



# International Amateur Radio Union Region 1

## C5 Contest Working Group

### Results of survey about IARU R1 VHF/UHF/Microwave contests

#### Introduction

The newly established C5 Contest Working Group (C5CWG) decided to conduct a survey about VHF&up contests to better understand the view of contest participants on the contests matters. This is the first time in the 61 years history of IARU R1 VHF/UHF/Microwave competitions that a survey of this type has been conducted. The C5CWG was seeking the comments and suggestions about contest organization, rule changes and introduction of new sections. The response far exceeded our expectations. During the 37 days the survey was open (25<sup>th</sup> October to 30<sup>th</sup> November 2017) 1277 respondents answered the survey questions. The map below shows distribution of survey participants (not shown are 3 from EA8 and one from ZS).

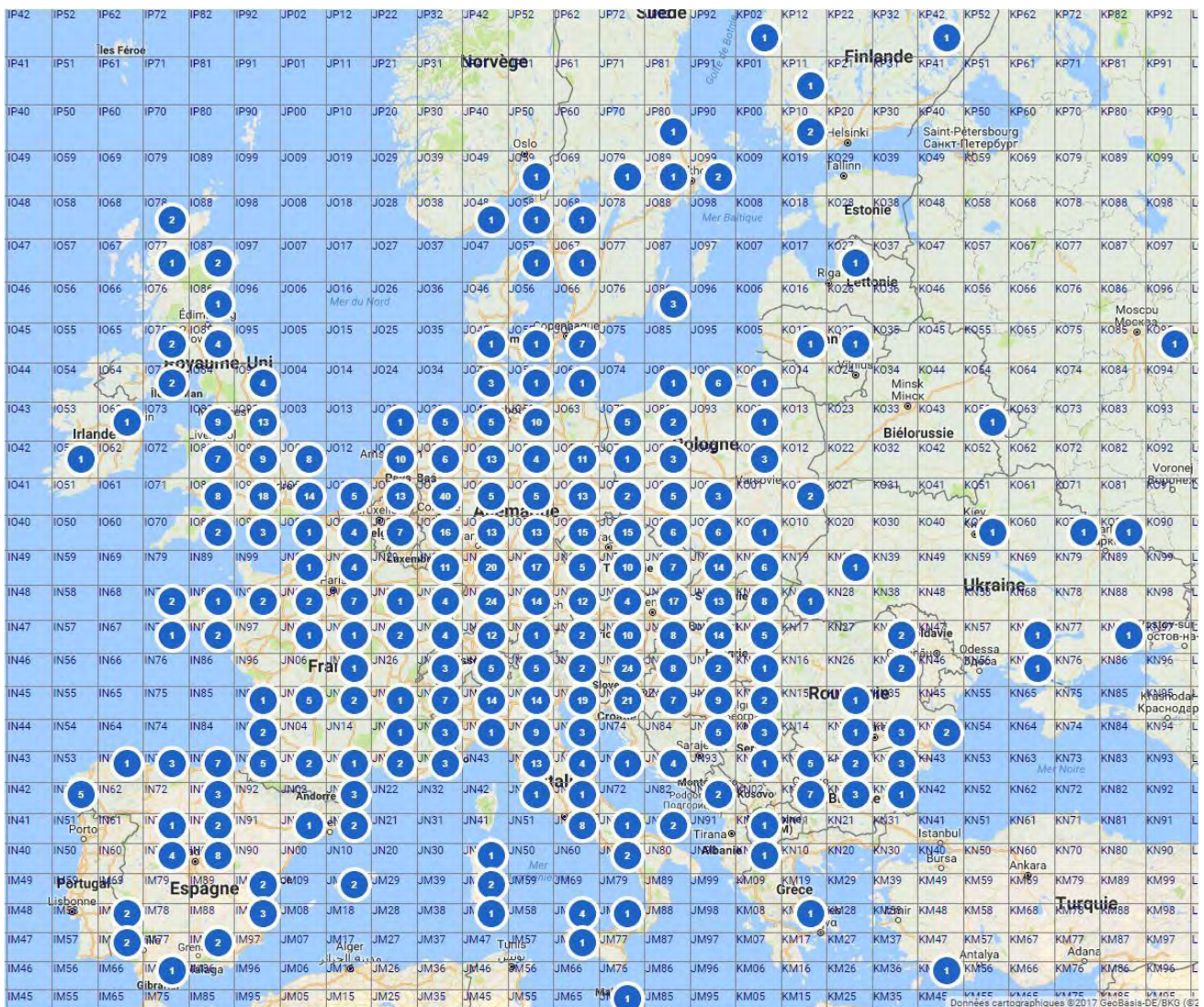


Figure 1 Map of Survey Respondants

The graph of the response to the survey versus time shows (Figure 2) how fast the information spread around the target public.

