

## Topic Page: [communications satellite](#)

Definition: **communications satellite** from *Dictionary of Energy*

*Communication.* an artificial satellite that relays radio, television, Internet, telephone, and other communication signals around the world; usually follows a geostationary or geosynchronous orbit.



Image from:

[television \(TV\) in The Macmillan Encyclopedia](#)

### Summary Article: **communications satellite**

From *The Columbia Encyclopedia*

artificial satellite that functions as part of a global radio-communications network. *Echo 1*, the first communications satellite, launched in 1960, was an instrumented inflatable sphere that passively reflected radio signals back to earth. Later satellites carried with them electronic devices for receiving, amplifying, and rebroadcasting signals to earth. *Relay 1*, launched in 1962 by the National Aeronautics and Space Administration (NASA), was the basis for *Telstar 1*, a commercially sponsored experimental satellite. Geosynchronous orbits (in which the satellite remains over a single spot on the earth's surface) were first used by NASA's Syncom series and *Early Bird* (later renamed *Intelsat 1*), the world's first commercial communications satellite.

In 1962, the U.S. Congress passed the Communications Satellite Act, which led to the creation of the Communications Satellite Corporation (Comsat). Agencies from 17 other countries joined Comsat in 1964 in forming the International Telecommunications Satellite Consortium (Intelsat) for the purpose of establishing a global commercial communications network. Renamed the International Telecommunications Satellite Organization (ITSO) in 1974, the organization transferred its satellite network to a private corporation, Intelsat, Ltd., in 2001. Intelsat now operates network of more than 50 satellites to provide global telecommunications. It has orbited several series of Intelsat satellites. ITSO continues to oversee the public service obligations of Intelsat.

Inmarsat was established in 1979 to serve the maritime industry by developing satellite communications for ship management and distress and safety applications. Inmarsat was originally an intergovernmental organization called the International Maritime Satellite Organization but later changed its name to the International Mobile Satellite Organization to reflect its expansion into land, mobile, and aeronautical communications. In 1999 its telecommunications operations became a private company as Inmarsat, and the International Mobile Satellite Organization became responsible for overseeing Inmarsat's public service obligations. Inmarsat's users now include thousands of people who live or work in remote areas without reliable terrestrial networks. Inmarsat presently has more than ten satellites in geosynchronous orbits.

In addition to the Intelsat and Inmarsat satellites, many others are in orbit, some managed by private companies and others by government-owned operators. These are used by individual countries, organizations, and commercial ventures for internal communications or for business or military use. A new generation of satellites, called direct-broadcast satellites, transmits directly to small domestic antennas to provide such services as cablelike television programming.

See Gordon, G. D. , *Principles of Communications Satellites* (1993);

Martin, D. H. , *Communications Satellites, 1958-1995* (1996);  
Evans, B. G. , ed., *Satellite Communication Systems* (3d ed. 1999).

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## Chicago

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## Harvard

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## MLA

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