

The International Amateur Radio Union

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VHF UHF MW NEWSLETTER

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Region I

Europe, Africa and part of Asia.
Founded 1950

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THE FRIEDRICHSHAFEN MEETING

Not many societies could be present in Friedrichshafen at the informal committee meeting. But those who were present had interesting discussions. In San Marino we can discuss how to handle our interim activities in the future.

Below the report of that meeting. Attached to this Newsletter distribution is the late document from PZK.

Subject: Report of an informal meeting of the IARU Region 1
VHF/UHF/MW Committee. Friedrichshafen 30/06-01/07 2001

Present: **DARC**(DF7VX,DK2NH) , **FRR** (YO3JW), **MARS** (HA5EA [sun]),
NRRL (LA4LN, also speaking on behalf of other nordic countries),
PZK (SP6LB, SP2DX [sun]) , **UBA** (ON6OO [sat], ON5TH [sun]) ,
USKA (HB9PQX), **VERON** (PA0SON, PA2DWH), IARU R1 **EC** (LA2RR [sun]), **Chair** (PA0EZ)

1. General.

The chairman welcomed the participants and said that the purpose this informal meeting was to exchange view on matters of the VHF/UHF/MW Committee in order to start preparing for the C5 meeting in San Marino next year. A report of this meeting will be an input paper to the conference. He expressed thanks to DARC for providing the meeting facilities.

The papers available for discussion were the papers received for Vienna 2001 (available on the web) and 3 papers for this meeting (attached to Newsletter 29). Moreover, PZK brought a paper to the meeting on PSK31 frequencies. Allocation matters would be discussed on Sunday as then LA2RR (replacing SP5FM) could be present.

2. 50 MHz

2.a. 50,00-50,020 MHz usage (Vie(00)10)

In this document discussion was invited on (mis-)use of the lower 20 kHz in the bandplan.

It was concluded that this 20 kHz should **exclusively be kept for EME** and that G3UUT (IARU R1 beacon coordinator) should be made aware of beacons in this segment in order that he can ask the operators to move the qrg(DARC will collect information).

2.b. Intercontinental DX segment (Vie(00)11)

SARL suggested here to remove exclusive use of the 50,10-50,13 MHz segment from the bandplan. From the discussion it became clear that such a segment still is very useful but VERON thought 30 kHz might be too much. This, however, is in Regions 2 and 3 also allocated. There still remains the educational problem. LA4LN refers to the UK 6-meter group publications regarding 6 m operating ethics.

3. 145 MHz

3.a. Footnote i.(FH 2001/03)

In this document DARC suggested that footnote i. in the 145 MHz bandplan should be deleted.

The meeting agreed that it would be better to reword that recommendation as follows :

i. No inputs or outputs of non-linear (1) repeaters shall be allowed to operate between 144,000 MHz and 144.794 MHz

(1) The expression "non-linear" is used in order to allow so-called "linear" repeaters which linearly convert a segment in one band to a segment in another band. (See 3.d)

3.b. EME in the 144,00 – 144,035 MHz segment (Vie(00)07)

SSA suggested removing from the bandplan the use of SSB in this segment . This proposal was fully supported, thus leaving for SSB the 144,150 – 144,160 MHz segment.

3.c. EME segment 144,140-144,160 MHz(Vie(00)13)

The meeting agreed to the SARL proposal that societies should bring the usefulness of this segment to the attention of their members.

3.d. APRS frequency (FH 2001/02)

The use of 144,800 by APRS stations is not according to the bandplan as the lower sideband of the signal extends into the segment were no unmanned stations should operate. The meeting, however, realised that it is not realistic to stop the use on

144,800 and therefore the bandplan should be **amended by moving the current ,800 borderline 6 kHz downwards.**

Everybody realised that such a move can be dangerous as this flexibility could create bad ideas by some operators. It would be as well a violation of footnotes 6 and 9. The APRS then could be mentioned in the usage column with 12 kHz bandwidth.

NRRL probably could write a conference proposal based upon this discussion.

3.e. Linear Repeaters (Vie(00)15).

When the bandplan was changed the allocation for linear repeaters disappeared. It appears that still some people would like such a possibility. VERON, therefore, proposed to reintroduce this but now in the usage column. This was seen as acceptable and it would require a rewording of footnote i. accordingly.

