USKA Input Paper #1 to IARU R1 Interim Meeting 2022

Subject: Transparent Information Policy in IARU R1
Society: USKA
Country: Switzerland
Committee:
Paper number:
Author: Willi Vollenweider HB9AMC

1. Proposal

USKA proposes that all relevant functions (executive, advisory, administrative etc) within IARU R1 report to the Member Societies annually, as specified in Annex.

2. Motivation

We appreciate the great work done by the actors of the association.

Unfortunately, the information of Member Societies about IARU R1 mandated officer's activities is in many cases insufficient. In some cases even not existent. It currently happens that there was no activity at all in important subjects. Without regular reporting, it is impossible for Member Societies to guess which matters are followed, thereby proceeding as expected, and which are not.
Abstaining from duties can result in severe damage.
Too long reporting intervals, such as triennial, is not an acceptable information policy and of very limited use for Member Societies.
Regular comprehensive and professional reporting has not been part of IARU R1's culture of communicating towards its Member Societies.

3. Objectives

Most of us are holder of stock in listed stock corporations. As shareholders, we are used to receiving their annual reports in due time well ahead of their general assemblies. Without asking and without having to argue and fight for it !

Same rule must apply for IARU R1, too. Member Societies have a right to be informed on a regular basis. It is the Member Societies who are the real stakeholders. It is them who have to suffer when they believe in good faith that promised action is done by IARU R1 while this does not hold true.
Changing to annual reporting intervals will give every Member Society a chance to detect in time any shortcomings and failures in IARU R1's activities.

The ten years timeframe of our "Shaping the Future" initiative to make Amateur Radio relevant again seems long, but it is not. Some actions have to be taken very soon, especially when they are prerequisites for other actions. It is therefore crucial for our most important STF process to detect any IARU flaws or omissions as soon as possible, allowing to take corrective action without further delay.

Furthermore, there should be open information about the number of people assigned to every IARU activity, as well as their names. This would allow Member Societies to see which group is in need of more human resources. We are all aware that IARU R1 is understaffed – but we especially need to know where more workers are needed, to be delegated from Member Societies, of course.

We ask for introduction of annual reporting according to the table below, starting with the calendar year 2022. All such reports shall be made easily accessible on our iaru-r1.org website. Centralized instead of scattered all over the place. Ongoing notification can be automated by using mailing lists to which Member Societies can subscribe as they desire.
Enforcement of the reporting shall be assured by the IARU R1 General Secretary's office.

Annex to "Transparent Information Policy in IARU R1":

IARU Bodies	Human Resources	Reporting to Member Societies	
	#people	Reporting	Future plan
IARU R1 Executives			
President	1	annually	annually
Vice-President	1		
General Secretary	1	annually	annually
Treasurer	1	annually	budget
Executive Committee Member #1	1	annually	annually
Executive Committee Member #2	1	annually	annually
Executive Committee Member #3	1	annually	annually
Executive Committee Member #4	1	annually	annually
Executive Committee Member #5	1	annually	annually
EC publishes meeting minutes within 2 weeks		every meeting	every meeting
IARU R1 Committees (by Chairpersons)			
C 1: Steering Committee	?	annually	
C 2: Credentials and Finance Committee	?	annually	
C 3: General Administrative and Organizational Committee	?	annually	
C 4: Permanent HF Committee	?	annually	annually
C 5: Permanent VHF/UHF and Microwaves Committee	?	annually	annually
C 6: Election and Ballot Committee (during the conference only)	n.a.	GC	
C 7: Permanent EMC Committee	?	annually	annually
IARU R1 Working Groups (by Chairpersons)			
High Speed Telegraphy (HST)	?	annually	annually
Political Relations Committee (PRC)	?	annually	annually
Spectrum and Regulatory Liaison Committee (SRLC)	?	annually	annually
Support for the Amateur Radio Service (STARS)	?	annually	annually
Youth Working Group (YWG)	?	annually	annually
Technology Working Group (TWG)	?	annually	annually
IARU R1 Coordinators (by Coordinators)			
Amateur Radio Space Exploration (ARSPEX)	?	annually	annually
Emergency Communications	?	annually	annually
HF beacons	?	annually	annually
IARU monitoring system IARUMS	?	annually	annually
International Progr. for Disabled Amateurs (IPDA)	?	annually	annually
Regulatory Affairs (RA)	?	annually	annually
Satellites	?	annually	annually
VHF/UHF/Microwave beacons	?	annually	annually
VHF/UHF/Microwave contests	?	annually	annually
Special bodies			
Program Board of "STF Programme"		Half yearly	Half yearly
STF SO Team Leaders (every team)		Half yearly	Half yearly
STF SO Team Leaders Team Meeting Minutes		within 1 week	within 1 week

