Please note: This is a draft version of the programme and speakers are only confirmed when specifically mentioned.

### The 2<sup>nd</sup> Annual Latin-Americas Spectrum Management Conference

October 20 & 21, 2015 Rio de Janeiro, Brazil

### <u>Day 1</u>

08:30 – 09:00 Registration and Welcome Coffee

Moderator: **Luca Belli**, Researcher, Center for Technology and Society, Getulio Vargas Foundation (CTS/FGV), Brazil (tbc)

#### **Session 1: Keynote Presentations**

09:00 – 09:15 Keynote Presentation Oscar Leon, Executive Secretary, CITEL (tbc)

09:15 – 09:30 **Keynote Presentation Maximiliano Salvadori Martinhão,** Secretary of Telecommunications, Ministry of Communications, Brazil (confirmed)

09:30 – 09:45 **Keynote Presentation Monica Aspe Bernal**, Undersecretary of Communications, Secretariat of Communications and Transportation (SCT) Mexico (confirmed)

09:45 – 10:00 **Keynote Presentation Decker Anstrom,** Head of US Delegation to WRC-15 (tbc)

10:00 – 10:15 Keynote Presentation Board Level Rep, Region-wide Telecoms Operator

10:15 – 10:40 Discussion with this morning's speakers

10:40 – 11:00 Morning Coffee Break

Session 2: WRC15 – regional positions, likely outcomes and implications for the Americas With the Radiocommunication Assembly now just a week away and WRC-15 due to start a week later, this session will offer a final chance to hear from those responsible for developing the Inter Americas common positions and understand their proposals, aims and objectives. Comparing these to the positions that have emerged elsewhere and exploring where there is consensus and where there are differences, it will look at what this is likely to mean for discussions at WRC, and at the likely outcomes across the key agenda items.

What positions have the Americas and other regions taken on the key agenda items? Are there any surprises in the positions put forward, or are there any areas in which further changes or surprises are likely?

Where is there consensus and where are there differences?

What is the situation in the region and elsewhere regarding the 470-698 MHz band, the C-Band and the other IMT candidate bands?

When considering common regional positions and policy objectives, how can it be ensured that

the long term objectives of all stakeholders are being considered and a balanced and future-proof approach is achieved?

What are the likely outcomes on some of the key decisions, and how could these affect mobile, satellite and broadcasting spectrum allocations in the region, as well as the frequencies used for public protection and disaster relief (PPDR)?

Moderator: **Maximiliano Salvadori Martinhão**, Secretary of Telecommunications, Ministry of Communications, Brazil **(confirmed)** 

#### 11:00 – 11:20 Keynote Presentation

Hector Bude, Chair, WG for Preparation of WRC-15, CITEL (confirmed)

11:20 – 12:40 Panel discussion

Fabio Leite, Global Spectrum Regulatory Policy, ESOA (confirmed) Paulo Ricardo H. Balduino, Director General, Asociacao Brasileria de Emissoras de Radio e Televisao (confirmed) Ven Sampath, Director, Regulatory Affairs & Standards Policy, Ericsson (confirmed)

Luis Lara, Director, Government Affairs, Spectrum and Regulation LATAM, Motorola Solutions (confirmed)

12:40 – 13:40 Lunch Break

#### Session 3: Beyond WRC-15: Policy & technology options for the next generation of connectivity

### Session 3i.: Additional options to meet the growing spectrum requirements for mobile broadband

Agenda Item 1.1 at WRC-15 is focusing on identifying additional bands for mobile broadband, and alongside the additional capacity provided by refarming the 700Mz band (which will be discussed tomorrow), this will go some way to meeting growing consumer demand for mobile broadband in the region. However it can still arguably only be part of the solution. In order to both tackle bottlenecks in urban centres and also ensure the roll-out of broadband in rural areas, there is still a need to also find additional capacity, and this session will examine other options to secure this.

How are both consumer behavior and the changing way in which services are being delivered altering spectrum requirements, and how can these be fully met?

