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ETSI

European Telecommunications Standards Institute

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Foreword

This ETSI Technical Report (ETR) has been produced by the Secretariat of the European Telecommunications Standards Institute (ETSI) on the basis of the ETSI Interim IPR policy, adopted by the ETSI General Assembly on 23 November 1994.

This ETR identifies, patents and patent applications which have been notified to ETSI as being Essential, or Potentially Essential, to ETSI Standards.

This ETR has been prepared on the basis of information received. ETSI has not checked the validity of the information, nor the relevance of the identified patents/patent applications to the ETSI Standards and cannot confirm, or deny, that the patents/patent applications are, in fact, Essential, or potentially Essential. No investigation, or IPR searches, have been carried out by ETSI and therefore no guarantee can be given concerning the existence of other IPRs which are, or may become, Essential.

It should also be noted that whilst ETSI members are not obliged to conduct IPR searches they are obliged to make reasonable efforts to inform ETSI of any Essential IPRs of which they become aware (see Article 4 of the ETSI Interim IPR policy).

This ETR will be maintained by the ETSI Secretariat and further editions will be issued as, and when, necessary. Any errors in the information contained in the ETR, or any additional information concerning Essential IPRs, of which readers of this ETR become aware, should be notified to the ETSI Secretariat.

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1 Scope

This ETSI Technical Report (ETR) identifies IPRs, particularly patents and patent applications, which have been notified to ETSI as being Essential, or potentially Essential, to ETSI Standards.

2 Definitions and abbreviations

2.1 Definitions

The terms "Essential", "IPR" and "Standard" given below are defined in the "Definitions" annex of the ETSI Interim IPR Policy.

Essential: as applied to IPR means that it is not possible on technical (but not commercial) grounds taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a standard can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

NOTE 1: In practical terms, the existence of an Essential IPR makes it necessary to have a licence in order to exploit the standard concerned.

IPR: shall mean any intellectual property right conferred by statute law including applications thereof other than trademarks. For the avoidance of doubt rights relating to get-up, confidential information, trade secrets or the like are excluded from the definition of IPR.

Standard: shall mean any standard adopted by ETSI including options therein or amended versions and shall include European Telecommunication Standards (ETSs), Interim ETSs (I-ETSs) and parts of Norme Européenes des Télécommunications (NETs), Common Technical Regulations (CTRs) which are taken from ETS, I-ETS or Technical Basis for Regulation (TBR), and including drafts of the foregoing, the technical specifications of which are available to all MEMBERS, but not including any standards, or parts thereof, not made by ETSI.

The date on which a STANDARD is considered to be adopted by ETSI for the purposes of this POLICY shall be the date on which the technical specification of that STANDARD was available to all MEMBERS.

NOTE 2: In practical terms, under the regime in force at the time of publication of this ETR, the ETSI deliverables applicable under this definition are:

- Technical Bases for Regulation (TBRs),
- European Telecommunication Standards (ETSs),
- Interim - European Telecommunication Standards (I-ETSs),
- Technical Specifications (TSs).

Also, the date on which the technical specification was available to members should be considered as:

- for TBRs, ETSs and I-ETS: the start date of the first Public Enquiry;
- for TSs: the date of publication by ETSI.

The following definitions also apply:

Notified:	means any IPR information of which ETSI has been formally notified by the owner of the IPR or, any IPR information of which ETSI has become aware, pursuant to the Interim IPR Policy.
IPR Licensing Declaration:	This is a declaration to the effect that the IPR owner declares that he is prepared to grant licences on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy
GSM Standards:	All standards issued by ETSI in relation to the European Cellular Digital system - Global System for Mobile Communication (GSM).
DCS 1800 Standards:	All standards issued by ETSI in relation to the European Cellular Digital system - Global System for Mobile Communication - DCS 1800 extensions.
DECT Standards:	All standards issued by ETSI in relation to the Digital European Cordless Telephone (DECT) system, also known as Digital Enhanced Cordless Telephone (DECT) system.
DECT/GSM interworking:	All standards issued by ETSI in relation to interworking between the DECT and GSM systems.
ERMES Standards:	All standards issued by ETSI in relation to the European Radio MEssaging System (ERMES).
TETRA Standards:	All standards issued by ETSI in relation to the Trans-European Trunked Radio (TETRA) system.

2.2 Abbreviations

For the purposes of this ETR, the following abbreviations apply:

AT	Austria
AU	Australia
BE	Belgium
BG	Bulgaria
BR	Brazil
CA	Canada
CH	Switzerland
CN	China
CZ	Czech Republic
DE	Germany
DK	Denmark
EP	European
EPC	European Patent Convention
ES	Spain
FI	Finland
FR	France
GB	United Kingdom
GR	Greece
HK	Hong Kong
HU	Hungary
IE	Ireland
IPC	International Patent Convention
IT	Italy
JP	Japan
KR	South Korea
LI	Liechtenstein
LU	Luxembourg
MC	Monaco
NL	Netherlands

NO	Norway
NZ	New Zealand
PCT	Patent Co-operation Treaty
PL	Poland
PT	Portugal
RO	Romania
RU	Russia
SE	Sweden
SP	Singapore
SK	Slovak Republic
SU	Soviet Union (former USSR)
TW	Taiwan
US	United States of America

3 Notified IPRs

ETSI has not undertaken any patent family searches in respect of the identified patents/patent applications. It should be assumed that, if any other corresponding patents, or patent applications exist, which are not listed in this ETR, then licences in respect of such rights will not be covered by the Licensing Declarations.

The Licensing Declarations given for the IPRs listed in this ETR are subject to the condition that those who seek the licence agree to reciprocate.

