ITU – GSMA – The World Bank – World Economic Forum

2nd High Level Dialogue on Leveraging the Role of Digital Connectivity and Technologies in the Covid-19 Crisis: From Emergency Response to Resilient Recovery

Session 2: Connectivity for Resilient Recovery

10 December 2020

Scope: Paving the road to recovery and identifying priorities to shape long-term resilience and preparedness for the digital economy.

Background: Understanding the role of digital infrastructure and technologies have played during the pandemic offers unique insight into the long-term opportunities it can bring businesses, governments, and societies, if nurtured properly. With economic recession looming, it's essential that future policy and regulatory instruments are results of enhanced public-private collaboration and harness the opportunities.

Regulatory measures considered during the pandemic to shape long-term resilience in telecommunications networks

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Telecom Regulatory action has managed, for decades, to keep *'just'* a step ahead of actual market needs. Advancing further than that would risk losing sight of the market, while staying a step back would jeopardize the market's development potential.

The outbreak of the pandemic forced digitalization **-at-scale-** to our societies and, as a result, all that's related to telecoms and ICT undertook year-long leaps in matter of months.

Our networks managed to cope with the extra load, but everyone understood that: for dealing long-term with such extreme conditions, there is a good amount of re-thinking that we need to do.

We need to re-think what's 'good enough' for **actually** working remotely. Not in some abstract kind of sense, but in a very practical, day-to-day manner that would allow **efficiently** working from home. We need to re-think what can truly enable **learning** through studying online.

Is your laptop's camera good enough? What about that ages old microphone? And what about the video conferencing software that you use? Is it ok to blur and de-synchronize video and audio streams to overcome your network's millisecond-long failures?

Are all these acceptable for short-term/occasional use only, or can also sustainably serve 'few-days or weeks' of remote work?

If our Pre-Covid-19 tools are good enough for our current needs, then, that's ok. Most of the regulatory framework that we have in place is just fine 'as-is'.

The problem is that we all **feel**, and slightly beginning to **understand**, that this is **not the case**.

If our Pre-Covid-19 tools are **not** good enough for our current needs, then the regulatory framework that we have in place is pretty outdated. By how much? By equal lengths to Covid-19's digital transformation wrath – that means outdated by quite a few years already!

It's quite simple to see it actually...

Covid-19 brings back to our agenda difficult, **network resilience problems**, enhanced by our modern ways of living. Let's take a 'doing business' related example - which is currently very geographically distributed:

> If you are having a three-party video-conference call with each participant connecting from a different country (not to mention different continent). What is the acceptable **overall** network latency and packet loss-rate that will allow this call to remain functional?
>
> How do we handle two streams (video/audio) per participant, three participants hundreds or thousands of kilometers apart, two directions per stream or 12 streams total in a time-sensitive manner?

To make sure the telecom industry can address challenges like these, the Regulators need to re-introduce, to everyone's agenda, the importance of the **Real Time Component** of our networks.

The required technologies are almost there -in most of the cases at least-. What's additionally mandatory is raising any 'Pre-Covid-19 regulatory roadblocks' that could hinder the potential of these technologies.

Building real-time networks needs a paradigm shift in regulatory mind-set. We need to shift from regulating 'lines' to regulating 'bitstreams' in order to get the job properly done!

Most of our working framework has its roots in now almost century old telephone networks and their Central Office hierarchy having point-to-point lines to connect the Central Office to each subscriber, acting as if these point-to-point lines deliver just one type of service (voice) and as if there is nothing 'intelligent' along the Central Office-Subscriber path. This is in general not the case these days, and will definitely not be the case in the near future!

We have been evolving our networks for decades, but still there is a lot of that DNA on our tools and methods, so there is a lot of work to be done!