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ITU REGIONAL SEMINAR FOR EUROPE AND CIS ON SPECTRUM MANAGEMENT  
AND BROADCASTING  
OPENING CEREMONY  
SESSION 1  
SESSION 2

JULY 1, 2020

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>> Good morning. Colleagues, I'm asking you for patience we're giving 2 more minutes to delegates to enter the platform. Then we'll leadoff. Ladies and gentlemen, this is time 04, time to kick-off and start the ITU seminar for Europe and CIS countries on spectrum management and broadcasting. Before we are starting with the opening ceremony, I will try to draw your attention that you have the liberty of selecting the language to use and to speak between the English and Russian. We also are encouraging you to use the captioning and to better follow the discussions and to have the record of the discussions.

Before we're starting with the opening ceremony, I also invite the IT moderator to provide us with a few insights on how to navigate through -- during the meeting.

The floor is yours.

>> Moderator: Thank you. Good morning, dear participants. I'm the remote moderator for this event. I want to draw your

attention to the following details. Firstly, if you would like to enter in, please raise your hand with the current raise hand button to request the floor which notifies us if you want to have the floor and we'll enable your audio and also please turn on your cameras when you're speaking.

Secondly, you can use the chat which you will see on the right side of the screen. With this chat, you can communicate with remote participants moderator and other participants.

Thirdly, the meeting will be recorded and we'll have Russian and English interpretation. On the upper left corner you see the interpreting feature. By click on that, you can choose your preferred language. If you said none, you will listen to the floor.

At the end of your presentation, click on the stop button to stop the speaking. You can do so by clicking on the upper right hand corner of the screen. It is so important. There are only five people maximum that can stream at the same time. When you disconnect yourself, you give other participants the chance to be involved.

I will be here. Thank you. Have a nice event.

>> Thank you for that.

Now I invite our high-level speakers to address the meeting and first I would like to invite Mr. Mario Maniewicz, Director of the Radiocommunication Bureau of the ITU and to provide opening remarks.

>> MARIO MANIEWICZ: Dr. Peter Vari, national Director General of national media and info communication authority, ladies and gentlemen, dear friends, I'm delighted to welcome you to the regional seminar for Europe and the Commonwealth of Independent States on Spectrum Management and Broadcasting with the ITU with support of the national media and info communication authority from Hungary. (Poor audio quality).

Europe and CIS has some of the most advanced economies in the world, this is reflected in terms of access and use of IT, the report shows that Europe is the region with the highest Internet usage rating a 80% connected and 99% mobile network through 3G or higher. The numbers in CIS are also impressive with 72% of individuals using the Internet and 88% mobile broadband connected. The connectivity in Europe and CIS and the digital technologies have proven to be instrumental economies during this COVID-19 pandemic. It enabled people to work from home, health, learning tools and helped people access critical medical services through telemedicine and other technology-led solutions. At ITU we are making full use of technology to ensure that our meetings and events, such as this one, will be useful and we continue to deliver to the expectation of our

members.

In this context we are holding that event. The seminars will discuss the outcomes of the world communication Conference, WRC-19, implementation plans and the priorities of the region in preparation for WRC-23. As you know, WRC-19 opened up the opportunity for introducing innovative, advanced services in the field of telecommunication. It has paved the way to connect the world using terrestrial and space communication technologies. This can impact the lives people around the world creating a digital landscape for obtainable goals and development. The seminar will explore the policies and best practices to foster and implement these wireless innovations in Europe and CIS. WRC-19 further identified additional global harmonized frequency bands for international mobile telecommunications, including the IMT2020, otherwise known as 5G. Facilitating the reverse usage scenarios for enhanced mobile broadband, massive machine telecommunications and low latency communications. This creates Smart Cities, makes communities more sustainable while allowing for effective climate actions, improved healthcare, sustainable agriculture practices and greater energy efficiency. This seminar will examine the issues related to spectrum management and the challenges in national 5G implementation, as well as the economics of spectrum utilization in the context of 5G.

Finally, the seminar will explore the future challenges to and dressed in digital broadcasting and spectrum management in general in Europe and CIS regions. The digital revolution is continuously opening doors to a variety of new applications that are spurring greater interest in and demand for the limited spectrum resource, increased demand requires that the spectrums use the efficiently and effectively and effective spectrum management processes be implemented. Ladies and gentlemen, you have a very heavy agenda before you. Let me conclude by thanking again the national media and info communication authority from Hungary to organize this virtual seminar. Let me also extend my special thanks to the regional telecommunication groups, thank you for your excellent cooperation and continued support to the ITU. At the same time, I would like to know that this seminar, it is a real example of excellent collaboration between the ITU radiocommunication and development sector which continues to support each other in building national and regional capacities and strengthening the enabling world of ICTs, including those relying on wireless systems to facilitate the achievements of the Sustainable Development Goals. We at the ITU believe these discussions are of utmost importance and I assure you can count on us to support the initiatives on spectrum management and activities in advancing the WRC-23 preparatory process. I wish you a very fruitful discussion.

Thank you very much.

>> It is my pleasure to invite Peter Vari, deputy director general, national media and info communication authority from Hungary. The floor is yours.

>> PETER VARI: Thank you very much. Good morning, Mr. Mario Maniewicz, good morning. Good morning, ladies and gentlemen. I want to welcome you and the virtual symposium organized by the ITU for Europe and CIS countries. I'm so pleased so many of you were able to join us. Last year no one thought we would be giving this Conference, the social distancing and other measures with the surprising COVID-19, it is drastically changing the communication behavior of people worldwide.

In this situation the role of telecommunication came to the forefront, and so far it is clear how important it is for communication and leading other sectors and how it interweaves in other's lives. The importance of communication is enormous so far. However, major changes took place this spring. With the outbreak of academic virtualization, we were faced with the fact that telecommunication working and distance learning were not an option, but the only option and it was fairly clear (audio issue). (No audio). Professionalism. 5G technology is a mobile revolution. 5G is not only important because it has the potential to support millions, the devices, that each of us need, but also because it has the potential to transform the lives of people around the world. The main advantage of the 5G is the speed and the transmission, lower latency and therefore the capacity of more execution.

(Audio issue). (No audio).

>> Thank you for contributing to this opening ceremony. With this, the opening segment of the meeting, we can declare as finalized and we'll be able to mosh to the first sessions.

For this morning, we have the two sessions, and so from 10:15 and 12:15, we'll be discussing the WRC-19 and beyond, as well as the policies for wireless innovation in Europe and CIS. Dear ladies and gentlemen, this is the moment when It is my great pleasure to introduce Istvan Bozsoki, head of telecommunication networks and spectrum management division of the ITU who will be moderating the first session on the WRC-19 and beyond joined by several prominent representatives from different regions.

Bozsoki, the floor is yours.

>> ISTVAN BOZSOKI: I don't want to speak long. You can see that we can manage, for example, the presentation on the results of the WRC-19 and the preparation for WRC-23 in 8 minutes if we can do that magic! We have speakers from the Radiocommunication Bureau, Philippe Aubineau, also we have four speakers from the

different regional telecommunication organizations and I hope we'll be able to hear from them, Albert Nalbandian, Alexandre Kholod, Khalid Al-Awadi and Kezias Mwale.

I want to let you know that after the presentations, there's no time for question, it is very limited. I hope at the end of the session we can have some questions to raise.

I will give the floor immediately over to Philippe Aubineau. Philippe Aubineau, please try to do the magic!

