History of NAVSTAR GPS

The GPS System was created and realized by the American Department of Defense (DOD) and was originally based on and run with 24 satellites (21 satellites being required and 3 satellites as replacement). Nowadays, about 30 active satellites orbit the earth in a distance of 20200 km. GPS satellites transmit signals which enable the exact location of a GPS receiver, if it is positioned on the surface of the earth, in the earth atmosphere or in a low orbit.

GPS is being used in aviation, nautical navigation and for the orientation ashore. Further it is used in land surveying and other applications where the determination of the exact position is required. The GPS signal can be used without a fee by any person in possession of a GPS receiver. The only prerequisite is an unobstructed view of the satellites (or rather of the sky).

The correct name of the system is NAVSTAR (Navigation System for Timing and Ranging), but commonly it is referred to as GPS (Global Positioning System).

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| 1973 | Decision to develop a satellite navigation system based on the systems TRANSIT, TIMATION und 621B of the U.S. Air Force and the U.S. Navy. |
| 1974 - 1979 | System tests |
| 1977 | First receiver tests are performed even before the first satellites are stationed in the orbit. Transmitters are installed on the earth’s surface called Pseudolites (Pseudo satellites) |
| 1978 - 1985 | A total of 11 Block I satellites are launched in this period. |
| 1979 | Decision to expand the GPS system. Thereupon the resources are considerably shortened and the program is restructured. At first only 18 satellites should be operated. 1988 the number of satellites is again raised to 24, as the functionality is not satisfying with only 18 satellites. |
| 1980 | Launching of the first Block I satellite carrying sensors to detect atomic explosions. This satellite is meant to control the abidance of the agreement of 1963 between the USA and the Soviet Union to refrain from any nuclear tests on the earth, submarine or in space. |
| 1980- 1982 | The financial situation of the project is critical, as the usefulness of the system is questioned again and again by the sponsors. |
| 1983 | When a civilian airplane of the Korean Airline (Flight 007) was shot down after it had gone lost over Soviet territory, it was decided to allow the civilian use of the GPS system. |
| 1986 | The accident of the space shuttle "Challenger" means a drawback for the GPS program, as the space shuttles were supposed to transport Block II GPS satellites to their orbit. Finally the operators of the program revert to the Delta rockets intended for the transportation in the first place. |
| 1989 | The first Block II satellite was installed and activated. |
| 1990 - 1991 | Temporal deactivation of the selective availability (SA) during the Gulf war. In this period civil receivers should be used as not enough military receivers were available. On July 01, 1991 SA is activated again. |
| 08.12.1993 | The Initial Operational Capability (IOC) is announced. In the same year it is also definitely decided to authorize the world wide civilian use free of charge. |
| March 1994 | The last Block II satellite completes the satellite constellation. |
| 17.07.1995 | Full Operational Capability (FOC) is announced. |
| 01.05.2000 | Final deactivation of the selective availability and therefore improvement of the accuracy for civilian users from about 100 m to 20 m. |
| 20.03.2004 | Launching of the 50st GPS satellite. |
| 25.09.2005 | Launch of the first IIR-M GPS-satellite. This new type supports the new military M-signal and the second civil signal L2C. |