

Technology Notes

METEOROLOGY

Intercontinental Weather Link

A high-speed weather communications link was opened between North America and continental Europe on Jan. 17, replacing an inadequate assortment of teletype messages and overhead radio broadcasts.

Running over the newest transatlantic cable, the system can carry data at 1,050 words per minute, compared to 100 wpm for the earlier teletype circuit; pictorial weather maps at a scan rate of 120 lines per minute; and live voice communications. Formerly, weather maps were received only as unclear radio signals intended for ships at sea.

In the future the system is expected to be incorporated into the World Weather Watch, a global system for correlation of meteorological data. The ends of the system are in Frankfurt, Germany, and at the U.S. Weather Bureau's National Meteorological Center in Suitland, Md.

MILITARY COMMUNICATIONS

8-in-1 Comsat Launch for Military

Eight communications satellites launched by a single Titan booster last week gave the Defense Department a 15-satellite "switchboard" linking the Pentagon with Vietnam.

The original seven satellites were launched last June, and are in position to relay messages to any specific station about 80 to 90 percent of the time. The new additions should fill the spaces, as well as providing extra capacity.

The system is expected to provide almost continuous, jam-free communications 24 hours a day, additional emergency message channels to overseas bases when ground links fail.

All 15 satellites are orbiting slowly in high, 21,000-mile almost-circular orbits that are just below synchronous altitude. A dozen more are being readied for future launches.

ENGINEERING

Engineers Must Advise Congress

Professional engineering societies must get out of their "comfortable and secure tradition" of "narrow technical specialization" and start paying attention to real social and economic problems, Congressman Emilio Q. Daddario (D.-Conn.) told the Engineers Joint Council in New York.

"This appears to be an era where the unwanted and unwarranted consequences of technology are being dramatized," said Rep. Daddario, who is chairman of the Subcommittee on Science Research and Development of the Committee on Science and Astronautics. He warned the engineering leaders of the imminent approach of "leveling R and D expenditures" and "so-called technology gaps between regions and nations."

He asked the professional societies to recommend consultants who would appear before Congress as individuals and offer their own views. The need for such advice is widespread among Congressional committees, he said, and cannot be solved by "any simple analogue to the White House set-up."

ELECTRONICS

Near-Zone Field-Strength Meter

Some kinds of missiles and rockets can be detonated prematurely by strong electromagnetic fields from nearby radio transmitters. A near-zone field-strength meter has been developed by the U.S. Bureau of Standards to spot such hazards in advance.

Design of the meter is based on use of a completely nonmetallic electrical transmission line, which can carry information to remote read-out points while remaining essentially "transparent" to the field being measured.

TRANSPORTATION

Subways Ruled Out

Integrated urban transportation system, including suburban jitneys, highspeed guided roadway vehicles, and downtown two-person capsules, all computerized, was presented to a meeting of the Highway Research Board Conference in Washington by a group of graduate engineering students from Massachusetts Institute of Technology.

Main feature of the MIT plan, called Project Metran, is a system of 8-10 passenger suburban buses which would operate in a relatively small area to bring passengers to a suburban terminal. A computer-directed dispatching center would direct the vehicles by the least-trafficked route to pick up the most passengers.

The conference was in general agreement that subways, and other conventional transportation schemes in which so many cities are now investing, will just not do the job.

Several speakers insisted that the experimentation, while necessary, would be costly. Prototypes of a number of far-out systems will have to be built, in cities of 100,000 or more. And many will be costly busts.

ASTRONAUTICS

Simple Lunar Height Gauge

Astronauts may be able to judge their distance from the moon's surface using a simple, hand-held device and a mathematical formula.

By comparing the curvature of the horizon with a hand-held disk of known diameter, test subjects have been able to estimate both their elevation and the location of the point on the surface below them, reports Lockheed Missiles and Space Co., Sunnyvale, Calif.

PEST CONTROL

Turkish Anti-Weevil Factory

A 100,000-curie shipment of cobalt 60 has been sent to Turkey to combat weevils in the world's first large-scale radiation disinfestation plant.

The insects live in stored wheat, barley, rye or corn, causing worldwide crop losses of about five per cent, and even greater losses in nutritional value.

In use the cobalt 60 will be placed at the bottom of a hopper, which will feed the grain by gravity through the gamma radiation field, rendering the weevils sterile and shortening their lives. Eventually, the plant, at Iskenderun, will have 200,000 curies of the isotope, from Nuclear Chemical Plant, Ltd., Harwell, England.