

PROTOCOL OF THE MEETING

This bilateral meeting between the Telecommunications Administrations representatives of Ukraine and Poland, arranged in order to improve the co-ordination of frequencies between the two countries, was held in Warsaw from 20 to 24 January 1997.

The list of participants and agenda of the meeting are enclosed in Annexes 1 and 2.

The participants gathered in plenary assembly for the official opening of the meeting. When the agenda was adopted, the meeting was split into two joint groups to work on different issues in parallel. One group worked on co-ordination of frequencies for TV and FM radio (broadcasting service) stations and the other group worked on the issues concerning the co-ordination in land mobile services.

A. The TV and FM sound broadcasting stations co-ordination.

A1. The following general topics were discussed:

1. Technical basis for TV co-ordination (Stockholm 1961).

Polish Administration made a proposal which summarised technical basis for co-ordination:

- the interfering field strength calculations should be based on Rec. ITU-R PN.370-6 without Δh correction.
- for high power TV stations (above or equal to 1 kW ERP in UHF band and above or equal to 100 W ERP in VHF band) 1% of time curves should be used; for other stations - 10% curves should be used.
- the median field strength for which protection from interference is used for co-ordination should be based on Rec. 417-4 without 2 dB correction for system K.
- the protection ratios from lower and upper adjacent channels interference should be equal to -9 dB.

This proposal will be evaluated by Ukrainian administration to the end of June 97.

2. Plans of using precision offset.

Both Parties agreed that precision offset may be used in reasonable instances.

3. Forthcoming use of TV channels from R1 to R5.

Polish Administration informed Ukrainian delegation about turning off all TV stations on channels R1 - R5 in Poland. Ukrainian administration plans to close the TV stations working on TV channels R4, R5 but exact time-limit is yet unknown; this band will be allotted for FM broadcasting and Ukrainian Administration will start frequency planning in mentioned band.

4. Further improvements of existing analogue TV.

Polish Administration informed Ukrainian delegation that from 01.01.1995 only PAL system is used in Poland. In the next month an experimental transmission „stereo/second sound” based on NICAM system will be started in Warsaw; the second subcarrier frequency 5,85 MHz was adopted for this purpose. Ukrainian Administration advised about its plans concerning introducing of „Enhanced SECAM” TV system with digital sound.

5. Opinions on the DTTB (Digital Terrestrial TV Broadcasting) and forthcoming use of frequency band 790-862 MHz.

Both Administrations agreed that they will introduce DTTB on TV channels above 60 after military services will abandon this band.

6. Prospective introduction of T-DAB.

Administrations agreed that the frequency band 230-240 MHz is the most suitable for this service. Ukrainian military authority plans to free this band for broadcasting after 2015.

7. The exchange of FM sound broadcasting and TV stations data bases.

Ukrainian Administration will be ready for such exchange in the end of this year.

Administrations agreed that the exchange will be proceeded on the floppy disks in ASCII format. Polish Administration will deliver the list of Ukrainian stations that were co-ordinated with Poland and vice-versa; the geographical co-ordinates of the stations in above list should be in degrees, minutes and seconds.

8. Frequency co-ordination between TV and military services.

Polish Administrations delivered for evaluation the technical basis for co-ordination between TV and military services working in TV channels 43-47 and 54-55. Ukrainian Administration will present their technical basis for co-ordination between TV and military services working on TV channels 43-60 to the end of June 1997. The effectuating in Poland TV stations on 59, 60 channels (listed in the Plan „Stockholm-61”) should be agreed with Ukrainian Administration. Before the 01.06.97 the Ukrainian Administration will submit to Polish Administration the calculation data concerning the maximum permitted field strength of TV59 and TV60 on the border line between Ukraine and Poland.

A2. The following stations were successfully co-ordinated during this meeting:

1. TV stations:

- for Ukraine see Annex A1;
- for Poland see Annex A2.

2. FM sound broadcasting stations:

2.1 In the band 66-74 MHz:

- for Ukraine see Annex A3;
- for Poland see Annex A4.

2.2 in the band 87,5-104 MHz:

- for Ukraine see Annex A5;
- for Poland see Annex A6.

A3. Co-ordination issues.