>> PHILIPPE AUBINEAU: Yes. Thank you. Good morning to all of the colleagues online. It is a pleasure for being with you this morning. I thank you very much for giving me this opportunity to present information from WRC-19 as well as for the preparation of WRC-23. I hope that we can put on the screen the presentation that's been prepared. You can find on the drive two versions of the representation, one in PDF format that contained much more detail and a short one which I'll show to you now. It has a number of slides. I'm trying to stay on 20 seconds per slide, I hope I can do that.

We'll move forward, please.

So you can go to the next slide to show the main principle and objectives of WRCs, in particular, to stress here the importance of providing a stable and predictable regulatory environment needed for the future investments, and all this required a good number of preparation to bring together all of the stakeholders that we work in building consensus for the review, for the radio regulation, the relevant part of it, this is the international version we'll use for the radio spectrum and satellite orbit.

If you go to the next slide, you will see that one of the objective, it is to -- to achieve worldwide or regional spectrum harmonization which is very important to prevent harmful interference and roaming and provide affordable devices and services, also to support the emergency communications.

The next slide, you have some figures from WRC-19, there was a high number of participants, we exceed significantly the previous report and also the number of administrations represented and many other entities, including industry and other stakeholders. You have also the documentation, the proposal received, 38 agenda items and issues.

On the next slide, you could see an overview of the topics that were considered at WRC-19 and so you could see the variety of services, almost all of the 40 plus services on the radio regs, they were on the agenda and there are different applications also that were considered.

If we tried to go to the incomes slide, we will see these agenda items.

To show you this slide, just telling you that we have these

documents that have been sent, we have the important circular letters that were issued afterwards, in particular, something which is a bit important in the final line, it is the WRC-19 decision included in the WRC-19 Plenary meetings, and another importance, we come back to that for the particular resolutions.

Going to the next slide, you can look at the first set of achievements, it relates to additional spectrum for the IMT. You see that 17 gigahertz, additional spectrum have been provided and identified for IMT and you see the bands identified on this slide. If we focus on this, you can see that the WRC has specified emissions to protect the system and this band, it has the ESS systems and there was a two-step approach decided to implement before September of 27 certain level of emissions and after that first of September, 2027 more stringent levels of the emission. Also I stress here the decision with the 66 band, this band was identified for IMT and to consider other wireless system applications and that you may implement IMT or consider IMT and other applications.

The next slide, in terms of harmonization, you see what was achieved with additional spectrum for IMT. Next slide please.

You see several bands are identified above 24, they were harmonized globally and only around 45 to 48 was only partial harmonization as you see on this slide.

If you go to the next slide, you could see that not only the WRC-19 allocated or identified new spectrum for IMT, but under agenda item 8, WRC-19 further harmonized bands that were already identified for IMT and you could see on this slide the difference between the situation after WRC-15 and then after WRC-19 where for instance in the mid-band range, you could see a significant increase of the number of countries using these bands or planning to use these bands.

On the next slide, we have another topic related to WRC-19 relating to the wireless access systems, the purpose of this agenda item, it was to clarify and see how you could use some bands and the conclusion, it was focused on the 51.50, 52.50, where different things are developed to facilitate the use of this band further, in particular in trains.

And if you go to the next slide.

You see the new platforms to develop and facilitate the new systems and on the next slide you have the harmonization of that band which was achieved also in WRC-19 and I'll go quickly to the next slide to show you the transport communication systems that were considered in WRC-19. This issue, it would be further harmonized in the work of ITU-R, the Study Group activity by development and reports, we also have a number of the -- next slide again, please -- we also have a number of amateur, Maritime and aeronautical, it is important to note the

harmonization of the band 50-52 as well as the development of a Maritime telecommunication, there was a form of that, and the navigational data as well as for GMDSS, the Maritime distress system where you have the spectrum with the Maritime systems and also for NGSO NMSS, we have that spectrum. This will be looked at WRC-23.

The next slide, it shows the achievement for the non-GSO satellite system, important to note the regulatory framework for the NON-GSO for the gigahertz and the approach we're looking at for the development of the satellite constellation and we are developing that constellation.

>> ISTVAN BOZSOKI: You have to hurry. We're at the end of the time.

>> PHILIPPE AUBINEAU: Next one, I'll skip that. Next slide, please.

This is the other issue with satellite. The next slide, a few words about WRC-23 which relates -- next slide again, please.

I hope you don't call it.

This is the different topics that we have on WRC-23 agenda. First one, it appears on the mobile, IMT, the fixed broadcasting service bands and there will be studies to try to allocate new spectrum in the range here from 3 to 10 gigahertz as well as to see how to share the bands from 470 to 960 megahertz and then also a new station trying to be studied to find suitable bands for 2.7 gigahertz.

We also have a number of topics related to transportation again, that's related to night or aeronautical noble service and others that you see here, the further harmonization. Looking at the -- please go back to the previous slide, please.

Thank you.

On the right-hand side here, you have also topics related to science services and below that, the satellite services. What is important to note here, it is the recent achievement of WRC-19 regarding the use of earth station in motion communicating with GSO, the Ka bands, that will be further developed for communication, but also with non-Geo sat light system. This is a big look for WRC-23.

>> ISTVAN BOZSOKI: I'm sorry. Last words.

>> PHILIPPE AUBINEAU: I would simply go to the -- if you go to the next slides.

The next one again. A further one.

Just to show you the next steps towards WRC-23, we have had already the first session of the con inferential preparatory meeting right after WRC-19 and we organized the preparation of the studies for WRC-23, we developed the structure for the draft CPM report and allocated agenda item through chapters and we

also identified responsible groups in ITU-R to develop the different studies. All this is summarized in future slides. That will get us to WRC-23, the second session, it will be held normally in the middle of 2022 and then we would have -- sorry, it is the 23-2, it is in the middle of 2023, it is about 6 months prior to WRC-23 and then we will have the Final Meetings of the original preparation leading to our WRC-23. In parallel to that, the Council will have to finalize the WRC-23 agenda and the date for WRC-23 with the discretion and the interests to host from U.A.E. and we have in parallel also the national and regional preparation of the Director of Spain trying to identify the need for the different stakeholders in the countries and consolidating or harmonizing that at the regional level before presenting that to the ITU.

With that, I thank you very much. Sorry if I was a bit too long.

>> ISTVAN BOZSOKI: Sorry I'm sure it was really impossible. Thank you very much for your presentation. Now I ask Mr. Alexandre Kholod CEPT. I don't know whether he's there.

Is Alexandre Kholod there?

>> Alexandre Kholod, yes. He's with us.

>> ISTVAN BOZSOKI: He's coming. Okay. The next speaker, Alexandre Kholod, he works with the European presentation for WRC-23.

Alex, the floor is yours.

>> ALEXANDRE KHOLOD: Good morning, everyone. I hope you can see and hear me well. While the presentation is being prepared, I would like to thank the BDT for inviting me to speak at this regional symposium. It is my pleasure and honor to be with you here this very sunny morning. As my talk is related to the Conference issue, I would like also to take this opportunity to thank the BR for all great efforts in the last month to allow the smooth start for ITU-R preparations for the next Conference despite this pandemic period.

I will speak today in my capacity of Chairman of Conference Preparatory Group to briefly highlight the last conference and the plans on the CEPT side, and I will present the CEPT priorities and organization of the studies for the next Conference.

Next slide, please.

To start with, I would like to emphasize that the 2019 Conference successfully resolved all of the contention issues on the agenda, the spectrum of IMT bands, spectrum for other platforms, operation of earth station in motion, the satellite procedural issues, creating milestones for the use of orbital and other resources by constellations of satellites.

The success of the Conference was also endorsed by



administrations, all signing the final acts. I'm proud to say that CEPT contributed a lot to further the issues on the agenda of the previous Conference. Therefore, the Conference outcomes, they're very satisfactory to us. All but one agenda item, the final decisions of the conference, they're very close to the European common proposals which will be submitted in the next Conference.

