



## GTPRN September 2020 Newsletter

---

## **Welcome to the GTPRN September 2020 Newsletter.**

We have the privilege this issue to have several exclusive contributions for GTPRN by high profile telecom policy practitioners and academics.

This include Prof. Gerard Pogorel, Professor of Economics-Emeritus, Institut Polytechnique de Paris-Telecom Paris Graduate School of Engineering. Prof. Pogorel is one of the main reasons for my dedication to spectrum management after reading his excellent book ‘The Radio Spectrum: Managing a Strategic Resource’ in 2008 where he conducted his famous categorization and analysis of the different spectrum management regimes. One of most important Prof. Pogorel’s publications, in my opinion, is his seminal contribution on spectrum assignment “Spectrum 5.0 Re-thinking Spectrum Awards for Optimal 5G Deployment’. Prof. Pogorel article for GTPRN ‘Telecom Operators facilitating Audiovisual Streaming and Cultural Diversity, post Covid-19’ can be found here.

I have always believed that it is important to highlight the IEEE non-technical activities especially those related to telecom policy issues. For instance, the IEEE-USA has several policy positions which can be found here. We have the privilege this month to have an important article by Prof. Jim Isaak, Chair of IEEE USA Committee on Communications Policy, on some of the policy challenges related to the privacy and broadband issues. The article can be found here. More information on Prof. Isaak’s activities, can be found on his website ([www.JimIsaak.com](http://www.JimIsaak.com)).

We continue in this issue our review to the different ITU-R activities with a focus this issue on Study Group 5 ‘Terrestrial Services’ by Mr. Mohamed Abdelghany, Vice-Chair of the group. The article can be found here.

Regarding online webinars, please check the PTC webinar on the ‘Impact of COVID-19 on Data Centers and Network Infrastructure’ on 15th of September 2020. More details can be found here. Another interesting webinar is hosted by TPRC on ‘Facial Recognition, Law Enforcement and Massive Surveillance: Ethical or Unjust?’ on 25th of September. Kindly register here. ITS will host a webinar on Tracking & Tracing Apps on 29th of September. Outlines and speakers’ details are available here. The IEEE Virtual World Forum on Internet of Things 2020 will be conducted over September 2020. More details can be found here.

With respect to telecom policy journals, a new issue of the Journal of Telecommunications and the Digital Economy has been published here. Volume 44, Issue 8 of Telecommunications Policy Journal can be found here. We have pointed out in previous GTPRN issue that 5G auctions are to be delayed but it seems that recently this has not been the case, at least within Europe. Kindly take a look on the following link by Cullen International.

I have also enjoyed last month a very interesting online conference, International Symposium on Advanced Radio Technology (ISART), which focused on what a “zero-trust” network environment means from a 5G spectrum perspective. ISART 2020 addressed an overlooked subject which is the security of radio layers and I was surprised that the concept is usually underestimated within the ITU-R when it comes to IMT-2020. Hope I am mistaken! Please share with us your views on the issue to be discussed in our next issue. Please check the ISART 2020 program here.

Take care, stay safe and well.

Mohamed El-Moghazi

GTPRN Team - [news@gtpn.org](mailto:news@gtpn.org)

# **Telecom Operators facilitating Audiovisual Streaming and Cultural Diversity, post Covid-19**

## **Gerard POGOREL**

### **Professor of Economics Emeritus**

Telecom Paris Graduate School of Engineering CNRS Interdisciplinary Innovation  
Institute I3

Cell +33 6 08 73 62 13

gerard.pogorel@telecom-paris.fr

<http://www.linkedin.com/in/gerardpogorel>

The pandemic of the year 2020 has dramatically affected peoples and economies worldwide. The crisis has illustrated the role played by communications networks in the resilience of our societies. It has also marked a new stage in the transformation of the global audiovisual landscape. Citizens and consumers have flocked to the increasing number of streaming services to access movies, series and documentaries, on demand or by subscription, independent or associated with national television channels and film industries. The future provision of audiovisual streaming services is a key development factor for telecommunications operators, fixed and mobile.

