



**INSTITUTO FEDERAL DE TELECOMUNICACIONES
OFICINA DEL COMISIONADO MARIO GERMÁN FROMOW RANGEL
IFT/100/Pleno/OC-MGFR/033/2018**

Ciudad de México a 25 de septiembre de 2018

**PLENO DEL INSTITUTO FEDERAL DE TELECOMUNICACIONES
PRESENTE**

Me permito presentar el informe de mi participación en representación del Instituto y en calidad de conferencista en "The 5th Annual Latin America Spectrum Management Conference" organizado por Forum Global los días 5 y 6 de septiembre, así como en el "Taller sobre Redes Comunitarias y Espectro Radioeléctrico" organizado por la Unión Internacional de Telecomunicaciones (UIT) el día 7 de septiembre de 2018, llevados a cabo en Buenos Aires, Argentina. Las actividades de la Delegación del IFT iniciaron el 4 de septiembre del año en curso.

Cabe mencionar que los mencionados eventos fueron organizados en colaboración con el Ministerio de Modernización de Argentina con la finalidad de intercambiar información y puntos de vista sobre temas de actualidad relacionados con políticas de gestión de espectro radioeléctrico en América Latina.

I. The 5th Annual Latin America Spectrum Management Conference

En este evento se abordaron los siguientes temas:

- Preparativos de la Región Americas para la Conferencia Mundial de Radiocomunicaciones de 2019 (CMR-19)
En este tema, en mi calidad de Presidente del Comité Consultivo Permanente II (CCP.II) de la Comisión Interamericana de Telecomunicaciones (CITEL) presenté los avances de la Región Americas respecto a los preparativos para la CMR-19 resultado de la 31 Reunión del CCP.II, así como de los trabajos que desarrolla el Instituto en los diferentes Grupos de Trabajo de la UIT
- Desarrollo de hojas de ruta para el futuro lanzamiento de bandas en América Latina
- Compartición de Espectro Radioeléctrico en la Banda C de 3.4 GHz - 4.2 GHz
- 5G en las bandas de microondas
- Gestión y distribución de espectro radioeléctrico en Argentina
- Precios y licitaciones de espectro radioeléctrico
En este punto, participé en el panel correspondiente exponiendo el marco legal vigente en nuestro país y las experiencias del IFT en licitaciones de espectro radioeléctrico
- Perspectivas sobre valoración de espectro radioeléctrico

- Enfoques para la implementación de la banda 700 MHz
- Tecnologías y soluciones para acceso universal

II. Taller sobre Redes Comunitarias y Espectro Radioeléctrico

En este evento se abordaron los siguientes temas:

- Trabajos sobre redes comunitarias
- Iniciativas de redes comunitarias en América Latina
- Enfoques regulatorios para maximizar el uso de espectro en zonas desatendidas
En este tema, participé en el panel correspondiente exponiendo el marco legal y regulatorio de las concesiones únicas y concesiones de espectro radioeléctrico para uso social comunitarias e indígenas
- Propuestas de los operadores para proveer comunicaciones en zonas no rentables y posibilidades de cooperación con redes comunitarias

Finalmente, con la participación en este evento se cumplió con el propósito de generar vías de cooperación o áreas de influencia conjunta con autoridades de organismos reguladores y entidades de gobierno de otros países sobre temas en el ámbito de competencia del Instituto.

Se anexa los programas de los eventos.

ATENTAMENTE



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Agenda

Wednesday 5 September, 2018

Morning

- 09:00 – 09:50 Session 1: Introductions and Keynote Presentations

- 09:00 – 09:15 Welcome
Andres Ibarra , Minister of Modernization, Argentina

- 09:15 – 09:50 Introductions and Keynote Presentation
Moderator: Juan Ignacio Crosta Blanco , Director, BlueNote Management Consulting

Oscar Leon , Executive Secretary, CITEL
Hector Huici , Secretary of Information Technology and Communications, Ministry of Modernization of the Argentine Republic
Silvana Giudici , President, ENACOM
Mario Maniewicz , Deputy Director, Radiocommunications Bureau, ITU

- 09:50 – 11:30 Session 2: Where are we with preparation for WRC-19 Across the Americas?
Preparation for WRC-19 is well underway in Latin America and all around the world. This session will provide the opportunity to hear from the key representatives responsible for formulating the LatAm positions and shaping preparations. Following an update on the current status of preparations within CITEL, an interactive discussion will focus on the best way forward to ensure a co-ordinated approach in the build-up to WRC, and one that works for the benefits of stakeholders and citizens throughout the region.

