

International Amateur Union - Region 1 Newsletter 65 - September 2011



Permanent HF Committee

To: Members of IARU R1 HF Committee, IARU R1 Executive Committee, Chairman of R1 VHF/UHF/MW Committee, RRWG Coordinator, IARUMS Region 1 Coordinator, Region 1 Beacon Coordinator, the President of IARU and the Secretary of IARU.

65.1 Minutes of the IARU Region 1 HF Committee C4 Meeting - Sun City Conference

1. Opening of the HF Committee Meeting

The meeting was opened by the HF Chairman DK4VW at 10:00.

2. Introduction of delegates and observers

Present at the C4 meeting:

HF Chairman: DK4VW C4 Secretariat: G4FSU

Delegates and Observers: SRAL, NRRL, IRTS, EDR, EARS, DARC, OeVSV, RDF, ROARS, RSGB, SARL, NARL, VERON, CRC, ERASD, MRASZ, USKA, UBA, UARS, SSA, ARAI, ARAS, HRS, IARU Region 3, IARU International Secretary K1ZZ, IARU Executive Committee G3PSM.

3. Approval of the agenda

02

The agenda was presented by the HF Chair, DK4VW.

Approval proposed by RSGB, seconded by EDR. Carried.

4. Reports

1. HF Committee Chairman's Report

04 DK4VW

The report was presented by the HF Chair, DK4VW.

Approval proposed by VERON, seconded by UBA. Carried.

2. Beacon Coordinator Report

05 G3USF

G3USF was not present so the report was presented by DK4VW.

Approval proposed by REF, seconded by EDR. Carried.

5. Contest Matters

1. HF Chair Ratification of paper VIE10_C4_03 – MOST

06 DK4VW

The paper was presented by DK4VW.

Approval proposed by SRAL, seconded by CRC. Carried.

Recommendation SC11_C4_01:

That within the 'Guidelines for HF Contests chapter of the IARU Region 1 HF Manager's Handbook, the category MOST is reworded: 'MOST – Multi Operator Single Transmitter'. A MOST station is a multi-operator station transmitting no more than one signal on not more than one running frequency on a band at any time.

2. HF Chair Ratification of paper VIE10_C4_04 - Contest free segments 07 DK4VW

The paper was presented by DK4VW.

Approval proposed by OeVSV, seconded by SARL. Carried.

Recommendation SC11_C4_02:

That the HF Committee encourage member societies to publish contest operating segments clearly in the rules of the contest and that those segments are considered with due respect to the IARU band plans.

3. DARC SO2R category in contests

19 DJ1YFK

The paper was presented by DJ1YFK. OeVSV asked why this could not simply be contained within the contest rules. MRASZ asked for clarification as to whether this changes the definition of SO2R. DARC explained that this does not change SO2R, but is intended to prevent running on 2 or more frequencies in the SO category. DARC explained that contest organisers are still free to set the operator categories as they see fit.

Approval proposed by SRAL, seconded CRC. NRRL abstained. Carried.

Recommendation SC11_C4_03:

That within the "Guidelines for HF Contests" chapter 7.1.2 of the IARU Region 1 HF Manager's Handbook, the category SO should be amended as follows: "An SO station is a station manned by one individual operator transmitting not more than one signal on one running frequency at any time".

4. Contest Manager Report, WG IARU HF World Championship Rules 28 DK4VW

The report by 9A5K was presented by DK4VW. CRC stated that although the report failed to generate any specific recommendations, he believed there was some agreement within the sub-working group and that further work should be done.

DK4VW proposed to accept this as an information paper as there were no specific recommendations raised. Accepted with no objections.

5. DARC IARU HF Championships

18 DJ1YFK

The paper was presented by DJ1YFK. The IARU International Secretary stated that the ARRL understood the desirability of including all the rules for the contest in one place and would undertake to implement these changes when the 2012 rules are published.

C4 welcomed the offer from K1ZZ to publish the rules in one place and this was accepted unanimously. Approval proposed by EDR, seconded by UBA. Carried.

