

For release:

From

IBM

*International Business Machines Corporation
Advanced Systems Development Division
Post Office Box 344
Yorktown Heights, New York*

IMMEDIATE

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1964
ENDICOTT, N.Y., Oct. 25 ... Transmission of business data between the U.S. and other countries at speeds of millions of words per minute was predicted by computer engineers today following a successful inter-continental experiment in communications between computers via the Telstar satellite.

In a test performed today by International Business Machines Corporation, data was flashed back and forth directly between an IBM computer in Endicott and an identical computer in Nice, France. The experiment, conducted in cooperation with the American Telephone and Telegraph Company and the French government postal, telephone and telegraph service demonstrated the future potential of satellite communications for the fast processing of large quantities of business data and other information on a global scale.

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In the 17-minute test, coded digital data was sent at a speed of 2,000 bits of information per second (equivalent to about 3,300 English words per minute) from an IBM 1401 data processing system at the IBM product development laboratory here to a similar computer system at the IBM World Trade Corporation development engineering laboratory at La Gaude, near Nice, France. The data was transmitted directly from one computer memory to the other and back again.

The message was sent from the Endicott laboratory over telephone lines to A.T. & T.'s Long Lines headquarters in New York City and then to the A.T. & T. earth station in Andover, Maine.

From there it was carried by microwave over one of Telstar's "voice grade" channels, the same type of channel that has been used for the international telephone and Teletype messages already transmitted over the A.T. & T. satellite. Telstar and future planned satellites each have potentially hundreds of such communications channels.

John M. Norton, assistant general manager of IBM's Advanced Systems Development Division who was in charge of the test, said that satellite communication appears to be a highly reliable means for achieving low-speed and high-speed inter-continental transmission of data. Mr. Norton indicated that although this test was to demonstrate reliability and compatibility between satellite media and computers at low speed, "the potential for high-speed transmission also appears good and we are examining the technical feasibility of data transmission at rates of millions of bits of information per second."

"This means," said Mr. Norton, "that a satellite system in the future could accommodate the large amount of high-speed traffic expected as the use of international information processing systems increases."

At present, underseas voice cables and high frequency radio circuits are used for international data communications. It is expected that these media will be used for the first global IBM Tele-processing system, the recently announced Pan American World Airways system that will provide airline reservations personnel on six continents with access to a central processor in New York City.

Today's test was designed to produce information that will be useful in design of future systems for data communications on an international scale. The trans-Atlantic transmission was performed both from computer memory to memory and from computer to magnetic tape.