Moderator: Juan Ignacio Crosta Blanco , Director, BlueNote Management Consulting

- 09:50 – 10:05 Presentation
Mario Fromow , Commissioner, IFT Mexico

- 10:05 – 11:10 Panel Discussion
Mario Fromow , Commissioner, IFT Mexico
Hector Bude , Chairman, WG for WRC-15 CITEL, Head of Spectrum Management Department, URSEC
Brett Tarnutzer , Head of Spectrum, GSMA
Hazem Moakkit , Spectrum & Regulatory Policy, ESOA
Ricardo Teran , Member ITU RRB, Ministry of Modernization, Argentina

- 11:10 – 11:30 Morning Coffee

- 11:30 – 13:45 Session 3: Developing roadmpas for future release of bands across LatAm

One of the key factors that mobile operators will point to when looking at justifying investment in new technologies and networks is the need for regulatory certainty. If regulators and governments are able to provide a good indication of the spectrum that is going to be made available over the next few years and how and when then is going to happen, it is argued that this leads to an environment that encourages investment and ultimately improves consumers services and reduces the prices that they pay. This session will look at the situation in the region with regards to the development and co-ordination of 'roadmaps' in this way, and what can be done to improve things going forward.

- What examples of spectrum roadmaps are currently being seen in countries across the region, and what impact are these likely to have in encouraging operators to invest in next generation networks?
- What impact does it have on mobile operators and markets more generally when a plan for future release of spectrum is not readily available or understood?
- What can regulators in those countries that do not yet have a spectrum roadmap in place do to create certainty for operators and help them understand when spectrum will become available?
- What bands should regulators be looking at prioritising when it comes to planning for spectrum release? What is the situation across the region, for example, with the 2500MHz, 3500MHz and other key bands?
- How can it be ensured that spectrum is available for use immediately once it has been auctioned and awarded, and how should the clearing of bands be arranged to achieve this?
- Without a central body co-ordinating release of bands, how should countries work together to have a more coherent plan for the timing of spectrum release?
- How could regional co-ordination in this area work in practice, and what organisations could play a role in delivering this?

Moderator: Andrea Catalano , Editor, iProfesional.com

11:30 – 11:40	Presentation: The importance of creating national and regional roadmaps for spectrum release Lucas Gallitto , Public Policy Director, GSMA
11:40 – 11:50	Presentation Francisco Giacomini Soares , Senior Director Government Affairs, Qualcomm
11:50 – 12:00	Case Study: Roadmap for spectrum release in Argentina Oscar González , Undersecretary of Regulation, Secretariat of Information and Communication Technologies, Ministry of Modernization of the Argentine Republic
12:00 – 12:10	Case Study: Roadmap for spectrum release in Ecuador Ramiro Valencia , Head of Planning Department , ARCOTEL
12:10 – 12:20	Presentation Richard Womersley , Director of Spectrum Consulting, LS telcom
12:20 – 12:50	Panel Discussion: Developing roadmaps for spectrum release in the region
Afternoon	
12:50 – 13:45	Lunch
13:45 – 15:15	<p>Session 4: A focus on the 3.3GHz - 4.2 GHz C-Band balancing the requirements of all users The 3.4GHz - 4.2GHz C-Band spectrum has been identified worldwide as a pioneer band for 5G services. It offers a compromise between the wide coverage of lower frequencies and the higher capacity of millimeter waves, and is seen as an ideal band both for this initial launch of 5G and also to deliver additional 4G capacity. However, in South America (as in many other parts of the world) it is already intensively used for other services, in particular by the satellite industry, where C-band's higher resistance to rain fade makes it crucial in the region for services requiring high availability. It is hugely important for TV distribution across the continent and is also heavily used to provide telecommunication services such as cellular backhaul to support terrestrial mobile deployment in remote areas. This session will address the optimal allocation of spectrum between these important uses and how this might evolve over time.</p> <ul style="list-style-type: none"> • What role will the C-Band play in the roll-out of 5G services in the LatAm region? • How much C-band spectrum will mobile operators need in the next ten years? To what extent, can other 5G mobile bands, both at lower frequencies and in mmW spectrum substitute for C-band? • What frequencies are likely to be made available for mobile services in the band across Latin America, and how will they be released? • How can it be ensured that any realignment of the band can deliver a solution that balances the needs of all users in the band? • What measures are required to protect and preserve satellite users and other incumbents in the band? How important

