

REGULATORY ASPECTS OF EARTH STATION LICENSING

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The Domestic Satellite plus means for local distribution or collection of signals provides a new parameter for the expansion of national communication services. A number of regulatory practices, which may not be a true reflection of Commission policy, seem to be obstacles for the broad development of these new services. Limitation on the authorization of earth station signal reception and on inter-connection of facilities for the use of such received signals is considered one such obstacle. This problem is considered here in detail and a solution which may be consistent with present Commission policy and authorized communications service is proposed.

The promise and the potential of the communications satellite is its "anywhere to everywhere" characteristic. Satellite communications makes this kind of service possible for tremendous geographic areas without introducing the traditional parameter of distance. It permits new efficiencies through multiple re-use of the same portion of the frequency spectrum for any earth station terminal and simultaneous reception of the same signal at any number of receiver locations. Transmissions require only three principal parts - an input terminal - a single relay point - and an output terminal. Such simplicity of transmission inherently incorporates two highly desirable ingredients that are essential to the flowering of full social and commercial use of communications. These are

1. Quality
2. Economy.

True the single relay point is expensive, sophisticated and inaccessible. Although it incorporates a multitude of the recent wonders of our space age technology, although it required tradition breaking, bullet biting conceptualization, implementation and risk taking by a large number of dedicated individuals and entities, it is simple in its basic concept and amazingly reliable in its operation. Space stations are being engineered for an active life of seven to ten years. They operate in what has always been considered a hostile and isolated environment. Apparently, its working environment is less hostile than the knob twiddling, power interrupted, weather scourged, cascade degraded, topography limited and access demanding communications facilities that we have traditionally associated with land lines and terrestrial microwave.

Once this anywhere to everywhere link is established there remains the problem of terminal point transmission to or from the point of use or origination. Broadband cable is an obvious, economic and totally compatible means of local delivery of signal to or from either dedicated or all interconnected terminals within a community. Other speakers on this panel have or will detail and recommend other ways of local distribution - either in place of cable or in cooperative conjunction with cable. But whether the satellite terminal is co-located with the point of use - be that a school, a community center, an industrial plant or even a private home; or whether the local distribution is by cable, broadcast, MDS, or by private or CAPS or common carrier microwave, or even by a telephone company local loop - the long line function can be, is and will be admirably served by satellite networking.

As wonderful and efficient as satellite networking is in principle and operation, there seems to be a serious flaw in the establishment of the "anywhere to everywhere" concept. That flaw is not technical, or physical or even economic - it is in the multiple roadblocks spawned by natural regulatory precedent, caution, politics, protectivism, routine priorities and workload. I am sorry to say that I believe many of these obstacles, which are natural and possibly even desirable under a bureaucratic system of control, are greatly encouraged or magnified by powerful, experienced and established forces which rightly or wrongly believe that their own special interests would not be served by the proliferation of the satellite concept except for their own use.

This paper might occupy its brief slot of time or space by naming a number of examples of regulatory obstacles - including the question of small earth terminals and including the increasingly serious problem of finding suitable locations for up-link transmission without danger of interference to those terrestrial services which "equally share" the 6 GHz earth-to-satellite band. I prefer, however, to concentrate these remarks on one area of concern. I hope that with sufficient industry and public support the logic and reasonableness of the solution can successfully tilt this windmill of regulatory practice.

Let us consider the case of authorized signal carriage for a licensed satellite receive-only earth terminal. Government policy, affirmed by the Federal Communications Commission, allows Domestic Satellite Communications to operate under the "open sky" concept. This means that anyone who can demonstrate satisfactory legal, financial, technical and other qualifications can apply for a satellite facilities license - even including a space station. Domestic service is not intended to be a facility for the exclusive use of a major common carrier or, as ABC recently proposed in its Petition for Rule Making, for the exclusive use of the broadcast industry. This policy is a positive and healthy recognition of the "anywhere to everywhere" concept and encourages the national proliferation of satellite facilities. Nevertheless, satellite licensing was assigned to the Common Carrier Bureau and is largely controlled by established common carrier rules and precedents

drawn from an extension of common carrier terrestrial microwave and international carrier traffic control.

