



## OVERVIEW OF TIMINGS

### MON 14 SEPT / DAY 1: Taking Stock – where are we now and where are we going?

- 14:00 – 14:45 Welcome and Keynotes: Delivering a forward looking spectrum strategy for Africa
- 14:45 – 15:15 'Make your introductions' discovery and networking session
- 15:15 – 16:15 Fireside Chat: Looking back - A Review of WRC-19
- 16:15 – 17:00 Showcase Sessions 1

### TUES 15 SEPT / DAY 2: Looking forward...key issues ahead of WRC-23

- 11:00 – 12:30 Session 2: The next steps: Starting on the path towards WRC-23
- 12:35 – 13:20 Showcase Sessions 2
- 14:30 – 15:45 A focus on the C-Band: To what extent is co-existence of spectrum and mobile services a reality in the 3.6GHz – 3.8GHz?
- 15:45 – 16:30 HAVE YOUR SAY... Audience interaction session

### WEDS 16 SEPT / DAY 3: Delivering coverage and connectivity to societies everywhere

- 11:00 – 12:00 Fireside Chat: Managing spectrum in times of crisis: tools and techniques to keep societies connected
- 12:00 – 13:10 Maximising the potential of the UHF band for all users
- 14:00 – 16:15 Building a co-ordinated strategy towards universal access: funding and technology options
- 16:15 – 17:00 Showcase sessions 3

### THURS 17 SEPT / DAY 4: Laying the foundations for 5G rollout

- 10:00 – 10:20 Thinking Point: spectrum pricing, make or break the 5G momentum?
- 10:20 – 11:30 View from key stakeholders – “What are your hopes, plans and expectations for 5G?”
- 11:50 – 13:35 Continuing the path towards a harmonized continental 5G strategy
- 14:35 – 15:50 Taking stock: where should the priorities lie for regulators in bringing spectrum to market?
- 15:50 – 16:10 'IT'S A WRAP!' Final Comments and Closing Ceremony
- 16:10 – 17:00 HAVE YOUR SAY... Audience interaction session

# The 5<sup>th</sup> Sub Sahara Spectrum Management Conference

14 – 17 September 2020

*\*All times are Central Africa Time (UTC+2)*

## DAY 1: Taking Stock – where are we now and where are we going?

14.00 Platform opens

14.00 – 14.45 **Welcome and Keynote Presentations: Delivering a forward looking spectrum strategy for Africa**  
**John Omo**, Secretary General, African Telecommunications Union (ATU) (confirmed)  
**Mario Maniewicz**, Director BR, ITU (confirmed)

14.45 – 15.15 **'Make your introductions' discovery and networking session**

An opportunity to find out what's happening in the exhibition and breakout areas over the course of the week, and to explore the platform and the networking area!

15.15 – 16.15 **Session 1: Fireside Chat: Looking back - A Review of WRC-19**

WRC-19 took place in Egypt at the end of 2019, delivering key decisions and directions on spectrum policy for the next four years and beyond. Now that the dust has settled, the general consensus from most stakeholders seems to be that overall a fair balance was reached, and also that overall, it was a successful conference for the African delegation and the Sub-Saharan region. This session will provide the opportunity to look back at the processes and outcomes of WRC-19 and the key takeaways for the Sub-Saharan region.

- What were the most important outcomes and takeaways from WRC-19 for the Sub-Saharan region?
- How influential was the African regional 'voice' at WRC-19, and how successful can the conference considered to have been for the region? What now needs to be done to continue this strong, co-ordinated approach moving forward?
- What new bands were identified for IMT at WRC-19 and what are now the next steps in order to ensure they are made available as quickly and efficiently as possible?