Annex A: Notifications in respect of GSM standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table A.1: Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	France		FR 2695776	FR	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	India	1052/DEL/93		India	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	China	CN 93-119206		CN	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	New Zealand		NZ 248564	NZ	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	Norway		NO 9303254	NO	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	Singapore		SP 9605241-0	SP	GSM 04.08, GSM 05.10	
Alcatel Alsthom	A Transmission Burst Organized for Discontinuous Transmission	Australia		AU 9640950	AU	GSM 05.03	
Alcatel Alsthom	A Transmission Burst Organized for Discontinuous Transmission	EPC		EP 724342	AT, BE, DK, FR, DE, IT, NL, NO, ES, SE, CH, GB	GSM 05.03	
Alcatel Alsthom	A Transmission Burst Organized for Discontinuous Transmission	Finland		FI 9600300	FI	GSM 05.03	
Alcatel Alsthom	A Transmission Burst Organized for Discontinuous Transmission	France		FR 2729806	FR	GSM 05.03	
Alcatel Alsthom	A Transmission Burst Organized for Discontinuous Transmission	New Zealand		NZ 280835	NZ	GSM 05.03	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	Canada		CA 2046579	CA	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	EPC		EP 466078	AT, BE, FR, DE, IT, NL, ES, SE, CH, GB	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	France	90-12005	FR 2667476	FR	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	Japan		JP 4255133	JP	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	South Korea	11673/1991		KR	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	Taiwan		57316	TW	GSM 01.78, GSM 02.78, GSM 03.78 GSM 09.78	
Alcatel Alsthom	Communication System for Cellular Radio Telephone Network	USA		US 5533114	US	GSM 01.78, GSM 02.78, GSM 03.78, GSM 09.78	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	Australia		AU 639516	AU	GSM 03.09	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	Canada		CA 2034411	CA	GSM 03.09	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	EPC		EP 438099	AT, BE, FR, DE, IT, NL, ES, SE, CH, GB	GSM 03.09	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	Japan		JP 60 86358	JP	GSM 03.09	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	New Zealand		NZ 236814	NZ	GSM 03.09	
Alcatel Alsthom	Communication Transfer in Cellular Radio Telephone Network	USA		US 5289525	US	GSM 03.09	
Alcatel Alsthom	Computer-Controlled Radiotelephone	EPC		EP 297616	AT, BE, FR, DE, GR, IT, NL, ES, SE, GB	GSM 03.26	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Alcatel Alsthom	Data Frame Transmission System for Transmitter and Receiver	EPC		EP 642242	AT, BE, DK, FR, DE, IT, NL, ES, SE, CH, GB	GSM 08.61	
Alcatel Alsthom	Data Frame Transmission System for Transmitter and Receiver	Finland		FI 9404071	FI	GSM 08.61	
Alcatel Alsthom	Data Frame Transmission System for Transmitter and Receiver	France		FR 2709901	FR	GSM 08.61	
Alcatel Alsthom	Data Frame Transmission System for Transmitter and Receiver	USA	SerNo 301587		US	GSM 08.61	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	Australia		AU 9538092	AU	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	Canada		CA 2179662	CA	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	Finland		FI 9602541	FI	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	France		FR 2726147	FR	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	Japan	513693/96		JP	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	PCT	WO 96131134		AT, BE, FR, DE, IT, NL, ES, SE, GB	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Energy Saving Method in a Terminal of a Mobile Radiocommunication Network	USA	SerNo 666428		US	GSM 03.41, GSM 04.12	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	Australia		AU 9523340	AU	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	China	95-115005		CN	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	EPC		EP 692919	AT, BE, DK, FR, DE, IT, NL, ES, SE, CH, GB	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	Finland		FI 9503345	FI	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	France		FR 2722353	FR	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	India	271/DEL/95		IN	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	New Zealand		NZ 272491	NZ	GSM 08.61	
Alcatel Alsthom	Frame at the TRAU-BTS Interface in a Cellular Radiocommunication Network	USA	SerNo 496749		US	GSM 08.61	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	Australia		AU 9467885	AU	GSM 04.08, GSM 05.10	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	Canada	2162707		CA	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	China	94-192099		CN	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	EPC		EP 698318	AT, BE, DK, FR, DE, IT, NL, ES, SE, CH, GB	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	Finland		FI 9505437	FI	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	France		FR 2705514	FR	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Hand-over Technique for Transferring Calls between Adjacent Cells of Cellular Phone System	Japan	525067/94		JP	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	EPC		EP 589753	AT, BE, DK, FR, DE, GR, IE, IT, NL, PT, ES, SE, CH, GB	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Method of Transmitting Timing Advance Data to a Mobile Moving in Cells of an Asynchronous-BTS GSM Network	Finland		FI 9304006	FI	GSM 04.08, GSM 05.10	
Alcatel Alsthom	Mobile Radio Network	Germany	P 36 38 735	DE 3638735	DE	GSM 02.16, GSM 03.03, GSM 04.08	jointly owned with Siemens.
Alcatel Alsthom	Mobile Radio System with a Repeater	Australia		AU 77486	AU	GSM 05.05	
Alcatel Alsthom	Mobile Radio System with a Repeater	EPC		EP 651524	FR, DE, IT, SE, GB	GSM 05.05	
Alcatel Alsthom	Mobile Radio System with a Repeater	Finland		FI 945088	FI	GSM 05.05	
Alcatel Alsthom	Mobile Radio System with a Repeater	New Zealand		NZ 264804	NZ	GSM 05.05	
Alcatel Alsthom	Mobile Radio System with a Repeater	USA	SerNo 331341		US	GSM 05.05	
Alcatel Alsthom	Software Downloading for a Telecommunications Terminal	Australia		AU 643526	AU	GSM 11.14	
Alcatel Alsthom	TRAN/BTS Error Procedure	Japan	518716/94		JP	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	Australia		AU 9461115	US	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	China	94-191289		CN	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	EPC		EP 686325	AT, BE, DK, DE, IT, NL, ES, SE, CH, GB	GSM 08.60, GSM 08.61	

