

Daniel Storrey  
Secretary to the Review  
Radio Spectrum Management Review

Velizy, July 18<sup>th</sup>

N/Ref. JCD/MCD/4809/2001

Dear Sir,

Astrium is pleased to provide the attached comments to the Radio Spectrum Management Review.

For any further information, please do not hesitate to contact the undersigned at the following address : [Jdomien@compuserve.com](mailto:Jdomien@compuserve.com)

Yours truly

Jean-Claude Domien  
Head of Regulatory matters

☎ 33 1 34 88 35 56

## **RADIO SPECTRUM MANAGEMENT REVIEW**

### **COMMENTS FROM ASTRIUM**

Astrium, a major space company with facilities in France, Germany and UK (Stevenage and Portsmouth), is pleased to provide the following comments to the consultation paper "Radio Spectrum Management Review".

Although the 1998 Wireless Telegraphy Act is not applicable to satellites, it would be too simple to conclude that the consultation does not apply to satellite communications. Indeed, the radio spectrum being shared between various types of communications, regulations affecting one of these types will impact the others. And, of course, transmitting earth stations fall directly under the scope of the consultation.

Until recently, frequencies were readily available to would-be users. Technical regulations were able to cope with the situation. However, with spectrum demand increasing constantly faster than supply, scarcity is now often the rule.

Applying economic principles such as the opportunity cost of the spectrum use is certainly a solution to avoid spectrum shortage, however it does not address such issues as "best use of the spectrum" and "ensuring adequate spectrum is available"<sup>1</sup> for all the user communities. Many of the services which the UK wishes to take advantage of are less to do with the optimum monetary value one can extract from them and more to do with providing a service to the public in respect to services and global ecological issues. A good example would be the UK government's support for the Kyoto Protocol where corruption of the frequency spectrum would make observations of the terrestrial biosphere impossible, so the agreement could not be implemented. To be absolutely clear about this issue there is little point in the British Government strongly supporting the Kyoto Protocol if on the other hand nothing is done to make earth observation and remote sensing data collection possible by protecting the frequency bands which such observations depend on.

All the difficulty is to establish this opportunity cost. It is indeed very easy to freeze development of new services by establishing a too high licence fee. Satellite innovative services take longer to develop and mature than terrestrial services. Therefore, the estimation of the lower bound of the net surplus in creation of value for such space-based services is much more difficult to establish.

UK's international obligations as a member of CEPT and ITU are of particular importance for satellite based services as most often these services are not limited to the UK territory, but are regional, if not international. Therefore, large difference in licence fees for earth stations between countries could be seen as barriers to trade.

Transmit earth stations use spectrum efficiently : They can share the same spectrum with other earth stations or with other radio services like fixed terrestrial links, even at the same location. This sharing efficiency must be taken into account in the determination of an opportunity cost applicable to such services.

Radio spectrum is too often associated to radio communications. Other use, such as satellite earth observation, must be taken into account as well by the regulator. Obviously, specific frequency bands - due to their reflection characteristics - should be allocated to earth observation services only. But they must be preserved as well from interference from other services in adjacent frequency bands as each additional use generates increasing noise in the earth observation bands, rendering these allocated passive frequency bands useless with no possibility of recovery. This would cause large downturns in the global earth observation industry. While the resulting macro economic cost for the Society would be out of common measures, the incremental opportunity cost for a single user in the adjacent bands would be next to impossible to establish. So technical regulations must not be replaced by economic regulations, the two must be applied together.

Note:

1. Reference Radio Spectrum Management Review 'foreword'.