Moderator: **Jean-Jacques Massima-Landji**, Representative for the Central African Zone and Madagascar, ITU (confirmed)

Speakers:

**Kezias Mwale** Radiocommunications Coordinator, African Telecommunications Union (confirmed)

**Bashir Gwandu**, Chairman, ITU Commonwealth Group (confirmed)

**Mohamed Moghazi**, Director of Spectrum Research and Studies Department, NTRA (confirmed)

16.15 – 17.00 **Showcase Sessions 1**

Stage 1: 5G is ON - Hosted by Huawei

Stage 2: Technology Roadmap of mmWaves - Hosted by Qualcomm

Stage 3: Dynamic Spectrum Access for an Inclusive Digital Africa - Hosted by Microsoft

## DAY 2: Looking forward...key issues ahead of WRC-23

### 11:00 – 12.30 **Session 2: The next steps: Starting on the path towards WRC-23**

We had the opportunity yesterday to look back over the key outcomes and conclusions from WRC-19. This session will now offer us the chance to look forward to the next steps. It will hear from representatives from different industry stakeholder groups on what they now see as their main priorities, opportunities and challenges following the decisions that were taken at WRC-19; and look ahead at the key issues and timetable ahead as the build up to WRC-23 already begins.

- Following the outcomes of WRC-19, what are now the key priorities, opportunities and challenges for different stakeholder groups?
- What impact are the decisions that have been taken likely to have on the future shape of connectivity in the low, mid and high frequency bands?
- What are set to be the most important (and most contentious) issues or agenda items at WRC-23 both for region 1 and globally?
- To what extent are studies and early preparation for WRC-23 currently being impacted by the situation with Covid-19, and what impact might this have on the longer-term scheduling and planning over the next 4 years?

Moderator: **Mario Maniewicz**, Director BR, ITU (confirmed)

11:00 – 11:15 Keynote Presentation  
**Mario Maniewicz**, Director BR, ITU (confirmed)

11:15 – 12.30 Panel Discussion  
**Mohaned Juwad**, Global Spectrum & Regulatory Policy, Global Satellite Coalition (confirmed)  
**Luciana Camargos**, Senior Director, Future Spectrum, GSMA (confirmed)  
**Elizabeth Migwalla**, Regional Lead for Africa, GSA (confirmed)  
**Mezom Melouta**, ICT Expert, AUB (confirmed)  
**Ahmed Boraud**, Chair WRC-23, Preparatory Group, ECOWAS (confirmed)

12.35 – 13:20 **Showcase Sessions 2**  
Stage 1: Delivering the requirements of 5G with 6GHz - Hosted by Coleago  
Stage 2: Industry Transformation Powered by 5G - Hosted by Ericsson  
Stage 3: The Role of Satellite in Bridging the Digital Divide – Hosted by Intelsat

13:20 – 14.30 Lunch Break

### 14.30 – 15.45 **Session 3: A focus on the C-Band: To what extent is co-existence of satellite and mobile services a reality in the 3.6GHz – 3.8GHz?**

One of the key issues on the agenda for WRC-23 is the future use of the 3.6GHz – 3.8GHz upper C-Band. Around the world, the C-Band is seen by the mobile community as a hugely important frequency for 5G. It is also intensively used for other services however, including the satellite industry, where in Africa, the high resistance to rain fade makes it crucial for services requiring high availability. With the lower (3.4GHz – 3.6GHz) portion of the band now allocated as co-primary for mobile across the region, attention is switching to the 3.6GHz – 3.8GHz portion of the band, with consideration of upgrading mobile services from secondary to primary status in region 1 on the agenda for WRC-23. This session will look specifically at the band, and at the best way forward to meet the needs of all users.

- With the 3.4GHz - 3.6GHz now allocated as co-primary for mobile across the Sub-Saharan region (and the rest of region 1), what is the situation regarding plans for allocation of spectrum in this band?
- Given that this portion of the band has already been identified for use for 5G (and in many cases not yet assigned), to what extent is there still a need to find additional spectrum in other areas of the C-band?