1. 435 MHz

4.a POCSAC (FH2001/01)

The DARC proposal to give POCSAC (a kind of paging system) a place in the bandplan did not meet much enthusiasm. Firstly, it was queried if such an activity was not too far from the purpose of the amateur service and secondly the proposed frequency was far from optimum. As DARC stated that this activity would anyhow take place, the meeting suggested that a **footnote** concerning a frequency in the usage part of the bandplan would be the least bad solution.

4.b. Amending the 432-435 MHz segment (Vie(00)14)

The EDR contribution was the result of many discussions started in Tel Aviv. It deals with the problem in the "6 MHz countries"(a.o. Scandinavia, Hungary, Slovenia) with incompatibilities between FM repeater inputs and SRD's.

DARC saw a danger in the proposal as it could imply that 6 MHz could be sufficient for amateurs. Moreover, they would have many difficulties in convincing their beacon keepers of the need to change frequencies.

Other societies had fewer problems. The conclusion of the discussion was that probably the best solution could be to indeed move the beacon band to near the DX-part , having a much larger all mode segment and accept in the usage part a national repeater system like proposed in the document. No problems were foreseen with linear transponders.

5. *All bands* (FH2001/04)

This contribution from PZK (attached) was too late for general distribution. It suggests changing the recommended centre frequency for PSK 31 from .610 to .085 in the bandplans.

No firm conclusion could yet be reached due to lack of preparation, but several people preferred to keep RTTY and PSK together with a view on several other new RTTY schemes.

2. *MS procedure.*

A remark was made that the MS procedure in the VHF Managers Handbook has not been amended according to the change in the 145 MHz bandplan. The chairman will correct this, but expects to receive a proposal from MS experts.

3. *Allocations coordination (Vie 900)16)*

The report was well received and the following suggestions were made:

- The table made by DK2NH should be made accessible at the internet. DK2NH and PA0EZ will work on this. Such a table will be very useful for societies having discussions with their administration about allocations.
- Societies should more active in informing DK2NH about allocations.
- The Region1 EC/ERC should set up an e-mail correspondence group consisting of one member of each society directly involved with national WRC/CEPT preparations and amateur allocations.

4. *Other matters*

The other documents distributed were not discussed and should be brought to the 2002 Conference in case the authors think is useful.

8. *ITU-WRC 2002/CEPT*

As SP5FM could not be present, LA2RR attended the meeting. He is actively supporting SP5FM in CEPT meetings.

For VHF and higher the following subjects are currently very important:

- SRD/LPD together with UWB. **There is an urgent need for an IARU participant to the relevant SE working group meetings, such as the SRD-MG.**
- EES allocation between 420 and 470 MHz. Although IARU has done a lot of work by providing ITU-R SG8 with a lot of material, recently CEPT SE has given the task to SE7 to study the (in)compatibility issues. IARU will have to be active here. Another person is urgently sought.
- CEPT/ETSI activities aiming at adding 24 GHz to the current 76 GHz automobile radar standard.
- Harmonics in the VHF band of PLT systems by non-linearity in the systems. Very much input from amateurs concerned is needed by DK9HU.

The meeting wished to bring to the attention of the ERC and the member societies that it is now also time to make proposals for the WRC2006 agenda. One item could be to change the satellite allocation 1260-1270 MHz in S5.282 from uplink only to up – and downlink. CEPT has not yet supported this but has also not taken a negative position.

At the end VERON asked if a 70 MHz allocation could be obtained. DARC said they got negative reactions on this from their administration but PZK was rather optimistic in obtaining it.

5. Finally

Although the meeting was very useful and this report could help progress at the next conference the chairman said that he found it an interesting experiment but due to the low number of participants probably not to be repeated.

He also said that an electronic discussion could have been interesting, but so far nobody has send any reaction to the Vienna papers on the internet although that page has been visited more than 150 times this year.

SP5FM's contribution.

Wojciech could not come to our meeting due to family matters. He, therefore , send us a written contribution, which follows here :

To: Region 1 VHF/UHF/Microwaves Committee

Dear Colleagues,

Because of my XYL's accident I was unable to join you in Friedrichshafen. I regret it very much.

An outline of some issues related to spectrum above 30 MHz can be found below. When back home you will also find on your servers some material that could be of interest.

I am available for you all summer.

1. General outline

Issues are often being processed simultaneously in more than one organisation and/or body e.g. at CEPT & ITU, CEPT & ETSI, FM-WG & SE-WG etc. They are now usually open to commercial representation and often dominated by industrial and commercial entities.