What challenges are faced by mobile operators looking to balance and manage frequency portfolios across a high number of different bands, and how can these can be overcome? What options are available to find additional bandwidth in both higher and lower frequency bands?

What innovative new technologies and policy tools are being used to help deliver the required connectivity?

What role can offloading technologies play in taking the strain off mobile networks?

Moderator: Graham Johnson, Partner, Aetha Consulting (confirmed)

13:40 – 13:50 Introductory Presentation from Moderator – Changing consumer behaviours and delivering connectivity in a new, converging environment Graham Johnson, Partner, Aetha Consulting (confirmed)

13:50 – 14:05 **Presentation: Balancing and managing frequency portfolios across bands to deliver the required connectivity** Representative, Mobile Operator or Vendor 14:05 – 14:20 **Presentation: Refarming and the use of the 2.5Ghz band** Speaker to be confirmed.

### 14:20 – 14:35 **Presentation: LTE 450 MHz technology – what potential for delivery of broadband services in rural and remote areas? Alexandre Reis,** CTO, AINMT Brasil **(confirmed)**

14:35 – 14:50 **Presentation: Addressing Unprecedented Data Demand in a Hyperconnected World Mazen Chmaytelli,** Sr. Director, Business Development, Qualcomm (confirmed)

14:50 – 15:05 **Presentation: The role of offloading & other technologies Fábio Alencar**, Vice President, ABRASAT; and Director of Business Development, Star One (confirmed)

15:05 – 15:30 Panel Discussion and Q&A

15:30 – 15:50 Afternoon Coffee Break

### Session 3 ii.: What is 5G and how can WRC-19 deliver spectrum requirements to maximise its potential across the LatAm region?

Agenda item 10 at WRC-15 has the objective of recommending items for inclusion in the agenda for the next WRC, and a big part of this (and more generally of long-term discussions on spectrum demand around the world) is focussed on meeting the needs of 5G and related LTE-A and IoT technologies. With 5G technology expected to deliver speeds several 100-times faster than fourth-generation networks, there will be a need to work efficiently and innovatively if these spectrum needs are going to be met. This session will focus on the spectrum requirements of 5G technologies and as focus already starts shifting towards WRC-19, the key band plan decisions that are set to be discussed there as we look to deliver the spectrum to deliver 5G and ensure its benefits are fully achieved.

What is 5G and what will its requirements be?

How is 5G set to affect how we use spectrum, and what decisions and changes need to be made over the next few years and at WRC-19 to ensure that its benefits are maximised?

What current spectrum strategies are being seen across the region as we move towards 5G, and what goals and priorities are Governments and regulators looking to achieve?

How can the transition between 4G and 5G be managed to ensure that the requirements of all spectrum users and the essential services that they provide are met across the region in both the short-term and the long term?

What technologies and bands offer the best solutions to meet the spectrum requirements of 5G and how can regulators and industry work together to create an environment that encourages the required investment in these?

To what extent can the millimeter bands above 6Ghz be part of the solution?

What are going to be the key bands in order to deliver 5G, and what is the shape of the 5G spectrum landscape likely to be post WRC-19?

Moderator: **Agostinho Linhares**, Manager of Spectrum, Orbit and Broadcasting Division, ANATEL (confirmed)

15:50 – 16:05 **Presentation: Delivering the 5G vision in Latin America & Globally: Spectrum Requirements & Recommendations** Representative, WWRF (tbc) 16:05 – 16:20 **Presentation: 'Mind the gap' – managing the transition between 4G and 5G Jose Ayala,** Head of Government and Industry Relations, Latin America, Ericsson (confirmed)

## 16:20 – 16:35 **Presentation: To what extent can spectrum above 6Ghz be part of the solution?**

Speaker to be confirmed.