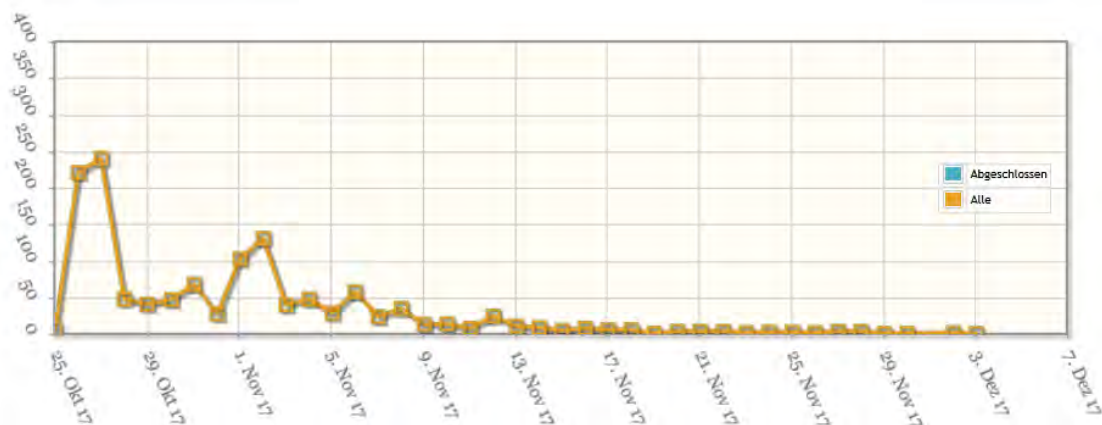
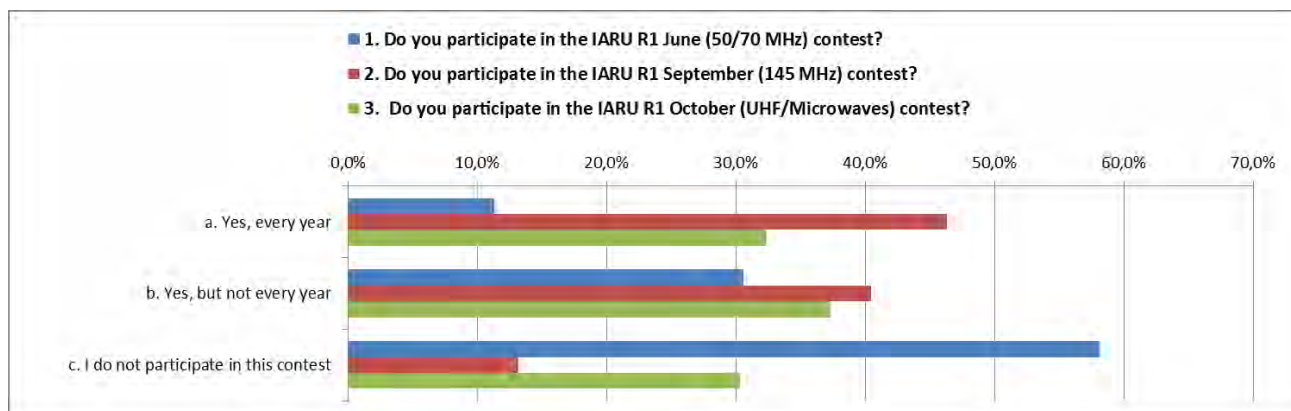
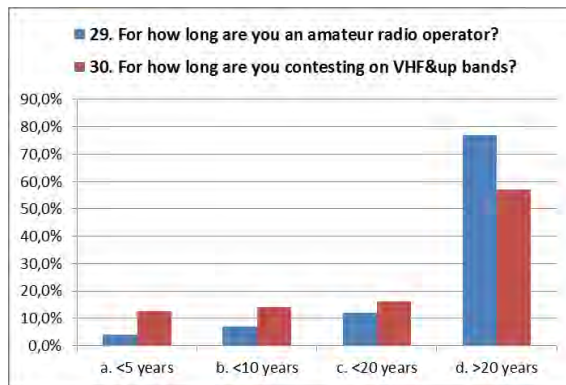
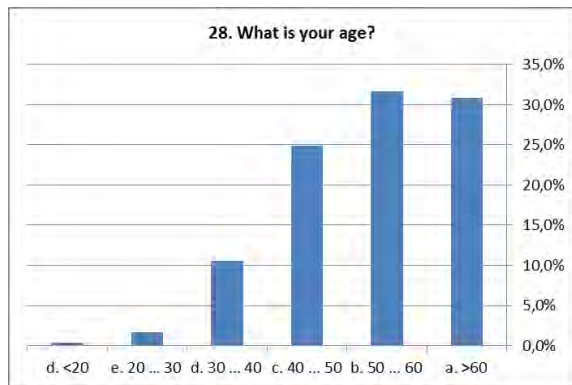


Figure 2 Survey Response

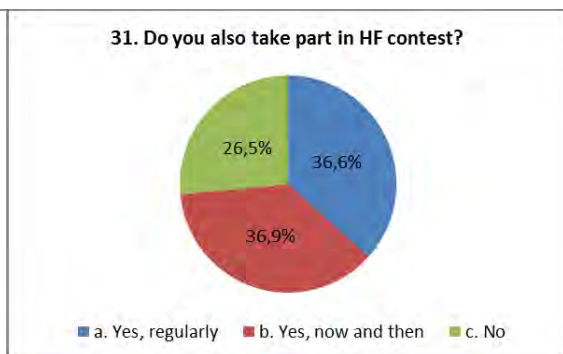
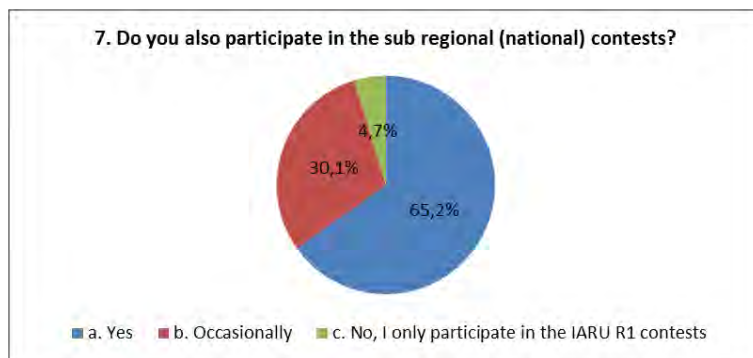
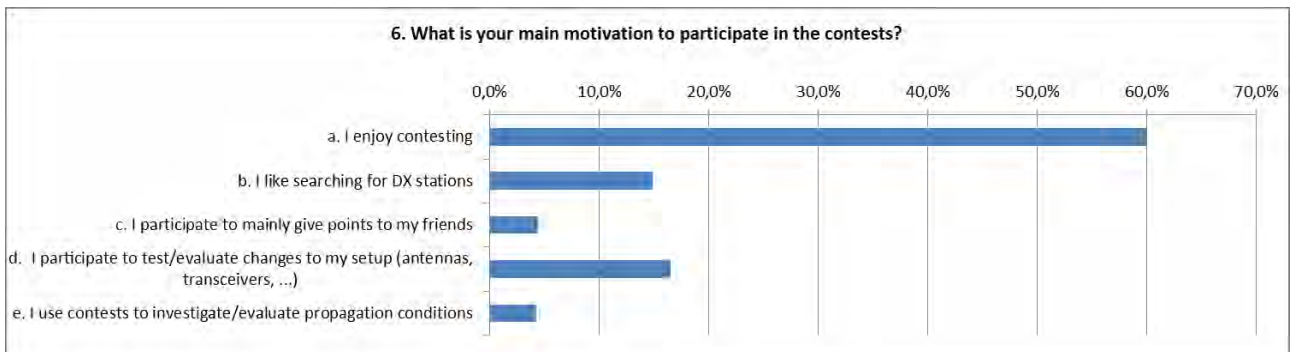
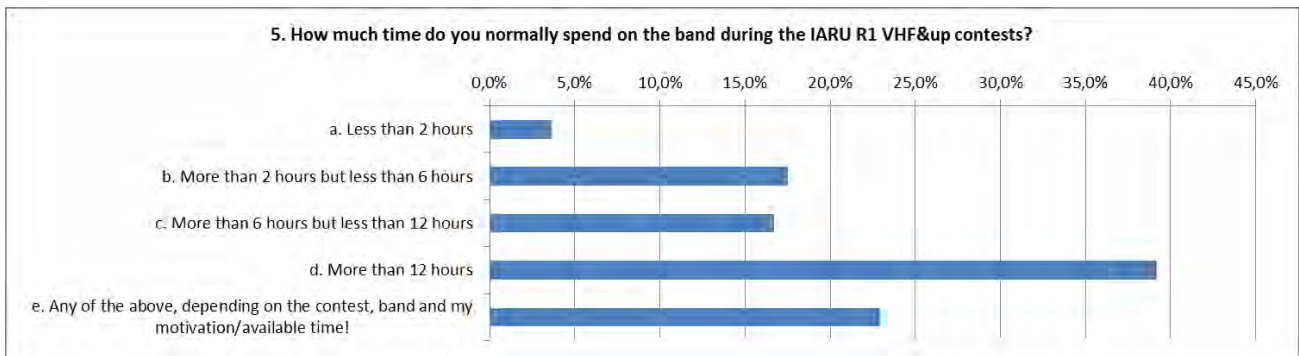
The time we had available to prepare survey questions and answers was very short as we wanted to have survey results available prior to publishing contest rules for year 2018. We acknowledge some of the questions and/or answers could have been better prepared. Nevertheless, the results are very interesting and useful and were of great help when we discussed changes to the rules for 2018. Our plan is to conduct more surveys in the future.