Next slide, please.

CEPT has already started to implement the decisions of the last Conference. In particular, the EE Plenary tasked Working Groups and will review the outcome and to suggest any necessary actions. Clearly, the first logical step would be to update the so-called European Common Allocation Table, furthermore, the outcome of the Conference on ECC decisions like IMT, 5G, other issues, all of this, it will now need to be introduced into the existing ECC procedures like decisions and reports and require the development of new deliverables and different work items were already created and depending on the issue to implement, the time span for these work items, it is between one and two years.

Next slide, please.

As administration of the -- as emission of the last Conference decision, I present on this slide the CEPT work on the decision of the 26 gigahertz band. I believe some you have recall well the intense discussions at the last Conference regarding the protection of passive earth exploration services. The Conference decided to implement the two-step approach regarding the limit for the out of band services. Reflecting that outcome of the Conference, we have also introduced the two-step approach in our decision and revise the limits to correspond to the barriers which are now given in 750. We have a few differences in comparing them to the Conference resolution. The main one, I show that here, it is that we advanced by 3.5 years the date for the second step. It will start in Europe on the 1st, January, 2027 whereas in the resolution of the Conference, it is September, 2027.

Next slide, please.

I move now to the agenda of the next Conference. The agenda contains 19 different items and 4 topics, that all fall broadly as highlighted by Philippe Aubineau previously in four categories of issues, mobile, broadband, space, transport, scientific medicine. If I speak about priorities for the Conference for CEPT, I would like to observe this agenda had been compiled to a large extent following the proposal from CEPT. Therefore, many items and topics are significant for CEPT members and therefore it is inappropriate to discuss just a couple of issues and this has been a priority for CEPT in the

Conference. We are interested in proposal and that we want to exhaust all of the issues raised.

I would like to point out two agenda items in my view that will be contention at the next Conference and will take time, the first one, of course, the review of the HR band and the other one, it is the two possible identification in the bands.

Regarding the CEPT preparation for the next Conference, it will be done in the Conference preparatory group. Due to the COVID-19 pandemic we had our first meeting remotely, last week. It was a successful meeting focused on the organizational structure and the assignment of agenda items to different project teams. I show here the structure of CPG, we have five project teams that will cover the Conference. Each with a well-defined scope and area of responsibilities. These project teams will start to have the first preparatory meetings in September or October, we don't know whether it will be possible to hold physical meetings or it should be attended still remotely. We will see. As for the second meeting of Conference preparatory group, we plan to hold it in December and I hope it will be realistic by that time to organize a face-to-face meeting, probably some restrictions in place for sanitary measures.

Next slide, please.

In terms of my concluding remarks, I would like to observe that we are all responsible for the successful outcomes of the Conference. This success means for us to secure the huge investments of different industries that are being made in radio technologies, and second to ensure that the world population benefits and takes full advantage of the best technologies that are currently available or will be made available later. In order to achieve the ultimate goal to have accessible Conference, the process of Conference preparation should be clear and transparent. All potential stakeholders should have access and be able to contribute to the studies on the regional and national level. Also noting the difference of interests and needs across six region and organization, we need to continue the previously established excellent -- I call it an excellent -- dialogue, between these regional organization, especially now in the pandemic period that causes so many issues to us, we should probably identify the international context and discussions.

Condition including, the previous Conference was successful, I'm confident the next one will be successful too.

Thank you very much for your attention. If you need more information on the last slide, I provide some links and you can follow the CEPT preparation for the Conference in these links. Thank you.

>> ISTVAN BOZSOKI: Thank you very much. You have kept the

time rather nicely. I do see some raised hands, the representative of Arab spectrum management group, he was the CPM19 Chairman. I don't know if he's there or I think he's coming. Yes. Hey. Good morning maybe. We're ready for your preparation for the next WRC from the lab region.

>> KHALID AL-AWADI: Good morning. Good morning. Good afternoon for me. Good morning I think for you and the rest of the participants from the European region.

I'm honored, glad that I have the opportunity to represent the ASMG and our experience that we had in the last Conference and the experience so far we're having for the preparations of WRC-23. I will also be speaking as well on behalf of the administration of the U.A.E. and some of the elements also attach the work that we're doing in the United Arab Emirates and the preparations for the next WRC.

We can move on. I know we have a bit of a limit with timing. I would like to move on to the next slide.

I would like to -- this is a very general information about the Arab Spectrum Management Group. As you're aware, ASMG, it is one of the regional groups established by the Arab Ministry of Council for ICT, one of the arms of the Arab League. We're basically under the Arab League per se as a spectrum management group responsible for managing radio spectrum. The Arab States work in this Working Group and there are three major activities: The first one, to basically take a look at all of the issues related to spectrum management in the Arab region, including sharing views, emerging aspects and new technologies that are coming in the sector.

The next thing that we work on, and the majority of the time, it is the Arab Common Proposals for the World Radio Conference, this constitutes the previous cycle, of course, it was constituted of 90% or 85% of the work of the ASMG, we look at agenda items and try to find our common proposals on the agenda items.

The third activity, which we work on, actively as well, it is the contribution of the work of the Working Parties and Study Groups of the Radio Sector and the ITU.

If you move to the next slide, please.

For us, I think the WRC-19 was quite a success. We were glad and honored that the Conference was actually in one of the states with are a part of the ASMG and part of the African Union. It was held in Egypt, in Sharm El-Sheikh, we're happy that WRC-19 was ran with huge success. We have heard of a good number of participants, one of the biggest in history. I think for the results of the discussions we are quite happy, satisfied that most of the agenda items, they were actually successfully discussed and successfully concluded. As we always say,

everybody is equally happy and equally unhappy, as they say.

For us, generally the main parts that we were really happy with, it is the topics that you see in front of you. First of all, for the IMT bands, we're very much interested, as you have seen, even at the Conference, the ASMG group, it is really keen on having additional spectrum to be identified for and we have done a marvelous job during this Conference. We understand that there are some issues that are related to some of the bands, the 26 gigahertz, but I think we can hopefully have implementation of the different systems and these bands and at the same time, the protection of the systems which are in adjacent bands, I'm sure we'll find a satisfactory solution with all of these systems. The other issue we're happy with, the recent documentation, that's something that we have between us and the European Group. This is an important system and important solution that is being introduced in the world, and we're happy that we're having an extension for the bands that will be used for the ESM systems.

At the same time, with WRC-23, we're happy that we're extending the implementation of the systems and different other frequency bands and other systems like the non-GEOs and we're hoping that the discussions are positive with regards to these agenda items in WRC-23. The.

Next important topic discussed in is the non-geo satellites, there is an interest in these and the huge constellations are planned. This is an important success we had during WRC-19. Next one, it is not that much advanced until now, we have good plans to improve this system and this resolution, it is going to be an addition to the work.

We hope we can get a better -- let's say specification or better indication for the use of the frequency band systems, but the current resolution, it is satisfactory. I think we'll work forward, work additionally with regards to this system in order to have better clarity.

In general, for the ASMG, I can share with you, we have 48 contributions from the ASMG to the Conference, we were happy that we had 19 of these proposals being similar to the proposals brought up by the ASMG and in addition to that, we have had 13 conclusions from the Conference that were aligned with the ASMG proposal with some modifications. I think that result was satisfactory for us as an Arab Group.

Next slide, please.

