

Experiences made

and

The road ahead in Switzerland

Willi Vollenweider HB9AMC, President USKA 25 May 2023

Important: This working (not final) document has been created for discussion in our IARU R1 STF progress discussion group.
 It reflects my personal insights and views, not those of USKA or IARU.



Introduction

Information and Communication Technologies ICT have never been so important and so ubiquitous as in today's complex hi-tech civilisations. The diversity of requirements and technical possibilities have stimulated the ingenuity of technicians, engineers and scientists. ICT is extremely popular with STEM youth as ICT proficiency stands for excellent reputation and good quality of life.

<u>The Amateur Radio movement</u> has started one hundred years ago as a community to experiment with wireless technologies promising to enthousiasts similar perspectives <u>as ICT does today</u>. With the spread of digital technologies, such experimentation saw a shift towards software. Unfortunately, a majority of overaged members and management teams prevented Amateur Radio organisations already in the late 20th century to respond and adapt to this technological challenge – making oldfashioned "Amateur Radio" very unattractive to young STEM talents.

All <u>Alarm Calls</u> (IARU: <u>Bob Whelan 2005</u>, <u>Don Beattie 2021</u>, <u>RSGB: Kamal Singh 2019</u>) did <u>not</u> find the indispensible support in the management teams of Member Societies, nor their base. Don Beattie realised, that continuing to market a 20th century museum product will ultimately fail.

In Switzerland, we are faced with a majority of widespread complacency, and much obstruction to any change. STF by our Member Society is thus terminated, but hopefully not in Switzerland.

<u>Amateur Radio is a timeless world cultural heritage</u>. We owe to the benefit of future generations to take care of it and continue to vigourously develop it – to the benefit of mankind.



Short History of Activities in USKA/Switzerland

- Starting 2011, USKA invested much in youth and PR work (every year several participations at big public fairs, monthly gymnasium workshops since 2018). -> Downslide of membership numbers could be stopped but not in the age segment below 40.
- In October 2019 we organised a one day workshop around:
 "why should I become a radio amateur what's in for me?"
 "why should I join a local Amateur Radio club ?"
 -> We found no satisfactory answer from the viewpoint of a 17 year old.
- 2020 to 2021, an USKA Working Group "Future of Amateur Radio" met many times (online) to discuss needed changes and actions.
 Main finding: it is ridiculous to pretend to be communication technologies experts as long as exam syllabus + course contents remain in the last century.
- 4. 2022: Active participation in IARU R1 STF initiative starting in October 2021. Five USKA delegates to the various Strategic Objectives Teams (SO).
- 5. 2022: Swiss Office for Communications declined "digital entry level license" idea



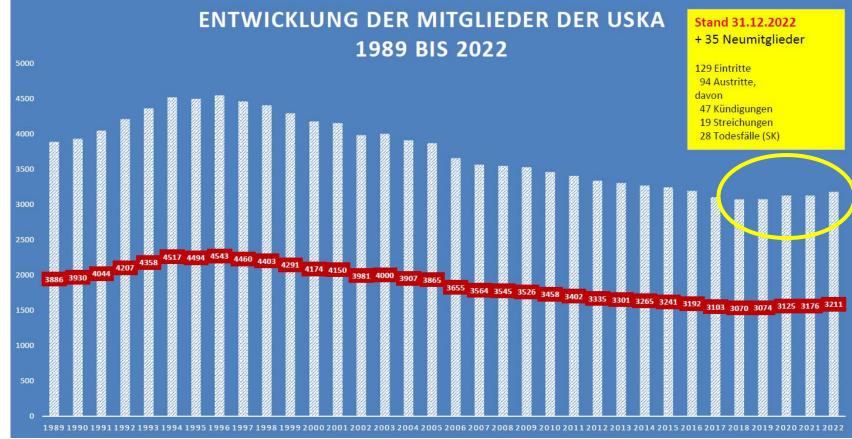
Where/why did we fail in Switzerland ?

- 1. USKA has almost no members below the age of 40 !
- A majority of our members is not interested in science&technology many have a <u>consumer's</u> attitude
- 3. Widespread lack of expertise in modern communication technologies mainly due to overageing
- 4. Local clubs fail to meet the challenges of the 21st century and therefore continue to loose members. Most have given up their former infrastructures (such as Labs, Club Stations etc). The clubs no longer provide any benefit to their members.
- 5. We failed to handle the enormous diversification of our hobby and to make use of huge opportunities to attract STEM people
- 6. Failure to adapt 30+ year old license exams to modern technologies
- 7. Stiff intolerance against modern technology themes (from inside of M.S.!)
- 8. Widespread complacency some attempts to try "more of the same" are doomed to fail

Is the situation "beyond repair"?