### Participants

Who are we and why do we take part in contests? The charts below speak for themselves.



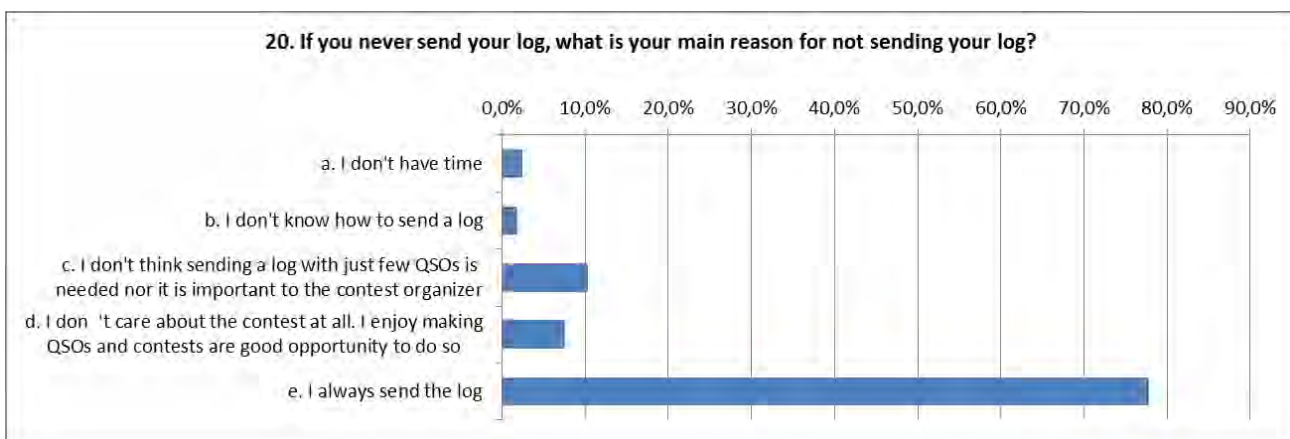
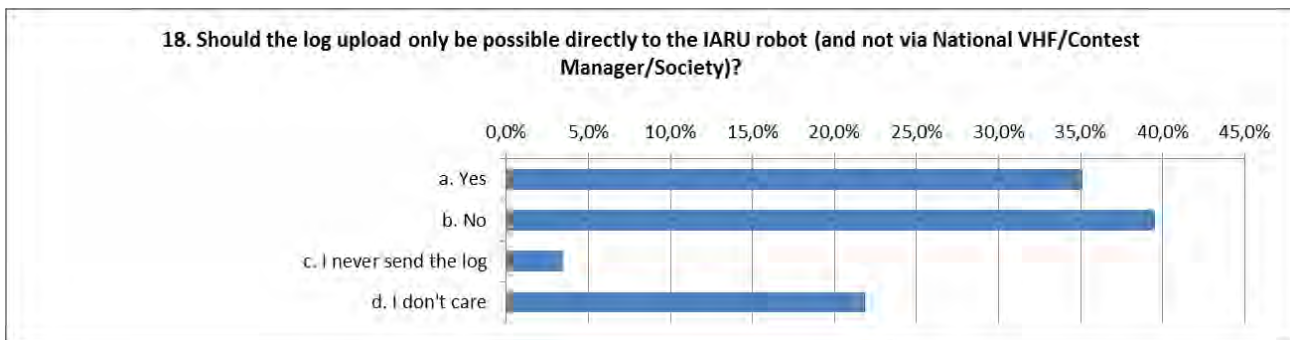
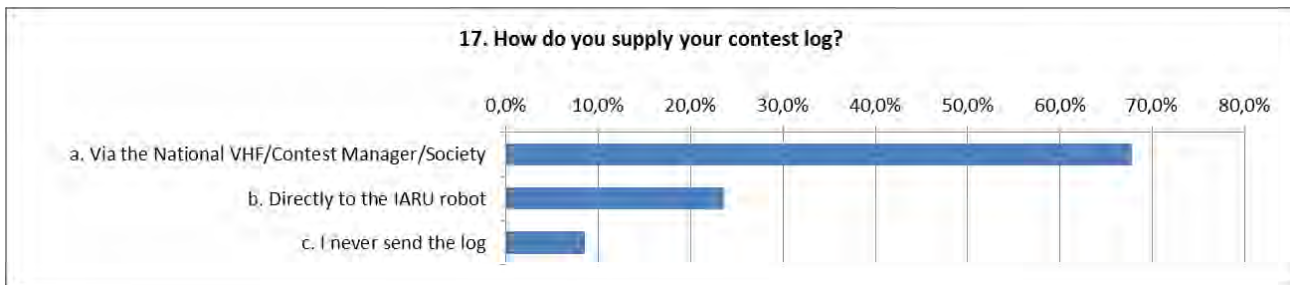