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Alcatel Alsthom	TRAU/BTS Error Procedure	Finland		FI 9503969	FI	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	France		FR 2702111	FR	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	Norway		NO 9503356	NO	GSM 08.60, GSM 08.61	
Alcatel Alsthom	TRAU/BTS Error Procedure	USA	SerNo 495615		US	GSM 08.60, GSM 08.61	
Alcatel Alsthom USA	Hand-over Technique for Transferring Calls Between Adjacent Cells of Cellular Phone System	USA	SerNo 545869		US	GSM 04.08, GSM 05.10	
AT&T	Digital Speech Encoder	France		8 219 772	FR		see note 1
AT&T	Digital Speech Encoder	Germany		3 244 476	DE		see note 1
AT&T	Digital Speech Encoder	Japan		1 332 758	JP		see note 1
AT&T	Digital Speech Encoder	Sweden		Published 456 618	SE		see note 1
AT&T	Digital Speech Encoder	United Kingdom		2 110 906	GB		see note 1
AT&T	Arrangement for Detecting Fraudulently Identified Mobile Stations in a Cellular Mobile Telecommunications Switching System	USA		5 309 501	US		see note 1
AT&T	Arrangement for Obtaining Authentication Key Parameters in a Cellular Mobile Telecommunications Switching Network	USA		5 329 573	US		see note 1
AT&T	Digital Speech Coder	Canada		1 181 854	CA		see note 1
AT&T	Digital Speech Coder	Sweden		4 674 298-6	SE		see note 1
AT&T	Digital Speech Coder	United States		RE 32 580	US		see note 1
AT&T	Maintaining Stable Virtual Circuit Data Connections with Spare Protocol Handler	USA		5 278 179	US		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	Belgium		0 175 752	BE		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	Canada		1 222 568	CA		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	France		0 175 752	FR		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	Germany		3 575 624	DE		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	Netherlands		0 175 752	NL		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	Sweden		0 175 752	SE		see note 1
AT&T	Multipulse LPC Speech Processing Arrangement	United Kingdom		0 175 752	GB		see note 1

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
AT&T	Multipulse LPC Speech Processing Arrangement	USA		4 701 954	US		see note 1
AT&T	Paging Arrangements in a Cellular Mobile Switching System	USA		5 278 890	US		see note 1
AT&T	Signalling Arrangements in a Cellular Mobile Telecomms Switching System	USA		5 396 543	US		see note 1
							NOTE 1: AT&T have stated that all of the identified patents have corresponding foreign pending applications but they have elected to provide details of granted patents only -as, and when, patents are granted pursuant to the pending applications, ETSI will be informed. AT&T have stated to ETSI that Licensing enquires should be sent to: AT&T, 10 Independence Blvd, Warren, NJ 07059-6799, USA, marked for the attention of: Herb Winfield (Tel: +1 908 580-5916, Fax: +1 908 580-4082). However, indications are that Lucent Technologies will take responsibility for the licensing of AT&T's patents. No other contact has been provided.
BT	Voice Activity Detector for Half Rate GSM Coder	India	890/MAS/94 (filed 13 Sept. 94)			ETS 300 581-6 ETS 300 580-7	see note 2
BT	Voice Activity Detector for Half Rate GSM Coder	Malaysia	PI 9402448 (filed 14 Sept. 94)			ETS 300 581-6 ETS 300 580-7	see note 2
BT	Voice Activity Detector for Half Rate GSM Coder	PCT	PCT/GB 94/01999	Published WO 95/08170	AU, BG, BR, CA, CN, CZ, EP, FI, HU, JP, KR, NO, NZ, PL, RO, RU, SK, USA	ETS 300 581-6 ETS 300 580-7	see note 2
BT	Voice Activity Detector for Half Rate GSM Coder	USA	158 852 (filed 29 Nov. 93)		US	ETS 300 581-6 ETS 300 580-7	see note 2
							NOTE 2: BT have stated that: the identified patent applications may be relevant to the half rate GSM voice activity detector described in the following recommendations: ETS 300 581-6 and ETS 300 580-7. The priorities claimed for the identified patent applications are as follows/ European 93307211.8 dated 14th September 1993. UK 9324967.0 dated 6th December 1993 and UK 9412451.8 dated 21st June 1994; and the BT contact is Dr. Martin Read, BT Group Legal Services, Intellectual Property Unit, 8th floor Holborn centre, 120 Holborn, London EC1N 2TE (Tel: +44 171 492 8152; Fax: +44 171 242 0616).