is C-Band to satellite in the region for the foreseeable future?

- Could the proposed C-Band sharing plan between mobile and satellite in the US be an option in the Latin American region?

13:45 – 14:55	<p>Panel Discussion</p> <p>Glenn Fallas , Director, Directorate General of Quality and Spectrum, SUTEL Agostinho Linhares , Manager of Spectrum, Orbit and Broadcasting Division, ANATEL Hazem Moakkit , Vice President, Spectrum Strategy, Intelsat Celedonio von Wuthenau , GSA CITELE Spectrum Group Member, Head of Government Relations, LatAm, Nokia</p>
14:55 – 15:15	<p>Afternoon Coffee</p>
15:15 – 17:30	<p>Session 5: 5G in the mmWave bands - what is the likely direction of the Latin Americas region?</p> <p>The issue of mmWave spectrum for 5G and developing a globally harmonised approach for this is one of the key areas for discussion at WRC19. Alongside these ITU discussions, other countries (including the US and South Korea) are pushing ahead with the rollout of 5G networks in the 28GHz band, which is not included in the candidate bands at WRC. Whilst many countries in the Latin America region are yet to adopt a formal position with regards to mmWave spectrum, the WRC discussions on the horizon and the progress being made in the US and elsewhere means that it is something that is starting to be considered. This session will look at how close the 'mmWave future' is in countries across the region, and the likely direction that the region is going to take in this area.</p> <ul style="list-style-type: none"> • How important are the mmWave bands for 5G, and how do mobile operators plans to rollout networks and more generally use these bands? • How close is the 'mmWave future' in countries across the Latin Americas region, and when realistically are most likely to look at awarding spectrum in these bands? • What are the regional views on the mmWave bands to be prioritised for 5G ahead of the WRC-19 meeting next year? • What is the situation in other countries around the world, and what consensus are starting to emerge? • What sharing studies have been taking place in mmWave bands and what results have been seen to date? • Should Latin American countries follow the US approach and concentrate on the 28GHz band or side with the decisions taken at WRC-19?
15:15 – 16:25	<p>Panel Discussion</p> <p>Moderator: Pierre Blanc , Partner, Aetha Consulting</p> <p>Jose Ayala , Head of Government and Industry Relations for Latin America, Ericsson Alberto Boaventura , Coordinator of Frequency Committee, Projeto 5G Brasil Rafael Sanchez , Senior Engineer, Regulatory and Competition Department, INDOTEL, Dominican Republic Olga Madruga-Forti , Chief, Global Strategy & Negotiating Division, FCC Hazem Moakkit , Spectrum & Regulatory Policy, ESOA</p>
16:25 – 17:30	<p>A focus on... Spectrum management and allocation in Argentina</p> <p>Speakers from key stakeholder groups in Argentina will discuss some of the current issues relating to the allocation and management of spectrum in the country, followed by a room wide discussion.</p> <p>Moderator: Carolina Limbatto , Principal Analyst, Americas, Cullen International</p>
16:25 – 16:35	<p>Presentation</p> <p>Ariel Fernandez Alvarado , President, CATEL (Chamber of Telecommunications Cooperatives)</p>
16:35 – 16:45	<p>Presentation</p> <p>Ariel Grazier , President, CABASE</p>
16:45 – 16:55	<p>Presentation</p> <p>Pablo Bressano , President, , CGE Metropolitan Antonio Roncoroni , President, Fecosur, President, Cotel</p>
16:55 – 17:05	<p>Current spectrum challenges and opportunities in Argentina</p> <p>Jose Joaquin Hirschson , Coordinator of Technical Affairs, ENACOM</p>
17:05 – 17:30	<p>Room Wide Discussion</p>
17:30 – 19:00	<p>Cocktail Reception</p>