### Log submission

The organization of the contests on the IARU R1 level is simply not on par with how the same (or similar) contests are being organized on the national and/or sub-regional level. The first priority of the C5CWG is to improve the contest organization. One of the challenging parts of contest organization is log collection. Due to historical reasons, most of the logs are being collected by the national VHF or Contest Managers and then “somehow” delivered to the actual contest organizer. Now that the contest organization is in the hands of the C5CWG, we will take appropriate steps to have quality logs collected in a timely manner. The majority of participants submit their log via national VHF/Contest Manager and most would like to continue to do so. The log upload application on the IARU R1 server will be greatly

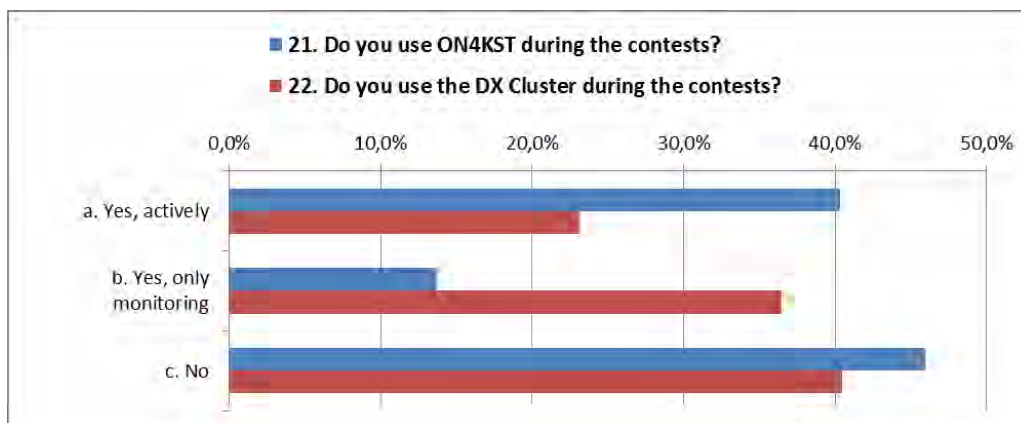
improved next year. We will drive the contest organization in a direction when the log submission deadline for national VHF/Contest managers will be fixed to 3<sup>rd</sup> Monday after the contest is over, so that claimed standings will be available a day after. Provisional results will be published one week later (one month after the contest is over).



Although almost 80% of survey respondents submit their logs, we would like to see other 20% of contesters to send their logs, even if with only one QSO.

## Assistance

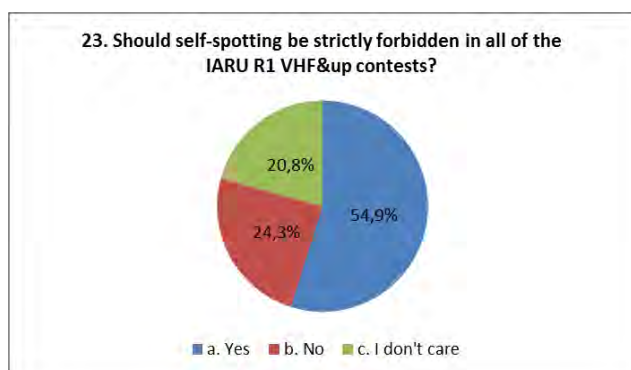
The debate on the DX Cluster and ON4KST chat room usage has been very heated for the last 10 years or so - and it still is. It should be noted that QSO arrangements (SKED) have been used on VHF&up bands from the very beginnings. Most of you (we are not young enough not to know, neither old enough to forget - ☺) would remember days when VHFNET on 14345 kHz was used in almost the same way as ON4KST is used today, the main difference being that VHFNET was normally not used during the contests. Today, 144.390 MHz is occasionally used to arrange contest QSO on a microwave and millimetre bands.



The ON4KST (KST) chat site allows for a **real time** QSO arrangement and because of this little detail, it offers opportunities to unsportsmanlike practices, like exchanging contest QSO data via other communication channels (and not on the channel where the QSO is being conducted).

On the other hand, the DX Cluster is a spotting network used by the radio amateurs on all bands to announce a DX callsign and frequency. Self-spotting on DX Cluster (that is, announcing YOUR OWN callsign and QRG) has always been (and still is) perceived as a bad practice.

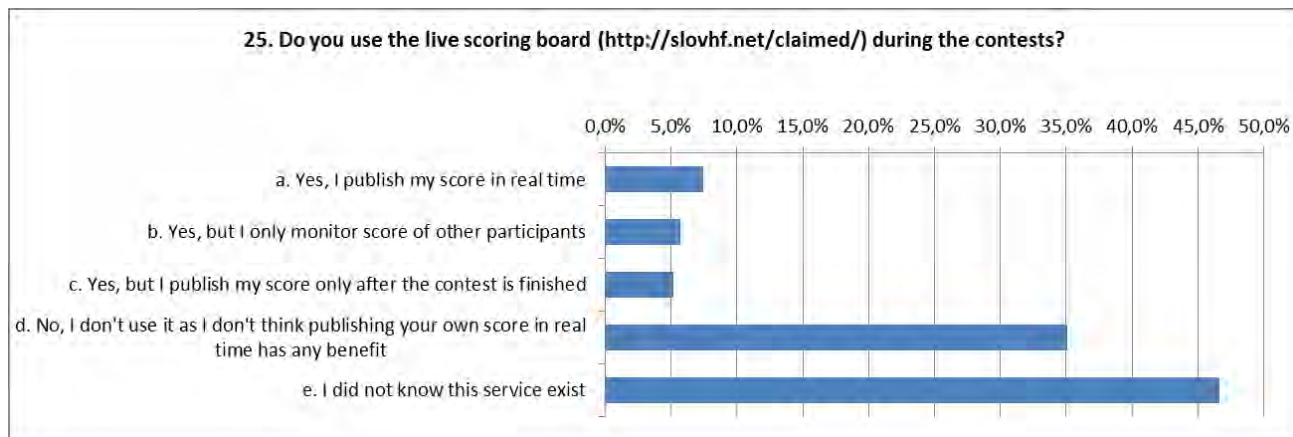
We believe that self-spots on the DX Cluster are of a very limited use during the VHF&up contests and this is a major difference when compared to HF contests. On VHF&up antenna radiation patterns are much narrower and a self-spot hardly brings any additional QSOs. A platform for real time QSO arrangement (like KST) is of a much greater value as it allows synchronizing the three otherwise random parameters needed to start a QSO: time, frequency and antenna direction.