With regards to the preparation or the work that we do after the Conference, unfortunately, up until now, in the ASMG we don't have common efforts that we have with the framework for the spectrum management, however, I can share with you the work that we're doing in the United Arab Emirates. This is basically

what we do after the Conferences, we have a complete review of the regulatory framework of the spectrum management in the country and we work on the national frequency plan and the spectrum charts that we have. We are working on this currently, these documents, it was last modified in 2016 following WRC-15, now we're working on modifying the documents as well as having a new document which was issued recently, which is the U.A.E. spectrum 2020 to 2025 Outlook, it's a Strategic Plan for the radio spectrum management in the country and this is basically what is a result of the Conference. In addition to this, of course, we have a total review of all of the documents to make sure that we are aligned with the international regulations.

>> ISTVAN BOZSOKI: You have the last minute.

>> KHALID AL-AWADI: That was fast! Next slide, please.

So we were one of the lucky groups that we had the opportunity to hold a meeting, a physical meeting actually, after -- immediately after the Conference, in February of this year, we held our physical meeting of the Arab Spectrum Management Group and that was the main topics discussed, it was the mechanism of the work and we redistributed the agenda items in five Working Groups and one important conclusion, it was from this -- from this ASMG, that we created a Working Group for standards. This is something that we're happy to say that we're trying to copy the efforts and the work that was done in the European region. I think you are doing well, whether that's to the standards, the technical standards, and hopefully we're trying to achieve similar achievements by having this new working group in the ASMG.

Next slide, please.

This is our roadmap. I'm not going to go thoroughly through it. We're having the next meeting, the second quarter of 2021. Then we'll have the next meeting, the second quarter of 2022, just before the end of the Working Group meetings.

Next slide, please.

We're going to have our next meeting just before the second session of the CPM and first quarter of 2023 and the last meeting, it will be just before the Conference, which is in quarter 4 of 2023.

Last point I wanted to mention, it is as you know, there's a big effort being done by the United Arab Emirates to host the next Conference in the U.A.E. We're working hard in cooperation with the ITU in order to achieve this target. Internally in the U.A.E., also we have already established a Committee for the arrangements and the preparations for the hosting so we just hope that everything goes well and we really look forward to welcoming all of the participants in the next WRC-23 to be held here hopefully in the U.A.E. Thank you for

listening. If you have any questions, I think we postponed that until the end of the sessions.

Thank you very much u.

>> ISTVAN BOZSOKI: Thank you, Khalid Al-Awadi. I put the message, that if anyone has a question, put it in the chat.

Now we don't have the chance to have more discussions on the questions. Please send it, we can share it with the speakers. In addition, you saw earlier, they put already the presentations on the websites. You can find them there.

The next speaker, Kezias Mwale, he's a representative of the African Telecommunication Union. I hope that he's coming. I'm sure he's arriving. Unfortunately, Albert is still not reachable..

Is Kezias Mwale there?

>> Remote moderator: No. I can't see him.

>> ISTVAN BOZSOKI: He's on the list.

Kezias Mwale, please raise your hand. I just had a chat with him. He was available..

If you're having a problem, put it into the chat.

>> Remote moderator: As I see, he's not connected.

>> ISTVAN BOZSOKI: He was connected --

>> Remote moderator: He was connected before.

>> ISTVAN BOZSOKI: 5 minutes ago.

>> Remote moderator: Yes.

>> ISTVAN BOZSOKI: I'm not sure whether he didn't want to do the presentation. I hope he can join back.

I think Albert is -- Albert. I see Albert there. Albert, can you raise your hand.

Kezias Mwale, are you back? Can you raise your hand?

>> ISTVAN BOZSOKI: Please, the floor is yours. Don't forget, we have around 8 minutes.

>> KEZIAS MWALE: Thank you very much. I'm sorry for this Internet break. I don't know why it has to happen when I was about to speak. I'm sorry about that.

First of all, thanks to the ITU Office of Europe and the BR led by Mario Maniewicz, we thank you and also to thank all other regions that we have worked so well together for the past Conferences.

I'll be quick I hope. I'll address something in case there is one, two people who do not know who we are, we have our WRC-19 perspective from our view, and how items have been treated by our perspective and then looking at the general Outlook for WRC-23 preparations.

Next slide, please.

So here I present to you about ATU, we're specialized section of the African Union in the field of telecommunications and ICTs. We were founded in 1977 but we formed in 1999. We're

a membership organization, thus far we have 48 Member States who are African countries, and then about 47 associate members. Our mission is to accelerate the development of ICTs, as you can guess, in Africa, we're currently based in Nairobi.

Next slide, please.

Here I sort of outlined to you our perspective on WRC-19. Generally, we believe that WRC-19 was really greatly hosted by Egypt. Great hosting in our view by Egypt who is a ATU member and ASMG member. We can claim them for ourselves. We had great participation by Delegates, great success overall.

Of course, as we say in radio, everyone was hopefully happy and happy! I think in the spirit of compromise, we managed to strike that balance to make many windows. In our view, our key outcomes were expansion of the life of the resolution illusion on capacity building together -- resolution on capacity building together with the D Sector and also a guideline for management of unlawful satellite earth stations. We were very happy that WRC-19 decided to facilitate the new systems, also allocated additional spectrum for IMT in this particular instance, 5G, and then in our case, the possibility for a new -- for effected countries in the broadcasting satellite plan, and also the possibility for a group of countries to actually notify and use fixed satellite services. We're extremely happy about those. We're very happy that WRC-19 agreed to place mandatory measures for management of the vehicle satellite stations in addition to others. And, of course, the WRC-23 agenda, particularly the agenda 1.2 which will look at our stat gee of IMT band below 10.5 gigahertz. For us, coverage is still an issue. We believe that the lower bands between 4 to 10.5 would help.

Next slide, please.

Here I summarize what we think key agenda items for WRC-23, and here I must make a disclaimer that this view is from the general secretariat, membership has not agreed on this because we're yet to have our first preparatory meeting. This is the feeling of us from the general secretariat. Number one, agenda item 1.2 on a number of bands that will be started for potential for identification and we believe and trust that this -- that these bands, they will be identified because that would help in our corporate agenda. As you can imagine, we are still not covered with mobile broadband and we hope these band will help. It cannot be just fixed with 8 but not all African countries are excited but that range is for IMT. That must be made clear.

Then there is the HIBS in SUB2.7 as explained with the coverage issue, we're hopeful that WRC-23 will improve the use of HIBS in sub 2.7 gigahertz in bands already identified and we think and believe that HIBS may help us in fostering the coverage agenda, particularly in rural areas where IMT bands are

not yet used. Therefore, stations in the air, it is better to use those and bridge the coverage gap.

In the future of the UHF band, here again, two sides to it, there are those countries, countries who are in the digital development while another group of countries, they really are against any prospect of this and we really state this as an interesting one from our perspective as general secretariat.

Next slide, please.

>> ISTVAN BOZSOKI: You have a minute.

>> KEZIAS MWALE: Here, this is the general outcome for WRC-23, we have two levels of recommendations, and the decision making meetings, they're called African preparatory meeting, these are decision-making meetings, each year we have one, and then the Working Groups.

Next slide, please.

That is it. Thank you so very much for your time. Anticipate hopeful we'll be able to see each other very soon.

>> ISTVAN BOZSOKI: Good news. I see now that the representative of RCC, I wish to give the floor to Albert Nalbandian.

I hope that he's coming.

>> Remote moderator: Yes. He has the floor.

>> ISTVAN BOZSOKI: Yes.

>> Remote moderator: Mr. Albert, you have the floor. Can you hear us?

>> ISTVAN BOZSOKI: I don't see him.

>> Maybe you have to unmute? He looks like there is a challenge. I will call him on the phone and we'll connect to save time.

>> ISTVAN BOZSOKI: Can it go through the interpreters?