6. RSGB World Championship rules

21 G4FSU

The paper was presented by G4FSU. NRRL is not in favour of the proposal, stating that contests should be designed to be fair and encourage activity, and the rules should not be so complex as to discourage activity. UBA stated that some people have 2 or 3 callsigns and that it would be impossible to identify whether self spotting is occurring or not. MRASZ agreed with points a/ & b/ but expressed concern as to how to identify when self-spotting is occurring. On point c/, in Regions 2 & 3 there would be significant problems to work 5 or more HQ stations due to the geographical distances involved. K1ZZ confirmed that point c/ would cause problems in other regions, for example on 160m in the US. OeVSV does not agree to the rule change to work 5 or more HQ stations. SARL stated that point a/ could not be policed, point b/ was supported, and that point c/ would be almost impossible from South Africa due to the distance involved. DARC supported points a/ and b/, but believed that point c/ was not realistic due to the disadvantage it would give to stations located in distant areas. CRC also stated that they agreed with points a/ & b/ but not point c/. SSA said that skimmer spots would make self-spotting irrelevant before long.

RSGB offered to withdraw the paper if work continues to look for a solution. DK4VW stated this would be put on the agenda for the next C4 Interim Meeting. This was accepted and the paper was withdrawn.

6. Band Plan Matters

1. UBA 28MHz band plan: channels FM repeaters

09 ON7LX

The paper was presented by ON7LX. NRRL supports the proposal as it expands the 6kHz bandwidth segment of the band. EDR spoke against the idea of channelising the HF spectrum and are against further allocations for repeaters on 28MHz. CRC asked if it was known how many 28MHz repeaters exist: Switzerland has 1, UK has 3, Germany has several. DARC supported increasing the number of channels. G3PSM noted that there is a proposal for introducing CTCSS on 28MHz & therefore additional channels may not be necessary if this is approved. It was proposed to delay the vote on this paper until the Tuesday C4 meeting in order to gather more information.

A revised version of the paper was presented by ON7LX at the second C4 session. DK4VW explained the detail of the band plan changes. OeVSV asked if anyone saw a problem with the renumbering of the channels. DK4VW stated that he didn't consider this to be an issue. EDR stated they were against repeater operation on HF bands and did not support expanding the number of 29MHz FM channels. IARC also stated they were against the proposal as they do not support repeaters in the HF bands. RSGB expressed support for the revised paper. REF also supported the paper but suggested that the FM simplex channels be adjacent to the repeater channels as the FM calling channel, 29.6MHz, is now between the repeater input and output segment. NRRL stated that 29.6MHz was the international FM calling channel and it was intentionally chosen to be between the repeater channels and should not be moved. VERON proposed that the EC should reappoint a 10 metre FM repeater coordinator as this will now be required if more channels are allocated. OeVSV asked whether we could appoint a coordinator within C4 and not the EC. UBA said ON4PC has stated he would be willing to undertake this position.

Approval proposed by VERON, seconded by RSGB. Carried.

Recommendation SC11_C4_04:

That IARU Region 1 modifies the 10 metre band plan in the segment 29.1 to 29.7MHz to allow 8 FM repeater channels as described in SC11_C4_09 rev1.

2. UBA 28MHz band plan: access FM repeater 08 ON7LX

The paper was presented by ON7LX. DARC noted that there has already been a recommendation to implement CTCSS on 28MHz repeaters, but that very few repeaters have implemented it so far. USKA believes there is a problem to introduce CTCSS as many transceivers, especially older ones do not have CTCSS and it would thus reduce activity. RSGB stated that all 3 UK 28MHz repeaters already implement CTCSS and they have seen no lack of activity. EDR suggested that the wording should be modified to be a recommendation and not a requirement. The chairman noted that Davos DV05_C4_Rec09 already encourages the use of CTCSS on the inputs and outputs of 28MHz FM repeaters.

Further discussion on this paper was deferred to the second C4 Meeting on Tuesday. At the second C4 session, the paper was withdrawn following the approval of paper SC11_C4_09.

3. DARC 7MHz band plan modification - CW contest preferred segment 17 DJ1YFK

The paper was presented by DJ1YFK. NRRL asked what the situation is now for the QRP activity frequency. DARC stated that the DL QRP group does not see a problem with this as they recognise the QRP frequency is largely unusable during contests anyway. NRRL stated that the Norwegian QRP operators were against the proposed. USKA stated that their QRPers were also against the proposal. OeVSV supported the principle but agreed a solution needed to be found for the QRP frequency. VERON stated it was too early to take a decision until more QRP groups could be consulted. CRC believed there is no real problem as QRP operation is at different times to contests. NRRL stated it would send a bad signal to the QRP community to put their allocation inside the contest-preferred segment. DARC stated that moving the QRP frequency to below 7010kHz could cause more problems due to simple rigs & crystal control. MRASZ suggested to

put the QRP frequency at 7024kHz as it is the closest to the current 7030kHz whilst still being outside the contest-preferred segment. NRRL noted that the Region 2 QRP frequency is also 7030kHz and it would be inconsistent to change the Region 1 QRP frequency.

