

# **GSM**

## **Global System for Mobile communications**

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# GSM

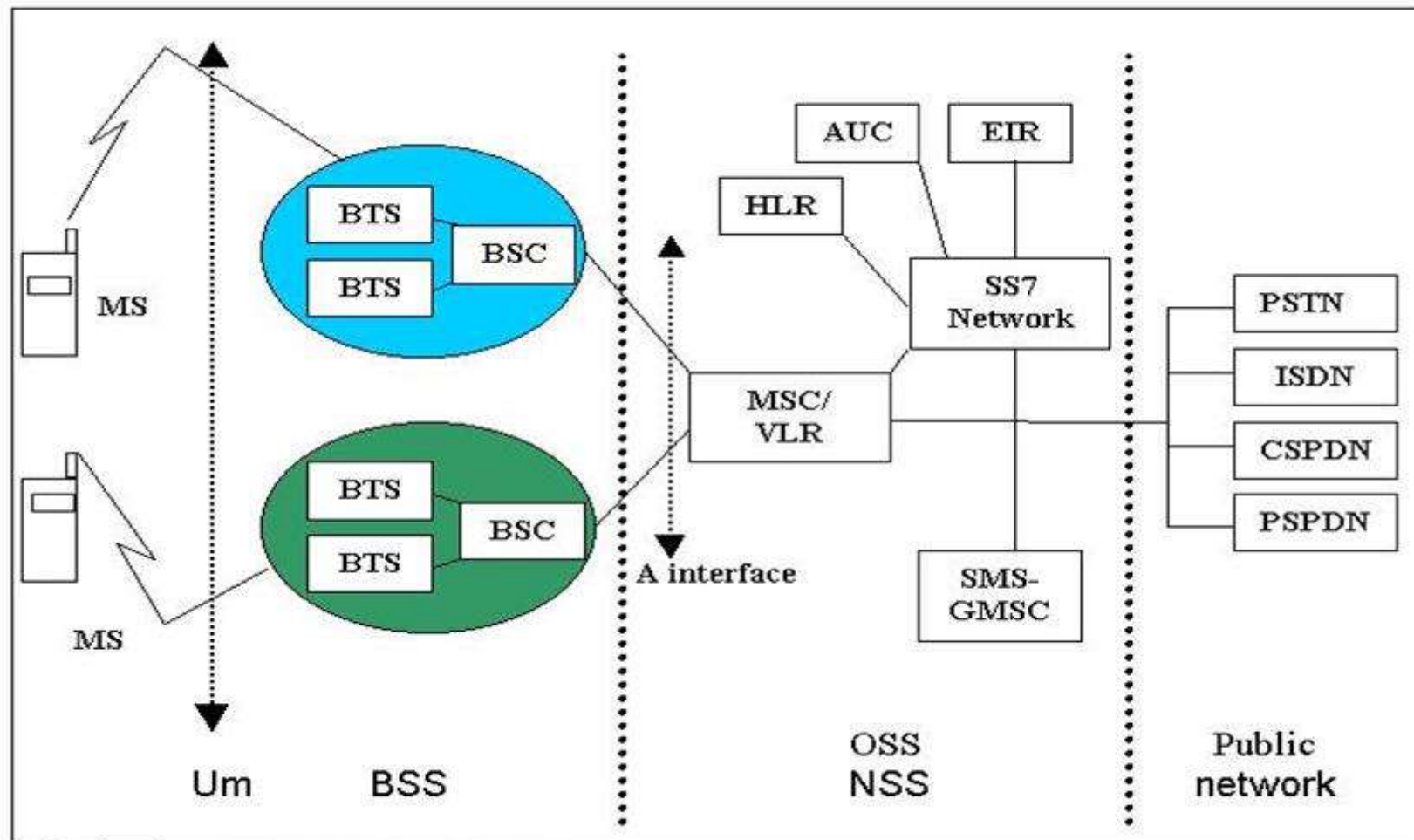
- ❖ 1979: reservation of the band of the 900 MHz for mobile communications in Europe (IUT);
- ❖ 1980: creation of GSM (Groupe Spécial Mobile) working group
- ❖ 1992: real commercialization of first systems GSM

Since, the GSM communications left its French acronym for the one of Global System for Mobile communications and supplanted the analogical systems.

frequency:

- band 890-915 Mhz for the uplink (TM for BTS)
- band 935-960 Mhz for the downlink (BTS for TM)

# General Architecture



# BSS : Base Station Subsystem

- ❖ MS (Mobile Station) : visible part of the system mobile radio.
- ❖ BTS (Base Transceiver Station) : points of access net GSM. The BTSs are materialized under the form of antennas on the the buildings in the city or on the edge of the road.
- ❖ BSC (Base Station Controller) : a BSC generates the canals radios and the BTS applies the decisions taken by the BSC (as the control of admission of the calls and the management of handovers).

# NSS : Network SubSystem

- ❖ MSC (Mobile-services Switching Center) : The MSC is a numerical switch that manages all the communications under its covering area;
- ❖ HLR (Home Location Register) : database of nominal localization in which the relative information to the subscribers of a mobile net are stored;
- ❖ VLR (Visitor Location Register) : database of Local localization in which the relative information to the users of a specific region are stored .

# GSM Services

- Voice
- Data
- Short Message Services (SMS)
- Sec.
- QoS!!!