The response to the questions #23 and #24 reveal that the contest participants understand the difference between the usage of the DX Cluster and the ON4KST chat site for self-spotting. Interestingly, 27% of respondents that would strictly forbid self-spotting on DX Cluster consider the practice of adding your CQ QRG to your name on ON4KST (which is actually a way of self-spotting) as acceptable.

We used this opportunity to promote the use of real-time contest scoring boards as these potentially adds a new dimension to amateur radio competitions. It is fair to say that amateur radio competitions are not really a spectator sport. During the competition, the participant has very little idea how his direct competitors are doing and any

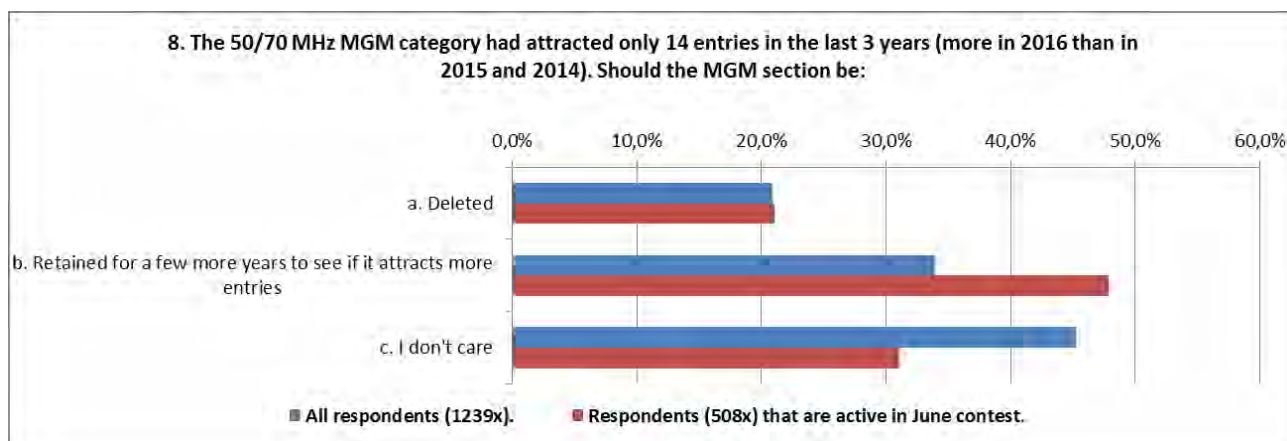
potential spectators has even less idea what is going on (that's why amateur radio competitions have no spectators that could watch and enjoy the game). Live scoring boards are quite popular in some HF contests, but even there not all top competitors decide to publish their standings in real time. It looks like more time is needed and probably more engagement from the contest organizers side before real-time score boards become truly accepted in all ham radio contests.



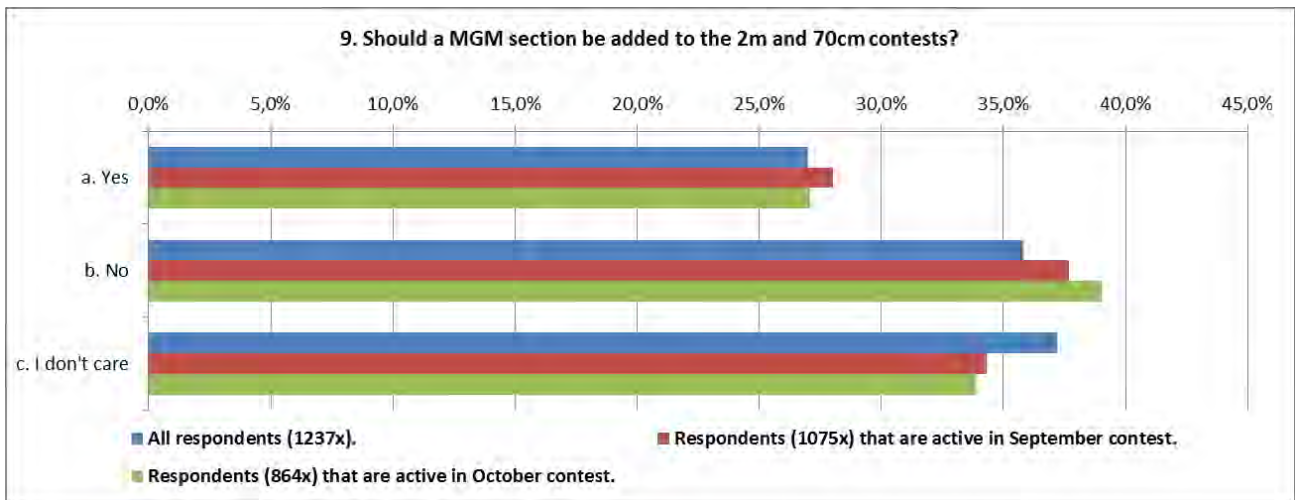
### Categories

One of the main reasons of this survey was to get an opinion from contesters about the introduction of new categories and whether some categories that have been introduced over the past few years should stay.

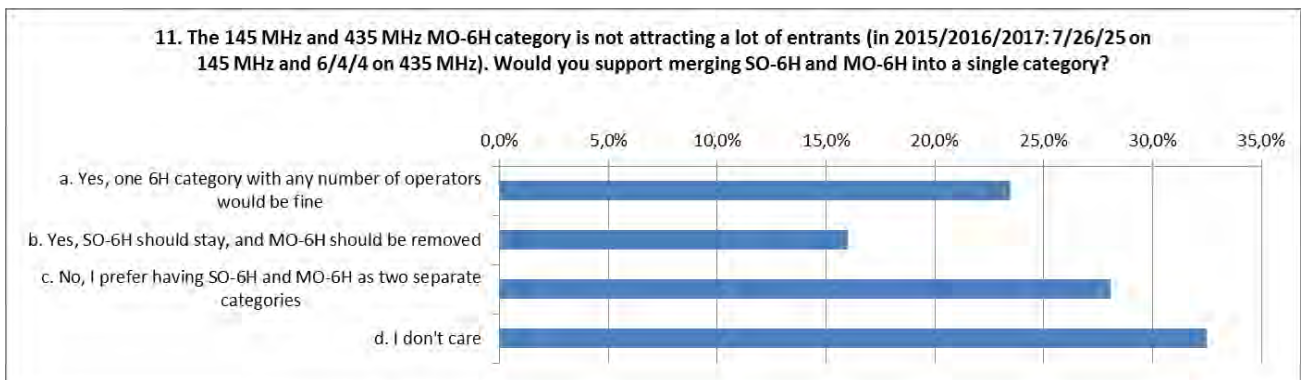
The MGM (Machine-Generated-Mode) section on 50 MHz and 70 MHz attracted very little participants in the last 3 years (it was introduced in 2015). Nevertheless, 48% of the June contest participants would like the category to stay. The result of the question #9 is clearly showing that MGM should not be introduced in September or October contests.



