

The International Telecommunication Union: A World Communications Commission?

by

Francis Lyall*
Dean of the Faculty of Law
University of Aberdeen
Aberdeen AB9 2UB
Scotland, U.K.

Abstract

Although the 1992 revisions to the ITU structures are to be welcomed, recent events indicate that it is time to contemplate giving the ITU a more active role in space matters, particularly in the areas of radio frequencies and orbits.

1. Introduction

Last year I commented on the reconstruction of the ITU which had been brought about by the Additional Plenipotentiary Conference of the Union held in Geneva in 1992.¹ The new constitutional structure came fully into force on 1 July 1994, and will be subject to minor alteration at the Plenipotentiary Conference to be held in Kyoto, Japan at the end of this year.

The ITU is the single most important agency in what we might call operational Space Law. Without its work on radio matters there would be limited tracking and no telemetry or control of satellites, not to mention the commercial signal traffic carried by satellites. The 1992 changes were to be welcomed. They fit the ITU better to attain its purposes in space as well as terrestrially, (although concern must remain about the potentially leukaemic effect of the Development Sector).

* Director IISL

Copyright © 1994 by the author. Published by the American Institute of Aeronautics and Astronautics, Inc., with permission. Released to AIAA to publish in all forms.

However, I am increasingly wondering whether a change is required in the role of the ITU. Hitherto it has provided a forum in which the interests of states and telecommunications entities can be discussed and compromises arrived at. Its procedures are the mechanisms through which the natural resources of the radio spectrum and the geostationary orbit can be more efficiently exploited. But mechanisms and procedures are not quite enough, and recent events intimate stresses and strains that need to be coped with before the ITU system is damaged and trust in it is irreparably lost.

2. Background

The ITU is a necessary organisation. Its major sanctions are not legal procedures but physical facts and physical laws. Unless there is compatibility of equipment and procedures international telecommunications are not possible. Unless there is respect for agreements made as to the use of the radio spectrum, mutual interference will impede communications. In space a lack of interference is the more crucial. Although techniques of repetition of signal and corrective programming can be adopted, it remains that even a slightly garbled message can create havoc in a computer-operated satellite.

From its earliest radio days the ITU has worked on three basic principles: that certain frequencies are allocated to certain purposes; that equipment shall be operated as efficiently as possible; and that the minimum signal strength required for adequate reception shall be employed. In addition, as renewed after the Second World War, a protection has been given to broadcasting

stations assignments registered by states on the Master International Frequency Register, kept first by the International Frequency Registration Board (IFRB), and now by the Radiocommunication Sector.² That protection is not absolute, but the position has long been that, under ITU rules, priority of registration has counted - the aphorism 'first come, first served' was not wholly accurate, but was a useful encapsulation of the matter. Intended assignments later in date have had to be negotiated with the state whose station had the prior notified assignment. These procedures were extended to space requirements when access to space opened.

Space, however, presented certain problems. First, the developing nations were concerned lest the principle of freedom of use of space contained in Art. I of the 1967 Outer Space Treaty should lead to the best frequencies being occupied, as it were, when they themselves became space-faring. Second, the geostationary orbit was itself recognised as a limited natural resource, which also might be occupied by the leaders in space, leaving the less useful orbital positions for the late-comers. To meet these concerns it was argued that, rather than a 'first-come, first-served' approach, matters should be negotiated in advance, and an 'engineered spectrum' be agreed.

The World Administrative Radio Conference, WARC-ORB 1985-88 sought in part to meet these concerns, setting aside orbital slots and radio frequencies for all states, while leaving these allocation positions open to use by others until they were required by those to whom they had been allocated. WARC-ORB 1985-88 also dealt with only a portion of the geostationary orbit. Unallocated slots could still be dealt with under the normal ITU procedures. In short, the Conference solution was partially a matter of 'engineering' while leaving open the 'first come' possibility so as to permit the efficient use of space resources ad interim and quoad orbits not allocated.

3. Matters of Concern

Four things have happened in the last few years that indicate problems for the ITU. These relate in three cases to the operation of the rules relating to the geostationary orbit, and the fourth to other developments, which call for a development of the ITU. The three cases are that of Tonga, of Indonesia and of

China, and the fourth matter comprises the Low Earth Orbit satellite system proposals.

Of these matters, in order.