DK4VW suggested delaying the discussion until further consultation can be made. NRRL supported delaying the issue until the next Interim Meeting. OeVSV stated we should look at the band plans from both Region 1 & 2 & not just consider the US license class segments. DK4VW proposed to continue the discussion at the second C4 Meeting on Tuesday.

Further discussion on this paper was deferred to the second C4 Meeting on Tuesday; the minutes from the second C4 session continue below:

DJ1YFK presented the updated proposal for this paper to withdraw the contest-preferred segment from the 7MHz band plan. NRRL expressed support for the revised proposal. EDR and VERON also supported the revised document.

Approval proposed by OeVSV, seconded by UBA. Carried.

Recommendation SC11_C4_05:

That the CW contest-preferred segment from 7000-7025kHz is withdrawn from the Region 1 band plan. Societies should encourage contest organisers to include a rule that restricts contest activity to a limited frequency range within the CW allocation. The choice of frequency segment is left to the discretion of the contest organisers, but should take into account expected activity levels and show consideration for non-contest operation.

The second session of the C4 meeting was opened by the HF Chairman DK4VW at 09:00 on Tuesday 16/8. Notes and recommendations related to the delayed discussion on papers from the first C4 session are included within the text relating to those papers.

7. Information Papers

1. SARL CubeSat to carry 14MHz beacon

26 ZS6AKV

The paper was presented by SARL. IRTS expressed concern that this might create a precedence for amateur frequencies to be used for commercial or non-amateur purposes. G3VZV stated that there is already a detailed IARU process in place to ensure that satellite frequency coordination is only for satellites meeting specific requirements and objectives acceptable to the amateur satellite service.

EMCOM WG Emergency Communications Frequencies at HF 10 G0DUB
 The paper was presented by DK4VW. LA4LN asked that the frequency 3720kHz in Norway be added to the list of frequencies.

3. DARC Training of contest newcomers

20 DJ1YFK

The paper was presented by DJ1YFK.

8. Operation

1. SSA Out of Band operations in contest

13 SM6CNN

DK4VW stated that as this paper covered the same information as is contained within the HF Chairman's report, SSA had requested that the HF Chairman be encouraged to continue to support efforts to prevent out-of-band operation within contests.

2. RSGB HF Operating practice

23 G4FSU

The paper was presented by G4FSU.

Approval proposed by SARL, seconded by CRC. Carried.

Recommendation SC11 C4 06:

In respect of deliberate interference, that:

a) De Haan 1993 – C4.4, is suppressed as much of the material is covered in

Cavtat 2008 CT-8 C3 Rec 44 or in the HF Manager's Handbook

b) IARU Region 1 endorses the "DX Code of Conduct" and urges its member

societies to publicise and recommend it to their members.

3. Harmonisation of amateur frequency bands used by Novice licensees 11 PA0SHY

The paper was presented by PA0SHY. CRC stated it was a good idea but as there was no suggestion for actual frequencies, there was not a proposal they could take to the regulatory authorities. VERON stated there was information on novice allocations on the PD3EM website. It was agreed that further work would be carried out to review the allocations and come up with a harmonised proposal at the next C4 interim meeting that could then be used to approach the regularity authorities.

9. Remote Operation

1. RSGB Remote Operation under CEPT License

22 G4FSU

The paper was presented by G3VZV. NRRL pointed out that it should be country prefix, not suffix and clarified that T/R 61-01 specifically is for short trips in the visiting country and agreed with the proposal. CRC asked that specific reference

to remote operation be specified, which was agreed. OeVSV expressed concern that C4 was dealing with the papers sequentially and that it would be better to group all the papers on remote operation into a single discussion.

Approval proposed by SARL, seconded by EDR. OeVSV voted against the proposal. Carried after vote.

Recommendation SC11_C4_07:

That member societies bring to their members attention that the T/R 61-01 agreement only applies to people using their own call sign, with the appropriate country prefix, when the operator is actually visiting that country, not for remote operation.