We have seen the development of services with very significant financial resources allowing an international footprint from the outset, both for the works offered in the catalog and for the technical and marketing means of distribution. They come either from own initiatives (Netflix, Amazon, Apple) or from major American studios (WarnerMedia, Disney).

But if we take a closer look at the world audiovisual landscape, highly diverse countries have originated great television and cinematographic cultural creations: in Europe – France, Italy, Germany, Great Britain, Scandinavia, Poland – in Asia – Japan, China, South Korea, Taiwan – in Africa, Egypt, South Africa, or in Latin America – Brazil, Mexico. They already have gained international recognition. How are they positioned, how can they take advantage of the international expansion of communication networks supporting universally accessible Internet platforms?

Diverse countries produce works that already have an audience outside their borders, on markets which are potentially multiplied by the digital means. Production was severely affected during the pandemic and is only progressively resuming in the Summer 2020. The trend in demand, however, is so strong that the industry will soon again be short of qualified professionals. Streaming platforms present diverse audiovisual works with a unique opportunity to reach wider audiences beyond their borders. The challenge, however, is the establishment of the relationship of these diverse works with these broader audiences. The range of the catalog of national film and television productions and the marketing resources in these diverse countries limit, but does not preclude, the possibilities of a direct relationship between national services and international audiences. This raises the crucial question of the relationship of works of cultural diversity with international networks and platforms, most often of American origin.

We can already see how the platforms, anxious to attract a local clientele for their international reach, provide welcome financial resources for original cultural productions. The international

openness and the range of possible agreements between network operators and producers of audiovisual works, managed with farsightedness, present a historic opportunity for the development of cultural diversity at the international level, for increased opening of world markets to varied works. Along with the cavalry of blockbusters and their sequels and prequels, diversity today is driven by a plurality of vectors. National streaming services exist or are being created. They play an important national role but are limited beyond their borders. The integrated quadruple-play offers of telecom operators, with their large markets and significant financial resources, are a powerful tool for market penetration. The platforms are a privileged vehicle for financing and international expansion, but regional initiatives, regional platforms, either extensions of regional operators or cooperative ventures established at regional scale would offer a welcome counterpart to international oligopolies.

We meet, particularly in countries of “diversity”, a tangle of regulations created over time in a defensive spirit for local works, quotas, financial aid, various obligations concerning exclusive content or events said to be “of major importance”, restrictions on mergers and acquisitions. These regulations, whose *raison d’être* must not be lost, must however be carefully re-examined in the light of the new realities of the digital world. Regulatory distrust of horizontal or vertical integration, such as exclusivity, which could be justified when the range of works and events offered to the audiovisual sector was limited, is much so less today. While the offer as well as the expectations of the public have widened and diversified. Achieving these promises for countries of diversity, in Europe, Asia, Africa, Latin America, requires careful re-examination of the constraints. Less constraints on the digital economy, in particular those affecting cross-border flows of data, capital and works, would be welcome.

In the forthcoming months, telecommunications operators are in a strategic position to achieve the synergy of culturally diverse creations, major international networks, national and regional streaming services, and by so doing, support the expansion of their fixed and wireless networks.



Gérard POGOREL is Professor of Economics-Emeritus, Institut Polytechnique de Paris-Telecom Paris Graduate School of Engineering, France, and an independent international expert in telecommunications and the digital economy. He published recently influential position papers: *The new post-COVID-19 International Trade Order*, *Spectrum 5.0 Re-thinking Spectrum Awards for Optimal 5G Deployment* (2018), and *Spectrum 5.0: Improving*

*assignment procedures to meet economic and social policy goals* (2017), and a reference book *The Radio Spectrum: Managing a Strategic Resource* (Wiley 2008).

