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Iridium satellite constellation project is a satellite-based, wireless personal communications network that allows any sort of phone transmission, such as voice, paging, fax, or data, to reach its target anywhere on the planet. The project delivers L band voice and data information to these communication tools. The constellation is owned and operated by Iridium Communications, which also sells equipment and access to its services. It was created by Bary Bertiger, Raymond J. Leopold, and Ken Peterson in late 1987 and it was developed by Motorola on a fixed-price contract from July 29, 1993, to November 1, 1998, when the system became operational and commercially accessible. The constellation consists of 66 operational satellites in orbit that provide global coverage, as well as reserve satellites that may be used in the event of a breakdown. Satellites orbit the Earth at a height of about 781 kilometers (485 miles) with an inclination of 86.4 degrees.

Electronically integrated Iridium satellites will give continuous global coverage. Satellites on the same or nearby orbital planes can use intersatellite crosslinks to pass calls to other satellites. Iridium gateways will connect the Iridium satellite constellation to the public switch telephone network, and they will be located in strategic locations throughout the world. In order to make the most efficient use of limited spectrum, the Iridium system will combine "Frequency Division Multiple Access" and "Time Division Multiple Signal Multiplexing." The L- Band (1616-1626.5 MHz) is used to communicate between the satellite and subscriber equipment. The Ka- Band (19.4 – 19.6 GHz for downlinks; 29.1 – 29.3 GHz for uplinks) connects the satellite, gateways, and ground terminals. This network connects Iridium phones to other phones all around the world, allowing for global communication.

The biggest problem of the project was cost. The corporation was forced to default on $1.5 billion in debt as a result of the building of this massive system. The service had been such a flop that only 10,000 people had signed up for it. This was partly due to technical issues with the first Iridium handsets. According to a case study on the history of Iridium published by Dartmouth Tuck Business School in 1998, the company predicted that it would have 500,000 users by the following year. However, the service was prohibitively expensive for customers, and the cellular phone industry had begun to gain traction as infrastructure in most large industrialized countries was being built out. A $3,000 Iridium handset might cost up to $5 per minute of talk time. Although cellular service was not as widely available, it was far less expensive. The service was particularly controversial because of technical issues. Subscribers were unable to use the phone inside moving automobiles, buildings, or many urban locations since Iridium's technology required line-of-sight between the phone antenna and the orbiting satellite.