

# International Telecommunication Union – Challenges for the Plenipotentiary 2014 – The Time for Change

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**Abstract.** ITU is the oldest intergovernmental and world telecommunication organization and UN specialized agency for telecommunications. Its federal structure is a historic property from those days when the political environment imposed it over any other, possibly more rational model. Together with the Union's membership segmentation into five (5) politico/geographical zones (in 1947), the "federalism" was fixed for several decades. It was a perfect reflection of the emerging new world order as well as defense of strategic national interests. In the 90s, the political environment changed together with the telecommunication environment and the client's needs – the Member States recognized it but it was too early to replace the archaic federalism with a healthy pragmatism! The organizational reforms were put on "standby".

With technology convergence and the need for streamlining the creative potential, the federal mechanism has become less appropriate and less responsive. The tension between the political and technical part of the ITU has led to regression of its credibility and loss of preeminence.

Some Governments of Member States have noted that they are no more the leading architect of the ICT future. The political wisdom and courage are necessary to review the ITU corporate activities and to open a debate on constitutional changes at the first next Plenipotentiary Conference in 2014 (Busan, Korea). It will be important in the future to preserve a balance of interests contrary to the balance of power. Governments and non-governmental entities – sector members – should find in ITU "a Forum" where the national telecommunication policies get their international recognition..

**Keywords:** ITU, RR, MIFR, WRC, WCIT, PP, Regulatory Policy, Reform

## **Mednarodna Telekomunikacijska zveza - Plenarno zasedanje 2014 – čas za spremembo**

ITU je najstarejša medvladna svetovna organizacija za telekomunikacije in specializirana agencija Združenih narodov za telekomunikacije. Njena federalna struktura izhaja iz časov, ko jo je politično okolje vsililo kot najboljšo možno, čeprav so obstajali tudi drugi, racionalnejši modeli. Skupaj z razdelitvijo držav članic na pet (5) geografsko/političnih območij (leta 1947) je »federalizem« ostal v veljavi desetletja. Bil je popoln odraz nastajajočega reda novega sveta kot tudi obramba strateških nacionalnih interesov. V devetdesetih letih se je politično okolje spremenilo skupaj s telekomunikacijskim okoljem in potrebami uporabnikov – države članice so to prepoznale, vendar je bilo prezgodaj za zamenjavo arhaičnega federalizma z zdravim pragmatizmom! Organizacijske reforme so bile postavljene na stranski tir.

S tehnološko konvergenco in potrebo po obvladovanju ustvarjalnega potenciala je federalna ureditev postala manj ustrezna in manj odzivna. Napetost med političnim in tehničkim delom ITU je povzročilo zmanjšanje njene verodostojnosti in izgubo prevladujočega položaja.

Nekatere vlade držav članic so opazile, da niso več edini arhitekti prihodnosti IKT. Za prevetritev delovanja ITU in za začetek razprave o potrebnih ustavnih spremembah na prvi prihodnji »Plenipotentiary Conference 2014« (Busan, Koreja)

sta nujno potrebna politična modrost in pogum. Za prihodnost je pomembno ohraniti ravnotežje interesov v nasprotju z ravnotežjem moči. Vlade in nevladne institucije – člani posamičnih sektorjev – morajo videti v ITU forum, kjer nacionalne telekomunikacijske politike pridejo do mednarodnega priznanja.

## **1 REGULATORY ARRANGEMENTS**

The radiocommunication regulatory regime and the related Frequency Spectrum Management (FSM) are defined through Radio Regulations (RR) [1], the international Treaty mechanism ensuring an equitable access to radio spectrum/orbit natural resources. The overall objective is to provide a most useful and cost-effective way of planning and managing the use of the radio frequency spectrum while conserving its flexibility for future expansion.

The advancement of technology and convergence of media, telecommunications and computing (ICT) are sponsoring permanent evolution of radiocommunication services. And this technology, by offering unlimited choice of coding, processing and switching of signals is

challenging the current rigid schemes of regulatory arrangements where the distinction between certain radiocommunication services has become blurred. Also, certain complex multi-function systems may offer a wide range of applications, thus putting in the question all definitions of single-purpose radiocommunication service(s).

The radiocommunication services, as defined in Radio Regulations (RR), may have a primary or secondary status where the latter shall cause no harmful interference to and shall not claim protection from the former. The regulatory procedures that are governing the use of the frequency bands, allocated to only one radiocommunication service, are adapted to the service concerned. This raises the question of why should there be different procedures if distinction between certain services has disappeared – or perhaps should there be new services defined together with the associated new procedures?