- What specific challenges exist in the Sub-Sahara region when trying to free up spectrum in the 3.6GHz – 3.8GHz band for 5G?
- To what extent is interference-free co-existence between mobile and satellite in the band possible?
- With the 3.6GHz-3.8GHz band featuring prominently on the agenda for WRC-23, how are discussions around this frequency likely to progress in region 1 in the period up to 2023 and beyond?
- How can the needs of the satellite and mobile communities across the C-band be best balanced to ensure that the requirements of both key sectors are met?

Moderator: **Hans-Martin Ihle**, Associate Director, NERA Economic Consulting (confirmed)

14.30 – 15.45 Roundtable Discussion

**Cesar Gutierrez Miguelez**, Head of Wireless Regulatory Policy for Africa, Huawei (confirmed)

**Brian Jakins**, Regional Vice President, Africa Sales, Intelsat (confirmed)

**Basebi Mosinyi**, Deputy Director of Spectrum Management, BOCRA (confirmed)

**Jerome Louis**, Director of Engineering Department, ICTA, Mauritius (confirmed)

15.45 – 16.30 **HAVE YOUR SAY...**

Open and interactive discussion – audience members will have the chance to take the floor and give their thoughts on the discussions that have taken place in today's panels.

### **DAY 3: Delivering coverage and connectivity to societies everywhere**

#### **11:00 – 12:00 Session 4: Fireside Chat: Managing spectrum in times of crisis: tools and techniques to keep societies connected**

The impact of the Covid-19 pandemic put a huge amount of pressure on communication networks all across the world. The imposed lockdowns and the resulting increase in home-working and use of web streaming and other services significantly increased broadband traffic, as and served to highlight the critical importance of connectivity for business continuity. In developing regions such as Sub-Saharan Africa, where there is very little fixed infrastructure to fall back on, the impact on mobile and wireless connections was even greater than in other areas around the world. This session will look at the work that was done by industry and regulators across Africa and the rest of the world to keep societies connected, and at how access to spectrum was managed to help with this.

- How did usage across networks rise during the crisis and what impact was seen for the various connectivity providers and stakeholders?
- What response to this was seen by regulators and industry representatives across different countries, and what spectrum management tools and techniques were utilised as part of this?
- Which approaches worked best, and which were less successful? What lessons can be taken from the communication sector's response to the crisis?
- What examples of temporary assignments of spectrum have been seen, and for what periods of time? How can the process of returning the spectrum when these temporary assignments come to an end best be handled for the benefit of all users and to ensure the continuity of the broader spectrum regime?
- What now needs to be the next steps as we move towards the post Covid recovery stage, and what role can spectrum play in delivering this?

Moderator: **Istvan Bozsoki**, Head of Telecommunication Networks and Spectrum Management Division, ITU (confirmed)

#### **11:00 – 12:00 Fireside Chat**

**Dick Sono**, Chief Director - Radio Frequency Spectrum, Department of Telecommunications and Postal Services, South Africa (confirmed)

**Tom Olwero**, Director, Frequency Spectrum Management, C A Kenya (confirmed)

**Hazem Moakkit**, Vice President, Spectrum Strategy, Intelsat (confirmed)

**Shergen Padayachee**, Executive Head, Technology & Wholesale, Vodacom Group (confirmed)

#### **12:00 – 13:10 Session 5: Maximising the potential of the UHF band for all users**

The UHF band provides key spectrum for a number of different stakeholders and technologies across Sub-Saharan Africa. The 700Mhz, 800Mhz and 900Mhz bands are all now identified for IMT (although the allocation of 'digital dividend' spectrum in the 700 & 800 MHz bands is ongoing across many countries), whilst the sub-700Mhz band is seen as a key for broadcasters across the region. Dynamic spectrum technologies are also using unassigned spectrum (or Television White Spaces) to deliver rural broadband connectivity. With a review of spectrum use and needs across the UHF band on the agenda for WRC-23, this session will take stock and look at how the potential of the band can be maximised for all users. It will frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470 694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 (WRC 15).