Thursday 6 September, 2018

Morning

- 09:10 – 10:50 Session 6: Spectrum Auctions Awards and Pricing
A recent GSMA report found that operators in the Latin-America region pay 60% more for spectrum than their counterparts in Europe. This session will look at the reasons for these higher costs, and the extent to which they can be justified. Looking at examples of different approaches to spectrum awards that have been seen in the region, it will examine where the best practice lies in this area, and at how regulators can balance the promotion of efficient spectrum use with that of revenue generation from spectrum awards.
- How is spectrum priced in Latin America and what recent trends in spectrum prices have been seen in the region?
 - How do these prices compare to spectrum prices for similar bands in other regions around the world?
 - What can the impact be on mobile operators and on consumers if spectrum prices are set at artificially inflated levels?
 - To what extent is the scarcity of spectrum availability affecting the prices that are being seen, and how can it be ensured that spectrum is being brought to market in a timely and efficient fashion?
 - What do regulators need to be doing to avoid ensure realistic prices for spectrum, and what examples of 'best practice' have been seen in this area?
 - To what extent should regulators rely on the market to determine spectrum prices and ensure true market value?
- Moderator: Amit Nagpal , Partner , Aetha Consulting
- 09:10 – 09:20 Introduction from the moderator
Moderator: Amit Nagpal , Partner , Aetha Consulting
- 09:20 – 10:30 Panel Discussion
Mario Fromow , Commissioner, IFT Mexico
Vitor Menezes , Superintendent of Grants and Resources for Provision of Telecommunication Services, ANATEL
Martha Suarez , Director General, ANE
Nestor Bruno , Senior Manager, Strategic Planning Direction, Telecom Argentina
Sebastian Kaplan , Director of Regulatory Affairs LatAm, Millicom
- 10:30 – 10:50 Thinking Point...Perspectives on spectrum valuation
Greg Attiyeh , Managing Director, FTI Consulting
- 10:50 – 11:10 Morning Coffee
- 11:10 – 13:20 Session 7: Approaches to the rollout of 700MHz - maximising benefits and coverage
A key objective for regulators looking to roll-out networks in the 700MHz band is to deliver nationwide coverage and help to tackle the digital divide. This session will look at different approaches that are being seen in the region and elsewhere around the world. Focus will be given to the wholesale approach that is being seen in Mexico, but also to other more conventional models. Ultimately it will look at the best way forward to making the required 'clean' spectrum in this key band available in an efficient and timely way.
- 11:10 – 12:10 Session 7i: Approaches to 700MHz seen across the Latin America Region
- 11:10 – 11:30 Presentation: Maximising the potential of the 700MHz spectrum macros Central American countries
Allan Ruiz , Executive Secretary, COMTELCA
- 11:30 – 12:50 Case Study: Rollout of the 700MHz network in Argentina
Hugo Miguel , Undersecretary of Planning, Ministry of Modernization
- 11:50 – 12:10 Case Study: Rollout of 700MHz network in Peru
Luis Pacheco Zevallos , Supervision and Inspection Manager, OSIPTEL, Peru

Afternoon

- 12:10 – 13:20 Session 7ii: Focus on...Red Compartida - The wholesale mobile network of Mexico
Earlier this year, Mexico went live with Red Compartida - the first fully wholesale mobile network anywhere in the world. This session will look at some of the challenges faced in delivering on the promises of Red Compartida, and how they

were overcome. It will look at the key objectives of the project, the extent to which they are likely to be achieved, and at successful the approach is likely to be successful compared to those seen in other countries.

