commonwealth
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Committed Leadership:
Harbouring a Roadmap for
ICT Enabled Growth

CTO ICT Minister's Conference Report

22 June, 2018

Executive summary

Over three days the Commonwealth Telecommunications Organisation convened the ICT Ministers of the commonwealth to discuss vital matters around security, safety, policy and development. With input from a range of experts and stakeholders from the public, private and third sectors, a diversity of views fostered a convivial environment for constructive debate. A set of recommendations and agreements has been proposed by the ministers in the closed sessions of the first day, and opportunities for sharing experience and learning dominated the second and third days. This report summarises those learnings for future constructive discussion and debate, as well as to provide an opportunity for those who could not attend to remain abreast of the developments at the conference. Among the top agenda items was a robust discussion of the role and challenges of OTTs, a debate on the progress towards 5G implementation, and opportunities to learn important strategies around cyber security and safety. The impacts and implications of the data privacy regulations which have recently come into force in Europe, called GDPR, were discussed from both a regulatory and economic perspective. Extended discussion about the upcoming WRC-19 and the CTO's recommendations for that conference next year capped off the final day.

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Opening Ceremony

Master of Ceremonies:

Gisa Fuatai Purcell, Director, ICT Development Department, Commonwealth Telecommunication Organisation (CTO).

Ministers have endorsed the recommendations in day one of the proceedings and instructed the CTO on the way forward.

1.1. Welcome Address

Marcel Belingue, Senior Manager, Memberships & Communication and Ag Secretary-General, Commonwealth Telecommunication Organisation (CTO).

Welcome and thanks extended to all participants, especially those travelling from afar.

1.2. Special guest address

Houlin Zhao, Secretary-General, International Telecommunications Union.

Importance of the partnership between ITU and CTO

The partnership between the CTO and ITU is very important, and Mr Zhao was happy to see that one of the CTO's goals was to ensure Commonwealth representation in the ITU. Zhao has been grateful for the participation of the commonwealth, and the co-ordination between CTO members at the international level. We have been discussing how we can collaborate around the SDGs and things like using ICT to support girls' education. By providing access to ICTs we accelerate the achievement of the SDGs. This won't happen automatically, and easily – indeed it can increase the divide between the haves and have-nots, so we must focus around appropriate implementation and evidence of change.

Collaboration and encouraging innovation for SMEs

There are small start-ups and professors coming from places like Mozambique, and they are engaged in the global questions and debates. In 2015 when Zhao was in Mozambique…I had some professors asking me questions about Artificial Intelligence, and they are not known for AI research there. We want to encourage this kind of innovation and the role of these SMEs, and we will emphasise this in our next conference. We also want to see how we can collaborate in sectors like agriculture.

Changing mindsets

We have to work hard to change people's mindset and increase capacity for collaboration, because although people think – ICT is business so it must be sustainable. People think "It will always profit." But that does not account for the fact that it is a high-risk business, so business stakeholders have to absorb that risk and protect against it.

I also want to remind you that we have ITU's annual event in Geneva in July and then we are meeting in South Africa in September.

1.3. Goodwill Address

Chris Disspain, Vice Chair, ICANN Board, Internet Corporation for Assigned Names and Numbers (ICANN).

Privacy and GDPR

As you all know the EU regulations for GDPR on Top-Level Domains, affect us all, and the relationship to the 'Who is' database is of particular concern to governments. Yesterday we published a draft of the access policy for law enforcement to be able to access the 'Who is'

database. We are aware this is one of your concerns, and we are trying to fix it for the purpose of cyber-security and law enforcement. I bring this up because it sheds light on some of the complex issues between regional, national and international regulation. I have been involved in the internet and the web for a very long time, and to be frank, much of the energy that developed the technologies we now take for granted was what we refer now to as the "adult entertainment industry." In a similar way, blockchain technologies are a very important and new set of ideas which are potentially as important now as the internet and the web were 30 years ago. The current attention and energy being used to develop blockchain by the cryptocurrency community is advancing our understanding of how blockchain can be built upon. We may have well-justified concerns about crypto-currency, but this is the cutting edge of an underlying technology, blockchain, that we can't afford to ignore.