He co-authored in 2014 a report to the Prime Minister of Italy assessing the investments by operators in Broadband networks in the European Digital Agenda perspective. He was an independent member of the Organo di Vigilanza of Telecom Italia Open Access (2009-2013) monitoring access to the incumbent's network. He co-founded in 2006 the European Spectrum Management Conferences, acted as its Chair/Rapporteur, and is a frequent speaker. He is an expert with the European Commission DG Connect, and was Chair of the European Union Framework Research & Technology Development Programme Monitoring Panel, and Chair of the Monitoring Committee of the EU Information Society and Technologies Research Programme. He set up joint research programmes on spectrum policies with universities in Sweden, the UK, Italy, in America, and in Japan and Thailand. He participates in numerous international Government-level and regulation Authorities Committees and Scientific Committees on telecom and media policy and regulation.

# Policy Challenges IEEE Privacy and Broadband Examples

**Jim Isaak**

## **Chair IEEE USA Committee on Communications Policy**

IEEE is the largest global society for technical professionals with thousands of conferences and peer reviewed publications every year. We also create standards (WiFi, and Operating Systems and AI Ethics for example.) As a U.S. not-for-profit educational organization, IEEE has constraints on the type of political advocacy it can do in the U.S. Similarly, operating in most countries in the world also creates local constraints on advocacy. However, IEEE does engage where it can with both global and U.S. specific policy positions. The IEEE Global Public Policy Committee (GPPC [URL](#)) is the clearing house for positions at that level, and assures consistency of IEEE-USA policy statements ([URL](#)) which take on U.S. specific characteristics.

A critical point of understanding is that all policy advocacy and practical influence is “local”. The variations in culture, legal perspectives and economics are simply too great to provide viable focused recommendations that can be applied in every context. One example is the IEEE position on Internet Access ([URL](#)). This asserts the value and need for access in every community. However, it is clear that priorities such as electricity, water and sanitation would seem more critical. However, even when these are in limited supply, many rural communities have cell phone access, even smart phones with network access.

The examples here, privacy and broadband, provide a basis for outlining some of the challenges and considerations in seeking to develop technology policy recommendations. In IEEE-USA, the Committee on Communications Policy has developed position statements in these areas ([URL](#)). Each reflects a different context in terms of technology, economics and timing, all of which are significant factors in identifying viable opportunities for policy advocacy.

### Privacy

The need for a 21<sup>st</sup> century privacy policy has grown out of increasing technical capabilities. The significant reduction in the costs of mass storage (big data), with computational capability to analyze this data are one factor. The emergence of “free” (advertising funded) services in search and social media are a second factor. Finally the application of analytics and artificial intelligence to develop profiles on every individual and target them with the most effective advertising is a key consideration. Note that most of these factors are being driven by private industry, not governmental interest, in the U.S. Other countries and cultures have different responses to these technologies. The current disputes between the U.S. and China with respect to social media platforms, data collection and use of that data reflect these different approaches.

The key concepts that IEEE-USA is advocating in the U.S. political environment include: transparency, disclosure, control and notification. These are the basis for governmental policies, but are directed at protecting consumers in the context of private corporate collection and uses of data. These parallel many of the policy positions already established in the E.U. and more recently in California at the state level. In the U.S. policy can occur at Federal, State and more local levels, with some pre-emption possible from the higher levels of

government. Since many high-tech entities are headquartered in California, it has a degree of influence and potential enforcement that might not be available for other jurisdictions. The U.S. Constitution is the highest legal level in the U.S. It has limited protection for privacy, and guarantees a level of free speech. Corporations are recognized as “persons” and as such are granted these protections. Another clause grants the federal government control over “interstate commerce” which has been determined to include communications facilities, in many cases including the Internet. All of this creates a fairly unique mix of protections and possible bases for action in either challenging state or federal legislation, or providing a basis for legislation or regulation.