2. IRTS Remote Controlled Stations

12 EI2CA

EI8BP presented the paper. OeVSV stated they do not want to build up new restrictions for operators but do want it to be clear as to what callsign should be used. IRTS pointed out they are not against remote operation. NRRL does not support recommendation a/ and b/, but does support c/. NRRL believes that as long as operator is suitably licensed for a remote station, he should not be restricted from doing so. IRTS cited as an example that a US operator with a remote station in Europe would be at a much greater advantage than other US stations in contests such as IOTA. USKA stated that the location of the antenna and transceiver is what counts. RSGB expressed support for the 3 recommendations. DK4VW stated that it is an ITU requirement that the identification of the station be consistent with the location of the transmitter.

DK4VW proposed further discussion on recommendations a/ and b/ in the paper be included in the worked proposed by recommendation c/. This was accepted.

Approval of recommendation c/ proposed by SRAL, seconded by NRRL. Carried.

Recommendation SC11_C4_08:

That the incoming Executive Committee is mandated to set up a sub-group to examine the question of transnational remote-controlled operation and to establish under what conditions such operation might, if ever, be regulated and to issue its findings in due course.

3. RSGB Gateways and Remote Operation Rev. 1 24 G3WKL

The paper was presented by G4FSU. Recommendation b/ was withdrawn from the paper following confusion over the revision. OeVSV does not see the need for the paper as the hobby is in general for experimentation and asked whether this was intended to also cover data gateways. G4FSU clarified that this refers only to voice gateways and is not intended to cover data modes. MRASZ supported the recommendation a/. A revised wording of the recommendation was agreed.

Approval of recommendation a/ proposed by IRTS, seconded by MRASZ. 6 abstentions. Carried.

Recommendation SC11_C4_09:

Voice Internet Gateways linking 2 stations should be restricted to experimentation and operation for emergency communication purposes on frequencies below 28 MHz.

10. Frequency Requirements

1. EDR 10MHz Expansion

27 OZ5DX

The paper was presented by OZ5DX. DK4VW pointed out that much of this work is already in progress. OeVSV expressed concern that other allocations were also under pressure and they wanted to put their energy into more serious threats with the regulatory authorities.

Approval proposed by DARC, seconded by CRC. Carried.

Recommendation SC11_C4_10:

Expansion of the 10MHz band shall be given high priority when talking with administrations and by IARU when negotiating with authorities.

2. NRRL 1.8MHz Expansion

15 LA4LN

The paper was presented by LA4LN. It was agreed to clarify that this applies to ITU region 1 in the proposal as Region 2 already has this allocation.

Approval proposed by NRRL, seconded by CRC. Carried.

Recommendation SC11_C4_11:

That IARU at further ITU World Radio Conferences should seek to expand the international amateur radio 160 metre band from its present lower end of 1 810 kHz to 1 800 kHz in ITU Region 1. IARU should also try to obtain an international secondary allocation for amateur radio between 1 850 and 2 000 kHz in ITU Region 1.

11. NRRL QSO Definition

14 LA4LN

The paper was presented by LA4LN. DK4VW showed the current C5 definition along with proposed NRRL definition. G6JYB presented the background to the C5 definition and stated that there has not yet been an instance where the definition had been challenged. LA4LN stated that the only difference is the specific requirement to exchange a report rather than some other information (commonly a report). OeVSV stated there should be a common definition between HF and VHF and believed the C5 definition was suitable also for HF. CRC stated that their view is that the C5 definition is suitable and it made no sense to have 2 definitions. UBA stated they were in favour of the NRRL proposal if the clause 'without outside help by others' was withdrawn. NRRL said the purpose of the clause was to prevent assistance of QSOs via list operations or cluster. SRAL stated that the definition of outside help is a thin line & needs to be carefully considered.

CRC stated that we should decide whether we need a definition, and if so we should adopt the C5 definition. DARC also expressed support for the C5 definition. EDR supported the NRRL proposal stating that it did not matter if there were two different definitions. DK4VW pointed out that the original intent was to identify a common definition and this should be kept in mind. DK4VW proposed a vote to consider whether we proceed with the NRRL definition, or to adopt the C5 version. NRRL said they could accept the C5 definition if the term report was followed by 'or some other information'. RSGB was against the proposal, saying that a definition of a QSO is not required.

DK4VW proposed a vote in favour of adopting the C5 definition.

Votes in favour of C5 definition: 15 in favour, 2 against, Abstained: IRTS, RSM, MRASZ, USKA.