1.4. Keynote Address

Victor Zhang, President, Global Government Affairs, Huawei

We have seen rapid growth of ICT access in the commonwealth. The spread of 5G technologies and the expansion of the Fiber backbone network will improve current efficiency. Industry and governments should coordinate their efforts to ensure that cybersecurity remains an absolute priority. Huawei is working with partners in all countries to build stronger digital infrastructure like the cloud and 5G. We are excited about the months and years and look forward to our collaboration. A favourable and robust internet infrastructure is the foundation for our digital future.

1.5. Review of Commonwealth Ministers Forum day one proceedings

Marcel Belingue, Senior Manager, Memberships & Communication and Ag Secretary-General, CTO.

Overview of discussions and agreed commitments.

1.6. Official opening

Gilbert Peterson. Telecommunications Authority of Trinidad & Tobago and Chairman of the CTO Council.

1. LEADERSHIP FOR ICT-ENABLED GROWTH

Chair: Gisa Fuatai Purcell, Director, ICT Development Department, CTO

Headline: Leadership requires developing the skills of young people, as well as creating an enabling environment for digital innovation. Decreasing the barriers to access and innovation can bring growth and leaders will emerge.

1.1. ICT-enabled growth: Leadership development

Honourable Shri Manoj Sinha, Minister of State, Department of Telecommunications, Ministry of Communications, Republic of India

ICT is deeply intertwined with every sector of growth and allows us to achieve the SDGs. At the heart of this paradigm itself is the splendid spread of ICT infrastructure. We want to bring the fruits of digitalisation to all parts of society. Leadership development is key to ensuring alignment of goals, and coordination of strategies and regulations. There is no one-size-fits-all model, but there are some best practices. I would like to share some examples from my country, India's, digital inclusion strategy. We have introduced Digital India a few years ago.

We say in India "Development of all with the participation at all".

Experience tells us that most businesses chase profitability, so we have prioritised government

investment, particularly in rural areas. We want to empower people with Digital services, including mobile banking, giving subsidises to the right beneficiaries. We are able to therefore target the less-privileged communities. We know it is a long and arduous journey, but the journey of a thousand miles starts with a single step.

India is the world's largest consumer of mobile data, with more than the USA and China put together, and the cheapest with a 93% reduction in cost of mobile data in the last 4 years.

We are also active in providing infrastructure and delivering services like e-health and e-learning in Africa. Strong trust and mutual benefit are the two pillars of our bilateral partnerships and investment in the continent. We hope that by working together we will make our planet a more equitable and harmonious place to live in.

1.2. High-level panel of eminent persons: Designing digital-ready leadership

Panellists:

Honourable Joseph Hew, Ministry of Commerce, Planning & Infrastructure, Cayman Islands

Dr The Honourable Andrew Wheatley, Ministry of Energy, Science and Technology, Jamaica

Detlef Eckert, Vice-President Global Government Affairs, Huawei

Houlin Zhao, Secretary-General, ITU

Key points:

- The Honourable Joseph Hew of the Cayman Islands described the process of targetting the department of commerce and investment, and converting all of the services to online after cutting out the red tape of 70% of their past procedures.
- Dr Wheatley of Jamaica described the Seeds of Change programme to train 18-35 year-olds in digital skills.
- Jamaica has opened an e-government portal as a one-stop shop for government services, so citizens always know where to go.
- Jamaica has also learned that if children don't have access to data at home, it means that the tablet in school programme is wasted because they can't access their work at home.
- Detlef Eckert of Huawei noted: "You only get productivity if ICT is adopted by other sectors. ICT sector is 5% of the economy, so how can you ignore the other 95% of the economy. Our recommendation is that ICT ministers need to stand up to finance ministers. You have to say taxation on ICTs will affect our economy, and not just my sector but all of the sectors."

Other key points:

- It is imperative to support innovation in ICT, or you can be left behind – if 4g is available, you can't settle for 3g, etc.
- ICT growth is about productivity growth
- The objective isn't just to "be digital" – we needed to create the services people needed.
- ICT should be a whole-government priority and requires a whole-government approach – we can't just have a ministry of ICTs, because it affects every department of government and not just one particular sector.
- Gender-balance on ICT is crucial to enable leadership for growth.
- It takes a whole team of stakeholders and experts to create digital leadership.
- The process for digital leadership needs to be people-centred and inclusive.

