NEW WORLD

Jostling for Space in Orbit

from a Correspondent

COMMUNICATIONS satellites are an economic form of message transmission when they connect points about 1,000 miles or more apart. If they are used to connect widely scattered places as well, their advantage over land lines and microwave chains is even more conspicuous. That considered, it is astonishing that the United States will not have domestic satellite links until 1974 at the earliest. A decade will have elapsed since the Syncom II brought the Tokyo Olympics to the world's television screens and nine years since Early Bird introduced commercial satellite communications across the Atlantic.

Why the delay in using satellites at home? The short answer is the Federal Communications Commission. The FCC, one of the hard-worked, little-praised regulatory agencies which look after essential American industries on Congress's behalf, has been trying since 1966 to design a policy for the introduction of satellites into the domestic communications scene. Its dithering has been an object lesson in the problems of fitting new technology into the bureaucratic structure of the past. There have been three main contenders for the right to own and operate American domestic satellites. None could proceed without the FCC's permission.

One was the American Telephone and Telegraph Company. AT&T is the nearest American equivalent of the British Post Office—it is the big communications power in the land—but its monopoly is nowhere near as great. AT&T runs the bulk of American local telephone services, all of the inter-state trunk telephone services, the Department of Defense's private communications network and the distribution of national television programmes. AT&T sees satellites, just as the Post Office does, as one of the techniques which it needs if it is to have the versatility which a national telephone service demands.

But in 1964 Congress decided that AT&T must keep its hands off satellites, at least as far as they were used in international communications, which was all anyone was talking about at that time. That year, Congress created the Communications Satellite Corporation (Comsat) to run the American end of the international system then being formed. Comsat was hobbled by having AT&T on its board (AT&T having become, understandably, a strong advocate of undersea telephone cables). Since 1966, Comsat has been pressing the FCC to give it a monopoly on domestic satellite services.

The third possible way to deal with domestic satellites was to let satellite users — the television networks and the news distribution agencies, for example—put up their own. In fact, it was the American Broadcasting Company, one of the television networks, which initiated the whole controversy back in early 1966 by asking the FCC if it could not put up a satellite for television alone. The networks felt they could save about half the $70 million a year they were paying AT&T for landline transmission if they could use satellites instead.

Weighing the economic and technical considerations of the various proposals nearly drove the FCC out of its collective mind. Prodded by an influential Task Force on Communications Technology which reported to President Lyndon Johnson in 1968, the FCC was about to give the prize to Comsat—at least temporarily—but it hovered too long. In January 1970, President Nixon's Office of Telecommunications Policy gave its opinion. Let the sky be open to all comers, the OTP said in a memo to the FCC. Let all qualified applicants who wish invest in a satellite (which would be launched for several million dollars by the National Aeronautics and Space Administration) and let the market place decide which shall win the American public's satellite business.

But the FCC, even with Republicans outnumbering the Democrats among the commissioners by four to three, is an independent agency, answerable only to Congress and not to the President. Last week it announced its decision and it was vintage FCC—full of temporizing and splitting the difference.

Nevertheless, it will allow domestic satellite projects to proceed at last. Competition in the American sky is most certainly to be allowed. But both AT&T and Comsat will be prevented from entering freely into it. All applicants who can show that they have the financial and technical ability to run a satellite system and that their proposed service would fill a demonstrable need will be allowed to try their luck. But AT&T, for three years, can only use its satellites within the continental United States only for telephone services. In other words, it cannot use the revenues it enjoys from its near-monopoly on telephone services in order to compete against other companies offering new kinds of communications facilities—data transmission, television distribution and private line services. And Comsat, for its part, will not be allowed to put up the two distinct systems it had in mind—one in conjunction with AT&T and the other serving customers like the television networks and news services directly. These restrictions on the two companies most likely to initiate domestic satellite service so offended three of the Republicans on the FCC, including the Chairman, Mr Dean Burch, that they dissented from the decision. Nevertheless it stands.

Final applications are due at the FCC this month. Among companies other than AT&T and Comsat which have placed satellite plans before the FCC are the Western Union Telegraph Company, the MCI Lockheed Satellite Corporation (a joint company formed by a new inter-state specialized microwave carrier and Lockheed), Hughes Aircraft Corporation and Fairchild Industries. The delay between the FCC's approval and actual launching is expected to be between 18 and 24 months. Ironically, the economics prospect of most of the new system is now jeopardized by the growing doubts of the television networks. They wonder if satellite transmission would be cheaper for them after all; perhaps, they are thinking, they should stick with proven, reliable AT&T.

NOBEL PRIZE

Professional Ethics

DR ORESTE PICCIONI, of the University of California at San Diego, is suing the 1959 Nobel prizewinners in physics, claiming that they stole the idea of the prizewinning work from him. Dr Piccioni alleges that Dr Emilio Segre and Dr Owen Chamberlain of the University of California's Lawrence Laboratory took his idea of using double magnetic lenses to focus the beam of the Bevatron accelerator at Berkeley, a development which played a critical part in the experiment to prove the existence of antimatter in 1955. Dr Piccioni claims that he made a "precise pact of collaboration" with the two physicists that they do the experiment but that he should be credited with the idea. Subsequently, Piccioni claims, he was manoeuvred out of the project and his name was not included on the paper announcing the discovery.

To rectify the situation Dr Piccioni is suing for $125,000 damages, plus public admission by the defendants of his role in the experiment.