>> ISTVAN BOZSOKI: We can hear you and --

>> You're connected through WhatsApp. Can you hear us?

>> ALBERT NALBANDIAN: Yes. I hear. The participant, they can hear?

>> ISTVAN BOZSOKI: It is a little bit weak.

>> Okay.

>> ISTVAN BOZSOKI: We'll increase the volume. Now we can start. Yes?

>> ALBERT NALBANDIAN: I should use my mobile?

>> ISTVAN BOZSOKI: You can start speaking. We're connected in a different way. Yes.

If you can just use the English --

>> ALBERT NALBANDIAN: From mobile or --

>> ISTVAN BOZSOKI: From mobile. Telephone.

>> ALBERT NALBANDIAN: From telephone. I'm starting once more.

Everybody hear me.



>> ISTVAN BOZSOKI: Yes. We can hear you. We have 8 minutes.

>> ALBERT NALBANDIAN: Thank you very much. Good morning. Thank you, dear colleagues.

I do present in Russian, I was supposed to do in Russian. Therefore, I will.

The first session of the WRC-19 in the movement forward, and I would like to start off with -- we lost it -- with -- well, I would like to say a few introductory remarks. One of the outstanding achievements in this Conference, and we still are pondering and analyzing the results of the radio systems and they work and should work without interferences. That is being regulated by radio regulation. This is amended in the document for all of those who use satellite orbits and the spectrum and I would like to draw your attention to the fact that that preparation to the world Conference should be viewed from the point of view of negotiations about satellite orbits and spectrum. In that sense, the Conference itself, it is a final stage of negotiations so the preparation, it is the most important in terms of the decisions to be taken at the Conference.

The Conference, this is part of the three-fold system in the ITU. We can view the three components in different order, but now I can see like this, more particularly, and please show the slide where I depicted this three-tiered system. So the Assembly of the radiocommunications, this is just before the world Conference and then the preparation session, it starts work for the next Conference, and in that sense, in preparation to the Conference, the emphasis, it is made on regulatory, technical issues and in harmonization and we have the view on multifaceted questions in many languages during the preparation and preparatory sessions. Without good preparation, at the Conference we may face issues where it would be difficult to find solutions. Preparation is the key. You can see on this slide, preparation to the Conference, the steps, I'm not going to go into details, but I would like to say that whatever we do at the Conferences, it is starting from '99 3 is spearheaded to improve the information process. Without information data and bases, we will not be able to find solutions to the questions that are included in the agenda. Here I would like to draw your attention to the fact that the Conference work on the basics of the proposal from the Member States of the ITU and seeks regions and their representative participants, specifically Arab, Africa, Western European, Americas, then our CIS countries.

Then I would like to highlight the problem which we faced before. We discussed it continuously. The recent Conferences had substantive agendas which contained such issues as the

spectrum and all of the services, all of the systems used in this range. There is one problem here. This is a problem of the development of 5G systems and the satellite systems and constellation of the satellite systems and we believe in the future the systems will merge and turn into one global mega system covering the earth segment and the satellite segment as well. Despite of the decisions that were taken, the development of the systems, they will continue.

Here we have to highlight the following: The increase of the electromagnetic transmissions with respect to the environment and the lack of competent specialists, without them, you cannot build anything. This is two issues that we have to pencil for us, and we have to start working on them well beforehand when the problem becomes burdensome. In our region we have started the preparation for the next Conference. It should be noted here that we created a Working Group in the RCC. We developed the plan of the preparation to the next Conference where we identified all of the focal points for all the items on the agenda and not only items on the agenda but additional issues that popped up as a result of the discussions during the Plenary sessions of the previous Conference, the significant element of our preparation, it is of course interregional coordination. It is slide number 10. Here I would like to highlight that the assistance which renders the organizing of a series of workshops in terms of preparation for the next Conference. There are three workshop, one for the text of the report, second in one-year time, a second workshop, the development of the draft report and final workshop, it is on the final text of the report, just before the Conference in 2023. We developed the principles of the preparation appointed focal points and this information, it was sent to all regional organizations, all the sessions, including the sessions for September this year.

In conclusion, I would like to say --

>> There are technical glitches.

>> ALBERT NALBANDIAN: ITU members hold multilateral conversations on the issues and have transparent measures to have relevant resolutions to provide for the consensus. In that sense, the situation that we have in the ITU presently, it is quite positive and fruitful.

Thank you very much for your attention.

>> Thank you very much..

Unfortunately, we'll be closing this session and we'll be starting the next session.

Over to you.

>> ISTVAN BOZSOKI: Yes. Thank you very much.

I'm happy that we could have the presentation.

It was an interesting session. A very tense session. Especially the difficulty we're having with such a large presentation on the WRC-19 and the WRC-23 presentations. But as I mentioned, you can find the presentations online and if you have any questions, put them in the chat and the speaker to whom you want to have the question answered. Sorry. Right now we don't have time for questions. I thank you for your attention.

I'm disappearing now from the video. I pass the video and the floor to Mr. Pados, moderator of the next session.

Thank you. Thank you. Good-bye!

>> LASZLO PADOS: Good morning, everybody. We have our main topic, the Strategic Planning and Policies for Wireless Innovation in Europe and CIS. The focus is for the implementation of new technologies. Our speakers are Mr. Roman Kurdadze, Spectrum Expert Working Group Chair, Eastern Partnership Electronic Communications Regulators Network ; Mr. Darko Ratkaj, Senior Project Manager for European Broadcasting Union ; Mr. Dimitar Genovski, head of the Radio Frequency Spectrum Regulation Department, Ministry of Communication and Information of Belarus ; Ms. Natalia Ratkaj, head of Public Affairs, EMEA Satellite Operator Association ; Mr. Pavel Mamchenkov, Spectrum Strategy and Management Megaphone, Russia.

Mr. Roman Kurdadze, the floor is for you.

>> ROMAN KURDADZE: Thank you so much. My audio? Can you hear me?

>> Yes.

>> ROMAN KURDADZE: May I ask for the presentation to be shown.

Thank you for the opportunity to present our expert Working Group activities. I'll try my best to present it in an efficient manner eliminating minor details.

Go to the first slide, please.

First of all, a brief introduction. As you may know, SEWG, is stands for Spectrum Expert Working Group, it was established in 2016 by the partnership regulators with the support of European Commission as an informal group to work towards a set of recommendations, remedy, mitigation, technical ideas which commonly support the political decisions and intentions of either administrations and at the same time ease the gross of all involved parties. The commitment by partners to coordinate on spectrum issues were successfully completed and we're continuing towards coordinated national spectrum strategies in the eastern partnership countries which will have formulated as regional spectrum agreement.

Going back to the beginning of our work, nowadays, we can proudly note that there is more and more national experts from

RSPG, others, they have participated in our work and, of course, contribution of our moderator, Mr. Laszlo Pados in terms of presentations and consultations he made to us cannot be underestimated using this opportunity I want to thank you, once again.

Next slide, please.

In this regard, it will be appropriate to mention goals we achieved by now. In 14E.U. countries it is necessary to terminate the digital terrestrial television licenses to release 700 megahertz band by 2020 or 2022. In nine European countries, it was possible to wait until the license expiration date and not prolong the license without missing a deadline set by this, the approach to wait until the license expiration date, it is a favorite one. That's exactly in line with the partnership country deadlines, but certain authorities went even further, as in actions speak louder than words, Georgia is an example, they were able to publish a 5G strategy in 2019 after more than a month of public consultations and questions and answers to stakeholders, the strategic document has been approved. We took into account the experience and analyzed the best practices of European countries to come up with a balanced and flexible approach. We introduced spectrum caps to ensure equitable access to spectrum for potential newcomers to provide a sustainable, market competition and fair conditions for all players.

