

until a new way of allocating the leases has been worked out.

However, FCC did not rule out the auction idea completely, and has invited the company to make alternative proposals for selecting bidders that would not contravene federal regulations. One is that sealed bids should be invited, and leases awarded to the seven highest bidders at the price offered by the lowest of the seven.

The dispute between RCA and FCC over how to allocate the leases reflects a gradual shift in attitudes towards the regulation of access to telecommunications satellites. In the early 1970s, when the satellites were first coming into service, the federal government introduced strict regulations to prevent manipulation of the market.

In practice, this goal has been achieved through classifying companies such as RCA which launch the satellites as "common carriers" which are required to offer leases on their transponders on a first-come, first-served basis at prices that are strictly regulated by FCC. The procedure has been effective in protecting smaller users from being squeezed out of the satellite communications market; it has also made it difficult for companies to stockpile transponders, even if they have no immediate need for them, in order to exclude their competitors.

Recently, however, concern has been growing about speculators who have bought leases at the regulated prices and resold them at a considerable profit. In addition, the growth of available space on satellites has led the industry to argue that tight federal regulation is no longer needed. The cause of deregulation of the telecommunications satellite industry has also been embraced by the members of FCC, which in a 7-0 vote last week agreed to publish for public comment new rules which would allow companies operating satellites to negotiate sales directly with private customers.

Satcom IIIR, launched successfully from Kennedy Space Center in November, contains 24 transponders, eight of which were reserved for those who had bought space on the ill-fated Satcom III which failed to go into orbit after its launch in December 1979.

Both Satcom IIIR and Satcom IV are dedicated to use by cable television companies. The satellites are intended to transmit programmes to local television operators, which would then distribute them to individual homes. Since an antenna can only pick up signals from a single satellite at any one time, the companies have been keen to band together rather than lease space on other commercial satellites, such as Westar 1 and Comstar D2.

Among the companies which will have to renegotiate the transponder leases with RCA is RCTV, a joint venture of RCA and the Rockefeller Center Inc., which has announced ambitious plans to distribute

Cashing in now

British Telecom, exercising its right under last year's Telecommunications Act to form partnerships with commercial enterprises, has launched a company to exploit spin-off from research at its laboratories at Martlesham Heath, Suffolk.

The plan is to set up small venture companies to exploit ideas, although patents may be available under licence to existing manufacturers. The new company, Martlesham Enterprises, has been set up with £250,000 of issued ordinary share capital, the shareholders being British Telecom (30 per cent), Electra Investment Trust (25 per cent), Lazard Brothers (20 per cent), Raeburn Investment Trust (managed by Lazards) (20 per cent) and Thompson Clive and Partners (5 per cent).

Research at the Martlesham Heath laboratories covers optical fibres, semiconductors, video-phones, slow-scan TV, speech synthesis and public viewdata systems. Martlesham Enterprises has already identified five ideas which could form the basis for new manufacturing companies, but so far only one of them, a new materials process for semiconductors, has been developed to any significant extent.

Martlesham Enterprises plans to hold a financial interest in new operating companies, giving its shareholders first option to put up new capital. Attractive terms are to be offered to inventors who leave the laboratories to help set up new companies. Interest on profits will, as normal, return to the shareholders. It is hoped that the operating companies will grow to the point where they can be launched publicly, when Martlesham Enterprises will decide whether to retain a financial interest or dispose of them.

Judy Redfearn

entertainment programmes through cable television. The company has already agreed to buy the first rights of British Broadcasting Corporation programmes for transmission in the United States.

Meanwhile, in a separate move illustrating the social and political possibilities being opened up by satellite telecommunications technology, four labour unions have joined with the American Federation of Labor/Council of Industrial Organizations to arrange for the broadcast over public television of two films on safety and health whose distribution had been suspended by the Department of Labor's Occupational Safety and Health Administration. The unions have made use of a 1978 amendment to the 1934 Communications Act which allows groups outside public broadcasting to rent time on one of the four transponders which the Public Broadcasting Station (PBS) leases on the satellite.

David Dickson

Technical change in France

Central theme

The French government is to set up a centre for social and systems research on science and technology, inspired to some extent by the Brookings Institution of Washington and, in Britain, the Technical Change Centre in London and the Science Policy Research Unit (SPRU) in Sussex. But in the Paris institution there will be a difference: it will be strictly linked to, and under the direction of, the Ministry for Research and Technology, and will thus lack the political independence of its models.

The Center for Advanced Technological Systems Study (CATSS), to use its Americanized name, (CESTA, Centre d'études des systèmes et des technologies avancées, in French) should be in full swing by 1984 with a budget of around 40 million francs and a staff of 40 "scientists and engineers".

The creation of CATSS is the immediate result of a report to Prime Minister Pierre Mauroy by Dr Joël de Rosnay, director for research applications at the Institut Pasteur (where Francois Gros, science adviser to the Prime Minister, was until recently director). De Rosnay recommended that a centre like CATSS be established "to study the industrial, social and cultural change induced by advanced technological systems (such as micro-electronics, biotechnology, robotics and solar energy)".

The questions are political and involved, the report notes, and it claims that in France "there are traditional difficulties" in thinking in terms of complex systems and networks. CATSS must overcome these difficulties.

As a government agency in a government devoted to industrial development through technology, CATSS may find its emphasis lying more frequently on innovation strategy in key industries than on social impact *per se*. The emphasis of the report is on missed, or botched, industrial opportunities: Concorde, an "indisputable technical success" marred by a failure to anticipate economics, competition and environmental impact; microelectronics, insufficient in France because opportunities to develop liquid crystals and integrated circuits were not taken up; and biotechnology, limited by the lack of researchers and engineers trained in the life sciences.

Despite its government links, the centre will be open to scientists, industrialists, union leaders, parliamentarians and local politicians. It will also collaborate with outside institutions (including, perhaps, Brookings, SPRU and the Technical Change Centre).

CATSS will have a strong training function as well as undertaking research, experimenting with new educational technology and communications systems,