DOCKET FILE COPY ORIGINAL

00-258

RECEIVED

MAR 8 - 2001

FCC MAIL ROOM

Orange SA
Registered Office/Siège social
6 place d'Alleray
Paris, 75015
France

Téléphone: (33) 1 44 44 22 22
Télécopie: (33) 1 44 44 43 07

Registered Number
B 388 356 792
Société Anonyme au capital
de € 4 801 915 818

Reference: FTM/DSP/F/00.104/VRC

Paris, 22 February 2001

Federal Communications Commission
To the attention of
Mrs. Magalie ROMAN SALAS,
445 12th street
SW., TW-A325
Washington, DC 20554

Mrs. Magalie ROMAN SALAS,

With the Notice of Proposed Rule Making related to New Advanced Wireless Services, published the 23 January 2001, the Federal Communication Commission offers to Industry in particular the possibility to comment the evolution of use of frequency bands below 3 GHz to support the introduction of new advanced wireless services, including third generation ("3G") as well as future generations of wireless systems.

Orange, as an operator taking an active part in the success of wirefree services mainly based on 2G systems as well as in the forthcoming introduction of 3G services in many countries is pleased to provide comments and express views since the regulatory decisions that will be taken following this NRPM will have an important impact, shaping the future wirefree communication environment.

With Best Regards

Didier Quillot
Executive Vice President

No. of Copies rec'd 0
List A B C D E

FCC NPRM related to 3G spectrum allocation
Orange comments

RECEIVED
MAR 8 - 2001
FCC MAIL ROOM

Summary of the NRPM **(N°1 and 2)**

A- Services requirements **(N°3)**

The present with 2G

After 3 years of massive increase of the mobile voice services penetration around the world, we are observing now the beginning of the mobile data services growth with short messages and with rustic access to internet. Users begin to appropriate these data services in spite of their limitations such as technology (low bit rates of 2G systems), ergonomy, interactivity, human/machine interface, services based on text and icons. These first mobile internet converging services benefit from a dramatic increase in some countries.

In addition, we observe a strong and increasing demand for the goal of achieving global roaming (as one of the practical consequences of globalisation) which is the first step towards seamless services. The 2G experiences shows that this is a key feature which helps to market and sell terminals, even if roaming functionality is not used regularly by many of the purchasers of such terminals.

The future with 2G and 3G

Wirefree will continue to grow exponentially, both in its current guises 2G and in its future manifestations 3G, pushed by the use of standardised technology and abundant spectrum. The convergence of the wirefree world and the internet world will be materialised by 3G, offering the permanent personalised life services independently of the location. This convergence will result in wirefree penetration that are far beyond the penetration rates envisaged initially in the framework of the ITU-R spectrum need estimations.

The penetration rate of 75 % envisaged for 2010 within ITU-R will happen around 2005 with sufficient spectrum made available which means that the **entirety of the spectrum identified by WRC-2000** would be appropriate to answer to **mobile** market needs around this date, in the high density traffic areas.

The basic reason is that wirefree medium will offer services supporting every aspects of day to day life, be it personal or professional : every device needs to communicate seamlessly either with other devices or other users. Interconnection adds value to life by making life activities and process **easier, quicker, more accessible and enjoyable**.

People don't want to have to worry about the technology used : the technology should be invisible. This will required a high degree of standardisation in order to allow real seamless services and offer remote control for life services. Wirefree will be the primary access by which services will be offered in a connected society where humans and also machines talk seamlessly with each other. Wirefree will pervade all aspects of life where communication, interaction, transaction and control are **seamless**, easy, and of course ... fun.

The key condition to achieve seamless services and to achieve low cost terminal fitting to a mass market with the benefit from economy of scale, is the world-wide coordination of standards, the world-wide harmonisation of frequency bands and of frequency arrangements. This allows to reduce the number of modes and of bands necessary in multi-mode /multi-band handsets and then their cost.

B- Spectrum requirements (N° 4 and 5)

The **future success of 3G services will be built on the continuing development of today 2G operators** as well as the increase of competition with new entrants. A minimum spectrum block of 2 x 20 MHz paired, and 5 MHz unpaired, for an introduction of 3G services is necessary for one operator in a first step. This spectrum block size suppose an exclusive usage nation-wide across the States.

In case of a sharing scenario with other spectrum users, a higher amount of spectrum would be needed and the importance of spectrum access easiness has to be stressed : complex technical sharing conditions and procedures would limit the necessary flexibility requested to manage properly the spectrum to answer to the traffic rapid increase and local / temporary variations in the high traffic density areas.

The possibility of additional spectrum allocations in a second step to answer to the further developments of 3G systems (increased bandwith or data rates, but also increased voice and data traffic due to increased competition) should be prepared from now in particular in the framework of WRC-2003 ITU-R preparation, agenda item 1.22. "*to consider progress of ITU-R studies concerning future development of IMT-2000 and systems beyond IMT-2000 in accordance with resolution 228*"

The principle to let market forces determining the best use of the bands allocated to mobile and fixed service will increase the flexibility for operators when choosing the appropriate service to offer. In particular this flexibility could reveal to be interesting for rural and sparsely populated areas where fixed service could be developed in frequency bands used for mobile services in urban areas. We believe that **when allocating to operators new spectrum below 3 GHz, priority should be given to mobile services in high density traffic areas,** without preventing fixed services operation. This would enhance the efficiency of the overall spectrum use.

