

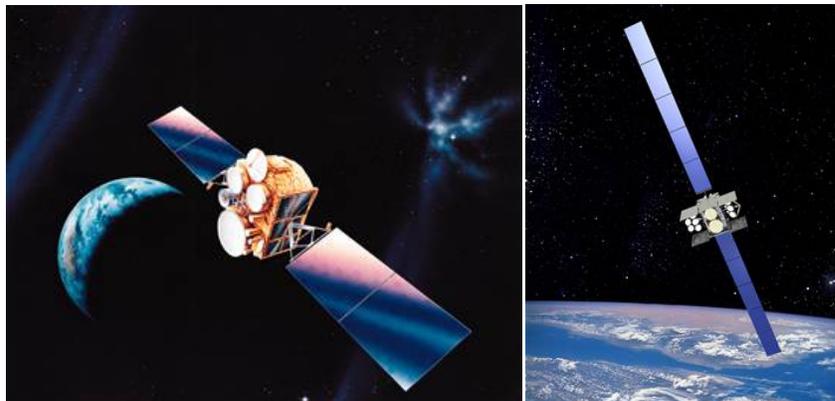


SATELLITE COMMUNICATIONS

Last Updated: 19 June 2012

Satellite communication (SATCOM) provides the ability for people and governments around the world to communicate with certainty.¹ SATCOM, whether it is military, commercial, foreign, or civil provides global coverage which affords the United States and allied national and military leaders with a means to maintain strategic situational awareness and a means to convey their intent to the operational commander responsible for conducting joint operations in a specific area.²

Satellite communications offer many unique advantages that allow the joint force commander (JFC) and subordinate commanders to shape the [operational environment](#). Using military SATCOM (figure Defense Satellite Communications System and Wideband Global SATCOM shows examples of military SATCOM satellites) and, in some cases, civil, commercial, and international systems, the JFC and subordinate commanders are provided a broad range of capabilities, including instant reachback to the global information grid, transmission of critical intelligence, the ability to tie sensors to shooters, and survivable communications in austere areas with limited or no infrastructure. While JFCs are apportioned SATCOM resources for planning, the actual allocation of SATCOM resources to JFCs for operations will be determined by the CDRUSSTRATCOM as the SATCOM operational manager.



Defense Satellite Communications System and Wideband Global SATCOM

¹ [National Security Space Strategy](#), Pg i.

² JP 3-14, [Space Operations](#).

SATCOM provides an essential element of national and DOD communications worldwide. They allow for information transfer from the highest levels of government to the theater tactical level for all matters to include operations, logistics, intelligence, personnel, and diplomacy. [Frequency bands](#) over which military satellite communications (MILSATCOM) operate are:

- ✦ Ultra high frequency for narrowband communications.
- ✦ Super high frequency for wideband communications.
- ✦ Extremely high frequency for wideband and protected band communications.

Protected band is defined as bandwidth that is specifically protected against solar/nuclear radiation using satellite hardening techniques and other threats using communications and transmission security techniques.

Commercial capabilities offer another avenue to satisfy DOD's growing information needs. Commercial systems currently support much of DOD's predictable, wideband, and fixed SATCOM needs when MILSATCOM is not available. Leasing commercial services also affords faster access to advanced capabilities and services than traditional government research, development, and acquisition programs.

There are several considerations for military use of commercial SATCOM systems. Communications may not be protected to military standards. There may be potential competition for access with other customers, including adversaries. Commercial SATCOM services may be owned by a non-US organization or controlled outside the borders of the United States. Commercial SATCOM capacity may not be accessible in areas to which the United States military may deploy, especially on short notice. Access and availability to commercial services are based on contractual terms which could be terminated at times not convenient to the military. Commercial SATCOM telemetry, tracking, and control (TT&C) links may be unencrypted, and vendors may lack the ability to identify, geolocate, and support DOD [jamming](#) or interference response.