Since many of the protections apply to action by the government, it is unclear that private corporations are constrained by these protections. Similarly, issues involving “freedom of speech” can pit the “right of corporate speech” – for example in advertising or in blocking access to a corporate communications channel against the right of a person (again, including corporations) to express their views using corporate controlled communications channels. Where these channels are ‘licensed’ from the federal government (the FCC for example licenses radio communications channels) regulations can be applied. The ability to do this for non-radio communications is a current political issue.

Current privacy issues in the U.S. include questions of government use of facial recognition, a capability implemented by online suppliers. Facial analysis is not just a factor in identifying persons, even those who are not “online”, but also identifying non-obvious characteristics. Even when these have modest accuracy, they can become part of corporate profiles on individuals that would not meet the criteria for court-room evidence, but will be applied in advertising and other situations. Characteristics such as gender, race, age, and more are both advertising criteria, and also discrimination criteria in the context U.S. employment and housing. Again these add challenges to the collection and uses of personal data.

An emerging technical component in the mix is the emergence of artificial intelligence (again a topic of IEEE-USA policy positions ([URL](#))). The use of individual profiles combined with AI may lead to highly effective advertising, persuasion or “nudging”. This is a topic of IEEE’s standards projects involving technology ethics, and in particular “The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems” initiative ([URL](#)). The increasing capability of corporations to develop personal profiles and apply these to generate increasingly effective personalized persuasion are a concern that will continue to engage these IEEE-USA committees as well as much broader policy communities.

Broadband:

The challenges of broadband communications and the Internet reflect a different aspect of the history and economics of U.S. communications policy. Specific technologies have been identified at the federal level as “essential utilities”. These include electrical service, telephone service and transportation/road infrastructure. Different incentives have been applied to facilitate universal access to each of these. In most cases, these have included supporting activities at the municipal, state and federal levels. Where private industry has been a key supplier, monopolies have been granted in return for assuring the level of service sought. Even with the breakup of the primary telephone monopoly, the dependence of this on physical wiring created a natural monopoly for use of the utility poles. Allocation of the space on these poles typically includes exclusive space for phone, cable TV, electrical and in some cases a “municipal” slot for town use. With the emergence in the 21<sup>st</sup> century of broadband via Cable,



telephone DSL services and now wide spread “smart” cell phone services, the landscape has changed. Many suppliers have “bundled” phone service, internet access and television into product packages that essentially have a high base rate and marginal pricing for the other options. If you want TV you can get the Internet for a few dollars more, if you want Internet you can get basic TV service for a few dollars more.

In the last few years, streaming services such as Netflix, and now many “networks” (HBO, CBS, Disney...) and even less obvious sources like Amazon have entered markets, but often they must access the customer via a monopoly controlled broadband channel. Incumbent suppliers have sought exclusive arrangements with municipal entities, housing developments and apartment buildings. In some states legislation has been adopted to block municipalities from directly offering Internet service. An interesting example of this is Colorado, where the legislation had an “escape clause” that allowed municipalities or counties to “opt out” by a majority vote. The result has been a number of local jurisdictions that have initiated over-ride referendums and received an effective mandate to provide a municipal broadband service. Towns like Fort Collins ([URL](#)), Loveland ([URL](#)), and even Estes Park ([URL](#)) – nested deep in the Rocky Mountains with limited line of sight, and long distances between residences. These factors have discouraged for-profit entities from providing cost-effective universal access in these areas. With the opportunity to install 21<sup>st</sup> century technology, towns have been rolling out “fiber to the premises” services with 1 Gigabit full-duplex service at costs comparable or lower than slower “cable” options. Emerging 5G cell service is another entry into this space, but with line-of-sight and antenna spacing challenges to reach rural or mountainous areas.

Into this contested arena the 2020 pandemic has added both incentives and clear applications that make the value of universal broadband clear. The need for at-home education, work, health care and an increased load of entertainment and social interactions are all unambiguous needs for many communities nationwide and world-wide.