USKA Input Paper #2 to IARU R1 Interim Meeting 2022

Subject: Implement Technology Working Group (TWG)
Society: USKA
Country: Switzerland
Committee:
Paper number:
Author: Willi Vollenweider HB9AMC

1. Proposal

We propose that the Technology Working Group (TWG) shall be implemented in 2022 without further delay, in order to support our overarching goal to make Amateur Radio relevant again.

2. Motivation

Today, IARU, "Amateur Radio" and some Member Societies (including ourselves) are NOT at all perceived as techno-scientific "centers of expertise" by outside observers.

Based on SARL's proposal NS20_C3_20, General Conference 2020 approved this new permanent IARU R1 body "Technology Working Group" (TWG).
The Executive Committee (EC) then decided to postpone its realization for good reason till after the Strategic Workshop that took place in October 2021.
EC has, however, no authority to cancel or delay this GC decision any further.

IARU R1 and IARU traditionally lack contacts to the "real world" with the exception where standards, spectrum regulations and legislations affect Amateur Radio directly. The result of abstaining from public relations to the "real world" whatsoever has been proven to be most unfavorable. What Member Societies consider existential for themselves, seems not to bother "us" at IARU R1 level.
Another severe consequence of lacking such a "techno-scientific center of expertise" was missing out on technological progress in our indigenous technologies for decades, resulting in syllabuses, curricula and the like to be now outdated by up to thirty years. Recognised in IARU already at GC 2005 in Davos (A Foresight Project DV05_C3_50_EC by Dr. Bob Whelan G3PJT). IARU is not to be blamed here alone, Member Societies bear responsibility for this as well.

Pretending radio amateurs to be the "Ambassadors of modern Communication Technologies" without really committing to doing 21st century techno-scientific activities at center stage would make Amateur Radio untrustworthy.

In order to meet the challenge to make Amateur Radio relevant again, we just cannot afford to delay the already approved TWG any further. Decisive action is urgent.

3. Objectives

We propose that the details of the approved "Technology Working Group" be refined in 2022 by the people who already volunteered at GC 2020, and that the TWG be implemented very soon. All in order to serve the strategic objectives of IARU R1 as set by the Strategic Workshop.

We should not wait until "Amateur Radio has become relevant again"! This will take years.
This TWG will complement the work under way in the various STF teams. It will require a few years to bring TWG to full production anyway. The effects thereof will be sustainable.

4. Proposed Scope of TWG (details, refinements, adjustments open for discussion)

SARL's proposition approved by GC 2020 is an excellent start. But it does not exploit the full potential of this excellent idea.
We therefore propose an enhanced concept of this TWG:

1. **Monitor, analyze and follow technological and scientific developments**, focusing on communication technologies (ICT) and scientific fields being of interest to our target groups. Thereby taking into account major movements (currently "Digital Transformation") as well as major behavioural changes in society, especially youth.