Receive only earth station applicants have been urged - in fact required - to submit engineering coordination data showing that the station complies with rules governing interference over the entire 4 GHz satellite-to-earth frequency band. They are required to provide such coordination for all of the possible domestic satellite orbital stations from 70°W to 150°W longitude in the Equatorial Plane. Notwithstanding this general nature of the application, Form 403, entitled "Application for Radio Station License or Modification Thereof Under Parts 21, 23 or 25" must be filed and approved for any change (Part 25 of the Rules relates to Satellite Communications). Modifications covered by this form include change in frequency, power, control points, points of communication and a catch-all called "other particulars".

The Bureau also asks for proof of a station's authority to use received signals and the license authorization stresses that "these facilities shall be used for the reception of only such programming material that the permittee has been authorized to receive and use, by the owner". Such a warning is certainly appropriate as a reminder. It is obvious that property rights and authorization for use by the owner of the baseband signal must be observed. But protection and relief in such instances is probably not a matter of Common Carrier Bureau responsibility certainly not before-the-fact. After-the-fact the Bureau's concern should be only when court ordered penalties are directed.

The Bureau goes further, it seems to assert de facto control over the type and content of the signal, possibly in conflict with rights guaranteed under the First Amendment. An earth station authorization for a cable system operator contains the restriction that it be "solely for the purpose of providing program reception services" for his own cable system or "on a non-profit basis to other cable television systems operated by affiliated companies under common corporate control with the grantee". (emphasis added) He must file this information with the Bureau, including "identification of the terrestrial facilities utilized to interconnect".

Further control is exerted over the space relay station carrier regarding the type of signal the space station may carry and where it may be received. Section 214 of the Communications Act, which relates to "Extension of Lines" has been interpreted to require a "certificate of necessity" for the construction and/or operation of such line extensions by a common carrier. I suggest that it is extremely doubtful that a satellite space relay licensee authorized to place a usable signal over a specified geometric area, is "extending its lines" each time a receiver is constructed within the area served.

Each of these practices and requirements in effect give the Common Carrier Bureau a powerful control over message content and use of a satellite earth terminal, which I believe is far in excess of any technical or traffic control regulation and user qualifications intended by the Communications Act. Enforcement is made effective, if not by outright denial of authorization, then by the process of delay. This is regulation by procedure rather than by policy or rule. It is regulation by staff rather than Commission. I am not suggesting that this is a nefarious scheme on the part of the Bureau. Lacking positive direction to the contrary, by the Congress or the Commission, it is a cautious treatment of a new communications parameter from the point of view of the familiar and the traditional. It follows the logical reasoning that "we must think this thing through" being subverted by the practical problem of not having time in which to do the thinking. I suggest however that there is a logical solution to this problem which could be adopted as standard practice by the Bureau. It would relieve the decision making of what is good and what is bad. It is a solution that is totally consistent with and supportive of the Commission's existing rules -- its policy and practice.

In the case of cable television the Commission has already defined as being in the public interest and authorized by Report and Order and by Part 76 of the Rules, the communications services permitted and required of a cable system. These rules relate to the reception, carriage and distribution of

communication signals within a properly franchised area for an operator to whom a certificate of compliance has been issued. In fact the Commission and individual Commissioners spent many many years, engaged in many public hearings, studied many staff reports and debated many policy issues before making the decisions which now form the rules for cable service. It does not seem to me to be the duty nor does it come under the authority of the Common Carrier Bureau to independently repeat these deliberations or to rethink, reapprove - or worse, set aside, frustrate or even unduly delay implementation of the rulings or policy decisions that the Commission has already issued. Now let's consider, what are the communications services authorized for a cable television system operator.