3.1 Tonga.

In 1992 the Kingdom of Tonga filed assignments for 31 geostationary slots, with the IFRB - far more than it needed for its own domestic telecommunications requirements - and claimed them on a 'first come, first served' basis.³ It seems that back of the idea was an American entrepreneur, who convinced the King that it would be possible to make money by filing on the slots and then selling or leasing the rights to service providers from other countries. In short Tonga staked a claim, and proceeded to try to make money on its claim by assigning exploitation of its stake to others. It was not going to operate those slots for its own telecommunications needs.

The then IFRB asked it to justify its claims, and did persuade Tonga to reduce their number. This Tonga has done - reducing them to six. These were duly entered on the ITU Register. Since then Tonga rented one position to a US company based in Colorado. It also bought and moved two former Soviet satellites into two of its slots. Finally it auctioned the remaining two to other enterprises, leaving one slot unused.

Apparently Tonga has claimed to have done nothing illegal. But the claim 'nothing illegal' is a defensive position. It might be argued that this is space being used for the benefit of all, and for the benefit indeed of a less developed country. If so, it is certainly not a use of space in contemplation of those who hammered out the ITU arrangements. And it raises questions as to whether the ITU treaty provisions are being dealt with in good faith, as is required by art. 26 of the Vienna Convention on the Law of Treaties,⁴ a provision which most take to be declarative of customary international law, not only constitutive of a treaty-law principle.⁵

One of the slots leased out by Tonga is the 131⁰E position, which is involved in the dispute with China and Apstar, that we are coming to.

3.2 Indonesia.

Indonesia runs a successful system, the PALAPA system. It was begun for Indonesian domestic purposes. Telecommunications

within the Indonesian islands and territories were very suitable for satellite treatment. However, PALAPA had spare capacity beyond that needed for internal requirements, was usefully sited, and is now the hub of an international system, as well as providing domestic services for a number of countries, including Australia.⁶

When the Tongan matter was beginning Indonesia took matters into its own hands. It moved one of the PALAPA satellites into one of the Tongan claimed slots in January 1993, on the ground that the assignment of that slot to Tonga was wrong in law. This matter was negotiated to settlement between Tonga and Indonesia in November 1993. But that departure from procedures is also unwelcome. The fear of many countries is precisely that those who can launch satellites will launch them into slots suitable for themselves, to the detriment of those who might come later. Indonesia's actions, going outwith normal procedures, foster such fears.

3.3 China.

On 21 July 1994 Apstar-1 was launched by the Chinese Long March system and was scheduled to start operation from 1 September 1994 from a position at 131°E. That position is 1° away from satellites belonging to Japan and to Tonga, which are now properly registered with the ITU. That Tongan slot is occupied by a Russian Gorizont satellite, Rimsat-1, operated by Rimsat Ltd, a company of Fort Wayne, Indiana, USA. The Japanese slot is used by the Telecommunications Advancement Organisation of Japan, which operates a CS-3A satellite for various Japanese companies and government bodies. The Apstar satellite is owned by APT Satellite of Hong Kong, and is sponsored by the Chinese government, although offering service to various organisations such as Turner Broadcasting, Time Warner and Viacom International.

Neither China nor Hong Kong had taken the matter through ITU procedures, and negotiations are at present under way on the question of radio interference between the three satellites.⁷

China's action in disregarding the international procedures is, of course, another threat to the stability of the system which has been developed. Unless the system is adhered to by all parties, it will very soon fragment.

3.4 LEOs.

The problem of the low earth satellite is different. Various sets of proposals are currently before the US Federal Communications Commission for the establishment of a communications satellite system in low earth orbit.^{8 9} The Globalstar, Iridium, and Teledesic systems will use between 35 and 840 satellites, with orbital configurations ranging from 400 to 750 miles up.¹⁰ In addition INMARSAT, has also studied such a system for use as a mobile satellite system and has filed proposals with the ITU Radiocommunication Sector for its system.¹¹

First, it has to be said this is not a geostationary problem. The orbits involved are Low Earth Orbits (LEOs). The ITU Convention therefore does not apply.¹² What is important appears *ex facie* to be simply the matter of radio frequency use. But I would suggest that it is more serious than that.