2. POLICY AND REGULATION

Chair: The Honourable Sir Joseph Bossano, Minister for Economic Development, Telecommunications and the GSB, HM Government of Gibraltar

Headline: The full range of technologies and possibilities must be considered in developing ICT policy, and the increasing role of satellite for connectivity can bring key advantages. However, there is no single solution, and an integrated open approach can encourage safety and sustainability.

2.1. How to construct a hybrid ICT policy

Simon Gray, Senior Vice-President for Humanitarian Affairs, Eutelsat,

In addition to his role at Eutelsat, Mr Gray is also a member of sustainable development board of the ITU, and responsible for all of the Satellite coordination in humanitarian response.

The solution to connectivity always Hybrid – as you can see in the most developed countries, everywhere needs satellite as part of the solution.

Since 2007 satellite has really improved in reliability, speed (of both rollout and service), cost and complexity:

- **Reliability** – FCC report on internet connectivity – the most reliable connections are High-throughput satellite (HTS) and we have the most coverage. We have the most reliable network in Uganda as well, and cuts that do happen are usually much shorter and cheaper to fix.

- **Speed** – Speed of deployment has been vastly improved. We connected the Ukraine for their election, and they had to put 12,000 sites within 6 weeks. This means you could connect a country the size of Nigeria in 20 weeks. You couldn't do that with any other type of infrastructure.
- **Cost** – Previously, before 2006, satellite was not building for data, so the bandwidth was much more expensive. We were building for TV broadcast, and that wasn't suited for data. Cost for installation for data satellites is much cheaper, and the installation is not a major cost. The data cost is also coming down, starting from just $25 per month.
- **Complexity** – Consumer systems now take 1-2 hours to set up, not several weeks. This is much easier as well and can be self-installed, with an app. Consumer-based spares and maintenance mean that receivers are easy to repair, easy logistics.

There is no one solution to universal access, all of the technologies have their advantages, and we need to think about how we use them together. We have a number of useful tools which we can use together now in a complementary way.

2.2. Panel: Smart regulation leading to increased growth

Panellists:

Stephen Bereaux, Chief Executive Officer, Utilities Regulation and Competition Authority, Commonwealth of the Bahamas

John Paul Rodriguez, Deputy Chief Executive Officer, Gibraltar Regulatory Authority

Professor Americo Muchanga, Director-General, Autoridade Reguladora das Comunicações - INCM, Republic of Mozambique

Dr R S Sharma, Chairman, Telecom Regulatory Authority of India.

- With these ubiquitous technologies, it is important for ministers to work together, since there is so much overlap.

- Mr Bereaux of the Bahamas expresses how they are trying to find a way to have collaborative and unified approaches to policy.
- Mr Rodriguez of Gibraltar also points out that there are regulatory issues for small territories where they are forced to comply with regulation which applies more to the situation of much larger countries.
- Professor Muchanga of Mozambique says: "One of our big challenges is making telecommunications "smart". Part of the problem is that we don't really know what telecommunications are any more. It used to be to call, to talk with people, maybe some data. But now it isn't just for one type of service – it affects everything, and it means that you can't do anything, you can't use a bank, you can't check-in at the airport. This means it becomes very challenging if there are disruptions."
- Mobile banking can be very insecure if someone is using their phone to validate accounts. They might sell the SIM card, and then they have lost their security means, and then lose all the money.
- Dr Sharma of India shared: "India has generally had a problem of scale. We have 1.2 Bn users, and average 11Bn minutes of talk time per day. We can also offer the services so cheaply, you can speak for 4 hours for less than 1 Euro, so most people have unlimited talk time. It is a very price-sensitive market and we have answered that need to force the prices lower through regulation. Telecom is not a vertical infrastructure it is a horizontal platform."
- India has made their digital ID software open-source and offers to share it with all of the Commonwealth. This is India's philosophy for technology – interoperable, open APIs and open source, and scalable. If you are building for diversity, scale and interoperability, India will share this with you – it is driving Digital India, and it is their underlying philosophy.

