

Milestones of the GSM/UMTS Development

Source: F. Hillebrand

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Major Milestones

Year	Standardisation	“Regulation”	Market
1982	Foundation of GSM (Groupe Spécial Mobile) for Pan European System	900 MHz spectrum allocation	
1987	Decision on the basic parameters of the standard (Madeira and Bonn)	EC issues directive on use of 900 MHz for GSM	GSM MoU to support the development of GSM and implement it in 1991 signed by 15 operators from 13 countries
1988	Completion of the first set of GSM Specifications for tendering		Ten GSM infrastructure contracts signed in autumn
1992			<ul style="list-style-type: none"> • First commercial networks in service • First roaming relations • First hand portables
1996		UMTS Task Force Report on a UMTS Strategy for Europe	<ul style="list-style-type: none"> • First GSM networks in China and Russia • Prepaid SIM in the market
1998	<ul style="list-style-type: none"> • Decision on the basic parameters of UMTS including UTRA • Creation of 3GPP, transfer of UMTS work 		GSM surpassed 100 million users
2000	GSM/UMTS Release 99, the basis for GSM evolution and UMTS opening completed by ETSI SMG and 3GPP	UMTS license auctions in Europe	<ul style="list-style-type: none"> • GSM surpassed 400 million users • GPRS in service • 5 billion SMS in one month
2006	Release 6 completed by 3GPP (MBMS, IMS Phase 2, GSM and 3G enhancements)		<ul style="list-style-type: none"> • GSM surpassed 2 billion users • 3G surpassed 100 m users • Nearly 1 billion handsets sold (all technologies) • HSPDA goes live with 3.6 Mbit/s

Specification Releases

Year	Specification freezing	Content	Responsible
1988	First set of GSM Specifications	Specifications for tendering	CEPT GSM
1990	GSM Phase 1 Specifications frozen	Standard for opening of service: telephony, SMS, call forwarding, call barring, emergency calls	ETSI SMG
1995	GSM Phase 2 Specifications frozen	Expandability, supplementary services, fax and data services, integration of GSM 1800 and GSM1900	
1997	GSM Release 96 (Phase 2+)	<ul style="list-style-type: none"> • New radio techniques: Multi band in GSM 400, 900, 1800 and 1900, dual mode of operation GSM with UMTS, PHS, DECT, EDGE, • New services: GPRS, HSCSD, CAMEL, ASCI, CTS, LCS, SAT • Architecture evolution • Speech coding evolution: dual rate codec (HR + FR), EFR, AMR • Security enhancements: FIGS, IST, LI, A5/1 key length 	
1998	GSM Release 98 (Phase 2+)		
2000	GSM / UMTS Release 99	GSM as far as not relevant for UMTS	3GPP
		UMTS and GSM as far as relevant for UMTS	
2001	GSM/UMTS Release 4	Enhanced 3G features	
2002	GSM/UMTS Release 5	IMS Phase 1, HSPDA GSM and 3G enhancements	
2005	GSM/UMTS Release 6	MBMS, IMS Phase 2, GSM and 3G enhancements	
2007	GSM/UMTS Release 7		

(3) Detailed Overview

Year	Standardisation	“Regulation”	Market
1982	Foundation of GSM (Groupe Spécial Mobile) for a Pan European System	900 MHz spectrum allocation	
1985	D, F, I and UK sign development agreement for GSM		
1986	Field trials demonstrated the viability of digital mobile radio transmission and speech coding		
1987	Decision on the basic parameters of the standard (Madeira and Bonn)	EC issues directive on use of 900 MHz for GSM	GSM MoU to support the development of GSM and implement it in 1991 signed by 15 operators from 13 countries
1988	Completion of the first set of GSM Specifications for tendering		<ul style="list-style-type: none"> Public presentation of GSM Specifications Ten GSM infrastructure contracts signed in autumn
1990	GSM Phase 1 Specifications frozen		
1992	GSM was chosen as system name and interpreted “Global System for Mobile Communication”		<ul style="list-style-type: none"> First commercial networks in service First roaming relations First hand portables
1993			<ul style="list-style-type: none"> 1 million GSM user Telstra (Australia) first non European signatory of GSM MoU First DCS1800 networks in service
1994			
1995	GSM Phase 2 Specifications frozen		<ul style="list-style-type: none"> 10 m users in 100 networks in 60 countries First PCS1900 network opened in US Prepaid SIM
1996	<ul style="list-style-type: none"> Cooperation agreement between ETSI and GSM MoU Association DCS1800 becomes GSM1800 PCS1900 becomes GSM1900 	<ul style="list-style-type: none"> UMTS Task Force Report on a UMTS Strategy for Europe Creation of UMTS Forum 	First GSM networks in China and Russia
1997	<ul style="list-style-type: none"> Freezing of GSM Release 96 (Phase 2+) Consensus on ETSI UMTS strategy Freezing of GSM Release 97 (Phase 2+) 		100 countries on air
1998	<ul style="list-style-type: none"> Decision on the basic parameters of UMTS including UTRA Freezing of GSM Release 98 (Phase 2+) Creation of 3GPP, transfer of UMTS work 	UMTS Decision by CEC providing guidance for introduction of UMTS in EU	100 million GSM users
1999			
2000	<ul style="list-style-type: none"> GSM/UMTS Release 99, the basis for GSM evolution and UMTS opening completed by ETSI SMG and 3GPP Transfer of the remaining GSM work to 3GPP, closure of ETSI SMG 	UMTS license auctions in several European countries	<ul style="list-style-type: none"> GPRS in service 5 billion SMS in one month
2001	Freezing of Release 4 by 3GPP: enhanced 3G features, bearer independent core network (“Rel 4 split”), 2G SIM specification terminated		500 million GSM users
2002	Freezing of Release 5 by 3GPP: IMS Phase 1, HSPDA, GSM and 3G enhancements		<ul style="list-style-type: none"> 400 million MS sold in 2002 MMS and first camera phones First 3G networks in service
2003			<ul style="list-style-type: none"> First EDGE network Over 500 m handsets sold in 2003
2004			
2005	Freezing of Release 6 by 3GPP: MBMS, IMS Phase 2, GSM and 3G enhancements		First 30 \$ phone announced
2006	Work started on LTE (Long-Term Evolution) and SAE (System Architecture Evolution)		<ul style="list-style-type: none"> GSM surpassed 2 billion users 3G surpassed 100 m users Nearly 1 billion handsets sold (all technologies) HSPDA goes live with 3.6 Mbit/s
2007	Freezing of Release 7 by 3GPP		