2. Some goals as already described in aforementioned **SARL's proposal** NS20_C3_20.

3. Establish and Maintain Official Contacts with international **Scientific Organisations** such as ESA, NASA (apart from ARISS), CERN, etc

4. Establish and Maintain Official Contacts with international **Humanitarian and Cultural Organisations** in our areas of interest such as UNESCO, IFRC, AUNSTO, UNIDO, UNOOSA, etc

5. Establish and Maintain Official Contacts with international **Professional Organisations** in our field, such as IEEE, ACM, W3C, etc

6. Establish and Maintain Contacts with important international techno-scientific **Citizens' Movements and NGO's**, e.g. Citizen Science, FOSDEM, various Open Source communities and organisations, GNU Radio, HamSci, Hackerspaces, Makerspaces FabLabs etc.

7. Establish and Maintain Official Contacts with important governmental or nongovernmental **Global Initiatives** for the motivation of young talents for STEM/ICT, such as foundations that are furthering techno-scientific education of youth etc

8. **Defend our Freedom of Experimentation** (other than spectrum, EMC)
   In some countries, the rights to freely experiment with hard and software are endangered by increasingly restrictive legislation intended to "regulate" free exchange of goods between countries.
   Continuing Lawmakers' stubborn refusal to differentiate "experimenters" from pure "consumers" ("end users") often has disastrous effects on Technical Experimentation (as warned by the 2nd progress report on EU's R&TTE Directive 1999/5/EC already in 2010!).
   This includes intimidation and punishment of creative and innovative people including young STEM talents.
   The mania to "certify" everything has already extended from hardware to software.
   We must fight for free experimentation with hard and software as fundamental right of radioamateurs and groups with similar interests, especially youth.
   Cooperations with other bodies who are defending such rights as well, are indispensable, e.g. FSFE.org and others.

9. **Facilitate Member Societies** to cooperate with national chapters of international organisations and bodies mentioned above.
   And vice-versa: Contacts first established on national level can motivate international bodies to follow suit.

10. **Internationally push forward, coordinate and support HamProjects**.
    Ambitious ham project ideas often exceed the resources that local clubs or small Member Societies possess: such as specialized skills, expensive measuring equipment, specialized hardware, software, expertise, project management skills, money and the like.

    (open for supplementation)

5. Human Resources

It is important that TWG staff are selected very carefully according to the qualifications required. Be it technical, scientific, diplomatic, political, humanitarian, influencer, marketers, opinion leaders etc.
We profit that there are many radio amateurs who are already inside the above mentioned organisations (partly in senior positions, sometimes retired but with remaining relationships)

TWG shall be a team, not a single person: Chair, several experts, several staff persons.

