

volves negotiations now going on within INTELSAT.

The interpretations to date of the Communications Satellite Act of 1962 have prohibited selling to any nation launch vehicles to orbit regional communications systems that would be in direct competition with INTELSAT. The French, therefore, have continued support for ELDO launchers—Europas—so that she could go her own way in communicating with her interests in Africa and Southeast Asia. Pressure is now on INTELSAT to allow regional communications systems, but with stipulations that these would not result in great financial loss to the 76-member organization, or be technically inconsistent with INTELSAT. Such accommodations, however, may still not satisfy the French since some areas could hardly be considered regional.

Two English arguments against the Europa development, however, are strong. One is money. The Europeans contribute a little over \$300 million yearly to space; Europa would eat up more than \$1 billion over the next seven years. This would limit any substantial European participation in the space station/shuttle developments of the United States. In addition, say the English, when Europa is finally finished, it would be outdated by the reusable launcher, the shuttle.

But the launching of communications satellites is not the only reason for European commitment to its own program, no matter how costly or late-on-the-scene it may be. The Germans see Europa as a stimulus to their own national industry and technology. And German scientists believe, and probably justifiably so, that they are ahead of the United States in these areas.

But another key question is more difficult to answer: Should the Europeans make a financial commitment to the space station/shuttle development, to what extent would the finished products be accessible to them?

This question will necessitate some commitment from the Nixon Administration. Although it was reportedly Mr. Nixon who asked and then encouraged the NASA overtures to Europe, he has yet even to support publicly the NASA budget struggle involving the space station/shuttle programs now going on in Congress.

Moreover, some Congressional leaders are not too eager to endorse a program that they see as a continuation of the drain and sharing of technology and space know-how to the world.

So whatever the result of the Lefevre visit, the revised INTELSAT agreements or cooperative free market exchange and enthusiasm, the delivery of the promises may still be a time consuming political decision. □

SCIENCE NEWSBRIEFS

Geneva protocol

President Nixon last week submitted to the Senate for ratification the 1925 Geneva Protocol against the use of chemical and biological agents in warfare. Although the United States first proposed the protocol, it has never ratified it; some 85 other nations have.

The President asked for certain reservations; for example, chemical warfare could be used by the United States in retaliation against an enemy that used it first, although biological warfare could not.

Also, the President said, "It is the United States understanding of the protocol that it does not prohibit the use in war of riot-control agents and chemical herbicides. Smoke, flame and napalm are also not covered by the protocol."

The President had earlier announced the United States would cease its biological warfare research and development programs except for defensive purposes (SN: 2/21, p. 194). □

Corn blight

A mutant of *Helminthosporium maydis*, a fungus which causes southern corn blight, is infecting corn all over the Central United States, and could reduce the crop by 10 to 50 percent.

Seed companies and state universities are working to produce enough resistant hybrids for planting next year. But unless Latin American nations are able to furnish enough resistant seed for export to the United States, the likelihood of there being enough resistant seed for the 1971 planting is small, say U.S. Department of Agriculture officials.

The fungus thrives in warm, humid conditions, and has been reported as far north as Illinois. Losses in individual fields have been from 10 to 100 percent, but the over-all percentage loss of this year's corn crop will not be known for several weeks.

The bulk of the nation's corn production is used for livestock feeding, and the severe loss will probably be felt in higher meat prices. □

Sensor trouble

Anti-intrusion sensors designed for use in Vietnam for broad area surveillance will be the subject of Congressional scrutiny this fall in hearings before the Senate Armed Services Committee, according to its chairman, Sen. John Stennis (D-Miss.). He and some committee members are concerned with the worth of the already costly program; others have indicated alarm over possible future uses to which the sensors might be put in the civil sector.

Developed for the once-called "Mc-

Namara Line" and now termed "electronic battlefield," the devices encompass many kinds of specially designed electronic and acoustical detectors for deployment in isolated regions. Critics of the network emphasize the lack of discrimination inherent in such a system—it is unable to tell a friend from an enemy. □

Antismog race

America's great Clean Air Car Race got off to a slow start at 3:00 a.m. on Aug. 25 in a 3,600-mile course from the Massachusetts Institute of Technology campus in Cambridge, Mass., to California Institute of Technology at Pasadena, Calif. Featuring propane-gas, electric, steam and even conventional gasoline engines, the more than 40 cars are designed as low-pollutant emitters. Entrants are competing for \$5,000 first prizes in each of five engine categories.

Started two years ago by students at the two universities as both a lark and a means to promote the development of vehicles having low exhaust emission levels, the annual event is now attracting entrants from schools all over the nation. It also has produced material and technical support from fuel and auto manufacturers, as well as the National Air Pollution Control Administration. □

NSF appointee

President Nixon will nominate Dr. Raymond L. Bisplinghoff, dean of the School of Engineering at Massachusetts Institute of Technology, to be deputy director of the National Science Foundation. An aeronautical engineer, Dr. Bisplinghoff has served as associate administrator for advanced research and technology for the National Aeronautics and Space Administration and as special assistant to the administrator of NASA. □

Transportation study

A joint study of the Department of Health, Education and Welfare and Transportation aims at pinpointing what happens to local transit systems when lower fares are offered to the elderly, many of whom are unable to afford or drive automobiles and are thus often nearly immobile if public transportation is inadequate.

The six-month, \$18,000, project is being sponsored by HEW's Administration on Aging and DOT's Urban Mass Transportation Administration.

One of the main goals is to see if reduced fares stimulate use sufficiently to create revenues as great as if the higher fares remained in force, as well as to determine other factors such as the need for route changes to serve the elderly. □