3. 5G Development

Chair: Honourable Stanley Mutumba Simataa, Minister of Information and Communication Technology, Republic of Namibia

Headline: 5G is coming, and it will involve a collaborative approach between sectors. Business cases for its use are important to justify the investment it will require in the coming years.

3.1. Role of satellite as catalyst for digital inclusion in 5G

Graham Peters, Managing Director of Government Services, Avanti

- Comparison of Galileo in Europe and GPS, and the need for alternative standards.
- Satellite will always be a key part of 5G solutions because it integrates all of the different connectivity solutions.
- Satellite can catalyse the rapid adoption of 5G because it can fill gaps in provision more seamlessly and reliably.
- Satellite is key for digital inclusion of the most marginalised, and Avanti wants to ensure these communities are not left behind by 5G.

3.2. Panel: The race for 5G

Panellists:

Kenva Williams, Director of Technology, TCI Telecommunications Commission, Turks and Caicos Islands

Peng Zhao, Spectrum Policy Director, GSMA

Justine Shen, Senior Manager, Global Government Affairs, Huawei

- Mr Williams of the Turks and Caicos Islands says: "We have only just got 4G because it is an island, so the prospect of going on to 5g is daunting."
- The question is no longer whether or how 5G will come, it is just a question of when.
- Alliance of manufacturers across sectors are working together to bring progress on 5G.
- Policy – what will the difference be between 4g and 5g. There are lots of new applications and use cases that require some justification. There are other things you can predict for 5G, for example you may have smaller cell sites - but lots of them.
- The spectrum issues for 5G are very complex and technical.
- The First 5G deployments in the Middle East have just happened but they are only limited bands.
- The rate for auctioning the 5G spectrum allocations will also be reduced because many markets are saturated, and we aren't talking about 10x growth of users and revenue, we are just needing to use 10x the spectrum for more speed, which people will expect to pay the same amount for.
- Alliance of manufacturers across sectors are working together to bring progress on 5G. Our next steps will include much more discussion around the use cases and the business cases.

4. CYBERSECURITY - FUTURE TECHNOLOGIES

Chair: Trevor Forrest, Senior Advisor on ICTs, Ministry of Science, Energy and Technology, Jamaica

Headline: Artificial Intelligence is already being used in many security applications, and it will be crucial for governments to understand its relevance in identifying fraudulent and criminal behaviour. Other emerging technologies, such as blockchain and IoT have potential use cases that will be important but are not yet proven.

4.1. Artificial intelligence (AI): Opportunities and risks

Sue Daley, Head of Programme Cloud, Data Analytics and AI, techUK, United

- What is AI – it includes a pretty wide range of technologies. Mainly we are talking about machine learning. But there are other aspects of AI that are developing very quickly.
- AI is both friend and foe for Cybersecurity.
    - As a friend, AI can help to identify cybersecurity threats, so that the attention of experts can be most efficiently used around more difficult to identify new threats.
    - As a foe, AI can be a threat to systems, as there are unknown ways that AI can be manipulated.
- In the UK there is a digital skills gap and there are not enough people working in cybersecurity at the moment. The online threat is greater than we can address right now with our current skills.

4.2. Panel: Safeguarding challenges (Blockchain, Cloud, AI and IoT technologies)

Panellists:

Sue Daley, Head of Programme Cloud, Data Analytics and AI, techUK, United Kingdom of Great Britain and Northern Ireland

G Narendra Nath, Deputy Director-General (Security), Department of Telecommunications,

Ministry of Communications, Republic of India

Dr Windfred Mfuh, Technical Adviser to the Minister, Ministry of Post and Telecommunications, Republic of Cameroon

Dominique Lazanski, Internet and Cybersecurity Public Policy Director, GSMA

Key Points:

- Blockchain and AI can be helpful in eliminating things like corruption and customs fraud in developing countries.
- Money laundering is particularly an important example where AI can help stop criminals, but there are always risks.
- Theft has not disappeared with greater technology for catching criminals, we haven't solved the problem, we have just moved it from on the streets to online.
- Best practice of cybersecurity is so simple, but it is not followed in certain parts of the world.
- Lots of examples of Cybersecurity failures, and they affect all of us – we can't be too ashamed to admit them, because it creates a stigma of seeking assistance.
- Everyone is susceptible to Cybersecurity threats, and phishing is common everywhere.