Observing the inconsistencies, we note that an existing or planned service may enjoy more protection than needed, possibly giving this way a useful service beyond the specified coverage. Or, certain frequency Plans have even not been implemented, an example being the Broadcasting Satellite Service (BSS) with its feeder links, where the use of the allocated frequency band (12GHz) is well below the expected level. But at the same time, and contrary to all the rules and procedures, the BSS is extensively using the FSS non-planned bands for "direct-to-home" (DTH) transmissions introducing the anomaly that needs to be considered while looking for an efficient spectrum management.

Spectrum regulation is just too sensitive and too important issue for all Member States to be left in disorder for longer time. It is known that over-regulation may become an obstacle for development of the radio systems, but the laissez-faire approach might lead to a chaotic situation! In many cases the definitions of radiocommunication services (RR, Article1) and the Table of Frequency Allocation (RR, Article5) are not consistent either. In view of potential non-compatibilities it is rational to favor the allocations that are based on generic services.

For the reasons exposed, the traditional concept of spectrum/orbit management in an environment of decreasing differentiation between traditionally defined radiocommunication services may no more correspond to the RR objectives. In this context, the Plenipotentiary Conference 2014 may wish to address questions relative to the Union future regulatory policy and practice.

- *What uses of the spectrum need to be regulated and to what extent?*
- *Is the rigid frequency block allocation scheme still appropriate?*
- *Is the principle of exclusive or shared allocation still valid?*

- *How to manage the increasingly more complex RRs (new format, new definitions)?*
- *How to simplify the procedures associated with RR?*

## **2 THE MASTER INTERNATIONAL FREQUENCY REGISTER AS A FALSE REFERENCE**

The Master International Frequency Register (MIFR) [2] is one of the pillars of the radio regulatory arrangement. The frequency assignments recorded there are given the status of protected stations. The right to international protection is subject to periodical examination in which the notifying administration is expected to confirm whether the frequency is used with the same characteristics as notified. In case of changes in the characteristics, the modified frequency assignment would be a subject to re-examination related to a possible increase of the harmful interference potential to the assignments already recorded.

In view of the above, many administrations have been consistently declaring no change (NOC) in the characteristics of the recorded assignments. Such practice has transformed MIFR into a list of assignments supposed to be in use, although many of them are no more, or are used with different characteristics. As the majority of these assignments have preserved their priority rights with respect to any new assignment, the new users were systematically given unfavorable findings. Although the notification procedure allows for recording of incompatible assignments, many administrations opted for an easy approach – to continue using the proposed incompatible assignments without any notification to the ITU.

*Such regulatory practice is not acceptable. This is particularly true when recording in MIFR does not result in any special priority. On the other hand, where registration provides some priority, the situation is also unworkable as administrations tend to keep the status-quo to retain that priority, even at the expense of the accuracy of the recorded data.*

## **3 WORLD RADIOCOMMUNICATION CONFERENCE AND RR UPDATING**

The concept of “cyclical” World Radiocommunication Conferences (WRC), to take place every three years in principle, brought up certain anachronisms in the regulatory process and contributed to the chaotic situation as to the required transparency and efficiency of RR updating process.

The objective of WRC by definition is to modify the RR provisions and agree on any change needed in regulatory procedures. The Members are expected to ratify the International Treaty as modified, in a reasonable time, but this “time” could be much longer than the period between two WRCs. This reality implies that there are always at least two or more different RR

versions applicable to different Member States. This fact is disturbing and may represent a problem in case of a potential disagreement among parties relative to the interference-free usage of the spectrum/orbit resources. The recent WRC-12 conference [3] just confirmed the limited capacity of the current mechanism to adapt the regulatory regime. The discussions with obvious political connotation and with no-results implicitly reduce the governments' rights to exercise their sovereignty regarding the use of the frequency spectrum, as guaranteed by ITU Constitution. The RR modification process has become irrelevant for those Members being not sufficiently aware of the procedures, or being absent from the conference.

These anachronisms are weakening ITU capacity to preserve a stable regulatory regime that would allow for an efficient FSM at the time of permanent evolution of the radiocommunication services. We believe that:

- the WRC short repetition cycle is not an appropriate parameter and proved it to be even counterproductive. The preparations and formal Conference Preparatory Meetings (CPM) [4] themselves are outdated and inefficient mechanism, thus making WRC inefficient.
- each WRC Agenda is saturated with complex items whereas important issues are usually dealt in a non-transparent way in advance and outside the formal and official conference meetings.
- the Resolution type "agreements" at the conference are making the core RR provisions "de facto" an auxiliary mechanism – pending the ratification of the Treaty texts.
- WRC is producing too many non-technical Resolutions thus negatively affecting the RR character. They are diluting the established regulatory process, making it contrary to the original intent of the Atlantic City 1947 Plenipotentiary conference [5].
- the ITU Radiocommunication Bureau, which is in charge of RR implementation, cannot properly apply the provisions in the spirit of equality of rights and obligations. This anomaly may provoke injustice to those that do ratify the RR on time. Moreover, it may have implications to the work of the ITU specialized secretariat on one hand, and to the activities of the Radio Regulatory Board [6] on the other, whenever the problem is detected among the parties.