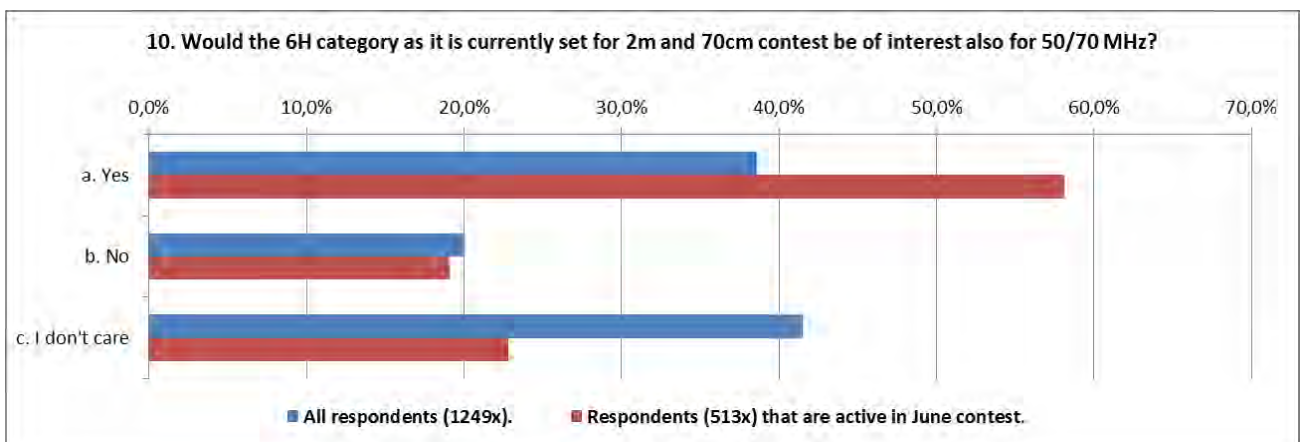




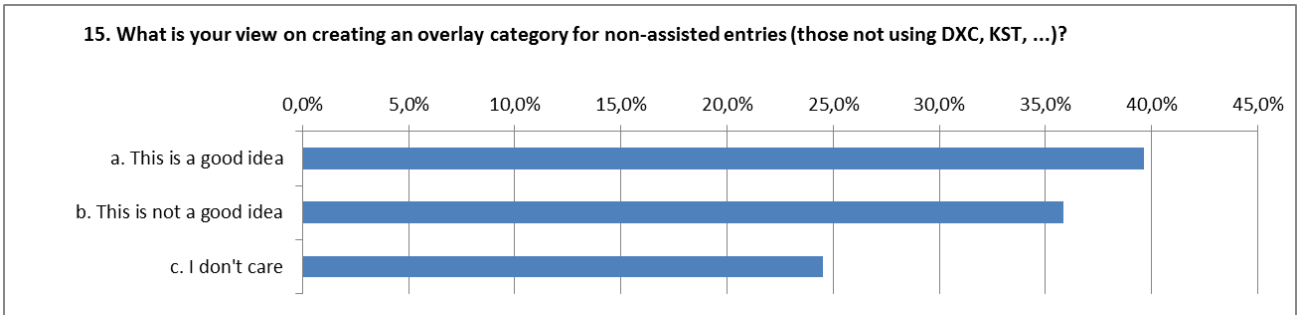
The 6H (6 hour) section proved to be quite successful (also introduced in 2015) for single operator entries, and not so attractive to multi operators. The answers to the question #11 can be interpreted that 40% of contesters agree to delete MO-6H section, while 28% would like to have MO and SO separated. C5CWG is of an opinion that number of operators for 6 hours of contesting has no effect on the achieved final result, therefore we are merging 6H SO and MO category into one.



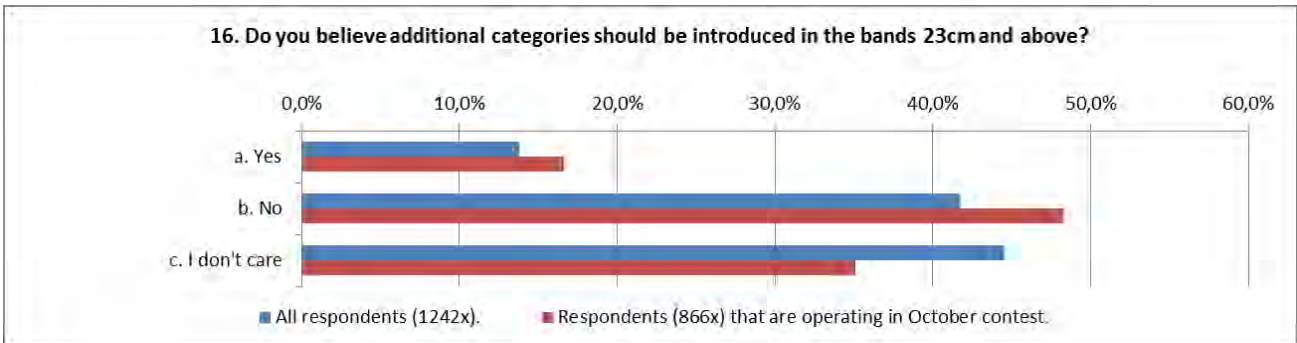
June contest participants would support having 6H section on 50 MHz too. Due to 6m propagation specifics it may come true that 6H could become very strategic game if not a pure luck (be aware that the 6 hours can only be split into a maximum of two operating periods!)