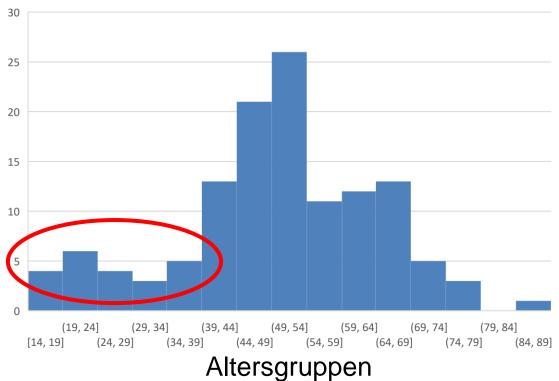


USKA has lost 1/3 of its members since 1996 despite enormous development and spread of communications technologies !





Analysis: Age groups of new members 2022



Anzahl Eintritte 2022 pro Altersklasse



Hugely increased diversity of our hobby is not handled !

Core and related Ham Skills

	Security IoT W3C.org Citizen Science Hacker			
Telemetry Electronics Experiments Algorithms				
Weather_Balloons GPS Algonalins				
Lig	ahtnings Nit SSB Circuit Design Certifications			
Fabl	Lab DATV ADC Batteries/Accus DAC Measuring Code Camps			
Maker	Contests Historic Telegraphy ISS Space Station Internet (F)OSS			
LoRa/WAN	WSPR Short Waves Emergency_Communications Languages IDEs			
DECT	Microwaves STEM DX LAN/WLAN HAMNET VHF/UHF IETF			
Bluetooth	Analog ORP Repeater DSP Ethernet MGM Zigbee			
Physics	Solar Activity SMD Core Ham Skills Digital Direction Finding VDP SMD Vocoder Q65 Protocols			
M2M	DIY Band plans APRS Interface Simulations IP TCP Drones			
UPS PhotoVoltaic	FSK/PSK/QAM/OFDM Open Source ARDF Operating SDR C/C++ EW/EMS			
ADS-B	Audio GNU Radio RPi/Arduino/ESP32 Regulations Linux 3D Printing			
ACARS Satellite Communication redpitaya SOTA Python experts				
	tworks FT8 Experiments Wave propagation Mathematics			
INCL	RFID Antennas Projects NASA/ESA/DSN			
Smart Home Sensors Robotics (Web)RTC Sensors				



Analysis: Professional Background of new members 2022

Agronom	Dr. Biochemiker	Informatiker	Personalsachbearbeiter
Arzt	El. Ing. HTL	Informatiker	Polizist
Arzt	Electronicien	Informatiker / Team Lead ICT Operation	Principal Systems Engineer
Automatiker EFZ	Electronicien	Informatiker Dr. rer.nat.	Rentner/Privatier
Automechanik	Electronicien	Informatiker EFZ	Responsable des services aux entreprises
Beamter-IV Rentner	Elektro-Manager Pens.	Ing Electronique	Retraite
Beamtin	Elektroniker in Ausbildung	Ingenieur ICT	Schmerztherapeutin
Bereichsleiter Sonderpädagogik/Integration	Elektroplaner	Ingenieur système	Schüler
Bereichsleiter Unix/Linux Anwendungen	Engineer	Ingenieur/Entwicklung	Schülerin
Betriebsinformatiker EFZ / System	Engineer	Inspecteur du travail Etat de Geneve	Schülerin
Boder	Enseignant	Installateur-électricien	Sekundarlehrerin phil II und schulische
Broker assicurativo	Entw. Ingenieur	IT Ingenieur	Senior Network Engineer
Chauffeur	Expert en Estimations Immob.	IT System Engineer	Software-Entwickler
Chauffeur routier	Feinmechaniker	IT-Support	Sozialarbeiter FH / Berufsbeistand
Chimiste, maître d'enseignement HES	Généalogiste	Kauffman	Student
Detailhandelsangestellter	HF Techniker	Lehrperson BVJ	System Engineer
Detektiv	ICT/Cybersecurity System Engineer	Lehrperson Sek I TICTS/PICTS	Teamleiter in der Telekom
Digital Marketing Manager	Immobilienvermarkter	Lektorin/Bewegungstrainer	Technicien Audio/visuel
Dipl. Bauführer	Impiegato bancario	Lernender Automatiker EFZ	Technicien VSAT/Electronicien
Dipl. Betriebswirtschafterin	Infermiere Anestesista	Lokführer/Ausbilder	Technischer Kaufmann
Dipl. Biochemiker	Informaticien	Maler in Ausbildung 3 Jahr EFZ	Telecom Projektleiter
Dipl. ElIng HTL	Informaticien/Retraite	Masch. Mechaniker	Tierpfleger EFZ
Dipl. El-Ing. ETH	Informatico	Mathematiker/Informatiker	Unternehmensberater
Dipl. Gerontologe SAG	Informatiker	Mechaniker Maschinenbau Mechaniker/Industriemeister/Hausdienstleit	Verantwortlicher IT/OT
Dipl. Ing. El. / Safety-Assessor BAV + EBA	Informatiker	er	Verwaltungsangestellter, Beamter
Dipl. Masch. Ing HTL/FH NDS BWL/UF	Informatiker Informatiker	Pensionär	Wirtschaftsinformatiker
Dipl. phys. ETH		Pensioniert	Wirtschaftsinformatiker / ICT-Architekt
Directeur R&D chez JTI	Informatiker	pensionierter Servicetechniker	Zimmermann
Direttore casa per anziani	Informatiker		



USKA's online HamEcosystem (2020-2023)

- BBB Videoconference-Server free for every member (10% of our members make use)
- HamWebinar.ch online presentations (used by 5% of our members)
- HamAcademy Lifelong Learning Seminars (used by 5% of our members)
- HamGroups.ch theme focussed online groups (SIGs) (used by 4% of our members)
- **Fairgate** online member database
- Wiki knowledge database (cooperation with Austrian ÖVSV) (used by <1% of our members)
- (in preparation: HamProjects.ch)

Red means we have been addressing the wrong target audience.



