-3.7GHz.



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