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
BT	Voice Activity Detector	PCT	PCT/GB89/00247	Published WO 89/08910	AU, BR, DK, EP,FI, JP, KR, NO		see note 3
BT	Voice Activity Detector	EPC		EP335521	AT, BE, CH, DE, ES, FR, GB, GR, IT, LU, NL, SE		see note 3
BT	Voice Activity Detector	Canada		1335003	CA		see note 3
BT	Voice Activity Detector	Hong Kong		1358/96	HK		see note 3
BT	Voice Activity Detector	Ireland		61863	IE		see note 3
BT	Voice Activity Detector	New Zealand		228290	NZ		see note 3
BT	Voice Activity Detector	Portugal		89978	PT		see note 3
BT	Voice Activity Detector	Singapore		9691600-2	SP		see note 3
							NOTE 3: BT have stated that the identified patents may be relevant to the full rate GSM Voice Activity Detector, that the patents claim priority form GB 880 9795 and that the patent was the subject of a BT/ETSI undertaking dated 4th April 1990. It should be noted that the provisions of this undertaking provides for royalty free licences if certain conditions are satisfied by a licensee. BT contact (see note 2)
CP8 Transac	Data Processing System for Protecting the Secrecy of Confidential Information	France		2 392 447	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	Data Processing System which Protects the Secrecy of Confidential Information	France		2 389 284	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	SIM Personal Telephone Sets	France		2 401 459	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	SIM Personal Telephone Sets	France		2 460 506	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	A Device for Transmitting Signals between two Data Processing Stations	France		2 483 713	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	A Method and System for Transmission of Confidential Data	France		2 477 344	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	A Process and System for Transmission of Signed Messages	France		2 480 539	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	A Portable Machine for Calculation, or Data Processing	France		2 483 657	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
CP8 Transac	A Method for Certifying the Origin of at Least One Item of Information Stored in the Memory of a First Electronic Device and Transmitted to a Second Electronic Device, and a System for Carrying Out the Method	France		2 530 053	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
CP8 Transac	SIM Personal Telephone Sets	France		2 566 880	FR	GSM 02.09, GSM 03.20, GSM 11.11	see note 4
							NOTE 4: CP8 Transac have stated that: all of the listed patents may be Essential to the GSM Standards and be of particular relevance to the subscriber identification module (SIM), as well as the terminals (personal telephone sets). The corresponding foreign patents/patent applications can be readily identified from the listed French patents. Non-exclusive world-wide licences are available on fair, reasonable and non-discriminatory terms and conditions. They will respect the commitment made by Bull S.A. to the International Standards Organization (ISO), which is mentioned in the introduction to ISO Standard 7816, to grant non-exclusive, non-transferrable, world-wide, irrevocable fully paid up licences, with no right to sub-licence, for the ISO standard, either independently, or in conjunction with other standards (e.g. GSM Standards), for FR 2 483 713 and its foreign equivalents - the fully paid up cost for this licence is FRF 25,000.00; and the fully paid up licence for FR 2 483 713 and its foreign equivalents covers the use of the ISO standard in the ETSI Standard, but does not extend to other patents, including the patents listed in the schedule.
Ericsson OMC Ltd	Improvements in, or relating to, Equalisers	United Kingdom		GB 2 215 567	GB		
Ericsson OMC Ltd	Power Booster	United Kingdom		GB 2 251 768	GB		
Ericsson OMC Ltd	Receiver Gain	United Kingdom		GB 2 233 846	GB		
Ericsson OMC Ltd	Transmitter Power Control for Radio Telephone System	United Kingdom		GB 2 233 517	GB		
INNOVATRON	Method and Apparatus for Coupling Smart Cards to Transfer Devices	France	78-01876 (24/01/78)	2 415 378 (16/07/82)	FR		Code: SCLIF. Expiry date: 24/01/1998. Final grant secured.
INNOVATRON		Germany	29 54 748.6 (19.12.94)		DE		Code: SCLIF3. Expiry date: 23/01/1999. Examination in progress.