### 16:35 – 16:50 **Presentation: Regulatory Perspective**

Diana Tomimura, Project Manager, Ministry of Communications, Brazil (confirmed)

16:50 – 17:05 **Presentation: Ensuring the right technology mix to maximize the benefits** of 5G for all Representative, Satellite Industry (tbc)

17:05 - 17:30 Panel Discussion and Q&A

17:30 End of Day 1

### <u>Day 2</u>

### 08:30 – 09:00 Registration and Welcome Coffee

#### Session 4: Digital switchover – current state of play across the region

The digital switchover in the Latin American region is ongoing, with countries at various stages in the switchover process as they look to meet their planned targets for the transition to digital broadcasting by 2024. This session will provide an update of the current situation in different countries and at the challenges that lay ahead. It will also look at the targets and deadlines that have been set and how realistic these are By taking examples from countries and regions that are already advanced in the digital switchover process, look at what lessons can be learnt and best practice in achieving a smooth transition to digital.

- What is the current situation in countries across the region, and what are the planned switchoff dates in different countries?
- How realistic is it that these targets for analogue switch-off can be met, and what implications will there be if they are not?
- How can the potential of interference be tackled and avoided?
- What issues are caused by the re-allocation of digital dividend frequencies if dates of switchover in neighboring countries vary greatly, and how can this be managed?
- How best can the 'simulcast' period of both analogue and digital services be managed, and what challenges does this raise?
- What options are available to 'fund the switchover, and what strategies have been seen so far?
- How can regulators ensure that citizens in low income areas have access to equipment to receive digital services prior to switchoff?

#### Moderator: Ricardo Castro, Partner, Catalitica (confirmed)

# 09:00 – 09:15 Introduction from moderator: The state of play of switchover across the region

Ricardo Castro, Partner, Catalitica (confirmed)

09:15 – 10:40 Panel Discussion

Rodrigo Zerbone Loureiro, Vice Chairman, Anatel (confirmed) Martha Suarez, Acting Director General, ANE, Colombia (confirmed) André Felipe Seixas Trindade, Communications Engineer, ABRATEL (confirmed) Monique Barros, Regulatory Manager, Claro (confirmed) Teresita Palacios, Chairwoman, Conatel, Paraguay (tbc) Augusto de Albuquerque, Counsellor for Information Society and Media, Delegation of the European Union to Brazil (confirmed)

10:40 – 11:00 Morning Coffee Break

### Session 5. Releasing the potential of the 700Mhz band in Latin America – awards and approaches

Whilst the analogue TV switchover is continuing, at the same time, countries across Latin America are already starting to make the first moves in refarming the 700Mhz band to mobile services. A number of awards of the Digital Dividend spectrum have now taken place, and national strategies and plans for licensing and launching networks in the 700Mhz band are starting to emerge. This session will look at the various approaches that have already taken place and those which are being proposed, and as the future shape of the 700Mhz band across the region starts to become clearer, look at the best way forward in unlocking the full economic and social benefits of this valuable spectrum.

What awards in the 700Mhz band have taken place to date, and what outcomes have been seen?

What plans and strategies are in place in countries in which the awards process has not yet begun?

What is the value of spectrum in the 700Mz band, and how can it be ensured that the prices that operators are paying for licences in the band are fair and reasonable?

Is there a link between high spectrum prices and investment in mobile broadband, and where does the balance lie in the objectives to raise revenue from licencing of spectrum and promoting investment?

What progress has been made in Mexico with regards to the roll-out of their open-access (wholesale) network, and how is it likely that this will work in practice?

Does the wholesale approach provide the best option for providing low-cost broadband access, and how does it compare with the traditional approach of competing networks?

What work has been done and needs to continue to be done across the region in order to ensure the future of the 700Mhz band is maximized?

