

Private Firms Have Satellite Projects Slated

By ALLEN LONG
Science Service Staff Writer
Washington—A handful of private companies already have their own satellite projects seriously in the works.

Major effort is now being aimed at using satellites to improve telephone, telegraph, radio and television service on a world-wide basis.

Transoceanic television coverage of spectacular marriages or coronations could be flashed instantly from Europe to America. It would take only minutes to reach a member of the family, vacationing abroad, with a telegraphic message sent over a radio channel to and from a satellite. It has even been estimated that a phone call to any receiver in the world via satellite, may cost as little as 25 cents.

Companies Interested
To mention only a few companies interested in satellites: International Telephone and Telegraph, American Telephone and Telegraph, Radio Corporation of America and General Electric company. Many other companies are capable of either making or using communications satellites.

The talk now centers about "what kind of satellite" and "how do we get it up there." Two kinds of satellites presently appear promising. First is the passive satellite, which the National Aeronautics and Space Administration hopes to launch next year. Second is the active satellite, a project of the Advanced Research Projects Agency here in the Department of Defense. ARPA's "talking" satellite is scheduled for launching within a year. Contracts were awarded for it July 17.

Passive Satellite
The passive satellite will be a 100-foot plastic balloon aluminized on both sides. It may be inflated either by two drops of water which, under the vacuum pressure of space, will be capable of expanding the light, thin sphere to its full size. Inflation might also be accomplished with a small bottle of nitrogen. The passive satellite gets its name because it does nothing but bounce radio signals back to earth.

The active satellite will be more complete. It will have electronic equipment aboard. Weaker radio signals can be sent up from the earth. They will be picked up, amplified by the electronic equipment and rebroadcast to earth up on command. It may last only two years. As operating experience is gained, life expectancy may go up to 20 years or more for later models.

Problems Remain
Although industry experts say flatly that the radio equipment itself can be readily built and made to work with present knowledge, many problems remain to be solved. For instance, one company wonders whether radiations in space, such as are found in the Van Allan radiation belts around the earth, can shorten the lifetime of the equipment.

The big problem is "how to get the satellite up there." Dr. Henri G. Busignies, president of International Telephone and Telegraph Laboratories, said the estimated cost of a satellite is about \$4,000,000. But "we considered that we could have four misfires before having one in operation. That multiplies the cost of \$4,000,000 by five—making a total of \$20,000,000 for the first attempt."

That is a big sheaf of money for a private company to invest. The emerging patterns, however, indicate that the government will take the lead, with industry cooperating. Slowly industry will build up on its investment and ultimately play a big private role in space.

Proper Preparation For Hospitalization Urged for Children

Denver (UPI)—The National Jewish Hospital says the three most important points to remember when preparing a child for his first hospitalization are:
—Tell your child the truth.
—Tell him why he is going to the hospital as simply as possible. What a child knows he is less likely to fear.
—Do not tell him you will be right back if the hospital rules do not allow it. Tell him exactly when you will come to see him.

The Washington monument has 898 steps.

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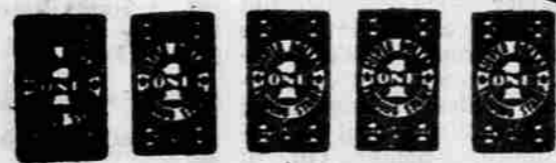
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