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
INNOVATRON		Germany	29 54 742.0 (09/03/93)		DE		Code: SCLIF2. Expiry Date: 23/01/1999. Examination in progress.
INNOVATRON		Germany	29 33 191.7 (20/09/79)	29 33 191 (06.02.92)	DE		Code: SCLIF1. Expiry date: 23/01/1999. Final grant secured after opposition.
INNOVATRON		Japan	500 325-54 (1979)	1 435 657 (25.04.98)	JP		Code: SCLIF. Expiry date: 23/01/1999. Final grant secured.
INNOVATRON		Sweden	79 07774-9	431 687	SE		Code: SCLIF. Expiry date: 23/01/1999. Final grant secured.
INNOVATRON	Method and Apparatus for Coupling Smart Cards to Transfer Devices	United Kingdom	32 293/79 (23/01/79)	2 036 435 (03.11.82)	GB		Code: SCLIF. Expiry date: 23/011999. Final grant secured.
INNOVATRON		USA	169 114 (17/09/79)	4 494 464 (13.09.83)	US		Code SCLIF. Expiry date: 13/09/2000. Final grant secured.
Lupa Finances	Automatic Telephone Number Dialler	EPC		Published A1-0 075 120	AT, BE, DE, FR, GB, IT, LU, NL, SE		An evaluation report for Lupa Finances' published European patent application, EP 0 075 120 A1 has been prepared by N&M Consultancy Limited, at the request of the ETSI Secretariat, and a copy of this report can be made available to ETSI Members, on REQUEST, from the ETSI Secretariat.
Lupa Finances	Automatic Telephone Number Dialler	Switzerland	6127/81		CH		An evaluation report for Lupa Finances' published European patent application, EP 0 075 120 A1 has been prepared by N&M Consultancy Limited, at the request of the ETSI Secretariat, and a copy of this report can be made available to ETSI Members, on REQUEST, from the ETSI Secretariat.
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Australia	622 543		AU	GSM 04.08, version 05.10	
Matra	Procédé et Installation de Radiotéléphonie Numérique Notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	Australia	638 160		AU	GSM 04.08, version 4.9.0	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Brazil	PI 900 1902.4		BR	GSM 04.08, version 05.10	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Canada	2 015 237		CA	GSM 04.08, version 05.10	
Matra	Procédé et Installation de Radiotéléphonie Numérique Notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	EPC	0472 460 B1		BE, DE, DK, ES, GB, IT, LU, NL, SE	GSM 04.08, version 4.9.0	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	EPC	0398773 B1		AT, BE, CH, DE, DK, ES, GB, IT, LI, LU, NL, SE	GSM 04.08, version 05.10	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Finland	90 2080		FI	GSM 04.08, version 05.10	
Matra	Procédé et Installation de Radiotéléphonie Numérique Notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	Finland	91 03 903		FI	GSM 04.08, version 4.9.0	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	France	89 05 469		FR	GSM 04.08, GSM 05.10	
Matra	Procédé et Installation de Radiotéléphonie Numérique Notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	France	90 10 485		FR	GSM 04.08, version 4.9.0	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Ireland	65 521		IE	GSM 04.08, version 05.10	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Japan	1 986 761		JP	GSM 04.08, version 05.10	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Norway	90 18 15		NO	GSM 04.08, version 05.10	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	Portugal	93 870		PT	GSM 04.08, version 05.10	
Matra	Procédé de Pseudo-synchronisation d'un Réseau de Communication à Multiplexage dans le Temps et Applications	USA	5 128 925		US	GSM 04.08, version 05.10	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	United Kingdom		GB2 204 215	GB	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	USA		US 5 067 171	US	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Canada		CA 1 306 014	CA	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Norway		NO 174 448 B	NO	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Singapore		SG606/64	SP	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Hong Kong		HK 923/94	HK	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Sweden		Published SE 8 801 191	SE	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Denmark		Published DK 8 801 699	DK	GSM 03.09, GSM 05.08	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Mitsubishi Electric	Method and Apparatus for Handoff of in Call Progress	Japan		Published JP 63245142	JP	GSM 03.09, GSM 05.08	
Mitsubishi Electric	Control Device for Radio Communication Apparatus	EPC		EP 0464 314 A	GB, FR, DE,SE	GSM 05 series	TDMA Timing Control
Mitsubishi Electric	Control Device for Radio Communication Apparatus	Canada		CA 2 038 645	CA	GSM 05 series	TDMA Timing Control
Mitsubishi Electric	Control Device for Radio Communication Apparatus	Japan		Published JP 4068827	JP	GSM 05 series	TDMA Timing Control
Motorola	Data Signalling System	Norway		169 415	NO	GSM 04.08	
Motorola	An Antenna array for a cellular RF communications system.	Germany		P. 28 06 178	DE	Applies broadly to GSM.	
Motorola	An Antenna Array for a Cellular RF Communications System.	United Kingdom		1 573 560	GB	Applies broadly to GSM.	
Motorola	Cellular Radio Telephone with Dropped Call Protection	EPC		Published A2-0 325 713	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE	GSM 04.08	
Motorola	Cellular Radio Telephone with Dropped Call Protection	Finland		Published 88 5520	FI	GSM 04.08	
Motorola	Cellular Voice & Data Telephone System	Denmark	859/86		DK	Applies broadly to GSM.	
Motorola	Cellular Voice & Data Telephone System	EPC		EP B1 0188 554	AT, BE, CH, DE, FR, GB, IT, NL, SE.	Applies broadly to GSM.	
Motorola	Cellular Voice & Data Telephone System	Finland		79 768	FI	Applies broadly to GSM.	
Motorola	Cellular Voice & Data Telephone System	Norway		169 810	NO	Applies broadly to GSM.	
Motorola	Clock Rate Matching in Independent Networks	France		9202058	FR	Applies broadly to GSM.	
Motorola	Colocated Cellular Radiotelephone Systems	EPC	88306565.8		EP	Applies broadly to GSM	
Motorola	Data Signalling System	Denmark		Published 170 082	DK	GSM 04.08	
Motorola	Data Signalling System	EPC		EP 0 116 577	FR, GB, DE, NL, LI, SE, CH		
Motorola	Data Signalling System	Italy		1 168 619	IT	GSM 04.08	
Motorola	Digital Radio Communication System and Two-way Radio	EPC	90 906636.7		EP	Applies broadly to GSM	
Motorola	Digital Radio Communication System and Two-way Radio	Finland	91 5002		FI	Applies broadly to GSM.	
Motorola	Digital Radio Communication System and Two-way Radio	Norway	PCT/US 90/01829		NO	Applies broadly to GSM.	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Motorola	Digital Speech Coding having Improved Vector Excitation Source	Denmark	4381/89		DK	GSM 06.20	
Motorola	Digital Speech Coding having Improved Vector Excitation Source	EPC		Published B1-0372008	AT, BE, CH, DE, FR, GB, IT, LU, NL, SE	GSM 06.20	
Motorola	Digital Speech Coding having Improved Vector Excitation Source	Finland	894151		FI	GSM 06.20	
Motorola	Digital Speech Coding having Improved Vector Excitation Source	Norway	893202		NO	GSM 06.20	
Motorola	Error Protection for Multi-mode Speech Coders	EPC		Published A1-0556354	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE	GSM 06.20	
Motorola	General Purpose Data Control System	Italy		1 168 620	IT	GSM 04.08	
Motorola	General Purpose Data Control System	United Kingdom	9422823.6		GB	GSM 06.20	
Motorola	General Purpose Data Control System	Norway		173 799	NO	GSM 04.08	
Motorola	General Purpose Data Control System	Denmark		Published 129 884	DK	GSM 04.08	
Motorola	General Purpose Data Control System	EPC		EP B1 0115 507	CH, DE, FR, GB, NL, LI, SE	GSM 04.08	
Motorola	Handoff Apparatus and Method with Interference Reduction for Radio System	EPC		Published A2-0255628	AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE	GSM 05.08	
Motorola	Local PSTN Interconnect with Remote Signal Link Processing	Germany		P 4105884.4	DE	Applies broadly to GSM.	
Motorola	LPC based Speech Synthesis with Adaptative Pitch Pre-filter	EPC		Published A4-0496829	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE	GSM 06.20	
Motorola	Method and Apparatus for Controlling a TDM Communication Device	EPC		Published B1-0261127	AT, BE, CH, DE, FR, GB, IT, LI, NL, SE	GSM 05.01	
Motorola	Method and Apparatus for Controlling a TDM Communication Device	EPC		Published A2-0412583	AT, BE, CH, DE, FR, GB, IT, LU, NL, SE	GSM 05.01	
Motorola	Method and Apparatus for Controlling a TDM Communication Device	EPC		Published A1-0538546	AT, BE, CH, DE, FR, GB, IT, LU, NL, SE	GSM 05.01	
Motorola	Method for Generating a Spectral Noise Weighting Filter for use in a Speech Coder	France		Published 9401450	FR	GSM 06.20	
Motorola	Method for Generating a Spectral Noise Weighting Filter for use in a Speech Coder	Germany	P 4491015T1		DE	GSM 06.20	
Motorola	Method for Generating a Spectral Noise Weighting Filter for use in a Speech Coder	Sweden	9403630-8		SE	GSM 06.20	

