are the most prevalent reasons. Realization of visual limitations and concern over our growing timber needs have resulted in great progress in new detection methods. The Northern Forest Fire Laboratory began a research program in the latter part of 1961 which has resulted in newly developed detection systems using remote sensing. These new methods of remote surveillance make detection not only of going forest fires foreseeable in the future but also the possibility of mapping a fire and of locating storms resulting in fire. Let me briefly describe some of the more promising and advanced methods.

The most developed and effective of the new remote sensing detection systems is an infrared system. Infrared is the name assigned to a "specific wavelength region of the entire electromagnetic radiation spectrum." Its value is in its ability to detect fires by the energy emitted from the fire by wavelengths rather than by illumination. Thus problems of night detection would be eliminated as would the problem of discovering fires which went unobserved until after a previous fire had been controlled because of heavy smoke. The infrared system also provides a method for measuring the size of the fire and for mapping its location to the extent that rivers, roads and other landscape characteristics are shown. The fire's exact location is then determined and the best approach to the fire is revealed. The intensity and velocity of a fire can be calculated by this system. The infrared system is being experimented with in aircraft; the system requires an unobstructed view of the source of the energy or heat to be effective and thus a high observation point is essential.

Radar and sferics are two types of remote sensing being tested for use in tracking lightning storm situations. Radar is employed by the U.S. Weather Bureau to track "cumulonimbus cloud formations, normally associated with thunderstorm activity." The radar set operates by transmitting pulses of microwave energy in a narrow beam and detecting the energy reflected by a target. Radar is quite effective in determining the location of a possible storm but it cannot, as of now, distinguish between an actual storm and one that does not develop.

It would thus be used primarily as a planning method in detection and as a study device to learn more about "the specific nature of fire-setting lightning storms." From the knowledge, techniques can be developed for early storm warnings and evaluations of wet or dry storms, fast or slow moving storms, and severe and moderate storms. Sferics is a mtheod of tracking lightning by means of electromagnetic energy discharged by the lightning and carried in wavelengths of the radio wave spectrum. This travels along the earth's surface, as well as a straight line, giving the sferics device the ability to detect lightning from thousands of miles. This, in addition to a very low cost as compared to radar, cause the sferics equipment to be considered quite important. Television is also being considered. Although, it has the same limitations as a human, it has the added advantage of being used in uninhabitable region.

And so, Mr. President, it is clear just how far fire-detection methods are progressing. The potentialities of remote surveillance are enormous. They broaden the scope of fire detection immensely.

I commend the Northern Forest Fire Laboratory for its outstanding work thus far and urge that these efforts continue. This research merits our full support. Preservation of timber resources from fire now appears in the realm of the possible. As a member of the Senate Appropriations Subcommittee handling Forest Service appropriations, I pledge my support to the continuation of these efforts.

WEST COAST DEVELOPMENT ASSOCIATION,
Klawock, Alaska, January 9, 1968.

Hon E. L. BARTLETT,
U.S. Senate,
Senate Office Building,
Washington, D.C.

DEAR SENATOR: The West Coast Development Association has taken a stand against exportation of our Alaskan round logs to Japan.

We feel exportation of round logs to Japan will not contribute to the development of home industry in our state. Log exportation is contrary to the program our organization has presented. We will continue to seek and encourage primary and complete manufacture plants to locate here, thus providing more jobs per thousand board feet of timber than would be derived from the export of round logs.