Iran

Attachment 2

QUESTIONNAIRE - PART II
(To be completed by Administrations only)
General Questions on National Spectrum Management

Describe succinctly the problems that your administration is currently experiencing in national spectrum management
(for example subject areas in national spectrum management).

Country ISLAMIC REPUBLIC OF IRAN E-mail: hamed@radtel.or.i
Focal point DIRECTORATE GENERAL OF TELECOMMUNICATIONS Fax No. : +98 21 867999

The following general questions on national spectrum management are based in part on the functional requirements of spectrum management described in the handbook on "National Spectrum Management."
If you need additional space to answer the questions please continue on a separate sheet of paper.

1. Do you have a national law governing spectrum management? YES * NO__
   - Last date this law was changed or modified? ___1984___
   - Are any actions planned to change this law? YES_*_NO__
   Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
   This law is being modified. Please send a copy of spectrum law of developed countries to this Admin., if possible.

2. Have you published regulations and procedures for national spectrum management (e.g. radio services, license requirements etc.)? YES_*_NO__

   Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
   Please let us have a copy of the National Spectrum management regulations of the developed countries, if possible.

3. Do you have a national radio frequency spectrum allocation table? YES_*_NO__
   Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
   See www.radtel.or.ir , Please.

4. Do you have Technical specifications for national spectrum use? YES_*_NO__
   Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
   The technical specifications for national spectrum is under compilation . The ITU's useful recommendations and comments in this regard is herewith solicited.

5. Do you have a need for any spectrum redeployment* ? YES_*_NO__

- The term "redeployment" is used here to refer to a process of national scope in which an assessment is conducted 1) to determine if portions of spectrum can be identified that are in limited use; and 2) to determine if such spectrum segments can be reallocated for use in delivering radiocommunication services that have expanding spectrum requirements.

  - If so, do you have a strategy for achieving this redeployment in respective frequency bands and for given radiocommunication services? YES__NO_*_

  - Please define the established strategy and describe the nature of the consultation, if any, with users regarding the potential costs resulting from the planned redeployment.

The Strategy will be based on the market demands.

6. What is the total cost of national spectrum management functions performed by your Government (expressed in Swiss francs)?
- What is the source of the funding required to accomplish these spectrum management functions?
Governmental public budget.

7. Do you have a method for establishing spectrum users' fees? YES_*_ NO__
- If so, please give a brief description of the method used in establishing those fees.
The calculation method for spectrum user's fee is attached.

8. Do you maintain centralized databases for spectrum management? YES_*_ NO__
- What is the approximate size of your database (expressed in number of records)? 240,000 Records
- Do you have a computerized data base management system (DBMS)? YES__ NO__
- What DBMS system do you use?
- Are these frequency assignment records available to public? YES__ NO_*_
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
For computerizing the data base management, we need the guidelines of the ITU's experts; However it would be useful to have a visit from the operating system in the ITU and developed countries.

9. Do you notify frequency assignments to the ITU? YES_*_ NO__
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

10. Do you have a policy and planning function for national spectrum management (i.e. a national strategy for future use of the spectrum)? YES_*_ NO__
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
There are usually some problems in the frequency allocation to the new services and anticipating them . so using the directions of the related ITU experts would be beneficial.

11. Do you perform technical analyses of frequency assignment requests? YES__ NO__
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
Because of the lack of (DBMS) computer systems, naturally the possibility of optimum allocation is difficult , and there is serious need for consultation with and guidance of the ITU Experts.

12. Do you perform radio monitoring? YES_*_ NO__
- number of fixed monitoring stations **5 Stations**

- facilities available at fixed monitoring stations
  -- monitoring up to **1000** MHz
  -- direction finding up to **1000** MHz
  - number of mobile monitoring stations **6 Stations**

- facilities available at mobile monitoring stations

-- monitoring up to **3000** MHz
-- direction finding up to **1000** MHz

Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?

13. Do you perform technical analyses of radio frequency interference complaints? YES_*_NO__
- Do you have an established consultation process, involving Government and non-government organization, for resolving these complaints? YES_*_NO__
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
In performing technical analysis, there is some interferences which require more consultation and training.

14. What computers and operating systems are in use for national spectrum management?
Type of computers
Operating system(s)
Have any problems been identified? and if so, do you need any assistance from the ITU in solving them?
For computerizing the national spectrum namagement, we need some consultation and organizing export meeting with ITU, for getting the neccessary guidances, visiting the operating computerized system in ITU and developed countries.

15. Number of technical/professional staff in national spectrum management? **100 / 20**
16. Number of support staff in national spectrum management? **50**
17. Describe your country's spectrum management structure (Please enclose a copy of organization chart).
Please refer to Iranian Directorate General of Telecommunications web site : (WWW. Radtel.or.ir)

18. Do you use the ITU-R Handbooks and Reports on:
a) National Spectrum Management, version 1995 ? Yes
b) Spectrum Monitoring[1], version 1995? Yes
c) Computer-aided Techniques for Spectrum Management, version 1999?
For the time being we don't use of them but we need them.
d) HF Broadcasting System Design, version 1999? Yes
e) Report SM.2012, Economic Aspects of Spectrum Management, version 1997[2]?
f) Windows Basic Automated Spectrum Management System (WinBASMS) Software Version 1997, Manual Version 1997 NO
It is available , but we have not used them yet.

Sincerely yours,

DOLATABADI
Ali Asghar Dolatabadi
Director General of Telecommunications

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[1] The Spectrum Monitoring Handbook is currently being updated, therefore, you are urged to contact Mr Jan Verduijn (NL), the designated Rapporteur from ITU-R Study Group 1, Working Party 1C if you have any comments that you wish included in a future version of this Handbook.