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Motorola	Method for Generating a Spectral Noise Weighting Filter for use in a Speech Coder	United Kingdom	9420077.1		GB	GSM 06.20	
Motorola	Method of Operating a Radio Trans. or Comm. System including Central Sta. and a Plurality of indi. Remotesta., a Radio Trans. or Comm. Syst & a Remote Sta.	Denmark		Published 165 273	DK	GSM 05.08	
Motorola	Method of Operating a Radio Trans. or Comm. System including Central Sta. and a Plurality of indi. Remotesta., a Radio Trans. or Comm. Syst & a Remote Sta.	EPC		EP B1 0269 643	AT, BE, CH, LI, FR, GB, IT, LU, NL, SE	GSM 05.08	
Motorola	Method of Operating a Radio Trans. or Comm. System including Central Sta. and a Plurality of indi. Remotesta., a Radio Trans. or Comm. Syst & a Remote Sta.	Germany		P 3 787 788	DE	GSM 05.08	
Motorola	Packet Switched Cellular Telephone System	EPC		Published A2-0 332 818	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE	GSM 05.08	
Motorola	Packet Switched Cellular Telephone System	Finland		Published 8 901 276	FI	GSM 05.08	
Motorola	Radio Arrangement having Two Radios Sharing Circuitry	Denmark	1852/89		DK	Applies broadly to GSM.	
Motorola	Radio Arrangement having Two Radios Sharing Circuitry	EPC		EP 0 310 876	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE	Applies broadly to GSM.	
Motorola	Radio Arrangement having Two Radios Sharing Circuitry	Finland	89 2678		FI	Applies broadly to GSM.	
Motorola	Radio Arrangement having Two Radios Sharing Circuitry	Norway	892094		NO	Applies broadly to GSM.	
Motorola	Selective Call Paging and Priority Signalling System	Denmark		Published 170 085	DK	GSM 04.08	
Motorola	Selective Call Paging and priority Signalling System	EPC		EP B1 0115 499	FR, GB, NL, SE	GSM 04.08	
Motorola	Selective Call Paging and Priority Signalling System	Germany		P 3 382 094.5	DE	GSM 04.08	
Motorola	Selective Call Paging and Priority Signalling System	Norway		168 079	NO	GSM 04.08	
Motorola	Selective System Scan for Multibone Radiotelephone Subscriber Units	EPC		Published A2-0 352 786	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SW	Applies broadly to GSM.	
Motorola	Selective System Scan for Multibone Radiotelephone Subscriber Units	Ireland	2029/89		IE		
Motorola	TDM Communication System Efficient Spectrum Utilization	Denmark	6161/87		DK	GSM 05.01	
Motorola	TDM Communication System Efficient Spectrum Utilization	EPC		Published B1 0261 112	AT, BE, CH, DE, FR, GB, IT, LU, NL, SE	GSM 05.01	

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Motorola	TDM Communication System Efficient Spectrum Utilization	Finland		86 122	FI	GSM 05.01	
Motorola	TDM Communication System Efficient Spectrum Utilization	Norway	874685		NO	GSM 05.01	
Motorola	TDMA Communication System with Adaptative Equalization	EPC		Published A2-0 343 189	AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE	Applies broadly to GSM.	
Motorola	TDMA Radio System Employing BPSR Synchronization for QPSK Signals Subject to Random Phase Variation and Multipath Fading	EPC		Published A2-0 318 686	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE	Applies broadly to GSM.	
Motorola	TOMA Radio System Employing BPSR Synchronization for QPSK Signals Subject to Random Phase Variation and Multipath Fading	Finland		97 712	FI	Applies broadly to GSM.	
Motorola	Trunked Communication System with Nation-wide Roaming Capability	EPC		Published A1-0 398 911	AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE	Applies broadly to GSM.	
Motorola	Two-way Personal Message with Extended Coverage	EPC		EP B1 0179 898	AT, BE, CH, FR, GB, LU, IT, NL, SE	GSM 03.02	
Motorola	Two-way Personal Message with Extended Coverage	Germany		P. 3 382 107.0	DE	GSM 03.02	
Motorola	Vector Quantizer Method and Apparatus	France		Published 2709387	FR	GSM 06.20	
Motorola	Vector Quantizer Method and Apparatus	France		Published 2706064	FR	GSM 06.20	
Motorola	Vector Quantizer Method and Apparatus	France		Published 2709366	FR	GSM 06.20	
Motorola	Vector Quantizer Method and Apparatus	Germany	P 4492048.2		DE	GSM 06.20	
Motorola	Vector Quantizer Method and Apparatus	Sweden	9404086		SE	GSM 06.20	
Motorola	Vector Quantizer Method and Apparatus	United Kingdom	9420077.1		GB		
NEC Corp.	Speech Coder	EP	91102440.4	0443 548 A2	DE, FR, GB	GSM 06.20	see note 5
NEC Corp.	Speech Parameter Coding Method and Apparatus	EP	92103179.5	0504 627 A2	DE, FR, GB	GSM 06.20	see note 5
NEC Corp.	Speech Parameter Coding Method and Apparatus	USA		5 487 128	US	GSM 06.20	see note 5
NEC Corp.	Speech Coder	USA		5 208 862	US	GSM 06.20	see note 5
							NOTE 5: Relevant to ETS 300 581-2 "European digital cellular telecommunications system ; Half Rate speech. Part 2 : Half Rate speech transcoding"

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Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
NEC Corp.	Method and Apparatus for Encoding Voice Signals	USA		4 716 592	US	GSM 06.60	Relevant to prETS 300 726 "Digital cellular telecommunications system; Enhanced Full Rate (EFR) speech transcoding"
Nokia		Canada	010 830		CA		see note 6
Nokia		United Kingdom	GB 9512284		GB		see note 6
							NOTE 6: Nokia Mobile Phones, Finland, have stated that: Nokia's proposal for Enhanced Full Rate (EFR) speech codec for the GSM Standard resulted from co-operation between Nokia, Universite de Sherbrooke (USH) and Siprolab Telecom Inc.; USH own the identified Canadian patent application and all corresponding patents and/or patent applications - not identified by Nokia; Nokia owns the identified UK patent application; and Nokia has the exclusive right to licence any patents owned by USH, or Siprolab which are Essential to the implementation of the EFR codec for the GSM Standard
NTT	All-pole Digital Filter	Japan		JP 63 - 32288	JP		
NTT	Encoding and Decoding Method for Speech Excitation Signals	Japan		JP3 - 167124	JP		
NTT	Method and Apparatus for Multiplexed Vector Quantization	Canada		1 311 060	CA		
NTT	Method and Apparatus for Multiplexed Vector Quantization	EPC		EP 0 314 018	GB, DE, FR, SW		
NTT	Method and Apparatus for Multiplexed Vector Quantization	Japan		2 061 805	JP		
NTT	Method and Apparatus for Multiplexed Vector Quantization	USA		4 992 508	US		
NTT	Sound Synthesizer	Canada		1 157 5634	CA		
NTT	Sound Synthesizer	France		2 766 828	FR		
NTT	Sound Synthesizer	Germany		3 037 276	DE		
NTT	Sound Synthesizer	Netherlands		8 005 449	NL		