5. OVER-THE-TOP SERVICES

Chair: Honourable Kelver Darroux, Ministry for Information, Science, Telecommunications and Technology, Commonwealth of Dominica

Headline: OTTs continue to be a source of debate and tension between MNOs, OTTs and regulators. There is no one-size-fits-all approach, but we have to recognise that OTTs will not simply disappear.

5.1. A Commonwealth report: OTT services survey

Dr Martin Koyabe, Manager, Technical Support and Consultancy Division, Commonwealth Telecommunications Organisation

- OTTs are here to stay.
- What are the drivers of OTTs. Use of videos, Whatsapp, the 'app economy' – etc. The demand for this type of consumption is increasing and has created an ecosystem, and people have become used to that.
- Cloud computing increases mobility and brought convenience. It allows the flexibility that SMEs need. This pushes use of smartphones and OTTs.
- Tax avoidance and evasion is important as well for developing countries, because OTTs see this as an opportunity. India has made some good strides towards net neutrality, and its implications for OTTs.
- In South Africa, MTN and Vodacom want OTTs (namely WhatsApp) to be regulated.

5.2. Panel: OTT licencing considerations

Panellists:

John Brading, Chief Executive Officer, Bitek Global Limited

Theo Bertram, Senior Manager, Public Policy, EMEA, Google

- The relationship between OTTs and telcos is starting to change, which threatens net neutrality.
- Mr Brading's company is talking about the extent to which taxes and USF contributions can be recovered and working with certain governments to come up with policy.

Mr Bertram shared Google's position that there are 3 myths about OTTs:

- "Telcos invest and OTTs sponge off of that infrastructure and rake in the profit." – Google has invested in 11 of the submarine cables, they invest in infrastructure and they invest in data centres. Google is very happy to put ourselves in the same bracket as a telco in terms of infrastructure investment.
- "OTTs don't pay tax" – Google is paying tax, and we pay it in the US mostly because we are an American company – that is where our intellectual property is. There is also a myth that taxing online advertising would lead to a magical pot of money that can address our need for infrastructure investment. That is simply not true because the amount of online spending in smaller, developing economies is tiny, and if anything it would hurt small businesses in your countries.
- "Telcos are being burdened by OTTs" – It has been calculated that for every 10% increase in internet traffic there is a 1.3% increase in GDP. Switching off OTTs because they create competition is bad for the economy, but also bad for ISPs – you can make money as ISPs in a world of OTTs. You can't just stick to your old business model though. It is more complicated than that.

6. ONLINE PROTECTION AND SAFETY

Chair: Mameetse Masemola, Deputy Director-General (Ag.), ICT Policy Department, Department of Telecommunication & Postal Services, Republic of South Africa.

Headline: Cyber Safety is an issue that affects everyone. We need to each play our part and we can do something about it. There are examples of delivering this well, but we need to get together to form the action plans that have a proven track record.

6.1. Protecting the user online

Terry Wilson, Director of Outreach, UK, Europe, Middle East and Africa, Global Cyber Alliance

- We should be using the term Cyber Safety, not Cyber Security.
- The Global Cyber Alliance is a resource to help commonwealth countries, but everyone need to own the problem for their own country.
- The Global Cyber Alliance has 221 partners across 18 sectors and 25 countries.
- Phishing is the biggest form of Cyber Crime, and can lead to ransomware and malware. It can be difficult to tell if an email has been spoofed, or is legitimate, once you have lost control of an email account, your identity can be stolen. It is a huge breach of your privacy and human rights.
- Recommendation to use DMARC and Quad 9 (9.9.9.9) cyber safety tools.

6.2. Securing the Internet

Andrew Little, Head of Partnerships, Get Safe Online, UK

- Get Safe Online collaborates with a large number of government and law enforcement stakeholders.
- Get Safe Online makes available a range of resources, many of which are UK-focused, but can be repurposed for other contexts.
- Get Safe Online also has lots of other bite-size pieces of content which are distributed through social media.