- What challenges were faced when setting up the Red Compartida network and how were they overcome?
- What lessons have been learnt?
- To what extent will the project meet on its objectives of offering greater coverage and cheaper prices for consumers; and also ensuring a more competitive telecoms landscape in Mexico?
- What will it mean for the efficiency of the available spectrum in the 700MHz band, and how does this compare to expected results in other countries?

Moderator: Jorge Fernando Negrete , Director General, Media Telecom

- 12:10 – 12:30 An overview of the Red Compartida project and Progress
Fernando Borjón , Director, Promtel, SCT Mexico
- 12:30 – 13:20 Roundtable discussion
Fernando Borjón , Director, Promtel, SCT Mexico
Andrés Sastre , Regional Director, ASIET
Erica Noda , Investment Officer, IFC
- 13:20 – 14:20 Lunch
- 14:20 – 16:30 Session 8: Connecting the Unconnected: Technologies and Solutions
The previous session focussed on different approaches to the 700MHz band, which is seen throughout the region as a crucial band to help deliver low cost and sustainable connectivity to rural areas. This can only be part of the solution however – a mix of different innovative approaches and technologies is needed to deliver the affordable and efficient rural connectivity that is required. This session will offer delegates the opportunity to hear from policy and industry representatives on the creative solutions that are being explored, and the role that different technologies can play in connecting the unconnected everywhere.
- Moderator: Carolina Limbatto , Principal Analyst, Americas, Cullen International
- 14:20 – 14:40 Utilising innovative technologies and solutions to deliver universal access
Christian O'Flaherty , Regional Development, Internet Society
- 14:40 – 15:00 Franchise Rural: Delivering broadband services to rural communities
Ana Valero , Director of Regulatory Affairs, LatAm, Telefonica
- 15:00 – 15:20 Presentation: HAPS
Lester Garcia , LatAm Public Policy Manager, Access and Connectivity, Facebook
- 15:20 – 15:40 Presentation: Utilising whitespaces to connect the unconnected
Michael Daum , Director, Technology Policy, CELA Privacy and Regulatory Affairs, Microsoft
- 15:40 – 16:00 Presentation: The role of satellite in delivering rural broadband
Gabriela Lago , Director, Regulatory Affairs, OneWeb
- 16:00 – 16:30 Room Wide Discussion



Taller sobre Redes Comunitarias y Espectro Radioeléctrico

Buenos Aires, Argentina - 7 Septiembre 2018

Las redes comunitarias son objeto de estudio del Sector de Desarrollo de la UIT en el marco de la Comisión de Estudio 1. La cuestión de Estudio 5/1 Telecomunicaciones/TIC para las zonas rurales y distantes fue confirmada en la última Conferencia Mundial de Desarrollo de las Telecomunicaciones en 2017 y, en consecuencia, la presente actividad contribuirá a la obtención de los objetivos definidos. En ese marco se procurará contemplar estrategias de fomento de operadores comunitarios que contribuyan a conectar zonas y poblaciones que no cuentan aún con servicios.

El aprovechamiento del espectro radioeléctrico en zonas desatendidas amerita un trabajo de análisis y reflexión en el que participen todas las partes interesadas. El mismo debe prestar especial atención a las necesidades e iniciativas de las poblaciones afectadas.