The next aspect to consider, it is emission and compatibility with television stations by implementing the recommendation 1501 for emission, which describes the active and passive systems, the independence of the system operation, it could be reached as well as protection of broadcasting will be ensured. This approach is reflected in the document that's been worked on and formulated as I said, at regional spectrum agreement.

Having in mind the lack of time, relevant details can be found in the documentation so let's jump to the projects that we're going to focus on during the very next meeting and on.

Next slide, please.

As we're speaking about -- as we're speaking about freeing up 700 from broadcasting, it is worth mentioning the goals of the challenge, which has enabled 5G operations in this range. On the other hand, to meet the requirements for next generation networks, we have to ensure the capacity and the speeds which cannot be achieved with only that range. After precise comparison of best practices, we can conclude 1.4, 2.3 and 2.6 gigs as the most optimal ones and easiest to be utilized by eastern partnership countries.

That is exactly what we're going to focus on along with

some higher ranges like 37 gigs, to ensure high-speed for broadband.

Can we go to the next slide.

That's okay. From a coordination perspective, there are some key elements which have to be discussed as soon as possible to outline our next steps toward implementations.

These are additional spectrum availability satellite protection which was already emphasized during previous presentations, security of systems and new solutions for cross-border coordination issues. With the help of international organizations, we're more than sure that all of them are going to be solved very effectively.

Another project we'll focus on, it is one of the most popular and from a tourism perspective, a 5G corridor, on one hand, there is nothing new in it, if it will be combined with the newest technologies available on the market along with the rapid implementations, even with the breaking in regime, such -- this will be extremely attractive to users. Last but not least, the significant issue, it is the emission control, which was also discussed during this meeting as experts in communication field, we have to take all necessary steps to define a new framework and rise it to national level. It is one of the most crucial issue many countries already face, but believe with appropriate status, consultations with experts and examinations of the best practices, we'll be able to successfully compile an appropriate emission framework and adapt to local laws in the timely manner which, of course, should not be done -- which of course, should be done in a manner applicable for most, not -- if not all in the partnership countries.

For the end of my presentation, it is one -- you may see there are different fields for us to focus on, which will lead all to successful implementation of the modern technologies and flexible, yet cooperated manner, what's most important to be aligned with E.U. countries.

Thank you.

>> LASZLO PADOS: Thank you.

Thank you.

The next speaker, is Darko Ratkaj. Darko Ratkaj, are you here?

>> Remote moderator: Mr. Darko, you have the floor. Can you hear us?

>> LASZLO PADOS: Darko.

>> Maybe we'll go to the next speaker to save time.

>> LASZLO PADOS: The next speaker, Mr. Dimitar Genovski. Please join us.

>> Remote moderator: There seems to be an Internet problem.

From our side, everything is okay.

>> If Pavel is ready, maybe you can take Pavel.

>> Thank you so much. Can you hear me, well?

>> Yes.

>> Okay. So let me try to make the presentation. First of all, I really appreciate to be with you. I would like to address issues related to is spectrum infrastructure sharing. Can we put it on the screen? (Pavel Mamchenkov).

The next one. Yes.

The topic of sharing, it is becoming the subject of the great importance in 5G network implementations. The argument to have the different approaches, how to collaborate between operators and regulators, it is the total cost of ownership of 5G networks. Today several new 5G license, spectrum license and models, they're on the discussions. You can see it on the slide. This composition, it was proposed by the spectrum policy forum in the United Kingdom as a response of finding ways how to provide licensing for 26 gigahertz, we'll make note of all of those methods and here I would like to just highlight that four out of five models are related to spectrum sharing.

Next slide. The first traditional or conventional message, it is the individual or exclusive national allocation of spectrum to the operators. It is used traditionally by the regulators mobile network operators since it guarantees the quality of service as well promoting competition and it will also invite the subject for the 5G era, especially the rural bands. In new bands.

There will be some applications and there will be exceptions and we'll make note of them in a later stage.

Next slide, please.

Here you can see the first example of the future share of usage model. It is called the Mixed Spectrum Release Model. The idea, it is to look at the territory of the country, of the region, put it in two different parts, the first part, it is the part for the -- it may be the urban part and with the exclusion approach and there are several of them, there are rural areas, they could spectrum share approach. There are several doorways of this apro. The first, there is a need to find a buffer area and the second, that some applications or services, for example, the backdoor services in the 5G network, they should be protected from the harmful interference of the neighbor or the coshare operators. It makes sense to distinguish the suburb and urban areas how to define the rules of the future usage on the shared basis.

The next slide, it provides an example of how it was done in Hong Kong. This is the high traffic demand priority areas. The communications of Hong Kong, it has divided in the range in

the two areas. In green, the picture there, you can see the parts of spectrum for the exclusion of non-shared usage and 400 megahertz band in the 28 gigahertz band that was allocated on a shared basis. Those 400 MEG bands, it is utilized by the smaller networks for the local high-traffic demand areas and with a wide licensing, having no licensing obligations and with the spectrum caps of 400 for each operator and with the first come first serve assignment model.

The next in our example, it is the next slide, it is a club sharing model. Now, this is a requisite for the 4G, 5G ranges I can say and it was initially introduced by the Italian administration during their options in the year 2018. The goal was to take 1 gig of spectrum resource from 26.5 up to 27.5 gigs and to subdivide that into five equal parts for the operators. The first comer in the particular location, they can use the whole 1 gig of the band and until the next one, the next operator comes, to the same location, and operators should come to an agreement how to share the spectrum resource. Of course, in the consultancy process with the regulator. You have to decide how to use it in this model and this model, it used and it work was the same spectrum and there is a transition period, of how to release the spectrum by the first comer. So it is quite a flexible model and we'll see the results I hope in the near future of how it works.

The next slide also illustrates the next approach, it is called the technology innovation driven sharing. It is from the United States or as it is called ASI in Europe or licensing in Europe, and the idea, it is to use the modern technologies allowing two divide different levels of spectrum users with different priorities. It is done on the instantaneous manner, how to find a place in spectrum resource on the geographical and frequency domain and how to avoid harmful interference to the users. I think the next will be artificial intelligence technologies that could be used for radio stations as well as for regulators with the processing of Big Data and it will involve additional levels of flexibility in regulatory and operational mechanism of network, of Internet 5G network.

The next slide, it is from Italy, not to waste time, I will just point out one interesting fracture, I think it is interesting in Europe where the third party, it is allowed to manage issues related to interference between the operators.

Next slide, please.

This is an example of China.

Now we're speaking about not just the MNO cases of sharing, but we can see the examples of sharing companies, sharing parties. On this slide, the landscape of allocation for 5G, for the spectrum bands, it is demonstrated. There are four

operators in China with the 5G licensing and they have three sharing pants, the first, China broadcasting network, those companies, they signed an agreement in May, 2020 in order to have the joint efforts in the rollout of 5G networks.

The second camp, it is the China Telecom, they have an agreement to deploy 5G networks with a joint effort in the 50 cities of China. It is the common radio access networks. And the next, it is CBM China Telecom, that combines the joint efforts for the indoor 5G applications in the frequency band 3300 up to 3400.

The next slide, it is an example of the Russian Federation where we're still under discussions here on the issues related to the 5G joint venture between the biggest mobile server providers with the task to participate in spectrum deployment exercises and to become the coordinator of spectrum sharing and in from structure sharing here in Russia, taking into account the need to save costs in 5G implementation in our territory.

The next slide, it is the last one, to conclude, you know, as I told you, there are key challenges of the total cost of ownership for 5G, and it may involve three difficulties, in spectrum, in backhauling and they could be solved by different collaborations between the mobile network operators and, of course, accompanied with the associated activities from regulators in order to establish flexible regulation framework in order to facilitate the sharing networks by operators.