IEEE-USA had a policy paper in 2004 advocating for 1Gigabit service to every residence, with a then-current rationale. IEEE’s GPPC more recently has adopted policies advocating universal access and community “hot spots” – which is aligned with their global perspective. The CCP committee has put forward a more U.S.-focused position calling for communities to evaluate their needs, available services, current technology and practical user-costs to determine how to meet the needs going into the next decade(s). Clearly the demand for broadband service will increase in all of the application areas identified during the pandemic. Innovation based on increased broadband can be expected as well. Communities with sufficient service and reasonable costs will have an advantage in attracting new businesses, employers and residents. Other countries, such as Singapore and South Korea, have taken a more “national strategy” approach to assure broadband access on a country-wide basis.

## Summary

Technology policy development is only viable when various factors converge. A given area of technology may evolve slowly for decades, and then explode with capabilities, applications and resulting social impact. Telephone services moving from wires to cells to smartphones reflect this type of “supernova” (the term adopted by Thomas Friedman in his book “Thank You for Being Late”, which points out 2007 as a year of emerging, high impact, technology.)

Once social impact starts to become evident, the window of opportunity for policy impact is limited. At this point you need relevant technical experts who can understand the technology at a sufficient level and anticipate possible responses to social impact on the other. At times the target for policy constraints (or investments) may be governmental agencies. At other times, the target needs to be corporate entities — with the added factor that such corporate entities may not “reside” in the jurisdiction where the constraints might be targeted. Finally, investing in education and continuing education is essential. Technologists need to maintain a level of awareness of both related areas to their work, and the applications that are emerging for use and abuse. The public needs a level of education to understand how the technology may be impacting their lives, and their opportunities. And of course policy makers need insight on the issues as well as practical guidance on steps they might take to address these.

Finally, all of these factors will vary from country to country, culture to culture and by history and economic factors.

From the IEEE-USA Digital Privacy Position Statement:

Transparency:

The public must be able to learn: the types of data being collected by any web site or other electronic means; what data is retained; how it is used; and what is shared with third parties, directly or indirectly. The same information must be available from those third parties. · All data collection mechanisms must be disclosed to users, including web beacons or other mechanisms for tracking user activity or data. Disclosed information must be sufficient for users to identify and utilize their privacy rights. · Each web site and application must disclose ongoing content placed on the user’s device and the uses of that content. · These disclosures must be accessible and comprehensible to the average user without specialized knowledge.

Disclosure for Users: · For each web site and application, users must be able to obtain complete disclosure of the information that is retained by the site, application or third party accessing the user’s information – directly or indirectly.

Control: · Users must be able to remove personally identifiable data easily from any site, cloud or collection devices. · Users must easily be able to identify, terminate, delete and/or uninstall any content or applications placed on their devices or cloud. · Disputes related to purging user data or applications must not default to licenses and arbitration processes that restrict the user’s legal options. · Users’ consent for a web site to collect data about them may not be interpreted to extend to information about their “friends,” or “contacts.” · A legally mandated age of consent must protect minors by restricting their release of private information.

Notification: · Users must be informed promptly and directly, should their private information be lost or misused. Organizations collecting or storing that information are responsible for the notification. · Users must have the right to know the source of privacy violations and the responsible parties, whenever possible. · Clear information must be available notifying recipients of paid advertising and content, along with a clear link to the source of that material and the intended beneficiary of the desired consumer action. · For online content, available metadata should lead to sponsoring site(s), allowing the user to utilize the transparency and disclosure rights indicated above



Jim is retired from 30 years in the computer industry and six in academia. He chaired the IEEE and ISO POSIX (UNIX/Linux) Standards committees, is President Emeritus of the IEEE Computer Society, past Vice President of the IEEE Society on Social Implications of Technology, and currently the Chair of the IEEE-USA Committee on Communications Policy as well as a participant in the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems.