In case the fixed service would use a significant part of this spectrum below 3 GHz it would also have the resulting effect of increasing of the totality of spectrum that would need be made available below 3 GHz and which was envisaged initially to answer to mass market development of mobile 3G systems.

Concerning mobile services, we believe that encouraging competition through standards, as developed by SDOs and efficiently coordinated and harmonised within ITU will favour competition in the provision of 3G seamless services. Standardisation should aim to promote development of open interfaces in key areas such as user to network interfaces and network to network interfaces fully supportive of all innovative and competitive services offered with 3G. In view of this objective we believe that it is important to allow ITU-R working Party 8F to apply the alternative approval procedure elaborated by Radio Assembly 2000, for the release of the IMT-2000 radio interface standards family.

The summary of the NPRM define its scope as the "*the possible use of frequency bands below 3GHz to support the introduction of new advances wireless services including 3G as well as future generation of wireless systems.*" In addition to the band identified for 3G systems below 3 GHz, the next generation of wireless systems would require the access to new frequency bands probably between 3 and 7 GHz, where both mobile and fixed services could be developed. Even if this next generation of wireless systems would present interest, **only in long term, at the end of the 3G licensing period**, it would be helpful to prepare, from now, in particular in the framework of WRC-2003 agenda item 1.22 mentioned above, concerning "*systems beyond IMT-2000*".

We believe that concerning **new spectrum allocated to mobile services, priority should be given to 3G standardised services when granting the licences,** without preventing other advanced mobile services.

(a) Currently allocated spectrum (N° 6)

A rapid access for 3G to frequency bands below 1 GHz is important in order to enhance the coverage of 3G, outside urban areas, for a better satisfaction of communication needs in adequate economical conditions. The refarming for 3G of part of the 806 – 960 Mhz band not currently used by 1G or 2G systems should be studied as soon as possible, since the refarming of 2G systems (and perhaps 1G) will probably occur only in the long term.

The frequency band 746 – 806 MHz answers also to the need of more economical coverage of low density population areas. But this band will probably suffer from a lack of harmonisation since it hasn't been identified for 3G by last WRC. This band could also answer to the need of a large number of other countries characterised by extended "low population density" areas and could then be studied in view of the next WRC decisions (agenda item 1.22).

A part from the 40 MHz of new spectrum in the band 1850 – 1910 / 1930 – 1990 MHz, the rest of the band could be refarmed in the long term for 3G.

(b) Additional Candidate Spectrum (N° 7)

(1) 1710-1755 MHz (N° 8 to 12)

The proposal (N°9) to allocate on a co-primary basis for mobile and fixed services the 1710-1755 MHz band, designated for reallocation from Federal Government to non-Federal Government use, is favourable for 3G systems operations in secure regulatory conditions.

(2) 1755-1850 MHz (N° 13 to 16)

The relocation procedure applied to the band 1755 – 1850 MHz should be designed with the objective that this band should be made available in equivalent time frame as the band 1710 – 1755 MHz.

The government systems could be moved for example as follow:
- up-link satellite control in the bands 2025 – 2110,
- military radio relay in the bands 2025 - 2110 / 2200 – 2900 MHz.

(3) 2110-2150 MHz and 2160-2165 MHz (N° 17 to 23)

Continuing use of that band by Federal incumbent could be compatible with the 3G if the remaining radio sites of the Governmental systems would be located in sparsely populated areas and the protection areas of those Governmental radio systems would not impact de 3G deployment in dense areas.

(4) 2500-2690 MHz (N° 24 to 28)

(5) Pairing options (N° 29)

In order to promote the continued growth of 3G, it is essential that the frequency arrangements for 3G are, as far as possible, compatible with those used by existing 2G systems in order to allow operators an easy transition, within their current licensed frequencies, towards 3G. The 3G systems are an evolution from existing technologies in response to market demand, allowing current operators and new licensees in existing mobile bands to bring advanced services to consumers as rapidly as new technology allows. As a consequence, **it would be critical and risky for future 3G success, to define frequency arrangement not compatible with 2G arrangements**.

The pairing of 1710 – 1790 MHz with 2110-2150 MHz would be incompatible with some current 2G use and would hamper future 3G spectrum harmonisation due to GSM1800 deployment. We strongly recommend option (1) as envisaged by NTIA Interim report, pairing 2 x 45 MHz within the band : 1710 – 1755 MHz (up-link) with 1805 – 1850 MHz (down-link). For equivalent reason the pairing of 1710 – 1850 MHz (up-link) or part of it with 2500-2690 MHz (down-link) shall be avoided.

The bands 2110-2150 MHz and 2160-2165 MHz could be used for additional down-link capacity for 3G systems, when they will be deployed in the bands 1850 – 1910 / 1930 – 1990 MHz.

Concerning the band 2500-2690 MHz, the pairing within this band is the most probable scenario. This pairing should be designed so that, in the long term, most part of the bands would be usable by 3G, in order to answer to market demand in high density areas. Other possible scenarios, which are not so much constraining from the frequency management point of view, could also be envisaged, such as the use by TDD or the use for additional down-link capacity for 3G systems, when they will be deployed in the bands 1850 – 1910 / 1930 – 1990 MHz in US (or 1920 – 1980 / 2110 – 2170 MHz in other countries). A combination of these 3 scenarios (FDD pairing within the band, FDD additional down-link capacity, and TDD) could also be envisaged.