That concludes my consultation. Taw thank you so much.

>> LASZLO PADOS: Thank you for that interesting presentation. We try to connect again Darko Ratkaj.

>> DARKO RATKAJ: Can you hear me? Thank you for bearing with me. Thank you for inviting me to speak at this event today. I think this is really a great opportunity.

The European broadcasting Union, and today when thinking about preparing for this session, the Strategic Planning and policies for wireless innovation, I decided to take a slightly different topic than the previous presentations.

Can I see the next slide, please.

I will start with talking about our thinking of where is the value of wireless technologies, then how will Strategic Planning help us to maximize the value? The next slide, please.

So the EBU, the European Broadcasting Union, it is an association of public service media organizations. A couple of basic parameters here, so the EBU members, they're present in more than 56 countries in the world and we have a large number of associates all around the world. Between them, they could use around 2,000 different service, radio, television channels, online services.

Next slide, please.



When we look at the services, it is not only a potential audience that's reached of about 1 million people, it is also in the technology domain, it is quite a significant impact in developing the technology for the media services.

Next slide, please.

So when thinking about wireless technologies, media is using a large number of different wireless solutions. What you see here, it is that the volume, it is obviously, there is a value in the industry itself, so the commercial value, the equipment, the services that the industry has enabled. The biggest value, of course, it is coming from the services be that rely on the technologies.

Next slide, please.

So when we look at what's the nature of that value, we see there are two parts in general terms. One, it is the private value, the commercial value of the activity, but there is a very significant public value and in some cases the public value is actually much grither than the commercial value. For services such as public protection, safety, services such as safe transport, things like trusted news, it is difficult to put a monetary value, but certainly the value, it is great for the host site.

Next slide, please.

Recently I attended a Conference in which one of the government officials for a country has said that they're currently working on a plan for the development of their country for the next 50 years. They're trying to describe a society they wish to have in 2071. I was impressed by that. That's why I put this slide here. I think really this is the right approach, for the Strategic Planning, the question is what kind of society you want to have, not the technology. If you decide what the society you want to have in the future, then you look at the services that the society will rely on, the technologies that will support the services and ultimately going through the question, they become more and more specific, and then we arrive to the spectrum as one of the key enablers and the policies around the spectrum, so on.

At this point, I would like to include and talk about the case of the public service media. This is what the E.U. members are, the public service media. What I put on this slide here, it is a quote from a document which is our policy document, a statement on our core values, we would like our content reach every member of society. This is about inclusion, it is about public sphere, it is about sharing content in all kinds of ways. It also is translated into the more technical requirements, how do we make our content universally available. Universally available means on all platform, all devices and means also for

all people whether they can pay for it or not.

The content, the public service content, it needs to be free at a point of perception. It has to be affordable. It also has to be trusted, otherwise people will not use it. We also need to look after People with Disabilities, a range of accessibility services. So traditionally, and it is still the case, that the media services, they have their own connectivity needs. And we have a range of technologies there. We have traditional growth, we have also a lot of production technologies, so wireless production, others are terms we use, but a lot of the technology, it has been developed by the broadcasters and the media throughout history. The telecommunication knowledge, it is quite good for the purpose. And still it continues to evolve. Now we have general purpose networks as well and 4G and 5G networks, and fixed broadband, they're obviously the technologies we're using a lot and we're trying to be involved in their development as well.

In the current situation, we as a public service media are facing a number of different challenges.

One challenge, it is that the audience behavior is changing. It is no longer just television and radio, it is much more on demand. People are expecting and use personalized services, they view the content, they listen to the content online and then they use a range of different devices.

For us, for the provider, it increases the complexity and increases the costs. The other side, it is that while traditional public service media, it is national, and it is still national and has a national focus, we're now confronted with global competition, this global competition comes not only from commercial media, or broadcasters, but increasingly, much more difficult to compete with, it is the large Telecom operators and Internet companies, which have much bigger resource than the public service media.

The question we are posing here, how can technological innovation help us out here.

Can I see the next slide, please?

A lot of investments go into the technological innovation here. Why are we doing this? In order to manage the complexity, if you need to deliver over a range of different platforms, to any device, that's very complex. Can we use the technology to help us there? Can you manage the costs? Can we remain available and findable on all different networks? You look online, there are thousands upon thousands of different television channels, how can public service media be easy to find and easy to access? Finally, how can we remain relevant? We need to be the trusted source of information. We need tools that will help us verify that information and disseminate. We

need to be available for everybody, everywhere, in a way that people can refer to us for the services. We're using a technology to help us there.

In order for technology, for technology that needs to scale, globally, large scale, globally, regionally, obviously, long-term policy, regulatory supports, they're essential. Here at least are a few examples where we need current policymakers that will first of all hear the requirements and then support the innovation.

The first one on my list, it is the issue of 5G. 5G, it is certainly a very, very powerful technology. Currently, it is only -- it is mainly being developed for the purpose of enabling the use cases that are in the focus of the mobile operators, and that will take us in some way to distribute the content, when it comes to content production, it is very, very limited, what they can do for us. We're looking at the possibility for creating non-public and private and we're not the only ones, there are a number of different industries that are doing the same, automation, health, culture, others. Many are looking at different ways of using 5G technology but in a different way than the mobile network operators would. Now, for all of this, we see that the spectrum office and licensing, they're enablers and for that, they'll take the lead.

The other aspect, it is that if 5G is only to be deployed on cellular network, which it was originally designed, they will still remain the issues of coverage and issues of capacity in some areas. There is a technical possibility to extend 5G deployment to other infrastructures and in particular, I would like to point out here the terrestrial broadcast networks and satellites.

The enablers in the technical standards, they're already there.

We would like to see not just the costs for the individual communication, but also multicast and broadcast to be enabled in 5G networks. All of this, it is as I said, it requires the regulatory support. The plan which you have heard before, it is a key topic for the upcoming World Radiocommunication Conference. What we would like to see, an outcome of that Conference, it is a solution that enables a flexible use of broadband, not just continuing the DDT and others, PMSE where needed but also new technology, perhaps 5G in one way or another is a technology that can advance us.

Finally, there's a lot of online content being available to everybody, public service media, it is not different there. A lot of consumption, a lot of access happens online. Now, online public service media, there is no regulatory safeguards in the conventional platforms. What do I mean by this? There is no

guarantee for universal usability, there is no possibility, there is no quality of service guarantee, none of this.

So we're engaged with the European regulators, in particular, to see how can this be introduced also for online?

Next slide, please.

It is just a summary slide. I would not repeat all that I said. What I would like to deliver, it is a message, it is that when thinking about longer term strategic objectives, it is important that the societal goals and public value are taken into account in addition to all of the economic gains that a particular technology can be, public service media is a case in point that the societal goals are relevant as well as the economic ones.

Public policy should favor those options that help create that value rather than just focusing on commercial.

With that, I thank you for your attention. If you have any question, I would be happy to answer them.

>> LASZLO PADOS: Thank you very much, Darko.

Next speaker, Natalia Ratkaj.

Are you here? All right.

>> NATALIA RATKAJ: Hello, everyone. Can you hear me?

>> LASZLO PADOS: Yes. All right. Everything is okay.

>> NATALIA RATKAJ: Perfect.

If I could have the slides. Good morning, everyone.

I'm very happy to be here today. Thank you to the ITU-R for organizing this seminar, involving us again this year. I'm Natalia Ratkaj, I'm the head of public affairs of ESOA, satellite operator association that represents 20 providers providing telecommunication services globally.