(continued)

Table A.1 (continued): Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
NTT	Sound Synthesizer	Sweden		8 006 850	SE		
NTT	Sound Synthesizer	United Kingdom		2 131 659	GB		
NTT	Sound Synthesizer	United Kingdom		2 059 726	GB		
NTT	Sound Synthesizer	USA		4 393 272	US		
NTT	Speech Coding and Decoding Methods using Adaptative and Random Codebooks	EPC		EP 0 514 912	GB, DE, FR		
NTT	Speech Coding and Decoding Methods using Adaptative and Random Codebooks	USA		5 396 576	US		
NTT	Speech Coding Method and Apparatus for the same	EPC	EP 93401656.9		DE, FR, GB, IT		
NTT	Speech Coding Method and Apparatus for the same	EPC	EP 96202584.7 (Divided out of EP 93401656.9)		DE, FR, GB, IT		
NTT	Speech Coding Method and Apparatus for the same	USA	08/082 103		US		
NTT	Speech Coding-Decoding Method	Japan		JP3 - 117646	JP		
Philips		EPC		EP 0 201 126 B1			
Philips		EPC		EP 0 240 073 B1			
Philips		EPC		EP 0 195 487 B1			
Philips		EPC		EP 0 073 014 B1			
Philips		EPC		EP 0 111 972 B1			
Philips		EPC		EP 0 111 973 B1			The Philips' licensing declaration is in respect of the GSM Standards and the DCS 1800 standards.
Philips		EPC		EP 0 111 970 B1			
Philips		EPC		EP 0 111 971 B1			
Philips		Germany		DE-PS 34 10 937	DE		
Philips		Germany		DE-PS 32 09 381	DE		The Philips' licensing declaration is in respect of the GSM Standards and the DCS 1800 standards.

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Table A.1 (concluded) : Notified IPRs for GSM

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Siemens AG	Method of Jam-Resistant communication transmission	Germany		DE 30 23 375	DE		see note 7
Siemens AG	Method of Jam-Resistant communication transmission	USA		US 4,843,612	US		see note 7
Siemens AG	Method of Jam-Resistant communication transmission	Canada		CA 1238 951	CA		see note 7
Siemens AG	Fernmeldenetz sowie Teilnehmersationen und Zentralstation für ein Fernmeldnetz	Germany		DE 36 38 735	DE		see note 7
Siemens AG	Einrichtung zur zweiseitigen drahtlosen Übertragung von Sprache	Germany		DE 32 25 443	DE		see note 7
Siemens AG	Timing Advance Control	EPC		EP 0 240 821	AT, DE, ES, FR, GB, IT, SE		see note 7
							NOTE 7: Siemens AG declares that it has existing patents or may in the future obtain patents, which are essential or potentially essential for manufacturing and selling implementations of the GSM Standards and/or the DCS 1800 Standards.
Telia AB	A Method and Arrangement for Performance Monitoring in a Telecommunications Network	EPC	92850263.2				
Telia AB	Arrangement in Mobile Communication System for Extending the Range Between One or More Mobile Units and Base Stations	EPC	94904363.2				
Telia AB	Device for Increasing the Speed in a Digital Mobile Radio System	EPC	95850184.3				
Telia AB	A method and an Arrangement for Dynamic Allocation of Multiple Carrier Wave Channels for Multiple Access by Frequency Division Multiplexing	EPC	94900333.9				
Telia AB	A Mobile Telecommunication System having an Auxiliary Routing Arrangement	EPC	92850286.3				
Telia AB	Antenna Arrangement Device	EPC	92850035.2				
Telia AB	Method for Locating Mobile Stations in a Digital Telephone Network	EPC	94850095.4				
Telia AB	Method of Location in a Mobile Radio System	EPC	91916715.5	0 551 310 B1			
Telia AB	Method and Arrangement for Increasing Capacity in a Mobile Telephone System	EPC	91903207.8	0 513 089 B1			
Telia AB	Procedure at Telecommunications Systems which makes Possible a Reduction of the Digital Processing	PCT	PCT/SE 95/00850				

A.2 Other declarations

Deutsche Telekom AG: has informed ETSI that it does not own, or control, any IPRs which are Essential, or potentially Essential to the ETSI GSM Standards.

Annex B: Notifications in respect of DCS 1800 standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table B.1: Notified IPRs for DCS 1800

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Matra	Procédé et Installation de Radiotéléphonie Numérique notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	Australia	638 160		AU		
Matra	Procédé et Installation de Radiotéléphonie Numérique notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	EPC	0472 460 B1		BE, DE, DK, ES, GB, IT, LU, NL, SE		
Matra	Procédé et Installation de Radiotéléphonie Numérique notamment de Radiotéléphonie Cellulaire de Communication avec les Mobiles	Finland	91 03 903		FI		
Philips		EPC		EP 0 111 971 B1			see note 8
Philips		EPC		EP 0 111 972 B1			see note 8
Philips		EPC		EP 0 240 073 B1			see note 8
Philips		EPC		EP 0 195 487 B1			see note 8
Philips		EPC		EP 0 111 973 B1			see note 8
Philips		EPC		EP 0 201 126 B1			see note 8
Philips		EPC		EP 0 073 014 B1			see note 8
Philips		EPC		EP 0 111 970 B1			see note 8
Philips		Germany		DE-PS 34 10 937	DE		see note 8
Philips		Germany		DE-PS 32 09 381	DE		see note 8
							NOTE 8: The Philips' licensing declaration is in respect of the GSM Standards and the DCS 1800 standards.