The growing IARU credibility is a very important factor thanks to the balanced behaviour of IARU representatives at ITU-R, CEPT and other meetings. We are perceived as a party which, although carefully looking after amateur interests, is not losing other services and spectrum efficiency factors out of sight. Thanks to the growing credibility IARU became a recognised partner at many forums including Civil-Military meetings.

We need more volunteers who would be able to assume particular responsibilities in our ERC structure. Many tasks have been already assigned but the world, with its speed of technology, does not wait. The extensive descriptive circular of several pages goes to EC/ERC members, but it is open to everybody. I expect that Arie, after returning home, will relay it to all members of VHFC.

For example, we urgently need someone technically competent who would be able to deal with SRD, including participation in CEPT Recommendation 70-03 SRD Maintenance Group (SRD-MG). I already mentioned it several times, including WGs meetings in Lillehammer, but the matter is now becoming more urgent than some others.

As you well know, SRDs include a multitude of devices (rapidly growing in number) ranging from 14 kHz to perhaps 75 GHz (so far!), some licensed but the most is not subject to any licensing. At WGFM we have originally achieved that in the 433 MHz band voice and audio SRDs are not permitted, and also duty cycle should be limited to 10%. Thanks to our efforts the 800 MHz SRD band has been established and included in ECA. However the industry has now imposed severe pressure to get the duty cycle again increased to 100% at least in certain segment of 433 MHz band; studies again started at ETSI & SE how to tackle it. We all know that poor quality and stability of SRD devices will practically mean that "certain segment = the entire band".

The SRD-MG works mostly by correspondence may meet 1-2 times a year, mostly at ERO, Copenhagen. The next meeting of SRD-MG is in July at ERO. Because of multitude of SRD devices, I would strongly invite PA0EZ to undertake this responsibility, but at the same time, to nominate his assistant (so we always have someone who is aware of developments). I shall immediately provide them with all references. Monitoring SRD-MG should be on permanent basis.

There are also targets within CEPT-SE e.g. SE24; those are however not necessarily permanent, but depended on issues processed.

2. ITU & CEPT.

Numerous issues of interest are being studied at ITU-R. One of those is the famous ESS/SAR satellite proposed by the Netherlands for 435 MHz band and located on the WRC-03 as agenda item 1.38. Thanks to persistent effort and work of IARU experts at ITU SG7 and WP8A/WG1, and thanks to military objections protecting their radiolocation installations, changes have been imposed on technical and operational parameters of that ESS/SAR. You may get updated info from K1ZZ and W4RA present in Friedrichshafen. Consequently to those changed parameters the initial CEPT-WGFM "No" has been converted to preliminary attitude (quote): *"Any possible allocation shall protect the existing services in this band"* (unquote). According to recent WP8A/WG1 findings: *"further studies are necessary"*.

At the recent WGFM meeting France proposed to commence studies for another EES satellite "Mimosa" in the vicinity of 430 MHz to penetrate deep ice (ice glaciers, polar regions). This is being carefully monitored. I would welcome someone to undertake

responsibility for monitoring developments concerning those satellites.

In Region 1 we mostly focus on **CEPT-FM** (spectrum-related). Because several amateur issues are in WRC-03 agenda, direct participation also in the work of CEPT-CPG and its CPG-PT4 will be required, not excluding WGSE wherever appropriate.

3. VHF and above.

Already strong appetites for our VHF/UHF and SHF spectrum got stimulated, seeking migration of amateurs from upper bands down to HF, following relaxation of Morse code requirement. This will be a pretext to review our VHF/UHF/SHF allocations that are already inadequately used in some geographical areas.

For 50 MHz reminder look at the June Region 1 News.

The commercial pressure dominated the DSI-3 process not without support of some CEPT officials who openly declared adjustment of DSI-3 process to “market-demands”. Such approach was adversely commented by CRAF, IARU and NATO at WGFM and led to fruitful consultations between “non-commercial” parties. However, the outcome was dominated by “market-demand”.

The net-result from DSI-3 is below our hope; however facing the enormous pressure on that part of the spectrum and billions dollars involved in campaigns, outside comments judge our results as very successful taking into account our inadequate activity in UHF/SHF bands (now being monitored by administrations). In DSI-3 we attempted:

1. to upgrade segments in 1.3 and 2.4 GHz allocations;
2. to obtain CEPT support at the ITU for amateur-satellite service to be permitted another direction in the band 1260 MHz;
3. to get specified amateur secondary segments in 1.3 and 2.4 GHz bands somewhat protected by including those in relevant European/ECA footnotes.