Approval to accept C5 definition proposed by CRC, seconded by VERON. Carried.

Recommendation SC11_C4_12:

That the following definition of a QSO be added to the HF Manager's Handbook:

A definition for a valid QSO is:

A valid contact is one where both operators during the contact have

- 1. mutually identified each other
- 2. received a report, and
- 3. received a confirmation of the successful identification and the reception of the report.

It is emphasized that the responsibility always lies with the operator for the integrity of the contact.

12. OeVSV Noise Level Measuring Network

16 OE3MZC

The paper was presented by OeVSV. NRRL asked why this had been submitted to both C3 and C4. At C3 and C2 it was agreed that money had been made available to support the proposal. G3PSM suggested the paper be withdrawn at it has been dealt with in C3. DK4VW noted that C4 welcomes the C3 decision and offers to determine the next steps.

13. RSGB Existing 500kHz Recommendations

25 G4FSU

The paper was presented by G3PSM. G3PSM also offered thanks from C4 to the members of the 500kHz working group. Approval proposed by RSGB, seconded by IRTS. Carried.

Recommendation SC11_C4_13:

That:

a/ San Marino 2002 - REC/02/SM/C4.11 can be suppressed as the matter is in hand via the ITU and CEPT preparation processes

b/ Davos 2005 – DV05_C4_Rec_01 and Cavtat 2008 – CT08_C4_Rec_01 could also be suppressed along with the closure of the 500 kHz Working Group.

14. Nomination of Chairman for the HF Committee for the coming three years

DK4VW announced he would stand for election as HF Chairman. No other candidates were nominated.

DK4VW was proposed as HF Chairman by EDR, seconded by IARC. Ulrich Mueller DK4VW is re-elected as HF Chairman.

Recommendation SC11_C4_14:

That Ulrich Mueller DK4VW be elected as HF Chairman.

DK4VW proposed 9A5K to be nominated as vice-chairman to help deal with contest matters amongst other items. Votes: none against, CRC abstained. Carried.

15. Date and venue for the next HF Committee Meeting

DK4VW proposed an interim meeting in Vienna in the February / March 2013 time frame.

16. Any Other Business

1. 10MHz band digital mode segment

NRRL received an application for a win-link system in the 10MHz band which raised an issue of automatic digital systems with greater than 500Hz bandwidth in the narrow 10MHz secondary allocation, against the IARU Region 1 30 metre band plan, and asked what the IARU could do to help resolve the issue.

2. 7MHz band digital mode segment

DK4VW noted that the 7MHz digital allocations have been moved and extended but many operators are still using the old PSK31 allocation in what is now the CW only segment, complaining that there is no activity in the revised segment. DK4VW contacted HB9DRV to ask if the HRD default frequencies could be changed. DK4VW asked that the member societies actively encourage operators to move to the new allocation.

3. Harmonising Contest Rules

DK4VW noted that previous efforts to harmonise contest rules had not been successful in the past to allow for parallel operation of different contests. DK4VW suggested that contest logging software could perhaps be modified to accommodate exchanges between different contests and offered to continue work in this direction.

4. Ethics and Operating procedures

DK4VW reported that following discussions with Jukka OH2BR, SRAL had some concerns that the wording for what should be included within a QSO was too strong in certain instances.

17. To close the HF Committee Meeting 2011

The C4 meeting was closed by DK4VW at 13:00

65.2 Additional information

65.2.1 Voice Internet Gateways

A Voice Internet Gateway is a system which links two gateway radio stations with input, respectively output frequencies on different bands via Internet.

An operator can use a radio link on one band to access the system and communicates with others who are using a radio link on another band to access a second gateway radio station.

65.2.2 Recommendation SC11_C4_06

'DX Code of Conduct' can be downloaded from http://dx-code.org/

65.2.3 Recommendation SC11_C4_08

The plenary mandated the C4 Chairman to set up the sub-group.