<http://www.jimisaak.com>

# **ITU-R Study Group 5**

**Mohamed Abdel-Ghany**

**Vice Chair ITU-R SG5**

ITU-R Study Group 5 (SG 5) is the group mandated by the ITU Radio Assembly for handling the technical studies for systems and networks operating under the fixed, mobile, radiodetermination, amateur and amateur-satellite services within Radiocommunications sector. SG5, as well as other ITU-R study groups, is formulated by Radio Assembly decisions, and inherit its responsibilities from ITU Convention. Within its scope, SG 5 carries out studies and adopts Recommendations and Questions, as well as approves Decisions, Reports, Opinions and Handbooks. Study Group 5 can also study topics identified in resolutions and recommendations of world radiocommunication conferences.

As Study Group 5 is the lead group for terrestrial networks and systems in ITU-R in addition to amateur-satellite services systems development (except for terrestrial Broadcasting issues that are handled separately in Study Group 6), it is composed of four working parties, namely these working parties are:

- Working Party 5A (WP 5A) handling systems and networks issues related to Land mobile service above 30 MHz (excluding IMT), wireless access in the fixed service and amateur and amateur-satellite services.
- Working Party 5B (WP 5B) handling systems and networks issues related to Maritime mobile service including Global Maritime Distress and Safety System (GMDSS), aeronautical mobile service and radiodetermination service.
- Working Party 5C (WP 5C) handling systems and networks issues related to Fixed wireless systems, HF and other systems below 30 MHz in the fixed and land mobile services.
- Working Party 5D (WP 5D) handling systems and networks issues related to IMT Systems.

These working parties are tasked to carry out the detailed technical and regulatory studies for various systems and networks to produce the required draft documents. Not to mention that the Working Parties are also tasked to develop the draft CPM text for a number of WRC Agenda Items in addition to the regular ITU-R documents development activities.

SG 5 usually convenes 2 to 3 time a year following its working parties block meetings to adopt the draft documents after being prepared by the responsible working parties. Usually, SG 5 block meeting are being held in ITU headquarters in Geneva, except for Working Party 5D that holds its meetings in different places at the kind invitation of the Member States, which contributes to wider participation and global spread of the ITU-R activity.

The ITU-R Study Groups meetings work is driven by contributions from Radiocommunication sector membership, this means that SG 5's work is also driven by ITU-R members (Member states, Industry, Academia, ...) submitting their contributions and providing material and information required to develop the preliminary draft output documents. It's on the shoulders of the SG 5 steering (SG 5 chair and vice-chairs, working parties' chairs and vice-chairs) to organize meetings' schedule and put the adopted work plans into effect in order to progress the

work of meetings throughout the study cycle, and guide the meetings proceedings to build up the required consensus for fruitful outcomes and successful development of the draft output documents for SG 5 adoption.

The current study cycle for Study Group 5 has already started following the last Radio Assembly meeting in October 2019, SG 5 working parties now are tasked to finish tremendous amount of work in the coming 4 years to carry out the required studies to finish developing the corresponding documents.

Working Party 5A previous study cycle has successfully accommodated recent technology development of the land mobile technologies and applications. like: cognitive radio systems (CRS), intelligent transport systems (ITS), broadband wireless access (BWA) systems, multiple gigabit wireless systems (MGWS) and Railway Radio systems between Train and Trackside (RSTT). The outcomes of these study cycle have resulted in a number of new or revised Recommendations, as well as Reports. Now, Working Party 5A will continue its tasks in accommodating technology developments in new areas like Connected Automated Vehicles (CAV), Utility Communication Systems, as well as developing CPM text for the WRC-23 Agenda Items 1.3, 9.1 topic b and 9.1 topic c.

