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It cannot be overemphasized, however, that Alaska in no way endorses the RCA plan as designed for, or meeting Alaska's needs; nor should the Commission grant a Construction Permit to RCA on the grounds that the proposed system meets Alaska's needs.

It should be noted that the objections of the State are based primarily on the design of the satellite to be used by Alascom, and not, in any manner, to the participation of that company as a communications carrier for Alaska.

On the basis of the above, the State of Alaska recommends to the Federal Communications Commission that:

1. Alaska not be required to use a specific satellite, RCA or other, to supply Phase I or Phase II services if in the State's judgement, a more cost-effective option is available;
2. Any carrier providing Phase I service to Alaska be required to meet the following criteria:
 - a. Compliance with State-approved small earth station specifications, and State-approved mixture of satellite and terrestrial services;
 - b. Satisfactory presentation of economic data, including accounting procedures and rate separations methods;
 - c. Full disclosure of business relationships among companies subsidiary to a common management;
3. The Commission judge the RCA Alaska Communications plan at issue only on the merits of service proposed for the entire United States, and not on the basis of specialized service for Alaska.

October 14, 1974

Comments on Sections II, III, and Attachments: The Technical Factors

Before summarizing the technical factors in RCA's "Alaskan Communications Plan 1974-1980," it should be mentioned that much information is missing and much that has been presented is misleading or contradictory. In the following comments, only the major issues have been addressed; opportunity should be reserved to comment further on these and other issues when RCA provides a clearer plan for review.

The major technical shortcomings of the plan can be summarized as follows:

1. The ground station design for telephone service to medium and small communities is approximately three times as expensive as necessary, due to system choice.
2. The design of all the RCA satellite transponders is optimized for telephone service between urban centers and consequently is inappropriate for Alaska's needs.
3. The satellite capacity required for Alaskan phone service is greatly overestimated.
4. The service offered will include two satellite hops (1 1/4 second delay in conversations).

5. RCA's plan proposes construction of expensive ground microwave and VHF systems despite the availability of much cheaper satellite alternatives. *

6. The plan gives no assurance that the satellite antennas will provide the signal strength promised in mainland Alaska.

7. The \$100,000 television reception stations proposed will not provide usable television to two-thirds of Alaska; RCA offers no technically valid alternative for Alaskan television distribution.

If there were no valid alternatives to RCA's proposals, or if the alternatives offered only moderate savings, it might be reasonable to ignore the shortcomings of the plan and allow RCA to proceed. There are, however, far less expensive, proven alternatives available. A more efficient telephone system is used by General Telephone and Electric in Algeria and Brazil. A more efficient satellite transponder design for Alaska is obvious and easy to implement. NASA's ATS-6 satellite provides high quality television to commercial ground stations costing only \$5,000, not \$100,000. The revenue RCA desires from Alaska is far more than that needed to use this efficient technology.

The RCA satellite design reflects none of the recent technology. Though it is supposedly designed to supply Alaska's needs, it will supply signals somewhat weaker than Anik, the Canadian satellite, already in orbit. Though RCA, rather than Western Union, is supposed to serve Alaska, Westar's signals are only slightly weaker in Alaska, only because RCA has requested a more favorable orbital position.