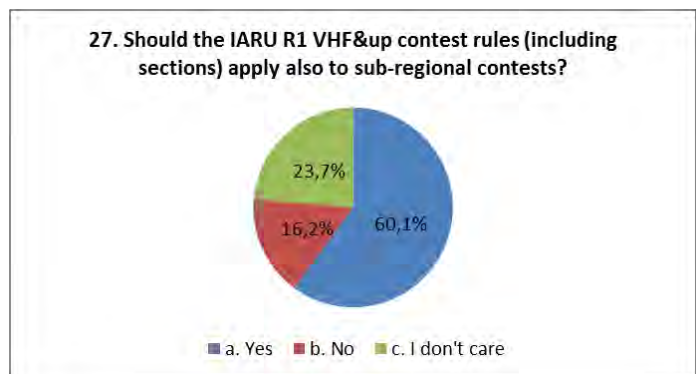
Even if the self-spotting and ON4KST usage created a lot of discussion, the support to introduce non-assisted overlay section was not large enough to proceed.



And we are staying with two historical sections on 23cm and above (MO and SO).



The result of the question #27 is actually addressing national and sub-regional contest organizers. The C5 VHF Manager is advocating an IARU R1 VHF&up Championship, and such a yearly competition can only be managed if sections in national/sub-regional contests are at least similar (preferably exactly the same).



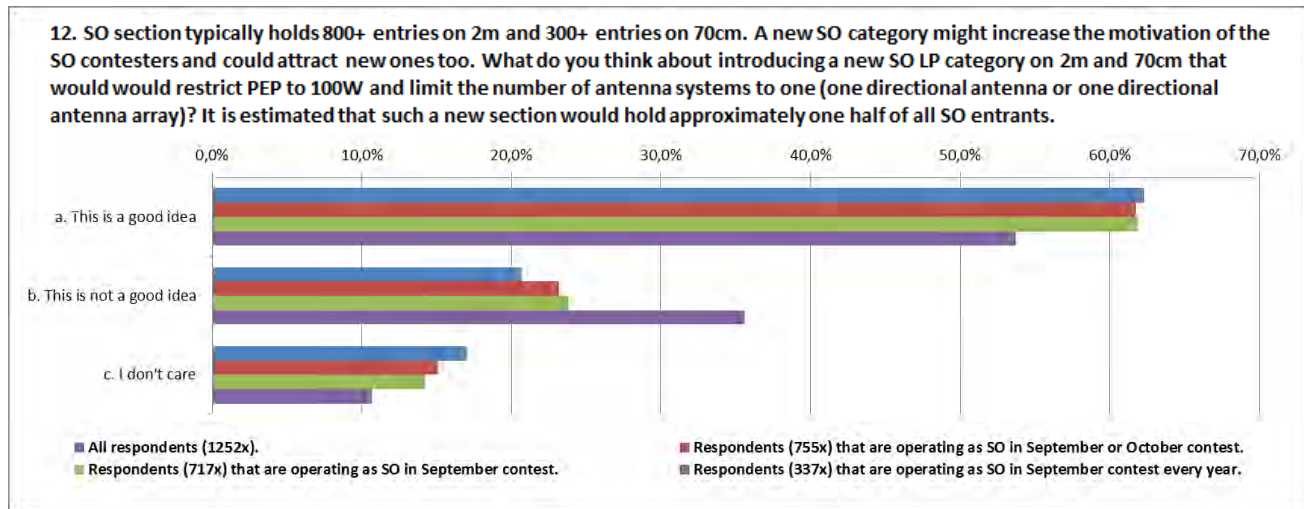
The IARU R1 September contest is the largest and the most important VHF contest in the world. It has splendid history and a lot of participants. It is estimated that more than 10000 amateurs (mostly in EU) would be active during this event in the first weekend of September. It is interesting to note that the highest ever result was scored back in 1981 by OK1KHI/P with a very modest equipment by today's standards. In the last 36 years, multi operator teams have tried unsuccessfully to beat that result. There are plenty of reasons why this has not come through (you are welcome to check the analysis of the [September Contests from 2007-2014](#)), but one of the very important "side effects" that this competition has is the constant progress in improving technical capabilities of the top contesting stations. This comes as a general note also for HF contests - contests have always been the major driver for technical improvements. Everything from designing antenna arrays with special patterns, to multi antenna systems, ultra-low phase noise transverters and transceivers, linear transmitters and receivers to innovative operating techniques – all this to win THE contest (we apologize that we missed to add one more answer to #6: "To win").

Now, there were many complaints in the comments section of the survey about the fair play and adhering to the licensed power levels. It should be noted that two historical sections (MO and SO) are probably the most unfair sections of any amateur contest today as the maximum transmit power is only limited by the participant's license. Maximum permissible powers on 144 MHz band across the EU countries lie between 120W and 3000W – so it is hard to talk about

