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Street Crime Provides a Case For Rationing Radio Channels

THE RADIO communications spectrum is one of the most precious natural resources of an industrial society. Like other resources, little attention is paid to its allocation until it comes close to being used up.

But the shortage of spectrum space is already curbing development of many fruitful applications of electronic technology.

The most serious pinch is probably in the area of automobile radio-telephones, not only for private use but also, in some cities, for routine police and fire protection services. Effective provisions for civil defense, riot

control and other disasters are nowhere to be found.

Personal safety against crime is also very much a matter of efficient communications. Individual SOS transmitters and automatic burglar alarms to call the police by radio could be mass produced quite cheaply, if it were not for the shortage of channels.

THE PATTERN of thinking about the radio spectrum as a natural resource that needs rational management is beginning to take hold.

For decades, we have understood that complete personal freedom would be chaos, and broadcasters have to be licensed to use a particular frequency channel to the exclusion of all other citizens. We are just beginning to realize that such a license amounts to a free gift of a precious resource now approaching depletion.

We need to establish better policies to be sure not only that the spectrum is being used in an efficient manner, but also—even more important—that that allocation of channels corresponds to some definite social policy for adjusting the conflicting claims of would-be users.

The Rostow task force on communications policy devoted a chapter to spectrum management, based largely on the technical work of the Joint Technical Advisory Committee (JTAC) of the Electronic Industries Association and of the Institute of Electrical and Electronic Engineers. They re-echoed the argument that "every significant study of the spec-

several years has emphasized that the Federal Government does not have adequate technical and economic information on which to base valid judgments affecting allocation and utilization of the spectrum."

The Government is, nevertheless, making many thousands of decisions every year, and it is making them on the basis of policies designed to minimize the surface cost of regulation. The JTAC report estimates that this neglect actually costs from \$5 billion to \$15 billion a year in waste of the resource.

IN THESE circumstances, an open market based on fees for rental of channels would seem to be an attractive approach to resource allocation.

The Rostow report points out, however, that the long-range impact of this policy has not yet been sufficiently studied. For example, how would educational and other socially productive uses be subsidized?

Furthermore, we still lack the technical knowledge to describe channel rights of users in adjacent territories or adjacent frequency channels that we need to resolve conflicts between them in an efficiently used system. Nevertheless, the report recommended that modest use fees would encourage economic allocation.

These proposals have more technically complicated aspects than can be discussed here. The important point is the priority we should attach to the exploration of these issues as some of the vital choices among our paths to the future.