There are licensing procedures underway before the US Federal Communications Commission in respect of proposed systems. The US, having jurisdiction over those who wish to establish the system, has the FCC as its regulatory body in the matter. But these satellites, in low earth orbit, will pass over many countries. It would be very surprising if the inhabitants of some of these countries do not wish to buy service from such a system. The system, however, will be regulate, designed and operated by another country.

The establishment of any LEO telecommunications system would involve the use of orbits to a major degree (in some configurations to a very great extent), and the occupation of frequencies globally, while perhaps providing a service for only a part of the world. Further there are questions as to possible radio-interference with terrestrial systems.

The FCC itself has correctly stated that the use of an FCC authorised system outwith the US would require clearance through the appropriate procedures of each other state in which the system is to be used.¹³ But that is hardly satisfactory. Whatever system is authorised by the US, and whatever standards are imposed for that requirement is likely to become the international standard on the matter.¹⁴ The European Union, for example, sees the danger, and it has been suggested that unless

the FCC proceedings take greater account of foreign interests, FCC licensed LEO systems may find difficulty in gaining European approval.¹⁵

4. A World Communications Commission?

These then are four areas or matters of concern. There is a willingness apparently either to abuse, or in self-help to disregard, ITU procedures for the geostationary orbital slot. There is a future problem with the LEOs both as to orbits and potentially as to frequencies. As a way to cope with these difficulties, I would suggest that the ITU should be reconsidered and given a major role in all matters of satellite radio links, and orbital use wherever that orbit be.

Since the emergence of space, and even before it was a reality, various proposals have been made for a World Space Agency.¹⁶ The International Sea-Bed Authority under the Law of the Sea Convention, has added some credibility to more recent proposals.¹⁷ Nonetheless I remain of the view that such a World Space Authority is not practicable for political, economic and other grounds. However, it may be that future difficulties in the matter of the exploitation of space, adumbrated by the four examples above, call for the limited solution of the establishment of a World Communications Commission to deal with orbits and frequencies with a view to their efficient and equitable use. Such a body would require both decision-making and enforcement powers.

The ITU is the obvious body to adapt to serve such a function. Of course, in the 1992 reconstitution of the ITU the International Frequency Registration Board was downgraded to a part-time Radio Regulations Board.¹⁸ Nonetheless we should consider reconstituting the IFRB/RRB extending its powers and through it making the ITU into a WCC. Indeed, when it was first established some hoped the former International Frequency Registration Board would be precisely such a body, a Federal Communications Commission analogue established for the world and possessing some of the characteristics of the International Court of Justice.¹⁹ That was too visionary, although as it has developed the IFRB did bear some resemblance to the FCC.²⁰ It is time to re-examine that route in respect of space, at least.

This would not be easily attained. It would be difficult to persuade countries which are space active to submit themselves to an international body that could actually take decisions and make dispositions in such matters. But, de facto there were many years in which the states of the world did adhere to the recommendations of the IFRB as it then was and to the Radio Regulations and their procedures which were agreed as supplementary to the ITU Convention. The laws of physics were weighty arguments for that step. Given recent events, we are getting close to the laws of physics operating thus once more.

It would also be difficult to get suitably qualified persons to staff such a body. But from the expertise of the different states, surely enough can be found?

But if we are to move to a global Communications Commission, we must also guard against something visible in the jurisprudence of the US FCC. This is the use of the rules and regulations, of the procedures and opportunities for claim, argument and rebuttal, to further business struggles. I believe that the function of the law is to settle matters; to say that in case of a dispute between parties, that one way and not another is the way that will be taken. The rules are not part of the game. In other words I see the rules as setting out the game, and having elements that deal with what happens when there is an infringement or interruption to the course of play. In some games, however, and notably in American Football (a game in which I greatly delight), the rules are part of the game and are used strategically by the coach to interrupt the flow of the game, to cause problems for the other side, and to gain advantage for himself. The same happens before the US courts and regulatory bodies where disputes are alleged to exist in order to impede or divert a competitor, where time or other advantage is gained by a spurious recourse to 'law'. We would need to ensure that such practice was not imported into that global Communications Commission.

NOTES

¹ F. Lyall, 'The International Telecommunication Union Reconstructed' 1993 Proc. 36th Coll. IISL (Washington DC: AIAA, 1994) 78-88.