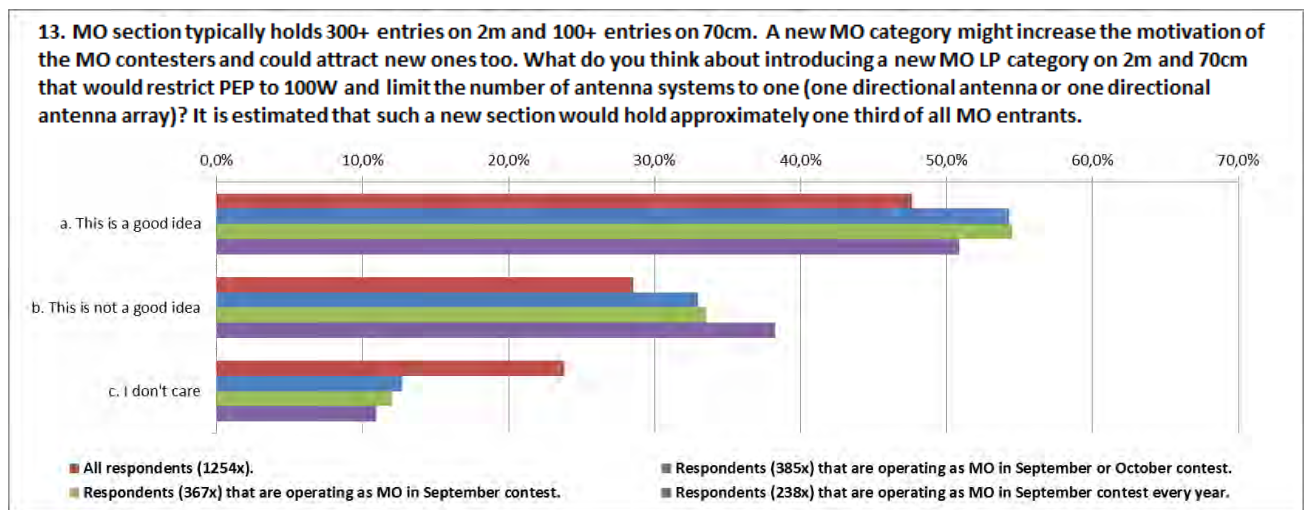


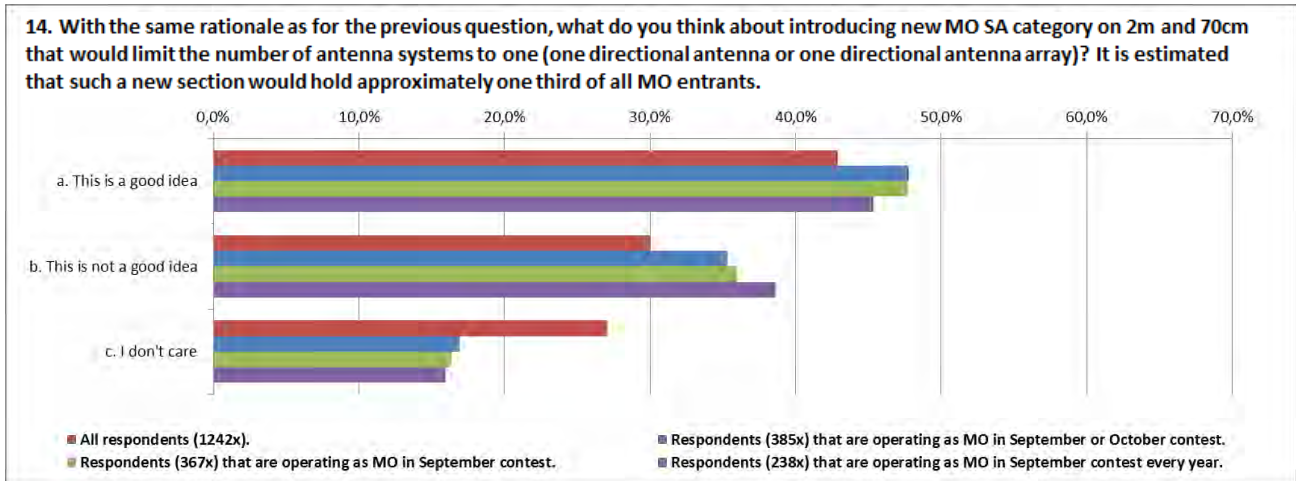
fair play. It looks like SO/MO sections got “self-regulated” over the years and are now somehow “open class” or “unlimited” as some named them.

SO section in VHF contest regularly attracts more than 800 participants, and MO gets 300+. In the mentioned VHF contest analysis it turned out that about 50% of SO entrants operate with 100W or less. It looked natural to split the SO category in half by introducing 100W section. The survey shows a very high support to this idea and in fact this now should be the “fairest” category.



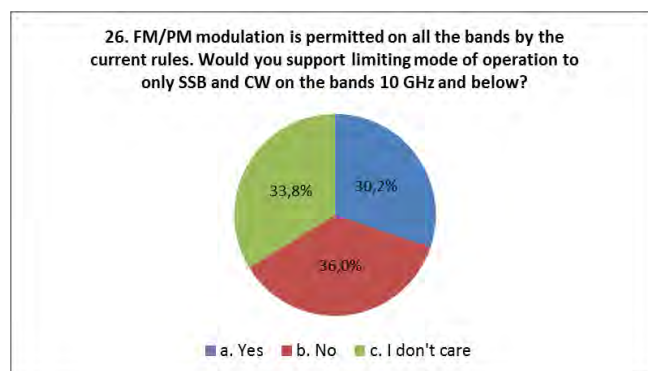
Out of 300+ MO VHF entrants, about one third of them operate more than one directional antenna system. It seemed natural to split MO section on the basis of the number of antenna systems (aiming to reduce interference levels by radiating into wide azimuth range with many antenna systems), but this idea was not well accepted. Therefore we are introducing LP section for SO and MO entrants, on 2m and also on 70cm.





### Other

Few years back the AM mode was removed from the IARU R1 VHF&up contests. Looking at the usage of the FM we thought that FM could also be removed – normally there are less than 0.5% of QSOs made in FM. As an outcome of the survey, we will keep FM as a mode for all 3 contests.



In the comments, many of you suggested various proposals – there were about 160 comments on the topics that were not covered by the survey. Many were asking for field day / portable / backpackers / QRP section, some proposed sections for junior operators. Some would like to see LP and 6H in uW bands.

Participants from the peripheral proposed to have UL as multipliers or to add some other kind of stimulation.

Many were requesting to limit the power and to monitor signal bandwidths.

An interesting idea was to limit the maximum time of occupying one frequency channel. For example, adding a rule to change CQ QRG by more than 50 kHz at least after every 6 hours and can return to that QRG+/-50 kHz not before 1 hour after. Such a rule would definitely improve the interference between big guns and small pistols in the centres of activity. It would also help big guns complete more QSOs as having two big guns 500 km apart occupying its own portion of the band they block local stations to work the other one.

Another interesting proposal was to mandate the use of real reports. For long time it has been a common practice to use real reports in the VHF&up contests (it was nothing uncommon to get 539 or 52 report years back). In last decade or so reports have started to follow HF contests way where the report is not a unique piece of QSO exchange any more. By using callsign/UL databases and real time QSO arrangement methods (KST for example) the only random QSO exchange today is a QSO number. It has to be mentioned that some % of participants still persist using real reports and this is evident in the cross-check analysis – some % of errors are coming from the incorrect RS(T). The proposal was to set a rule that some % of sent reports must be different from 59/599.

## **Conclusion**

C5 Contest Working Group members are thankful to all of you that took time and answered questions of this unique survey. We are sure you will find results interesting and we hope this will stimulate future debates. We also hope your motivation to participate in these contests will start to improve. We look forward to work you on the bands 😊.

73 de C5CWG

dl3mbg, f5len g0fct, ha0lc, iv3kkw, oe1mcu, ok1vao, om3bh, on4avj, s53ww

December 2017