- What is the current progress with digital migration across the region in the 700MHz and 800MHz bands?
- What are the barriers that are slowing things down, and how can these be overcome?
- How can regulators ensure that the spectrum in this band is allocated in a way that allows it to be used as efficiently as possible?
- How much spectrum UHF spectrum is actually required by mobile operators to meet the coverage requirements of 4G and 5G? How can this be balanced with also meeting the requirements of broadcasters and other incumbent users?
- With a review of the usage and needs within 470-960 MHz UHF band in Region 1 on the agenda for WRC-23, what work needs to be done in study groups in order to prepare for this?
- What is the current thinking regarding the short-term and long-term future use of UHF spectrum across Sub-Saharan Africa and beyond?

- What is the future of the TV whitespace model in the UHF band?
- To what extent are there possibilities for sharing between IMT and incumbent users of the UHF band, and what challenges are there to this? Would making the frequencies available on a paired (FDD) or an unpaired (TDD) basis make any changes to this?

Moderator: **Mark Colville**, Principal, Analysys Mason (confirmed)

12.00 – 12:05 Introductory comments  
**Mark Colville**, Principal, Analysys Mason (confirmed)

12:05 – 13:15 Panel Discussion  
**Austin Nwaulune**, Director Spectrum Administration, NCC, Nigeria (confirmed)  
**Jean-Pierre Faisan**, Head of the Communications Working Group, Broadcast Networks Europe (confirmed)  
**Martha Suarez**, President, Dynamic Spectrum Alliance (confirmed)  
**Eiman Mohyeldin**, Senior Specialist, Standardization, Regulatory and Spectrum, Nokia (confirmed)  
**Richard Magkotho**, Radiocommunications Specialists, ICASA (confirmed)

13.15 – 14.00 Lunch Break

#### 14.00 – 16.15 **Session 6: Building a co-ordinated strategy towards universal access: funding and technology options**

A recent report from the United Nations Broadband Commission for Sustainable Development estimated that around \$100 billion would be needed to achieve universal access to broadband connectivity in Africa by 2030. It also highlighted the necessity of stakeholders to look at innovative approaches and the need to work together in order to extend connectivity to the hardest to reach rural areas. This session will look at the different funding and technology options that can help to reach this target, and at how stakeholders should be working together to achieve this common goal for the benefit of all.

- What funding options exist to deliver the required investment in network roll out that will help to make the goal of delivering universal access across Africa a reality?
- What major challenges and hurdles need to be overcome and how can all stakeholders come together to tackle these?
- What specific challenges are faced when looking at connecting the unconnected in African countries, particularly relating to issues such as the relative shortage of fixed infrastructure, and the geographical scale of the areas that is being covered?
- What innovative solutions and technologies are available to help deliver the required connectivity, particularly in those most remote areas?
- How can it be ensured that the right technology mix is put in place in each case to meet the needs of communities and regions throughout the continent?

#### **Session 6.i: Funding and Technology Options - Presentations and Case Studies**

Moderator: **Andrew Rugege**, Regional Director for Africa, ITU (confirmed)

14:00 – 14:15 Introductory keynote presentation  
**Andrew Rugege**, Regional Director for Africa, ITU (confirmed)

14.15 – 14.30 Presentation: Finding the required funding to deliver universal access  
**Eleanor Sarpong**, Deputy Director and Policy Lead, Alliance for Affordable Internet (confirmed)

14.30 – 14.45 Presentation: Technology Options to deliver universal access  
**Bello Moussa**, Head of Innovation and ICT Strategies, Huawei, Southern Africa (confirmed)

14.45 – 15:00 Presentation: Technology Options to deliver universal access  
**Laith Hamad**, Global Spectrum & Regulatory Policy, ESOA (confirmed)

15:00 – 15:15 Q&A and Discussion

## **Session 6.ii: The View from the Regions**

Following the presentations and case studies in the previous session, this session will hear from regional representatives throughout Africa on their strategy for delivering universal access, and the importance of working together to achieve this.