***It is therefore desirable to put a balance in this process by creating simple and transparent procedures to have the three major elements of the regulatory process re-examined, namely, the process of RR establishment by a relevant intergovernmental meeting, RR implementation / application procedures by ITU specialized secretariat and RR modification / updating process by WRC or WARC.***

#### 4 THE RADIO REGULATION'S FORMAT

The format of the Radio Regulations, as a Treaty text, should be as simple as possible and frequency allocations should be as broad as possible, sufficient protection to the allocated services should be ensured and harmonization in the global/regional spectrum usage should be opted for. Both protection of the radio services and harmonization of the spectrum usage will help to enhance the efficiency and will facilitate and possibly accelerate the development and convergence between the services.

By performing the efforts towards these objectives, the following elements should be considered in view to enhance the efficiency and transparency of Frequency Spectrum Management (FSM):

- wherever possible, the frequency bands may be allocated to the broadly defined services with adoption of the associated regulatory provisions that would provide the maximum flexibility in the spectrum use, taking account of the relevant technical and operational factors, including safety;
- wherever possible, the frequency bands may be allocated on a worldwide basis (aligned services, categories of services and frequency-band limits) taking into account all the relevant factors, including the regulatory provisions between Regions;
- to allocate the frequency bands by including the name of a service in the Table of Frequency Allocations (Article 5) and, to the extent possible, not in the footnote (FN);
- to take into account the use of radiocommunications in achieving the national, regional and global priorities, including the resolutions on the emerging technologies and other socio-economic issues;

#### 5 TIME FOR CHANGE

In the perspective of the flexible frequency band allocation scheme, a substantial review of the radio regulatory regime is recommended in order to redefine certain concepts (such as "mobility") which has indeed, become inadequate. "A priori" planning should be related to flexible operating parameters accompanied with a plan modification procedure able to meet the changing requirements of Members and technology developments.

The coordination process should be further refined in view to maintain its relevance. The concept of notification and recording of frequencies should be reviewed and the database, relevant for the efficient management of the spectrum/orbit resources, should be maintained. Following these directions and having based these conclusions on the past experience, an early WRC Reform is needed in order to:

- ensure that the modified Treaty (RR), instrumental for efficient FSM, should be applicable to all Members with the same importance and legality.

- change and innovate the RR format as well as the organisation of the RR updating process (conferences) by making it easier, simpler and transparent – with the major role of the ITU specialized secretariat.
- allow for a general type of the radiocommunication conference with an exclusive administrative character to take place at longer intervals, as appropriate (WARC).
- charge the ITU secretariat to draw up the major conference working document, based on the approved ITU regulatory Policy.
- assure that in this working document, the contributions by Members as well as by other parties authorized to contribute, are taken into account.
- allow for any regional conference to take place, if the interest is expressed by a group of Members or the Region concerned.

The Resolution 951 (Rev WRC-07) [7] underlines the importance of having the ITU regulatory activities and the associated Frequency Spectrum Management properly reformed. It is the best evidence of the inadequacy in the current FSM approach.

*Each next WRC is more complicated and it is difficult to put order into the Radio Regulations when there are several versions out there which independently apply to various groups of membership! This anomaly may provoke a disagreement among parties concerned, as to the interpretation of the regulatory procedure in force! So far the creative work on the subject matter has not advanced and there has always been a danger that “Notice of Compliance (NOC) will become a policy.*

## 6 INTERNATIONAL TELECOMMUNICATION REGULATIONS AND WCIT 2012

The International Telecommunication Regulations (ITR) in force, were agreed at the WATTC Conference in Melbourne, held on December 9, 1988. Their adoption at the time was taken as a starting point of the liberalization process in international telecommunications.

The 2012 conference on the same subject (WCIT-12, Dubai) was saturated with a number of proposals that were substantially incompatible with the ITU mission and understanding of the technical issues involved. Certain contributions sparked at the very beginning an overall politicization of the debate, which was harmful for the proceedings. The irresponsible behavior of the ITU leadership contributed to chaotic conference proceedings and ending with no-consensus reached.