08:00 – 09:00	Registro
09:00 – 09:30	Palabras de Bienvenida y Apertura <ul style="list-style-type: none">• Mario Maniewicz, UIT• Christian O’Flaherty, Internet Society• Mauricio Agudelo, CAF - Banco de Desarrollo de América Latina• Silvana Giudici, Presidente, ENACOM, Argentina
09:30 – 11:00	Sesión 1. Trabajos sobre redes comunitarias <p>Las redes comunitarias suelen ser una respuesta natural y autogestionada a una necesidad que aún no ha recibido soluciones efectivas del sector privado ni del sector público. En consecuencia, considerando el objetivo de superar la brecha de acceso en materia de conectividad llegando a aquellos que aún no están conectados, estas experiencias son de manera creciente objeto de atención por parte de entidades internacionales que promueven la cooperación y ven en estos modelos potenciales soluciones a las necesidades mencionadas.</p> <p>Presenta el tema y modera: Sergio Scarabino, UIT</p> <p>Presentaciones</p> <ul style="list-style-type: none">• Christian O’Flaherty, Internet Society• Mauricio Agudelo, CAF - Banco de Desarrollo de América Latina• Agustín Garzón, ENACOM, Argentina <p>Debate abierto y comentarios</p>

11:00 – 11:30	Café
11:30 – 13:00	<p>Sesión 2: Iniciativas de redes comunitarias en la región</p> <p>En esta sesión se recogerán testimonios de distintos modelos de redes comunitarias implementados en la actualidad en distintos países de la región, identificando los desafíos y oportunidades que se presentan.</p> <p>Presenta el tema y modera el panel: Christian O’Flaherty, ISOC</p> <p>Presentaciones de casos</p> <ul style="list-style-type: none"> • Peter Bloom, Rhizomatica, Mexico • Nicolás Echaniz, Altermundi, Argentina • Ignacio Prieto, Fundación Enlace Hispano Americano de Salud, Perú • Julian Casasbuenas, Colnodo, Colombia <p>Debate abierto y comentarios</p>
13:00 – 14:00	Almuerzo
14:00 – 15:30	<p>Sesión 3: Enfoques regulatorios para maximizar el uso de espectro en zonas desatendidas</p> <p>El espectro radioeléctrico se ha convertido en un recurso estratégico indispensable para proveer acceso a zonas desatendidas. La combinación de concesiones exclusivas en zonas que son comercialmente no rentables se convierte a veces en un obstáculo al despliegue de soluciones alternativas. En atención de las experiencias de las redes comunitarias es necesario revisar lo que se ha hecho en materia regulatoria a fin de habilitar el funcionamiento de estas redes sin vulnerar los derechos adquiridos por los concesionarios.</p> <p>Presenta el tema y modera el panel: Mario Maniewicz, UIT</p> <p>Presentaciones</p> <ul style="list-style-type: none"> • Oscar Gonzalez, Subsecretario de Regulación, SETIC, Ministerio de Modernización, Argentina • Mario Fromow, Comisionado, IFT, Mexico • Allan Ruiz, Secretario Ejecutivo, COMTELCA • Ramiro Valencia, Jefe del Departamento de Planificación, ARCOTEL, Ecuador <p>Debate abierto y comentarios</p>
15:30 – 16:00	Café
16:00 – 17:30	<p>Sesión 4: Propuestas de los operadores para proveer comunicaciones en zonas no rentables. Posibilidades de cooperación con redes comunitarias</p> <p>La provisión de conectividad y servicios en zonas rurales y no rentables sigue siendo un desafío para proveer banda ancha de manera sustentable. Se convierte en un espacio oportuno para la asociación público-privada y la exploración de modelos alternativos que apuesten al desarrollo integral de las zonas desatendidas.</p> <p>Presenta el tema y modera el panel: Xoan Fernandez, CAF - Banco de Desarrollo de América Latina</p>

	<p>Presentaciones</p> <ul style="list-style-type: none">• Ana Valero Huete, Grupo Telefónica• Facundo Fernandez Begni, Ericsson• Lucas Gallito, GSMA LA <p>Debate abierto y comentarios</p>
17:30 - 18:00	<p>Conclusiones y Cierre</p> <ul style="list-style-type: none">• Sergio Scarabino, UIT• Christian O'Flaherty, Internet Society• Mauricio Agudelo, CAF - Banco de Desarrollo de América Latina• Hector Huici, SETIC, Ministerio de Modernización, Argentina