- Get Safe Online runs monthly campaigns, on topics like ticket fraud, romance fraud and other safety issues people face online, and their online campaigns through social media have also gained traction in mainstream media.

6.3. Preventing terrorist use of the internet

Mark Albon, Head, Countering Violent Extremism, Secretary General's Office, Commonwealth Secretariat

- Violent extremism takes many forms, but many people, and especially young people, are susceptible to being recruited through the internet, and that is why we discuss it in this context.
- To be effective in addressing violent extremism, a fast and robust response must be taken by the Commonwealth countries.
- By working together for a common set of guidelines and goals, greater reach can be achieved.

6.4. Panel: What more can be achieved at global level?

Panellists:

John Carr, Secretary, UK Children's Charities' Coalition on Internet Safety and Member of the Executive Board, UK Council for Child Internet Safety, United Kingdom

Andrew Little, Head of Partnerships, Get Safe Online, UK

Mark Albon, Head, Countering Violent Extremism, Secretary General's Office, Commonwealth Secretariat

Key points:

- We are all vulnerable in some way, and online safety must be treated as a collective issue that we collaborate on openly.
- It is crucial for childrens' safety to be able to do checks on people who register for certain TLDs like ".kids" in particular, as there is not enough safeguarding.
- The ICANN registrars aren't able to ensure that people are signing up to the 'Who is' database with their real names.
- Protection of children is an important priority for global coordination.

7. THE DIGITAL ECONOMY

Chair: Sue Daley, Head of Programme Cloud, Data Analytics and AI, TechUK, United Kingdom

Headline: There is a need to match the investment of the money into broadband infrastructure with the research and evidence that actually indicates what will work, and what has a sustainable business case.

7.1. Panel: Digital transformation and economic growth

Panelists:

Dr. Salma Abbasi, Chairperson & CEO, eWorldwide Group: "It is important to match the investment into broadband with investment in research and evidence of what will work."

The Honourable Sir Joseph Bossano, Minister for Economic Development, Telecommunications and the GSB, HM Government of Gibraltar

Malcolm Warr OBE, Federation of Small Businesses Home Affairs Committee, Federation of Small Businesses, United Kingdom

Honourable Frank Tumwebaze Kagyigyi, Minister of Information Technology and Communications, Republic of Uganda

Thana Sivasambu, Chief Operating Officer, Commonwealth Businesswomen's Network.

Key points:

- The key to making a business case for digital services to enhance the digital economy is quality and competence.
- Government and Industry need to work hand in hand. But we have to have different approaches in different contexts and we can't expect the same capacity, nor the same issues in Rwanda and Nigeria (for example), compared to Scotland, New Zealand, etc
- There is an important effect on productivity that comes from the digital economy, but the problem, and opportunity in Gibraltar is to be flexible.
- The Commonwealth Businesswomen's Network offers training through their website and this will be enhanced through a digital platform, including the development of a digital MBA.

8. UNIVERSAL ACCESS AND SERVICES

Chair: Honourable Demba Ali Jawo, Ministry of Information and Communication Infrastructure, The Gambia

Headline: The Universal Service Fund is not what it once was and has gone from an important part of service provision for isolated and remote areas to its current state. This means that there has to be a new approach to collecting and spending the Universal Service Funds in order to ensure access for all.

8.1. Universal Service funding frameworks across the Commonwealth

David N Townsend, President, DNTA, United States of America

- USFs started as a way to redistribute resources to ensure rural connectivity.
- Institutional planning for USFs needs to follow a logical approach from the policy and institutional framewok through to the project implementation, which is where everyone normally wants to jump in.
- DNTA works with regulators and operators to develop a plan that they can maintain for a consistent approach to USF.
- A long-term and systematic view is the most important guideline.

8.2. Panel: A changing legacy – Universal service funding

Dr Steve Unger, Executive Board Member, Office of Communications, Ofcom, United Kingdom

Dr Martin Koyabe, Manager, Technical Support and Consultancy Division, Commonwealth Telecommunications Organisation

Bashir Patel – Regional Advisor, Regulatory and Market Access Div., SAMEA

Key points:

We have seen 50% reduction in USF contributions recently, and that means that there has to be a different approach to using the fund.