### 11:00 – 11:15 Introductory Presentation – 700Mhz awards and approaches in the region Richard Marsden, Senior Vice President, NERA Economic Consulting (confirmed)

### 11:15 – 11:30 **Case study – Chile**

**Claudio Pezoa**, Head of Department: Radio Spectrum, Engineering and Administration, SUBTEL (tbc)

11:30 – 11:45 Case study – The wholesale approach to the 700Mhz band in Mexico Ricardo Martinez, Secretariat of Communications and Transportation (SCT), Mexico (tbc)

### 11:45 – 12:00 Case study – Plans and strategies for the 700Mhz band in the Caribbean region

**Christa Leith,** Head, Regulatory & Policy Affairs, Telecommunications Services of Trinidad and Tobago; & Member, Regulatory Committee, The Caribbean Association of National

Telecommunication Organizations (CANTO) (confirmed)

12:00 – 12:15 **The Mobile Perspective** Representative, Mobile (tbc)

12:15 – 12:40 Panel Discussion and Q&A

12:40 - 13:55 Lunch

### Session 6: Spectrum Auctions, Strategy and Valuation: Best practice for a competitive, sustainable and innovative market

There have been a number of important spectrum awards across the region recently, and many more expected in the near future. With a number of different approaches, valuations and results seen, this session will offer the opportunity to hear from 3 experts on key issues, such as best practice in auction design, valuing and awarding AWS spectrum, auction strategy and when (if ever) specific licence conditions or constraints should be used in spectrum awards in order either promote competition (eg spectrum caps) or to ensure quality of service. Following this, we will hear a response from an industry and regulatory point of view, before a final interactive discussion looking at developing a best practice for a competitive, sustainable and innovative market.

### i. Expert corner – presentations from 3 experts on important and topical issues

### 13:55 – 14:15 **Presentation: Best practice in auction design** Scott McKenzie, Director, Coleago (confirmed)

14:15 – 14:35 **Presentation: Best practice in auction conduction Jozef Svrcek**, CEO, Specure **(confirmed)** 

14:35 – 14:55 **Presentation: Best practice in auction strategy and technique** Speaker to be confirmed

### ii. Stakeholder response

14:55 – 15:10 **Response from industry** Representative, Mobile (tbc)

### 15:10 – 15:25 **Response from national regulator**

**Guillermo Montenegro**, Director Nacional de Planificacion tecnologica TIC, AFTIC Argentina (tbc)

### 15:25 – 15:45 Panel Discussion and Q&A with speakers from the session

15:45 – 16:00 Afternoon Coffee

### Session 7: Measuring and Promoting Spectrum Efficiency

As we saw yesterday, WRC-15 will see a big push from various stakeholders looking to secure more spectrum. Alongside this however, an equally important factor if the Americas region is going to maximize the social economic potential that spectrum offers is to increase the efficiency of existing spectrum, both in terms of usage and cost. This session will look at methods of measuring efficiency and at how efficiently spectrum is currently used across the region. Moving

forward it will then look at innovative options that are available to improve this and how these can best be implemented.

How efficiently is spectrum currently being used in different bands and countries across the Americas?

What metrics and tools are available for judging spectrum utilization efficiency, and what challenges and considerations need to be taken into account when defining how efficient spectrum is being used?

How can it be ensured that spectrum is being used efficiently by all users, including the military and public sector?

What technological and policy options are available to improve spectrum efficiency? What is the future of spectrum sharing and what potential does this have in reality as a tool to open up access to more spectrum and support innovation?

What are the respective advantages of sharing on a licensed, license exempt and dynamic spectrum access basis, and what challenges does each approach provide? Which has the potential for promoting the most efficient spectrum use?

Moderator: Elena Scaramuzzi, Principal Analyst, Cullen International (confirmed)

### 16:00 – 16:15 **Presentation: Measuring the efficiency of current spectrum usage across** Latin American and Caribbean Countries

Representative, LS Telcom (tbc)

16:15 – 16:30 **Presentation: Authorized Shared Access Francisco Soares,** Senior Director of Government Affairs, Qualcomm (confirmed)

### 16:30 – 16:45 **Presentation: Network Sharing**

Cristina Gavazza, Innovation and Partnerships Master Specialist, TIM Brasil (confirmed)

16:45 – 17:00 Presentation: Dynamic Spectrum Access

H Nwana, Executive Director, Dynamic Spectrum Alliance (confirmed)

17:00 – 17:15 Increasing efficiency and maximizing the potential of L-Band Spectrum Representative, Plum Consulting (tbc)

17:15 – 17:35 Panel Discussion and Q&A

17:35 End of the conference