It is the business of a cable operator to receive communications signals from whatever source and, in accord with the Commission's rules, deliver them to points of use within his authorized area of service. Note, I stress communications signals - and not "programming material" specified in the Common Carrier Bureau Earth Station Authorization. What kind of communications signals did the Commission have in mind for a cable system? Television programming including pay cable is certainly part of the service. What else? I could not have given better examples myself than the illustrations given in Footnote 10 of the Cable Television Report and Order. *

It is the business of a cable operator to "lease channels" on his cable system to others who may have a dedicated use for the signals carried on that leased channel. Not only may a cable operator lease channels on his cable system, he must provide leased channel service. Furthermore, when this type of use exceeds his capacity to offer service he must provide additional capacity.

It is the business of a cable operator to interconnect with other cable operators, regardless of whether they are "operated by affiliated companies under common corporate control" or non-affiliated cable television systems. The Commission does not specify or limit the means by which this interconnection may take place. It could be a

direct hand-off through the subscriber cable; it could be an express cable which runs between the head-ends of two contiguous cable systems; it could be a CARS band delivery, by point to point or LDS; it could be by hand off to a common carrier using land line or microwave, including MDS, for delivery to the interconnected system.

I maintain that this is the legitimate business of a cable television system and that authorization and regulation of the Cable Television Service by the Commission constitutes the necessary precedent for automatic approval by the Common Carrier Bureau for earth station reception of any cable service related signal. The same reasoning applies to any other private user/operator of a satellite earth terminal. If that earth station licensee is authorized to provide communication services in accord with an established part of the Commission's Rules, he should be authorized to receive those signals at his earth station. A broadcaster, an MDS operator or a private microwave licensee as well as a cable operator could be confident that signals used in his business or authorized service can be received by his own earth station and interconnected by any appropriate means without regard to or limitation on any prior handling of that signal.

Therefore I recommend to the Common Carrier Bureau that satellite earth station operation by private owners be authorized, under the license, for reception of any or all signals from space stations licensed in the U.S. Domestic Satellite Service, provided:

- (1) the signals are transmitted within the coordinated frequency band and orbital arc of the licensed satellite earth station;
- (2) The satellite earth station is within the authorized service area of the space relay station;
- (3) The satellite earth station operator acknowledges that he must be contractually and legally eligible to receive the signals;
- (4) The signals are received at the satellite earth station

- a) for the private use of the station operator, or
- b) are used by the station licensee in connection with communications services that he has been authorized to provide under existing Commission Rules.

We, as cable operators and satellite earth station applicants are not innocent of responsibility for the arbitrary limitations on signal reception that have developed. We have had as our objective the immediate use of an earth station for access to a specific program channel. Therefore we have not been too concerned by a limitation of authorization. In fact we've been advised that any attempt to extend the authorization beyond these limitations - including shared use or interconnection with others - would surely cause delays that would materially affect the primary and immediate use of the station. The time has now come to determine if such limitations of the use of an earth station is truly a reflection of Commission policy, or an unnecessary expedient whose purpose, intentional or otherwise, is to limit communication service opportunities of the developing technologies for the interest and benefit of the American public.

Footnote 10 36 FCC2d 143 (1972)

* "Facsimile reproduction of newspapers, magazines, documents, etc.; electronic mail delivery; merchandising; business concern links to branch offices, primary customers or suppliers; access to computers; e.g. man to computer communications in the nature of inquiry and response (credit checks, airlines reservations, branch banking, etc.); information retrieval (library and other reference material, etc.) and computer to computer communications; the furtherance of various governmental programs on a Federal, State and municipal level, e.g. employment services and manpower utilization, special communications systems to reach particular neighborhoods or ethnic groups within a community, and for municipal surveillance of public areas for protection against crime, fire detection, control of air pollution and traffic; - - - - -"