None of those was entirely successful. However in relation to (b) and (c) it has been achieved to replace the initial “no” with “not for the time being”. It means that we can attempt again through routine WGFM procedures, and I judge our chances much higher than during the DSI-process sometimes dominated by commercially stimulated hysteria. Our earlier DSI-1 & DSI-bIS achievements, such as access to 50 and 3400 MHz remain.

4. DPLT & ADSD/xDSL

Civil and military frequency-managers have been successfully alerted by IARU, RSGB, DARC (orally and submissions), EBU & NATO with strong support of several administrations led by UK and Norway. OZ8CY is acting effectively at SE36. G4JKS successfully presented her contribution at EU PLT Workshop in Brussels. Unfortunately, the

ITU community is getting educated on these threats slowly and inadequately. I feel very strongly about potential interference threat to amateur sensitive VHF receivers caused by unwanted products of these technologies. Unfortunately I also feel as voice on desert. Although PLT ADSL/xDSLs are perceived as HF only problems, I have spoken already in 1999 at WGFM and CEPT Civil-Military meeting on the unavoidable impact on VHF spectrum. This possibility has been also included in the Region 1 document to the CEPT Civil Military meeting.

(Quote from our Doc.civ/mil(99)10:)

Power and telephone installations include numerous nonlinear devices, “intended” and “unintended”, which can behave as frequency multipliers, detectors and mixers.

“Intended” nonlinear devices such as diodes, transistors, thyristors are present in all kind of home appliances: light dimmers, vacuum cleaners, electric-tools, home alarms, toys, video & hi-fi sets and in each telephone & telefax set.

Unintended nonlinear devices appear at poor and/or oxidised joints; thousands of those are present especially in power line installations. Oxidised copper forms a diode; these cheap copper-oxide diodes were present in each telephone set, they were also used as low power rectifiers in many devices not long time ago.

These nonlinear elements are not being taken into account when considering interference levels (see 4.2. below).

Power and telephone lines do not exist in radio frequency vacuum but in the real environment full of RF signals.

The picture changes dramatically when DP/TLC appear together with these signals in presence of nonlinear elements. They can act as detectors, frequency multipliers and mixers that will generate a whole new range of RF wideband noise-modulated products.

Strong signals at the input terminals of radio receivers can cause desensitisation (blocking) and cross modulation. Detection can occur also at Hi-Fi equipment and various SRDs that usually have little or no input selectivity. Even for an amateur station with external antenna, the interference would many times exceed the average amateur reception level.

The modern digital modes used in fixed/mobile defence systems and some other governmental fixed service applications can be very susceptible to so strong high-speed wideband digital fields. The degree of such interference would vary from system to system and from installation to installation.

Present-day semiconductors, hundreds of which are everywhere around, are usually capable to function on very high frequencies. Their multiplying/mixing efficiency can be high. Together with a piece of wire acting as an antenna, they form an interference source well into VHF range. In practice, new frequencies are being generated by passive nonlinear elements at levels lower than those expected in DP/TLC installations. (unquote).

The full documents are available electronically on request. In Region 1 PLT matters are now coordinated by DK9HU and OZ8CY.

5. Amateur and military radiocommunication

The degree of confidence with military organisations has further grown-up. This

cooperation is particularly important and may be a key-element in many situations because nearly all amateur non-exclusive allocations are shared with military applications.

The CEPT Civil-Military frequency-management meeting was held in Dubrovnik/Croatia 6/7 March. It was attended by LA2RR and SP5FM who presented a paper on 7 MHz issue, commented PLT/DSL issues and were involved in many useful consultations.

It is important that we may present our views to military organisation such as NATO and our views are being taken into account.

73 de SP5FM

INTERNET

The internet is a very efficient source of information. IARU and IARU Region 1 have their own internet pages. But it appears not possible to arrange with the Region 1 to create a good link to the information relating to our committee, which I maintain.

In order to get access to this internet page, you should use the URL :

<http://people.a2000.nl/adogtero/start.htm>.

In an earlier Newsletter you were invited to send comments to the "Vienna documents" by e-mail. But nobody has ever tried this. It is a pity as we should use modern means to communicate in stead of only discussing matters at the tri-annual Conference or at the interim meeting.