The role of OTTs means that we can't project an increase in the USF, even if there is an increase in the user base, because it is generally not based on data but on calls.

Proposal raised for a further study on broadband in the Commonwealth in collaboration with interested partners to understand the further barriers to universal access.

There is a need to see where the most appropriate place is to seek taxes in internet and data-driven consumption patterns, because the USF – which is effectively a tax – is no longer achieving this.

9. GLOBAL INFRASTRUCTURE INVESTMENT

Chair: Honourable Kapembwa Simbao, Minister of Communications and Transport, Ministry of Transport, Works, Supply and Communications, Republic of Zambia

Headline: Investment in infrastructure is beginning to bring access globally, however the lack of resilience and redundancy in networks in remote and emerging markets means that they are vulnerable to service interruptions and require further investment.

9.1. Panel: ICT infrastructure resilience - Building a global network

Panellists:

Honourable Adebayo Shittu, Ministry of Communications, Republic of Nigeria

Benjamin Choppy, Principal Secretary for ICT, Office of the President, Department of Information Communications Technology, Republic of Seychelles

Dr R S Sharma, Chairman, Telecom Regulatory Authority of India

Honourable Monise Laafai, Ministry of Communications and Transport, Tuvalu

Honourable Onkokame Kitso Mokaila, Ministry for Transport and Communications, Republic of Botswana

Honourable Christopher Ndlangamandla, Minister of ICT, Kingdom of eSwatini.

Key points:

- Nigeria has worked through public-private partnerships and we have some foreign direct investment, and this has been the first support for infrastructure development. There is a lot of competition, and we have seen that the market has driven connectivity.
- Mr Choppy from the Republic of Seychelles described the challenges of getting private investment for fiber optic cable to a nation of 115 islands. In the end they split the cost between private investors and international funds from the EU and Africa.
- A pragmatic and hybrid approach to connectivity is necessary for countries which are distributed (across islands) or remote.
- Dr Sharma shared that India has focused on public investment in infrastructure to ensure that costs would remain low.
- For defense to attacks and natural disasters, there are two sides. There is the software and the hardware. From a software side, even if there are vulnerabilities, the main aspects of telco software infrastructure are secure and are built on best practice.
- Tuvalu aims to improve infrastructure in the capital, but it is beyond our capacity to do much else, because they are very remote with a population of only 11,000, and their ICT budget for the whole country is only $60,000. Telecoms is slow, expensive and unreliable – among the least connected countries in the world.
- There can be difficulties with fixed line cables, because people are stealing the copper wires to sell them.
- Collaboration between neighbouring countries is crucial to maximise benefit for everyone.

- One of the key issues is about the dependencies between the critical sectors, for example if the power goes, how does it affect communications infrastructure, or other more complex critical relationships between different infrastructure areas.

10. SPECTRUM

Chair: Unutoa-Auelua Fonoti, Regulator, Office of the Regulator, Independent State of Samoa

Headline: Agreement about key spectrum issues within the commonwealth can have significant influence on WRC-19, and the CTO and ICT ministers can agree on a set of recommendations to advocate together.

10.1. Relevant spectrum issues for Commonwealth countries at WRC-19

Steve Jones, Senior Regulatory Manager, Avanti Communications Group

- The commonwealth nations play a very important role, and there are 6 regions involved, 3 of which are significant for the commonwealth particularly. Asia-Pacific, Africa and the Americas.
- The most important agenda item for this WRC is 5G/IMT and Satellite services.
- There was a very long and difficult debate in WRC-15 about which bands should be identified for new spectrum allocation, and it has been a very challenging task to study that over the last 4 years. Some of the regional groups have said they will stick to the bands that were identified.
- It is important to find a balance between 5G and the current technologies, including accessing rural areas, WiFi on aircraft, all of the other major issues.
- Satellite and terrestrial together will make 5G happen.
- We need to also use this new protocol to monitor the earth and climate change.
- As far as satellite is concerned, the spectrum from 3.4 – 4.2 is absolutely crucial where you suffer a lot of rain. This includes in the UK.
- The competition in the satellite sector is absolutely going to drive down costs in the next few years.