6. Finances

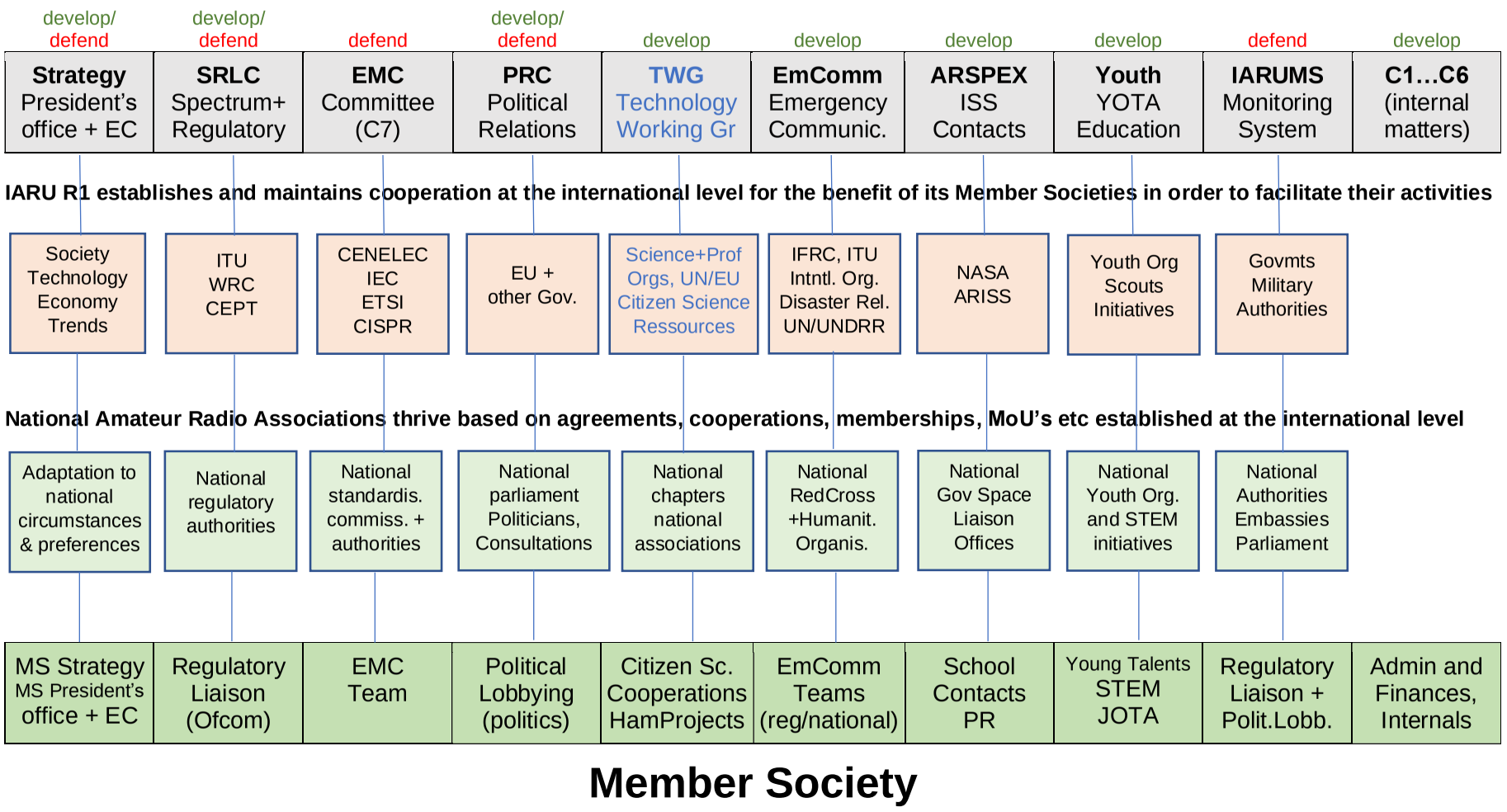
TWG will need money from the IARU R1 (STF?) budget in order to establish and maintain these activities. Some partner organisations will expect us to pay membership fees, at least in the beginning before mutual benefit is recognized by both (“win-win”).

7. Final remark

Technology Working Group is not a “PR Department” for IARU R1, although TWG’s achievements will be made public in order to develop recognition of Amateur Radio with society, industry, science, education, authorities and politics.

Annex: Organisational chart (Organigram) of IARU R1 including TWG.

IARU R1 Organigram (external relations only) – where does TWG fit in?



Source: https://www.iaru-r1.org/wp-content/uploads/2021/03/WG-Terms-of-Reference-March-2021.pdf

USKA/HB9AMC/28 March 2022

USKA Input Paper #3 to IARU R1 Interim Meeting 2022

Subject: Bring the "Full License" Syllabus of Amateur Radio to the 21st Century
Society: USKA
Country: Switzerland
Committee:
Paper number:
Author: Willi Vollenweider HB9AMC

1. Proposal

We propose that the partly outdated CEPT/HAREC-2018 recommendation ("Full" License) be quickly adapted to the requirements of the 21st century.
(this proposal does not affect the entry level licenses issued by numerous national administrations)

2. Motivation

In his opening address to the IARU October 2021 Workshop, president Don Beattie said:
"*In short, I think we need a **relevant product** to offer to **today's generation**".*
This is uncomfortable for all of us, but true.

As we all know, Communication Technologies have arrived in the 21st century, but our license exams including associated training activities have not.

Aforementioned CEPT/HAREC T/R 61-02 recommendation keeps producing an outdated and false image of what Amateur Radio really is today, in stark contrast to what young STEM talents expect!