Moderator: **Andrew Rugege**, Regional Director for Africa, ITU (confirmed)

15.15 – 16.15 Panel Discussion

**Sarah A. Kabahuma**, Liaison Manager - ICT, East African Communications Organisation (confirmed)

**Mawuli Amoda**, Programme Officer Telecommunications & Networks, ECOWAS (confirmed)

**Antony Chigaazira**, Executive Secretary, CRASA (confirmed)

**Guichard Tsangou**, Head of Telecommunications/ICT, Economic Community of Central African States (ECCAS) (confirmed)

16.15 – 17:00 **Showcase session 3**

Stage 1: Improving Connectivity in Sub-Saharan Africa – How Effective Spectrum Licensing Can Set the Stage for Better Digitalisation - Hosted by GSMA

Stage 2: Spectrum – the Answer to Africa's Connectivity Questions? - Hosted by ESOA

Stage 3: Wi-Fi 6E Demo - Hosted by Intel

## **DAY 4: Making 5G a reality in Africa**

10:00 – 10:20 **Thinking Point: spectrum pricing, make or break the 5G momentum?**

**Scott McKenzie**, Director, Coleago (confirmed)

### **Session 7: View from key stakeholders – “What are your hopes, plans and expectations for 5G?”**

Whilst the actual rollout of 5G networks across Africa remains some way in the future, countries all across the region are developing their rollout plans, and building their 5G vision and roadmap. This session will provide a platform for key stakeholders from across the region to outline the hopes and expectations that they have for 5G, and the ways in which they plan to work together to deliver this.

All the speakers have been given 7 minutes to address 3 key questions:

- What are your hopes and expectations for 5G?
- What spectrum needs to be made available to achieve this, and how should it be allocated in a way to allow it to be used as efficiently as possible?
- How do you hope that connectivity providers use the bandwidth that is made available to ensure that the 5G benefits are maximised?

Moderator: **Shiv K. Bakhshi**, Vice President, Industry Relations, Ericsson (confirmed)

10:20 – 10:25 Introductory Comments by Moderator

**Shiv K. Bakhshi**, Vice President, Industry Relations, Ericsson (confirmed)

10:25 – 10:55 “What are your hopes, plans and expectations for 5G?” – Opening thoughts

From 4 stakeholders in Africa

**Richard Magkothlo**, Radiocommunications Specialists, ICASA (confirmed)

**Daniel Obam**, Communications Secretary, National Communications Secretariat, Kenya (confirmed)

**Jake Mongalo**, Technical Regulatory Manager, MTN (confirmed)

**Damien Ndizeye**, Council Member, Consumers International (confirmed)

10:55 – 11:30 Discussion with the speakers

11:30 – 11:50 Break

### **Session 8: Continuing the path towards a harmonized continental 5G strategy**

We have learnt in the last session about some of the hopes and plans for 5G of countries across the Sub-Saharan region. This session will now build in this by looking more broadly at the continental strategy to deliver the successful implementation of 5G across the region as a whole. It will examine the work that is being done by the African Union Commission/Africa Telecommunications Union and other stakeholders, and at the progress that has been made since a similar session to this was held at last year’s edition of this conference.

- What unique challenges and opportunities does 5G offer to Africa, and how should the regional approach be different to that used elsewhere in order to take advantage of these?
- How important is it that Africa takes a harmonised approach when it comes to roll-out of 5G, and to what extent is a concrete plan beginning to emerge?
- What lessons can be learnt from the experiences of rolling out 5G networks that have been seen in developed regions?
- What options are available to regulators when looking to develop licencing frameworks for 5G, and to what extent should local as well as national licencing be considered to ensure the needs of all users in both rural and urban areas are covered?
- How can it be ensured that 5G does not just become a technology for cities and developed regions in Africa, but also truly serves the development needs of the region as a whole?



- What benefits can 5G bring to developing areas and low-income consumers, and how can the roll-out of 5G networks be coordinated with continued roll out of 3G and 4G services?
- To what extent are the decisions at WRC-19 likely to influence and shape the regional approach to delivering 5G in Africa?
- What mix of technologies and solutions are best going to meet the needs of Africa's 5G future, and how can it be ensured that both the infrastructure and spectrum is in place to deliver this?