Working Party 5B is tasked for development and maintenance of Recommendations that enable protection for distress and safety applications, while allowing sharing spectrum resources with other services operating within the allocated bands, it continuously carries out activities to accommodate recent development the areas of radiodetermination, aeronautical mobile and maritime mobile services to facilitate utilization of these services. WP 5B's work is very important to facilitate global maritime and aeronautical activities, therefore WP 5A maintains close cooperative efforts with other United Nations' Specialized Operating Agencies such as the International Civil Aviation Organization (ICAO), International Maritime Organization (IMO) and World Meteorological Organization (WMO).

Recent activities of WP 5B included conducting aeronautical studies to develop new Recommendations dealing with the technical characteristics and protection criteria for aeronautical mobile service systems in various frequency bands such as 22.5-23.6 GHz and 25.25-27.5 GHz, 45.5-47 GHz and within the 4 400-4 990 MHz frequency range, respectively. WP 5B will continue its mandate to facilitate development of maritime and aeronautical systems, as well as developing CPM text for the WRC-23 Agenda Items: 1.6, 1.7, 1.8, 1.9, 1.10 and 1.11.

Working Party 5C previous study cycle had accommodated many of the recent technology development in Fixed wireless systems like point-to-point applications operating in the 71-76 GHz and 81-86 GHz bands, automotive radar applications in the 76-81 GHz bands, the technical and operational characteristics, applications of the point-to-point fixed service applications operating in the frequency band 275-450 GHz, and spectrum needs of HAPS broadband links. WP 5C will continue development of recommendations for fixed wireless systems especially those systems in spectrum higher than 86 GHz like W-Band and D-Band fixed systems, as well as developing CPM text for the WRC-23 Agenda Item 9.1 topic c jointly with WP 5A.

Lastly, Working Party 5D previous study cycle had accommodated many issues related to the development of IMT, and during this study period addressed technology, spectrum and other aspects related to IMT including the continued expansion of use case being supported by both

narrow and broadband IMT for the expanding global applications in telecommunications, entertainment and IoT, the development of IMT-2020 in support of 5G, the evolution of IMT-Advanced and necessary technical and spectrum work. Following WRC-19 decisions for additional spectrum bands for IMT-2020 (5G), the current study cycle for WP 5D carries as usual many important objectives to accommodate fast technological development in IMT, these objective include developing required frequency arrangements – Revision of Recommendation ITU-R M.1036, developing IMT parameters for WRC-23 sharing studies, draft new report for IMT AAS antenna pattern modelling, draft new Recommendation ITU-R M.[IMT-2020.SPECS] based on IMT-2020 candidate technologies evaluation under the key technical criteria of the IMT-2020 Vision and global 5G, as well as developing CPM text for the WRC-23 Agenda Items 1.1, 1.2 and 1.4.



M. Abdelghany holds the position of the Radio Spectrum Procurement Director at the National Telecom Regulatory Authority of Egypt (NTRA).

Under his position, Mr. Abdelghany is responsible for Egypt’s radio spectrum supply through national radio spectrum plan and regulations. On the international level, he has developed several technical studies and international contributions and held more than one position as the coordinator for the views of the Egyptian administration, the Arab Spectrum Management Group (ASMG) and the African Telecommunication Union (ATU) regarding the agenda items of World Radio conferences since 2007 till now.

Mr. Abdelghany has more than 16 years of experience in the field of telecommunications and information technology, management and regulation of the frequency spectrum both nationally and internationally, he is an expert in spectrum management methodologies and the International Radio Regulations, frequency spectrum engineering and wireless communication technologies.

He received the Best Research Paper Award from the Second ITS Regional Conference for the Middle East and North Africa in 2019.

Currently, he holds the position of Vice President of Study Group 5 in the Radiocommunication Sector of the International Telecommunication Union. Mr. Abdelghany holds a Master of Engineering degree in Electronics and Communications from Cairo University in 2018, B.Sc.

in Electronics and Communications Engineering from the Faculty of Engineering – Ain Shams University in 2003.