

Difference between GSM and CDMA Mobile Technologies

Parameter	CDMA	GSM
Acronym for	Code Division Multiple Access and also known as IS-95 or CDMAone.	Global System for Mobile Communication.
Technology Used	This Technology is based on spread spectrum technology and does not require dividing the channel by time. It also allows several users to share same frequency in a given band or space. Users are isolated by bipolar sequences and can share same frequency.	In this technology Carrier is divided into number of time slots. These different time slots are assigned to each user and until ongoing call is not finished, no other user can access this assigned slot.
Concurrent User Access	Same frequency is used by several users on the same time and can accommodate more users per MHz of bandwidth than any other technology.	Each user uses separate time slot that can be used by one user at a time.
Network Portability	No such feature is available and hence international roaming is a Problem and very limited support is available.	The availability of Subscriber Identity Modules (SIM) allows users to switch networks.
Spectrum Frequencies	800MHz (India)	900MHz/1800MHz (India)
Security	CDMA is more secure than GSM. Because Data is transmitted by using PN Codes.	GSM is less secure than CDMA because data is transmitted with no encryption.
Cell Site Range	CDMA has no built-in limit. Hence large no. of phones can be served by smaller no. of cell sites and have economic advantage.	GSM has fixed size cell size range of 120Kms. (Expanded from Old range of 35Kms).
Data Transfer	EVDO/3G/4G/LTE	GPRS/EDGE/3G/4G/LTE
Global Reach	Limited	Worldwide
Voice and Data Simultaneously	NO	Yes , GPRS Class A
Handoff	In CDMA Soft handoff technique is used in which the channel in the source cell is retained and used for a while in parallel with the channel in the target cell.	GSM uses Hard handoff Technique in which the channel in the source cell is released and only then the channel in the target cell is engaged.

Alternate Titles:

CDMA vs GSM

Code Division Multiple Access vs Global System for Mobile Communication

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