- USKA Strategy Meeting planned+prepared for 15 April 2023:
 - how will USKA implement the IARU R1 STF findings ?
 - How can the implementation, which has been started with great effort, be put on a solid foundation in terms of personnel and finances in the long term ?
 - what changes to the Bylaws and to the organisation are necessary for this purpose ?



May 2023

- USKA Strategy deeting planned+prepared for 15 April 2023:
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 - what changes to the Bylaws a. I to the organisation are necessary for this purpose ?
- Delegates Assembly <u>and</u> Member Voting stop any development by denying reinforcement of USKA board urgently needed for the intended development of Amateur Radio in Switzerland
- Majority vote in USKA board cancels planned USKA Strategy
 Meeting at its march meeting
- Consequence: development cannot be done by denying it personnel and financial resources. USKA STF came to a halt.







end of May 2023

Situation Assessment

- Most people see no urgency of action whatsoever !!!
- A majority of our <u>members</u> is not willing to allocate additional human resources needed to develop Amateur Radio along IARU R1 STF.
- A majority in USKA <u>board</u> fears and blocks any strategic discussion of the future of Amateur Radio in Switzerland.
- Lacking personnel + funds -> Work already started will have to be undone

-> Any resumption and continuation of STF will have to be done by another organisation. Anything else is a waste of time we do not have: Two years of IARU STF have already passed without results.



Solution:

Creation of a new national "STF Community"

- Focusing on technical and scientific experimentation wireless is everywhere !
- Addressing ALL people interested in experimenting with ALL wireless technologies
- Not dependent from M.S. Cooperating wherever wanted, while not duplicating M.S. existing satisfactory services
- Taking into consideration the findings of IARU R1 STF as well as our own. Not repeating errors of the past.
- Have credible answers to a young talent's questions "what's in for me?" and "why should I become a radioamateur?" (every activity must be of benefit)



Quick Implementation of findings of IARU/USKA STF processes Experience and understand the fantastic world of 21st century's wireless science and technology!

Enjoy the enormous diversification of wireless technologies! Enable yourself to a successful life in today's complex hi-tech world! Be part of today's "digital transformation", not its victim!

- Learn for your life and for your career ! (Competence, certification, challenge, projects library/PBL, OER)
- **Gain from exchange** with experts and colleagues participate in teams. Events, online gatherings, local meetings, excursions
- Accomplish together (success experience)
 Projects will be announced publicly well before they start
- Share stay informed and let your colleagues know Website, Newsletter, social media
- Exchange with related interest groups and extend your horizon



To be defined

- geographical scope and language Switzerland, Germany, Austria. German.
- Finding committed co-workers (Phase I) • assign tasks
- Finding members/subscribers (Phase II) • marketing starts as soon as website is operational
- Finding money (Phase III) for further development • contributions, foundations, ARDC, industry, gov initiatives, legacy
- **Finding local partners/infrastructures** • FabLabs, chamber of commerce, schools, industry, other clubs
- **Finding legal form** • foundation?





- Carry out the much needed STF activities that our M.S. decided not to take care of.
- we will make techno-scientific experimenting <u>relevant</u>, thereby encompassing Amateur Radio as well
- There will be complementary co-existence and cooperation with thematically related national and international organisations

What we will NOT do

• Services provided satisfactorily by other organisations will <u>not</u> be duplicated (EMC, antenna construction permits, radiosports, diplomas, contests, EmComm, IARU, New Technologies, printed club magazine, BBB, A.R. community development,)



online STF Ecosystem

- Swiss STF Website
- "Ham"Webinar.ch online presentations
- "Ham"Academy Lifelong Learning Seminars
- "Ham"Groups.ch theme focussed online groups (SIGs)
- "Ham"Projects.ch
- Local Partners
- Wiki knowledge database (in coop with austrian ÖVSV)

and more to come.



The name is very important

- Amateur ? Misleading, someone non-proficient
- Ham ?
 Misunderstood, misleading and undesired limitation to licensed people
- Radio ? Misleading, Broadcast, grandma's radio set
- Wireless ?
 Is a method/technology
- Experimenting ? is an activity producing value



Shaping the Future of Amateur Radio is a Challenge

Let's get moving to make Amateur Radio relevant ! We do not know the solution yet. We do things and observe whether and how they work. Let us continue to exchange experience

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Legislator

Youth / PR

Political Lobbying