10.2. Panel: Commonwealth preparation for WRC-19

Panellists:

Ross Bateson, Special Government Advise, GMSA

Rob Webber, Assistant Technology Manager, British Broadcasting Corporation

Stephen Talbot, Head of International Spectrum Policy, Ofcom, United Kingdom

- Pacific Islanders care about the sea band – we need to maintain this for satellite services. It is important to onboard the services for seacraft and aircraft as well as this affects island nations.
- Ross Bateson from the GSMA stated the need for fixed links. There are 3 types of mobile satellite: sea and air are fine, but land will undermine fixed links.
- The GSMA is pro-connectivity, but believes the move to newer spectrums can mask the need to double down on the fixed links, particularly in Africa, to build the backbone of the infrastructure.
- Although the WRC agreements are a binding treaty, it does still recognise national sovereignty to give some flexibility.
- It is helpful to know what other countries are doing with spectrum allocation and to be

able to align with that.

- The coordination of the commonwealth with the WRC will let us have a stronger voice.
- We should bear in mind as commonwealth citizens, that we need to serve everyone, not just geographically, but all sorts of devices. The services for moving vehicles (1.5) were allocated in WRC-15 and that is more about the regulatory and operational use of that band across the different areas.
- We are looking at a wifi ecosystem which is expanding. By 2020 there will be >1Bn WiGig routers. The HTS and VHTS ecosystem is evolving. These provide high capacity services.
- The mobile ecosystem is evolving and capacity is growing with the existing spectrum and technologies.
- We need to change our mind-set as regulators and policy makers, How can we use all of the technologies available to us to meet our needs, rather than just auctioning off lots of spectrum we don't really need to use.

11. DATA PRIVACY

Chair: Honourable Paul Lewis, Ministry of Communications, Works, Energy and Labour, Montserrat

Headline: GDPR is encouraging 'Privacy by Design' across different jurisdictions, not just the EU, and stakeholders should understand the regulatory implications in their context.

11.1. ICANN, the GDPR and WHOIS

Nigel Hickson, Vice-President, UN and IGO Engagement, Government Engagement Team, ICANN

GDPR is getting a lot of attention – but this isn't the first time we have data protection. We have had data protection in the EU since 1995, and that was very similar to GDPR. The legislation is all about giving the owner of data rights to that data, to say they don't want their data to be processed anymore. It gives rights to the data subject which they didn't have before. Who are these companies that are subject to these rules? Is it just European companies, or is it all companies? Indeed it places obligations on companies that work with European citizens at all. What has changed most about GDPR is the enforcement and penalties, which are no longer up to the individual countries. Instead it is up to Europe as a whole.

We want to ensure that registrars can continue to publish "Whois" data for the sake of law enforcement, security and intellectual property purposes while still remaining in compliance with GDPR.

ICANN is not going to publish the data but will still collect it for enforcement purposes.

11.2. Panel: Succeeding post-GDPR - Going beyond compliance

Panellists:

Raedene McGary, Head of Policy, CentralNic Group plc, UK

Natasha Jackson, Head of Public Policy and Consumer Affairs, GSMA

Hugh Milward, Corporate External and Legal for the UK, Microsoft

Key Points:

- If people don't trust a service, they won't use it. GDPR has actually helped to encourage privacy by design across different jurisdictions
- It's really important that new startups are not crippled by data rules. Having onerous requirements makes it very difficult for small companies to innovate and it is very important that there is enough alignment between the different frameworks. There are mechanisms that need to be leveraged to ensure compliance.
- The different jurisdictions for data are separate, so how is GDPR enforceable? It is not as straightforward as we think to see how this legislation will be applied.
- There is a rule in GDPR that if you are a company of a certain size you need to have a data compliance officer. Part of it is not just about the data, its about how it's being used. You need to think about how the data that is created from a product or service is not used in an inappropriate way.
- GSMA has created a flowchart to help companies work through the series of questions to help with GDPR and privacy by design.
- Bigger companies need to disseminate this information to the smaller ones.
- The accountability principles of GDPR means we need to also have some contingencies for potential data breaches.