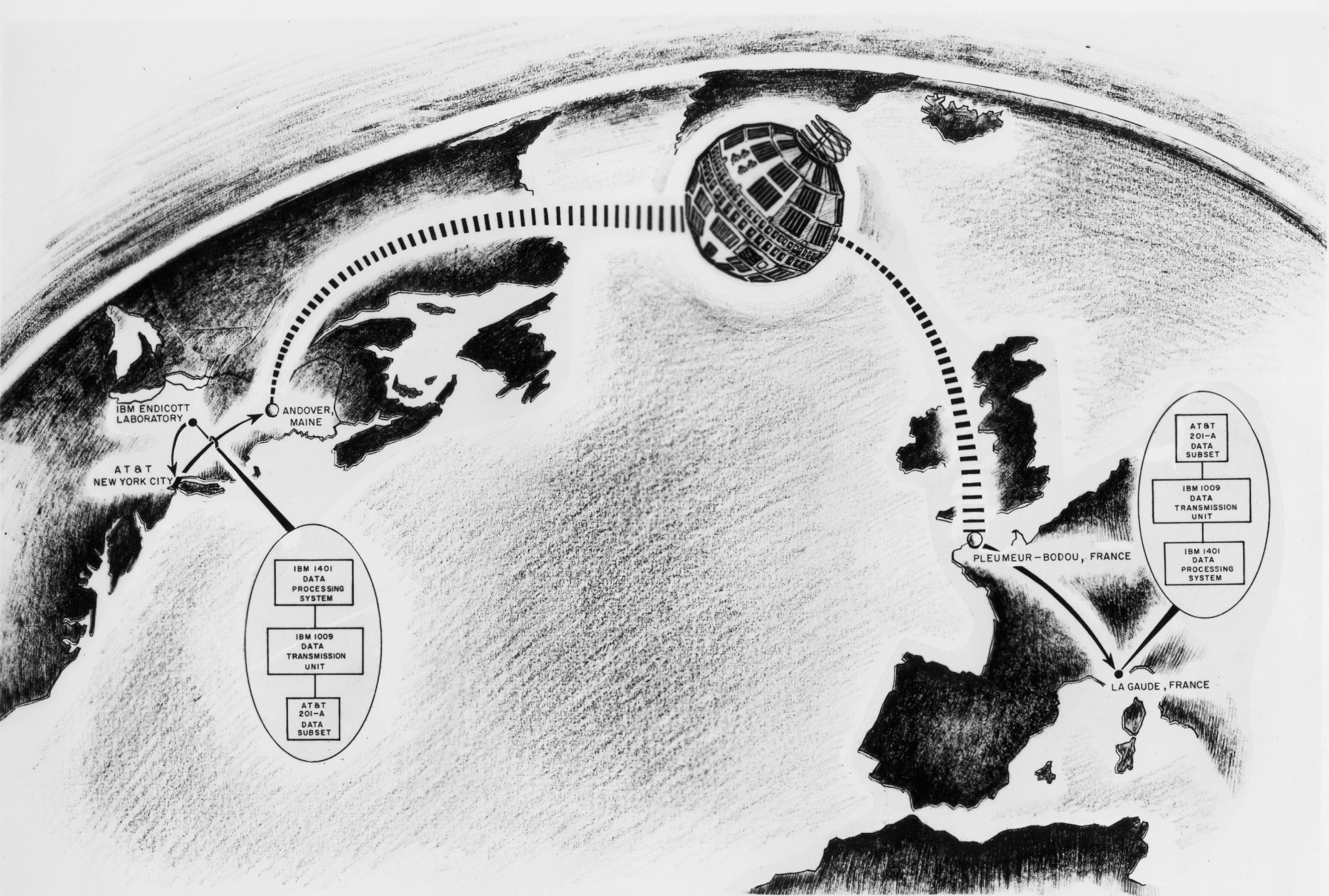
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ENDICOTT, N.Y., Oct. 25 ... Computer engineers predicted exchange of business data between the U.S. and other countries at speeds of millions of words per minute following the success of a satellite transmission test performed today. Chester Siminitz and C. Fred Woitd of the IBM laboratory here sent messages directly from this IBM 1401 computer to an identical computer in Nice, France, via the American Telephone and Telephone Company's Telstar satellite. The engineers are shown monitoring the IBM 1009 data transmission unit, which converts binary coded decimal signals from the computer into a special transmission code. Voice communication was maintained between the remote computer installations over other channels throughout the test.

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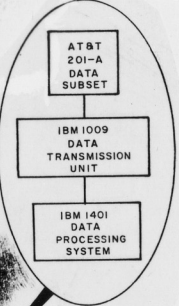
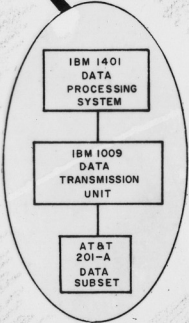
IBM ENDICOTT
LABORATORY

ANDOVER,
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ENDICOTT, N.Y., Oct. 25 . . . In the satellite data transmission test performed today by International Business Machines Corporation, a message was transmitted from an IBM 1401 data processing system here to an identical computer at the IBM World Trade Corporation Laboratory at La Gaude, France. The message was converted by an IBM 1009 Data Transmission Unit from binary coded decimal form into a special transmission code. From this special code serial bits were converted into audio signals in an American Telephone and Telegraph Company digital subset. These audio signals were then transmitted to the A.T. & T. earth station in Andover, Maine. From there the message was carried by microwave via Telstar to the earth station in France, and by telephone line to the receiving terminal, where a digital subset reconverted the message into special code for another IBM 1009, which checked for error and converted to standard binary coded decimal characters for the receiving computer.

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