² See D.M. Leive, *International Telecommunications and International Law: The Regulation of the Radio Spectrum* (Leiden: Sijthoff; New York: Oceana, 1970); F. Lyall, *Law and Space Telecommunications* (Aldershot, Hants: Dartmouth, 1989); R.L. and H.L. White, *The Law and Regulation of International Space Communication* (Boston: Artech House, 1988).

³ See M.L. Smith, 'Legal and Policy Developments in International Satellite Communication' 1991 Proc. 34th Coll. IISL (Washington DC: AIAA, 1992) 342-7 at 345-6; D. Riddick, 'Why does Tonga own Outer Space?', 19 Air and Space Law, 15-29. Cf. *Space News* vol. 4, no. 11, March 15-21, 1993 22; vol. 5, no. 4, January 24-30, 1994, 3 and 29; no. 25, June 21-27, 8;

⁴ Convention on the Law of Treaties, Vienna, 23 May 1969, 1155 UNTS 331; (1980) UKTS 7964; (1969) 8 ILM 679; (1969) 63 AJIL 875.

⁵ The US has not ratified the Vienna Convention on the Law of Treaties.

⁶ F. Lyall, *Law and Space Telecommunications* (Aldershot: Dartmouth Publishing; Brookfield VT: Gower, 1989) 172-3.

⁷ See *Financial Times* (London), 2 August 1994, 1 and 10; *Space News*, Vol. 5, no. 29, July 25-31, 1994, 3 and 20; no. 31, August 8-14, 1994, 18.

⁸ In the Matter of Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 1094; FCC 94-11, adopted January 19, 1994, released February 18, 1994.

⁹ Cf. In the Matter of Rulemaking to Amend Part 1 and Part 2 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band and to Establish Rules and Policies for Local Multipoint Distribution Service, Second Notice of Proposed Rulemaking, 9 FCC Rcd 1394; FCC 94-12, adopted January 19, 1994, released February 11 1994.

¹⁰ See Proceeding cited n.9 above, and In the Matter of Preparation for International Telecommunication World Radiocommunication Conferences, 9 FCC Rcd 2430; FCC 94-96, adopted April 20, 1994, released May 5, 1994. Cf. M.A. Rothblatt, 'Low Earth Orbit Satellite Communications Systems' 1991 Proc. 34th Coll. IISL (Washington DC: AIAA, 1992) 319-20; J.S.Y. Kwok, G.E. Morgan and H.R. Patel, 'The Art and Science of the LEO Satellite License Game', 1992 Proc. 35th Coll. IISL (Washington DC: AIAA, 1993) 400-10.

¹¹ It seems the INMARSAT system would use 37 satellites

¹² The ITU deals with the geostationary orbit under arts. 1.2.b and 44.2 of the ITU Constitution and art. 12.4.a of the Constitution.

¹³ Proceeding cited n.8 para 1 and n.2.

¹⁴ This is another example of a hobby-horse of mine; cf. F. Lyall, 'Space Law - What Law or Which Law?' 1991 Proc. 34th Coll. IISL (Washington DC: AIAA, 1992) 240-43.

¹⁵ *Space News*, vol.5 no. 23, June 13-19, 1994, 1 and 28.

¹⁶ To use an older example, cf. G. Clarke and L.B. Sohn, *World Peace through World Law: Two Alternative Plans* (Cambridge Mass.: Harvard UP, 1966).

¹⁷ U.N. Convention on the Law of the Sea, 1982 21 ILM 1261, Part XI, sec.4, arts.156-91. There is, of course, the negative example of the Space Authority to be established under art. 11.5 of the Moon Treaty.

18 Cf. article, cited n.1 above, and F. Lyall, 'The International Frequency Registration Board' 1992 Proc. 35th Coll. IISL (Washington DC: AIAA, 1993) 394-9.

19 Cf. H.K. Jacobson 'The International Telecommunication Union: ITU's Structure and Functions' cited by G.A. Coddling, Jr., and A.M. Rutkowski eds., *The International Telecommunication Union in a Changing World* (Dedham, MA: Artech House, 1982); and, D.M. Leive, *International Telecommunications and International Law: The Regulation of the Radio Spectrum* (Leiden: A.W. Sijthoff; Dobbs Ferry N.Y.: Oceana Publications, 1970) 25.

20 Cf. M.T. Paglin, *A Legislative History of the Communications Act of 1934*, (New York and Oxford: Oxford University Press, 1989).