Moderator: **Elizabeth Migwalla**, Senior Director of Government Affairs for MEA, Qualcomm (confirmed)

11:50 – 12:05 Keynote presentation

**Souhila Amazouz**, Senior Radio Communication Officer, African Union Commission (AUC) (confirmed)

12:05 – 12:20 Setting the scene - Introductory Comments by Moderator

**Elizabeth Migwalla**, Senior Director of Government Affairs for MEA, Qualcomm (confirmed)

12.20 – 13.35 Panel Discussion

**Bienvenu Agbokponto Soglo**, Government and Policy Director – Africa, Intel Corporation (confirmed)

**Cecil Ameil**, Global Spectrum & Regulatory Policy, ESOA (confirmed)

**Baxton Sirewu**, Director Technical Services Engineer, Potraz (confirmed)

**Budget Linzie**, Head of Electronic Communications, CRASA (confirmed)

**Flavien Bachabi**, President, ARCEP, Benin (confirmed)

13.35 – 14.35 Lunch Break

### **Session 9: Taking stock: where should the priorities lie for regulators in bringing spectrum to market?**

A wide range of spectrum bands have now been identified for allocation for IMT in the Sub-Saharan region – 700MHz, 800MHz, 2.6Ghz, 3.5Ghz, 26GHz and more. In many cases however, the process of actually allocating the available bandwidth has not yet taken place and the spectrum is laying fallow. This has resulted in a backlog of frequencies waiting to be allocated across many countries. This session will look at which bands regulators across the region should be prioritising when looking at making bandwidth available for 3G, 4G and 5G.

- What is the current situation regarding the allocation and award of the 5G pioneer bands and other bands that have been identified for IMT across Sub Saharan countries?
- What bands should be prioritised by regulators when looking at key spectrum to make available?
- What impact has Covid-19 had on spectrum the release of spectrum bands across the region and to what extent have things been delayed?
- Should countries and operators be focussing on the roll-out of 3G, 4G or 5G services?
- To what extent is there a need to continue identifying new spectrum bands for IMT, or should the focus now be more on making available the bandwidth that has already been allocated?
- What tools and mechanisms exist for regulators to ensure that available bandwidth is allocated for mobile broadband as quickly, fairly and efficiently as possible?

Moderator: **Kiril Minchev**, Manager, Aetha Consulting (confirmed)

14:35 – 15:50 Panel Discussion

**Kamal Tamawa**, Senior Policy Manager, Sub-Saharan Africa, GSMA (confirmed)

**Cristina Data**, Director of Spectrum Policy and Analysis, Ofcom (confirmed)

**Mandialy Bodian**, Head of Engineering & Frequency Planning Department ARTP (confirmed)

**Abdouramane El Hadjar**, Director of Strategy and Prospective, Telecommunications Regulatory Board, Cameroon (confirmed)

**'IT'S A WRAP!' Final Comments and Closing Ceremony** (hosted by Broadcast Networks Europe)

Closing comments and thoughts, traditional entertainment from Mauritius (our virtual event host country), and a final 'HAVE YOUR SAY...' session – the opportunity for audience members to take the floor and give their thoughts on the discussions that have taken place in today's panels as well as providing their overall event conclusions and takeaways.

**15.50 – 15.55 Welcome Remarks**

**Jean-Pierre Faisan**, Head of the Communications Working Group, Broadcast Networks Europe (confirmed)

**15.50 – 16.05 Closing Comments**

**Andrew Rugege**, Regional Director for Africa, ITU (confirmed)

**Dick Christophe Ng Sui Wa**, Chairperson, ICTA Mauritius (confirmed)

**16.05 – 16.10 Traditional Mauritian Entertainment**

**16.10 – 17.00 HAVE YOUR SAY...**

A final opportunity for audience members to take the floor and give their thoughts on the discussions that have taken place in today's panels as well as providing their overall event conclusions and takeaways