1. During the TV co-ordination the problem of different software for this matter arouse. As a consequence - there were obtained different results of some calculations. A special meeting between the technical experts of both Administrations should be held in Wrocław in the end of June 1997. This meeting will be dedicated to the exchange of experience in the field of the engineering methods and procedures used for frequency co-ordination.

2. Administrations agreed about the following:

- the ERP reduction or other technical parameters modifications of all Polish FM broadcasting stations which work in accordance with GE84 Plan, caused by protection of Ukrainian TV stations working in channels R4 and R5, will be reconsidered during the creating of the frequency Plan for FM broadcasting in the band 87,5-100 MHz in Ukraine.

3. Polish Administration submitted to Ukrainian Administration requests for co-ordination of 2 TV stations (Annex A7) and 21 FM broadcasting stations (Annex A8).

B. Land mobile service issues.

1. General principles of frequency co-ordination

The parties discussed the past and present practices of frequency co-ordination in land mobile service. In order to facilitate such co-ordination the parties confirmed the intention to use the procedures described in „Vienna Agreement” (December 3, 1993). The Ukrainian Administration supported by Polish Administration will take all necessary efforts to have introduced co-ordination procedures based on Vienna-93 software as soon as possible. Parties will define the date of implementation of frequency co-ordination procedures according to Vienna-93 during next meeting.

Until that date, the co-ordination requests from Poland will contain the parameters to enable the calculations for the Ukrainian Administration (see **Annex B4**). It was also agreed that those Polish co-ordination requests that were not yet answered in 1996 will be resent to the Ukrainian Administration, in line with Annex B4, and will be reconsidered and answered within 60 days from their reception.

The Polish party has given to the Ukrainian delegation the list of frequency bands allocated for use in the land mobile radiocommunication service with basic parameters of the radiocommunication networks. Those data, together with similar data that Ukrainian Administration is going to prepare in future, will serve in further harmonisation meetings.

2. Preferential frequency division for NMT-450i system.

The parties agreed and will use the preferential frequency division (for NMT-450 systems) in the band 453.000-457.000 and 463.000-467.000 MHz (NMT channels 1 to 161) as stated in Annex B1.

For the co-ordination of NMT frequencies in subbands 452.500-452.975/462.500-467.975 MHz and 457.025-457.475/467.025-467.475 MHz (NMT channels 181 to 200 and 162 to 180), the normal co-ordination will be applied.

The parties have intention to adopt a preferential frequency division for NMT system in those subbands as well. The parties will inform each other about the use of frequencies in the above mentioned subbands to prepare agreement regarding their preferential division.

3. Frequency bands for Polish police.

The Polish police representative presented a proposal for preferential division of the following bands (see **Annex B5**):

148.6625 - 150.0000 MHz

450.0000 - 451.9000 MHz

460.0000 - 461.9000 MHz

In this same Annex the future Polish police plans for the bands 165.500 - 167.500 MHz and 172.000 - 174.000 MHz (duplex separation 6.5 MHz) were communicated to the Ukrainian delegation.

The preferential division in the above mentioned bands that are used by Polish Ministry of Interior and Administration (see also the Annex B5) will be discussed with the Ukrainian Administration at future co-ordination meeting.

4. Preferential division of GSM channels.

Now in Ukraine and Poland the radio navigation systems are working in the GSM band. Therefore Ukrainian Party has proposed the modified Preferential Division for GSM frequencies in the border area taking into consideration the actual location of radio navigation stations in both countries (**Annex B2**).

For the moment, however, the radio navigation service in Ukraine still occupy GSM channels 48-50, 81-95 and 97-119 and in Poland - GSM channels 91-119. Therefore the Parties agreed not to use mentioned channels until they will be free from radio navigation systems.

Moreover, there was considered the draft Plan for preferential division of GSM channels in the border area between Poland, Belarus and Ukraine (**Annex B3**). Both Parties will send above draft Plan to Belorussian Administration.

5. Preferential division of DCS-1800 channels

The parties have exchanged information on spectrum availability in the band that is allocated in Europe for the DCS system. The Polish party is ready to work in the band 1755-1785 / 1850-1880 MHz. The Ukrainian party has free channels in the band 1755-1775 / 1850-1870 MHz. Given this situation, the parties decided to make a preferential division of the DCS bands 1755-1785 and 1850-1880 MHz (the proposal - see **Annex B6**). Frequency assignments, however, in the band 1775-1785 and 1870-1880 MHz shall be co-ordinated case by case before DCS-1800 system has been introduced in Ukraine in above mentioned bands.