The ambitions to change the basic structure and content of ITR, together with possible redefinition of ITU role, its legal jurisdiction over the new services (as Internet), while maintaining the preminent role on the subject

matter, were not agreed. And for the first time in ITU history, an intergovernmental conference concluded where about 40% of Member States present and having right to vote, did not sign the Final Acts.

The WCIT-12 offered one more argument how the ITU should not function, where the tension between technical and non-technical issues seriously harmed the technical spirit. WCIT-12 can be understood as a sign of decreasing confidence in the ITU leadership.

The majority of ITU Member States still attach importance to the national sovereignty and they are not prepared to subordinate the ITU technical mission to the isolated political ambitions of certain lobbies.

## 7 LOOKING FOR CONVERGENCE

By addressing the future challenges, it appears that the Union needs a new and different Constitution that should allow the Governments on one hand and the Partners on the other (Industry, SIO, NGOs, etc.) to make value of the best performance of their respective competences. Equal rights should be enjoyed at different levels and in different formats. The two poles should be complementary with a universal objective for dynamic and efficient frequency spectrum management, transparent regulatory regime as well as a leading role in the global standardization processes.

In that perspective, the idea of a new entity within the ITU structure is considered as a realistic objective. The Entity should build on the strengths of the Union and establish partnerships with other standard bodies on related issues. Currently certain Members States, for different reasons, have no opportunity to participate in the work of numerous ITU Study Groups as well as in the industry forums and partnership projects. ITU must give them back their basic rights – to be involved in the process.

Sector Members (partners) possess the required creativity and dynamism, both financial and human. With the new entity, ITU would get a responsive and convergent structure that would provide an environment to carry on the respective academic studies and research related to the ICT standardization and radiocommunication service applications. The Entity [8] should become a facilitator for co-operation with different regionally established standard bodies and industry forums related to the telecommunications and ICT.

The Entity's work should be project-oriented, private-sector driven and self-financing. It may also build on the work done externally by making reference to the relevant standards of other organisations and concentrating on the ITU recognized strengths such as interconnectivity, interoperability, the numbering and network management.

The ITU Regional Offices should be used to disseminate the results of these efforts in the Regions and should encourage the contributions to the work of the new Entity by members that are lacking the

resources to physically participate in the meetings. The Entity should cover all academic, scientific research and technology standardisation activities which are currently part of ITU-R [9] and ITU-T [10] together with certain issues dealt by the current ITU-D [11].

## 8 CONCLUSIONS

If the Reforms are to become the Union Policy for the future, then Members should demonstrate maturity and wisdom to execute such ambitious plan in due course. In 2014, the Plenipotentiary conference PP-14 [12] is coming up as the first opportunity to address the outstanding issues. Looking for credibility and preeminence, the Conference may, while defining its strategic goals and objectives, also include its general agreement concerning the ITU Reform process which is inevitable. It is therefore realistic to expect that:

- the preparatory work for Reform would be launched on a multilateral basis, on large scale, over the complete PP cycle (2014-2018) and starting as soon as possible;
- the leadership and the Union legal bodies should associate with the Reform philosophy, its objectives and importance of its implementation. An active support is therefore expected from the Member States at the initial stage.
- at an appropriate time, the future Partners (sector members) should be invited to take an active part in the Reform process in view of its successful implementation. They are those that have the strongest interest to launch a substantial Reform movement for ITU revival, as a leading organization for the telecommunication infrastructure development and ICT convergence.
- all accessories to the Reform mechanism should be discussed in due course, at various ITU and other Regional telecommunication forums, as appropriate. The Reform agenda itself would not start prior to the 2018 Plenipotentiary conference.
- after the agreement reached and the draft new Constitution being considered and approved by the Union Policy bodies, the transitional period would start. The Secretary-General (to be elected in 2018) should report in due course to the Council and to the PP-2022, on the Reform implementation program.

Hopefully, the PP-14 may reach a political consensus on the matter providing that the membership and leadership would work hard and together in the preparatory period in order to put forward convergent views and promote them as appropriate.

*This conference is the opportunity for the ITU Members to give up the previous conservatism and opportunism approach which is preventing the Union to advance and go forward with convergence. PP-14 in its conclusions may ensure that relevant mechanisms (i.e. the Reflection Group composed of government representatives and partners) are established in view to consider all necessary elements that should be leading to ITU Reforms. This group might present its report to the Plenipotentiary Conference in 2018.*

*Such evolution would bring forward new challenges and open new opportunities for many research areas including microelectronics, electronic components and materials in the effort to find appropriate solutions for future telecommunications.*

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