

## HSCSD (High Speed Circuit Switched Data)

HSCSD (High Speed Circuit Switched Data) is a specification for data transfer over [GSM](#) networks. HSCSD utilizes up to four 9.6Kb or 14.4Kb time slots, for a total bandwidth of 38.4Kb or 57.6Kb.

Fixed/Mobile	Mobile
Circuit/Packet	Circuit
Max Bandwidth	57.6Kb
Range	Coverage area of host network
Frequency	Frequency of host network
Host Network	GSM
Definer	<a href="#">ETSI</a> (European Telecommunications Standards Institute)
URL	<a href="http://www.etsi.org/">http://www.etsi.org/</a>

14.4Kb time slots are only available on GSM networks that operate at 1,800MHz. 900Mhz GSM networks are limited to 9.6Kb time slots. Therefore, HSCSD is limited to 38.4Kbps on 900Mhz GSM networks. HSCSD can nly achieve 57.6Kbps on 1,800Mhz GSM networks.

### The History of HSCSD

HSCSD was an enhancement to to earlier CSD (Circuit Switched Data) standard.

[EDGE](#) (Enhanced Data-Rates for GSM Evolution) enabled GSM networks are able to implement ECSD (Enhanced Circuit Switched Data), an enhanced version of HSCSD. ECSD increases the bandwidth of each timeslot to 48Kb and allows the use of eight timeslots, which gives a total transmission speed of 384Kbps.

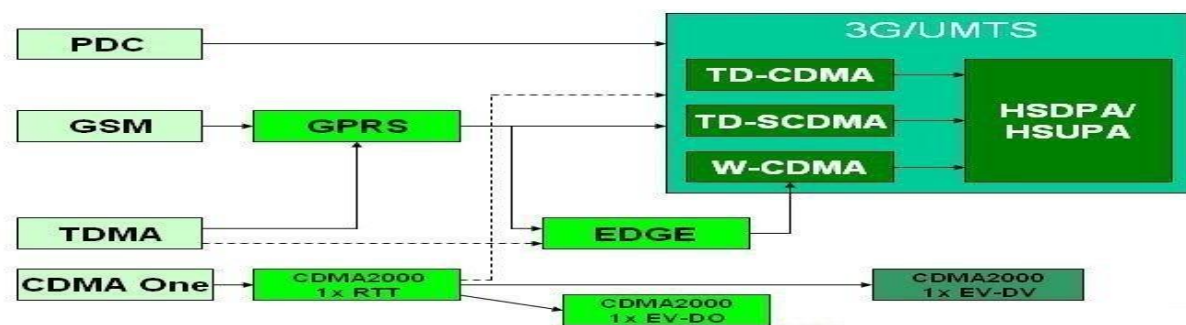
Both HSCSD/ECSD and [GPRS](#) are likely to eventually be phased out in favor of UMTS, which is a packet switched technology with speeds up to 2Mbps.

## HSCSD vs. GPRS

HSCSD has an advantage over GPRS in that HSCSD supports guaranteed quality of service because of the dedicated circuit-switched communications channel. This makes HSCSD a better protocol for timing-sensitive applications such as image or video transfer.

GPRS has the advantage over HSCSD for most data transfer because HSCSD, which

### 3G Operator Evolution Options



is circuit-switched, is less bandwidth efficient with expensive wireless links than GPRS, which is packet-switched.

Due to this, HSCSD is not as widespread as GPRS. HSCSD is, however, currently available in over 27 countries.

Source: <http://www.tech-faq.com/hscsd-high-speed-circuit-switched-data.html>