6. Preferential divisions of TETRA channels

The parties agreed that a preferential frequency division of TETRA-E standard (Trans European Trunking Radio - Emergency) should be done in the band 380-385 MHz and 390-395 MHz. The Polish party has given the Ukrainian delegation the documents related to this standard. The proposal of preferential frequency division presented by the Polish party has been included in **Annex B7** and will be discussed on the next meeting.

7. Exchange of information on harmful interference cases reported.

The Ukrainian Ministry of Internal Affairs in L'viv region uses the 148.100 and 148.375 MHz frequencies for different services. Ukrainian Party has complained that there were cases of carrier frequencies transmission from Polish territory in order to suppress the Ukrainian transmitter.

Polish transmitters works with average intensity at frequencies belonging to the Ukrainian Ministry of Internal Affairs listed below:

148.325 MHz	172.125 MHz	148.450 MHz	172.250 MHz	148.325 MHz
148.725 MHz	172.375 MHz	148.800 MHz	172.400 MHz	
148.850 MHz	172.475 MHz	148.950 MHz	172.700 MHz	

The Ukrainian Party has informed the Polish Party there are noticed seldom irregular communications at frequencies 148.100, 148.150, 148.200, 148.250 MHz in border area in Volyn' region. These communications were using Polish language without Call Sign signals.

The Polish party has informed the Ukrainian party of the following interferences observed:

1. In the band 172.0 - 174.0 used by the Polish Ministry of Interior, interferences reported at

- area of Przemyśl: the frequencies 172.125 MHz; 172.350 MHz; 172.750 MHz; 172.925 MHz
- area of Zamość: the frequencies 173.350 MHz; 173.400 MHz

In the 148 MHz band used in Poland by civil services, the frequency 148.100 MHz used by the voivod's office in Przemyśl also suffers interference.

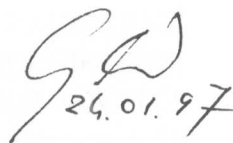
The 44 MHz band, used in Poland by the civil services, there are interferences reported in Krosno, Przemyśl and Rzeszów voivodship areas at the following frequencies:

44.175	44.800
44.400	44.850
44.475	44.875
44.500	44.650
	44.975 MHz

The parties will investigate the causes of these interferences, and will discuss this subject in more detail at future meetings.

On the Friday 24 January the protocol from the meeting was signed by the Heads of Delegations. Both Administration share the opinion that a next co-ordination meeting should be organised in the beginning of the next year, in order to continue the fruitful efforts of frequency co-ordination between Ukraine and Poland. The meeting was closed.

For the Administration of Poland:

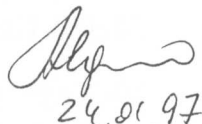


24.01.97

Wojciech Gromek



For the Administration of Ukraine:

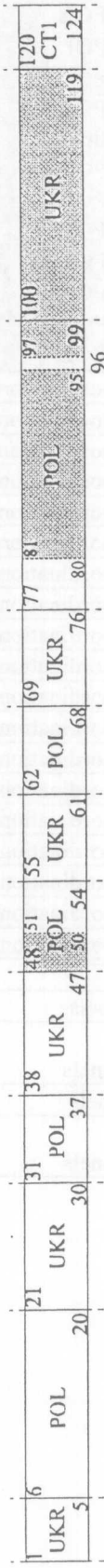


24.01.97

Olexij Karpenko

Annex: B2.

Preferential frequencies for GSM system in the border area of Poland and Ukraine.



- POL - 59 channels
- UKR - 60 channels
- CT1 - 5 channels
- GSM channels shall be used by special arrangement

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20-24.1.97

GSMR, P.O. 012
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Annex: B3.

Preferential frequencies for GSM system
in the border area of Poland, Belarus and Ukraine.

1	BLR	12	13	POL	20	21	UKR	30	31	POL	37	38	UKR	48	49	POL	54	55	UKR	61	62	POL	68	69	UKR	80	81	BLR	86	87	POL	98	99	BLR	119	120	CT1	124
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- POL - 40 channels
- BLR - 39 channels
- UKR - 40 channels
- CT1 - 5 channels

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