65.2.4 SC11_C4_09 rev1

Current IARU Region 1 band plan

Current land Region 1 band plan					
28000 - 28070	200	CW	QRS Centre of Activity 28055 kHz QRP Centre of Activity 28060 kHz		
28070 - 28120	500	Narrow band modes	Digimode		
28120 - 28150	500	Narrow band modes	Digimode, automatically controlled data stations (unattended)		
28150 - 28190	500	Narrow band modes			
28190 - 28199		International Beacon Project	Regional time shared beacons, exclusively		
28199 - 28201		International Beacon Project	Worldwide time shared beacons, exclusively		
28201 - 28225		International Beacon Project	Continuous duty beacons, exclusively		
28225 - 28300	2700	All modes	Beacons		
28300 -28320	2700	All modes	Digimode, automatically controlled data stations (unattended)		
28320 - 29200	2700	All modes	SSB QRP Centre of Activity 28360 kHz Image Centre of Activity 28680 kHz		
29200 - 29300	6000	All modes	Digimode, automatically controlled data stations (unattended)		
29300 - 29510	6000	Satellite-Downlink			
29510 - 29520		Guard Channel			
29520 - 29550	6000	All modes	FM simplex - 10 kHz channels		
29560 - 29590	6000	All modes	FM-Repeater input (RH1-RH4)		
29600	6000	All modes	FM Calling channel		
29610 - 29650	6000	All modes	FM simplex - 10 kHz channels		
29660 - 29700	6000	All modes	FM-Repeater output (RH1-RH4)		

IARU Region 1 band plan UBA proposal

28000 - 28070	200	CW	QRS Centre of Activity 28055 kHz QRP Centre of Activity 28060 kHz
28070 - 28120	500	Narrow band modes	Digimode
28120 - 28150	500	Narrow band modes	Digimode, automatically controlled data stations (unattended)
28150 - 28190	500	Narrow band modes	
28190 - 28199		International Beacon Project	Regional time shared beacons, exclusively
28199 - 28201		International Beacon Project	Worldwide time shared beacons, exclusively
28201 - 28225		International Beacon Project	Continuous duty beacons, exclusively
28225 - 28300	2700	All modes	Beacons
28300 -28320	2700	All modes	Digimode, automatically controlled data stations (unattended)
28320 - 29100	2700	All modes	SSB QRP Centre of Activity 28360 kHz Image Centre of Activity 28680 kHz
29100 - 29200	6000	A II. mana alan	TM Circular 40 kt la appains
			FM Simplex - 10 kHz spacing
29200 – 29300			Digimode, automatically controlled data stations (unattended)
29300 - 29510	6000	Satellite-Downlink	
29510 - 29520		Guard Channel	
29520 - 29550	6000	All modes	FM-Repeater input (RH1-RH4) - NEW - renumbered
29560 - 29590	6000	All modes	FM-Repeater input (RH5 -RH8) - OLD - renumbered
29600	6000	All modes	FM Calling channel
29610	6000	All modes	FM Simplex-repeater (parrot) Input and Output
29620 - 29650	6000	All modes	FM-Repeater output (RH1-RH4) - NEW - renumbered
29660 - 29700	6000	All modes	FM-Repeater output (RH5-RH8) - OLD - renumbered

All above the thick blue line has been not changed with the exception that the upper limit of the segment with max. 2700 Hz bandwidth has been moved down by 100 kHz to now 29100 kHz.

In the UBA proposal changes are highlighted in dark yellow.

65.2.5 QSO definition

In 2007 the IARU Region-1 VHF/Microwave Committee (C5) was asked to consider the definition of a QSO. In 2011 this definition was adopted by the HF Committee (C4) at Sun City, resulting in a common definition for all Region-1.

The three main lines of the definition are true to the spirit of the original 1957 Ed Tilton definition, but have been carefully phrased to be general purpose, so that they can apply regardless of the mode or technology used.

The impact of new modes (such as MGM), technology, clusters, databases etc mean that it is important that operators fully understand what they are using and ensure it is correctly setup and applied, so it does not undermine the integrity of the contact. It is for this reason that the important final sentence was added.

This is a top-level generic definition. As such it is a starting point that specific contest rules or operating procedures may reference and build up on.

65.2.6 HF Manager Handbook

In *October 2011* an updated version of the HF Manager Handbook (version 8) will be available for download from IARU Region 1 web site.

http://www.iaru-r1.org/index.php?option=com_content&view=article&id=150&Itemid=109

65.2.7 HF Committee Interim Meeting

The next C4 Interim Meeting will be held in Vienna 19-21 April 2013.

(The C5 Committee meets again in parallel.)

73 Ulli

Ulrich Mueller, DK4VW Chairman Permanent HF Committee C4 International Amateur Radio Union Region 1

Tel: +49 6421 33660 GSM: +49 178 729 41 68 Skype: dk4vw_marburg E-mail: dk4vw@darc.de