We have to ask ourselves the question: "*Why should a 17 year old want to become a radio amateur?*"
To be honest, we answer him/her that it makes no sense whatsoever to learn last century's technologies as required by regulators, but rather recommend him/her to join more innovative communities which instead focus on 21th century technologies which contribute real value to his/her education, career and life.

Even if the 2018 HAREC improvements (DS+DSP) were included into the national exam syllabuses (e.g. not yet the case in Switzerland), most current exams lag at least twenty years behind "state of the art".
This neglection and denial of new technologies in exam syllabuses are one of the major reasons why our hobby is NOT MARKETABLE anymore to young STEM talent. (Who are by the way not afraid at all to meet intellectual challenges!)
This can very easily be proven by studying the age histograms of Member Societies, and is not subject to speculation. Not surprisingly, many Member Societies refrain from publishing these age histograms.

3. Objectives

For many, if not all of the Strategic Objectives (SO) defined in the October 2021 STF workshop, the need to fix this problem is prerequisite. Should we refrain from meeting this challenge quickly, we will not be taken serious in pursuing most of the goals as defined in our "Shaping the Future" process.

For good reason, governmental "Digital Transformation" initiatives are in the hands of ministries responsible for Industry, Economy, Research, Science and Education, not "Communication".
We must understand and accept that youth education and techno-scientific competitiveness are in most countries not the task of purely administrative and law enforcing communication regulators.
For this reason, ministries with economic objectives must be involved with priority.

Young STEM talents want to technically understand 21st century technologies, not how communication used to function in the last century.

In addition, young STEM talents are not at all “stupid” consumers.
But rather experimenters, creators, makers, researchers, innovators and curious discoverers!

We may not hesitate to throw outdated “material” over board in order to get our boat afloat again.

Recommendation: Modern Amateur Radio exam syllabuses and curricula should take into account:

- Motivation: How can I learn “Digital Transformation”? How can I profit from it? How can I avoid to become a victim of it? What’s in for me, for my education, for my career, for my life? How can I learn to understand how today’s high tech world functions, enabling me to take the right decisions?
- Adding new ICT Content (thereby substituting outdated content to avoid “overloading”):
    - Digital Fundamentals (Digital Logic, DAC/ADC, Digital Signals, Digital Signal Processing, Digital Filters, digital Modulation/Demodulation, SDR, …)
    - Microcomputer Technology (architecture, interfacing, system software, languages, tools, integrated development environments etc)
    - Fundamentals of Methods of digital transmission of text, voice, image, video and data (Sampling, quantisation, coding, error correction, data compression, channels, lossy/lossless, real time communication, …)
    - Networking Fundamentals (Ethernet, IP, Addressing, Ports, Switch, Routing, Gateways, Firewalls, Protocols, Services, Security… (IEEE 802), Web technologies (W3C.org)
    - Experimentation/Applications (VoIP, DATV, LoRa, LoRaWAN/IoT, HAMNET, FreeDV, M17, Vara, Winlink, Pactor, FT8, Webservers, Satellite Telemetry, API’s, Tools etc)
- Goal:
  Radio Amateurs shall be proud to be recognized in society and by employers as “Ambassadors of modern Communication Technologies”. Thus contributing to make Amateur Radio relevant again.

Details to be discussed.

4. Remark

It is very important to take into account that young STEM talents nowadays already know how to write computer programs in at least one programming language.
Most school children learn how to program robots early. Writing computer code has become a widely recognized part of basic skills, similar to reading and writing, speaking English, fundamental math skills.

This is a very fortunate starting position for us. Hence, Amateur Radio courses do not have to teach programming to our students. In rare cases, any missing prior knowledge such as mathematics or programming essentials can be taught in additional preparatory course units.

5. Legal Basis

International Telecommunication Union: Recommendation ITU-R M.1544-1 (09/2015).
(ITU is the United Nations specialized agency for information and communication technologies - ICTs.)