[2] This Report SM.2012 was updated during the ITU-R Study Group 1 meeting in August 1999. This new version is expected to be available in the three working languages by January 2000.

The Formula for the Calculation of Licence - Fee in the Islamic Republic of Iran

The fee may be calculated on the basis of 3 components (characteristics) as mentioned below.

These components include :

1- Price of applied spectrum

2- The expenditure due to the maintenance and in the whole, all of the indirect costs of the spectrum management, such as national and international cooperations,-ITU contribution-fee-domestic planning-observation and research for the interference and development policies.

3- Costs related to administrational and executional affairs. This component deals with the direct expenditure of Spectrum Management Administration which includes the following :

A) Costs of Licensing
B) Costs of renewal of the licence
C) Costs of calculation and process-fee as well as the method of instalmentation

Now we notice the calculation of each component :

For the calculation of the 1st component, i.e., the tax of utilized spectrum, being the most important part , the following formula is proposed :

$$F1 = B\ li\ Si\ Ai\ TR$$

In this formula, B: represents the utilized bandwidth (in MHz); Li : Stands for coefficient to geographical area (related to the population density), in table 1 the numerical value of this parameter is given. In this case the maximum value is assumed 8, and others are resulted in proportion to 8.

Si: The coefficient related to the utilized band in total spectrum (regarding scarcity or crowdedness of the spectrum in that particular part) and also the type of service (i.e., indeed the coefficient related to the position of band in the total spectrum and service which type are put together). In table 2 the proposed numerical values of this parameter are given.

Ai: The covering area in square kilometer (at the time of licensing this parameter will be precisely determined by asking the covering radius from the service provider).

T: Time coefficient appears in the table 3 of proposed numerical values of this parameter.

R: Base-price in Rial per MHz/square kilometer.

Note : If the demanded service is a secondary one, the aforesaid relation may be multiplied by ½.

The second component, i.e., indirect costs of Spectrum Management Administration, may be regarded as a percentage, whereas it is proposed that it should not be less than 30% , i.e.,

F2=KF1

While: $K \geqslant 0.3$

There is no special formula on the third component of fee calculation which is the same as direct expenditure of Spectrum Management Administration. This component includes : licence-issuing expenditure, licence renewal expenditure and the costs due to calculation procedure of the fee and the method of instalmentation . Hence it is calculated on a hour-standard basis . (This is meant that, for instance, how much hours is needed for licence-issuing or other objectives; whereas this task is done in the Spectrum Management Administration and some expenditure is taken into account for each hour).

This is of note that the costs related to licensing is taken exclusively at the initiation , but the licence-renewal and fee-calculation costs are calculated and taken per anum.

Having calculated these 3 components on the basis of mentioned procedure, the final fee will be calculated so :

$$Fee = F1 + F2 + F3$$

Notice that it is popssible to take into account a minimum fee; so that if the calculated fee appears less than that value, it may be increased to that prescribed amount.

Also it is possible to take into account another formula for fee – calculation, that is , indeed, the first component of the former method, with the alteration that table 1 is amended to fulfill the spectrum management abjectives as follows:

Formula : $Fee = B\ li\ Si\ Ai\ TR$

The parametres, here, are the same as defined in the former method. In this case, only table 1 is amended as below: (Tables 2 and 3 are the same as before) .

Table (1) Coefficient of Locality

Table 1 - Location Coefficient

Location	Tehran	Center of Province	Center of Township	District	Villages	non-residential areas	Vessel Aircraft	Nation Wide
Coefficient	8	6	4.5	3	1.5	1	1	1.7

Table 2 - Frequency band Coefficient for Various Radio Services

Greather than30GHz EHF	10-30 GHz SHF	3-10 GHz SHF	1-3 GHz UHF	300-1000 MHz UHF	108-300 MHz VHF	87.5-108 MHz VHF	30-87.5 MHz VHF	10-30 MHz HF	3-10 MHz HF	MF	LF	VLF	frequency band / Service
3	6	6	10	10	10	10	8	8	5	2	-	-	cellular land mobile
0.45	0.9	1.2	1.5	1.5	1.5	1.5	1.2	1.2	0.75	0.3	-	-	land mobile (un cellular)
0.15	0.225	0.375	0.45	0.45	0.6	0.6	0.6	0.75	0.75	0.75	0.75	-	aeronutical mobile
0.15	0.15	0.3	0.45	0.45	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.5	maritime mobile
0.15	0.225	0.375	0.375	0.45	0.6	0.75	0.75	0.75	0.75	0.6	-	-	point to multipoint (fix)
0.1	0.15	0.25	0.25	0.3	0.4	0.5	0.5	0.5	0.5	0.4	-	-	point to point (fix)
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	-	-	-	-	satellite mobile services
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	-	-	other satellite services
-	-	-	-	0.0005	0.0005	0.01	0.0005	0.0005	0.0005	0.0005	-	-	Broadcast
0.05	0.08	0.1	0.1	0.1	0.125	0.125	0.125	0.1	0.1	0.1	-	-	radio Location
0	0	0	0	0	0	0	0	0	0	0	0	0	amateur
0.025	0.025	0.025	0.075	0.075	0.075	0.05	0.05	0.05	0.025	0.025	0.025	0.025	meterological
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	other services

Table 3 - Time Coefficient

day duration	since 00-06 o´clock weight=1						since 06-12 o´clock weight=4						since 12-18 o´clock weight=3						since 18-24 o´clock weight=2					
hours	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Coefficient	1	2	3	4	5	6	4	8	12	16	20	24	3	6	9	12	15	18	2	4	6	8	10	12

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