With that, I'll go to the next slide, please.

We think it is important to continuously innovate and to see how the sector is changing. It is important to see that the satellite sector has not only evolved in the world but also in their thinking. We have -- we'll be in the governments, with companies, investors, innovation sources, from hosting providers of bandwidth to value added partners and other technologists working on standards for the integration of terrestrial networks. The technology has seen a huge innovation across the space and the ground sector, whether it is through high through put satellites in different orbits that produces increased capabilities and the increased payment flexibility and also on the ground, we see a smaller, lighter antenna and other exteriors. These innovations clearly open larger branches of possibilities.

Next slide.

So we see how operators have responded to a growing demand of data across the different service sectors. Data services,

media services, government, secure connectivity, communications, and even though we know that some markets are now down, they will grow even stronger after this crisis that we're living in COVID next slide.

So when we think about this, the Strategic Planning for Europe, the CIS, we think we need to think about the challenges and the realities we have in our region. There is still 6 million unconnected in the European households and the CIS countries have a bigger challenge on this. When having some countries where connectivity that has a low connection, the rural speed target, it is 30 MBPS, it is challenging the connectivity in the areas, we know that deploying fiber to the premises has huge costs in the area and the problem persists when we talk about fiber -- about fixed wireless access.

What this shows us, that there is no solution that will fit everyone.

Next slide.

Another reality that we have, it is the 5G. While we work towards 5G and as the previous speaker was saying, Darko, now we have to acknowledge the reality, 4G coverage is incomplete across the region and 5G will require greater investment and business case remains a bit unclear. The deployment starting in populated areas, but at the same time, with key verticals, there is not uninterrupted coverage. We know there is a pilot project, there is a European project, there is an example in the slide that talks about the highway across many states but these cases are possible because of public support. This shows that whatever comes next, it will need a multitechnology approach.

Next slide.

So in addition to this realities and challenges that we know and that we have, there is one more, what's happened during the last few months, it cannot be overlooked. This will have a direct relevance to whatever we plan next.

The use of Internet, it is likely to be more and more remote. For schools, for education, for work even, but also for social interaction, the COVID has shown a spotlight on the need to ensure complete coverage. For resilience, continuing of our lives, to enable the flow of information to everyone, no matter where they are, to ensure continuity of education, but also to enable essential services that even before the pandemic will have been beyond the reach of connectivity.

An inclusive approach is more important than ever for our strategy.

Next slide.

Very briefly, I want to share with you some of the examples of what our members have been experiencing during the last few months. A -- when they closed schools, some members here in

Turkey, Saudi Arabia, they provided capacity to broadcast the education channels so that the children could follow their educational programs. If you go to the next slide. We can see also that while many of us, everyone was at home, could not move from home, essential services were necessary. Our region is home to many important ports and rely on those transport, the crew, they were not able to go out, they had to remain on board. Satellite operators provided free capacity to ensure that the crew had the ability to communicate with families and I suppose as many of us that are in the meeting, watching Netflix, any other streaming service.

If we go to the next slide, we see also that there are other services that are essential, we can see an example on banking, how in the U.K. it covered just by using a satellite and a van, it covered more than 350 communities around the U.K., but also and especially, the safety and the first responders were using connected vehicles and both pictures here refer to London and the U.K.

If you go to the next slide, when it comes to rural areas, we have seen a range of connectivity of 70% in some regions, through satellite broadband activity connections and more subscriptions across Western and central European countries. At the same time, there is more satellite capacity requested to ensure 24/7 connectivity.

Next slide.

Indeed, COVID has changed how we behavior, it has a potential long High School lasting change in our behavior, and I think it is urgent to push forward with different solutions to ensure equal opportunities for all. Whether it is connectivity at home, satellite broadband solutions, satellite sharing, the community wi-fi, that uses satellite connectivity and wi-fi technology, but also satellite is providing backdoor solution, there are multiple ways to achieve the objective.

Going on to the next slide.

When talking about the change in behavior, I mean, where are we going to use this connectivity? I don't refer to what we are doing when connected. A study has shown that was performed during the months of COVID and of crisis, it has shown that the top ten applications used using satellite, they're exactly the same or comparable to those using in any other broadband network, it is YouTube, WhatsApp, Netflix, Instagram, it is any of the ones that we normally use. This clearly shows and dispels many myths on satellite technology, all of the requirements for a great experience on the different applications.

Next slide.

So just to compute, I think going forward we need to adapt

our digital strategy and planning for a post-COVID reality. We need to look for resilience and it must be built in the planning in view of the increased vulnerabilities. Whether it is a pandemic type of situation, or the political unrest that many of us are seeing now, the world is seeing now, or the Climate Change that was there before and is still there, they have any of the situations that we're facing.

Satellite systems, they are going to be even more important going forward, and the cross-sector collaboration, it is going to be key to address all of the challenges..

We think -- and I think innovation, it needs to continue to happen in technology, we also need to extend it, going beyond it, it has to go into policymaking too.

So with this, I thank you all very much. We can have some questions at the end I suppose..

>> LASZLO PADOS: Thank you very much. It was a very interesting presentation.

I think the next speaker, Dmitry Korzun. Are you here?

>> (Request for interpreters to stay longer).

>> LASZLO PADOS: Dmitry Korzun, are you here?

>> REMOTE MODERATOR: Sir, you have the floor.

Mr. Dmitry Korzun is disconnected now.

>> LASZLO PADOS: Dmitry Korzun.

Mr. Dmitry Korzun.

I would summarize what has been in our session. It was a very presentation about regulatory communication, regulatory network work, and there was an interesting thing about sharing methods of 5G technology.

I think that the EBU presentation did not talk much about the COVID situation but it is a very interesting situation with the broadcasting frequencies and which direction they will go in the future.

I think the presentation of Natalia Ratkaj about the satellite operation, it is very interesting and I think in the future everything will go more and more to the direction of satellite and the target of Europe, it is very interesting, and the 30 megabit a second, it is the aim, but I think in the future everybody will go to the 5 megabit a second.

The time is over for us. Dmitry Korzun, are you here?  
No.

Thank you for your attention. I think we finish with the second session.

>> REMOTE MODERATOR: You are muted.

>> Thank you very much, Mr. Laszlo Pados, for the moderation of this session. We would like to invite all participants to refer to the website for all presentations which have been made available to all of you, also including the last

presentation, that unfortunately due to the connection challenge, it was not delivered in the way we would anticipate to have this. So please don't miss this opportunity to use also your lunchtime to catch up with this presentation.

We thought for a second we had -- maybe I will still make it. I hoped he would be able to. Let's give him a last try. Dimitry Korzun, it would be really great to have you with us. We have seen you for a second. Let's have a try. He's coming and going from the system. Yes. So I think we'll not -- not manage most probably. Yes. His connection is unstable. Ladies and gentlemen, we invite you to refer to the slides made available on the website. We thank all moderators of both sessions for moderating. We will be restarting our meeting at 13 hours, so in four to five minutes and we wish you a great lunch, a great break and let's reconnect.

Now, Julian would like to intervene. I will hand it over to you for additional statement.

>> For communication, you will all be disconnected from the platform starting in 10 minutes and you will be able to reconnect to the platform starting from 12:45. We would invite you also, we would invite the moderator and any speakers for session 3 to connect 10 minutes in advance. Thank you very much.

>> All of us will be disconnected and then we'll reconnect for the system. Please, don't leave your system on. Let's disconnect and then we'll reconnect and also once we reconnect, we'll reconnect to the one room that everybody has the possibility to use the chat and be a part of the -- also to be chatting.

Thank you very much. See you in 45 minutes. Thank you. It is a pleasure to be with you.

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