Annex C: Notifications in respect of GPRS standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table C.1: Notified IPRs for GPRS

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
De Te Mobil GmbH	Verfahren zur Paketweisen Datenübermittlung in einem Mobilfunknetz	PCT	PCT/DE/00121		EP (AT, BE, CH, LI, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), AU, BG, BR, CA, CN, CZ, JP, KR, PL, RU, SK, UA, US		
De Te Mobil GmbH	Verfahren zur Paketweisen Datenübermittlung in einem Mobilfunknetz	Germany	DE 44 02 903		DE		

Annex D: Notifications in respect of DECT standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table D.1: Notified IPRs for DECT

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Telia AB	A Mobile Radio System	EPC	94902147.1				
Telia AB	Arrangement in a DECT system	EPC	95850001.9				
Telia AB	Arrangement for Improving Functions in a Radiocommunications System	EPC	95850041.5				
Telia AB	A Mobile Radio System	PCT	PCT/SE95/00998				
Telia AB	A Radio-Based Communication System	PCT	PCT/SE95/00259				
Telia AB	A Mobile Radio System	PCT	PCT/SE95/00610				
Telia AB	Device at Telecommunication Systems	PCT	PCT/SE95/00845				
Telia AB	Device at Telecommunication Systems	PCT	PCT/SE95/00846				

D.2 Other Declarations

Motorola: has informed ETSI that it has not identified any Motorola IPRs Essential to the DECT Standards at this time.

Annex E: Notifications in respect of DECT/GSM Interworking standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table E.1: Notified IPRs for DECT/GSM Interworking

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Telia AB	Arrangement for handover in a mobile telecommunication network	Sweden	9500408-1		SE		
Telia AB	Method and arrangement for transfer between a cordless telecommunications system and a cellular mobile telecommunications system	Sweden	9500407-3	503 848	SE		

Annex F: Notifications in respect of ERMES standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table F.1: Notified IPRs for ERMES standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Motorola	Decoder for Transmitted Message Activation Codes	EPC		EP 0 090 851			
Motorola	Multiple Format Signalling Protocol for a Selective Call Receiver	EPC	EP 92901376.1				
Motorola	Multiple Frequency Message System	EPC	EP 89909668.9				
Motorola	Multiple Frequency Scanning	EPC	EP 91904526.0				
Motorola	Nation-wide Paging with Local Modes of Operation	EPC	EP 90915018.7				
Motorola	Power Conservation Method and Apparatus for a Portion of an Information Signal	EPC	EP 89913131.2				

Annex G: Notifications in respect of TETRA standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table G.1: Notified IPRs for TETRA standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Motorola	Radio System	EPC	93922524.9		AT, DK, DE, GB, ES, SE		
Motorola	Improved Dispatched Trunked Radio System	EPC		EP 0 210 181	AT, BE, FR, GB, DE (P3584248.2), IT, NL, SE, CH		
Motorola	Selective System Scan for Multizone Radiotelephone Subscriber Units	EPC		EP 0 352 786	AT, BE, FR, DE (P68912672.7), GB, GR, IE, IT, LU, NL, ES, SE, CH		
Motorola	Trunked Communication System with Nation-wide Roaming Capability	EPC	89901513.5		AT, BE, FR, DE, GB, IT, LU, NL, SE, CH		
Motorola	Packet-Switched Cellular Telephone System	EPC	89101118.1		AT, BE, FR, DE, GB, GR, IT, LI, LU, NL, ES, SE, CH		
Motorola	A method of operating a Radio Transmission or Communication System Including a Central Station and a Plurality of Individual Remote Stations a Radio Transmission or Communication System and a Remote Station	EPC		EP 0 269 643	AT, BE, DK, DE (P3787788.7), FR, GB, IT, NL, SE, CH		
Motorola	Radio System	Finland	943189		FI		
Motorola	Radio System	Hungary	P9401972		HU		
Motorola	Radio System	Poland	P-304341		PL		
Motorola	Radio System	Romania	94-01115		RO		
Motorola	Radio System	Russia	94035751.0		RU		
Motorola	Radio System	Turkey		28221			
Motorola	Communications Apparatus	United Kingdom	GB9119186.6		GB		
THOMSON-CSF	Procédés et Dispositif de Transmission Numérique de Signaux Vocaux par Voie Radio	EPC		87/4028541			
THOMSON-CSF	Procédés et Dispositif de Transmission Numérique de Signaux Vocaux par Voie Radio	France	86/17877		FR		

(continued)

Table G.1 (concluded): Notified IPRs for TETRA standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
THOMSON-CSF	Dynamic Codebook for Efficient Speech Coding Based on Algebraic Codes	Canada	2 010 830		CA		see note 9
THOMSON-CSF	Dynamic Codebook for Efficient Speech Coding Based on Algebraic Codes	EPC	909159568				see note 9
THOMSON-CSF	Dynamic Codebook for Efficient Speech Coding Based on Algebraic Codes	PCT	PCT/CA90/00381				see note 9
THOMSON-CSF	Dynamic Codebook for Efficient Speech Coding Based on Algebraic Codes	USA	927 528		US		see note 9
							NOTE 9: This patent is owned by the University of Sherbrooke who has given a licence to Thomson to grant sublicences

Annex H: Notifications in respect of other standards

Essential, or potentially Essential, IPRs in respect of which a Notification followed by a Licensing Declaration has been given by the IPR owner and for which licences are available on fair, reasonable and non-discriminatory terms, in accordance with subclause 6.1 of the ETSI Interim IPR Policy.

Table H.1: Notified IPRs for HIPERLAN standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
INRIA	Installation de Type Réseau Radio de Transmission de Données, avec Routage	France	95 09928		FR	ETS 300 652	
INRIA	Installation de Transmission de Données de Type Réseau Radio, et Procédé Correspondant	Canada	2 132 626		CA	ETS 300 652	
INRIA	Installation de Transmission de Données de Type Réseau Radio, et Procédé Correspondant	Europe	94 905 162			ETS 300 652	
INRIA	Installation de Type Réseau Radio de Transmission de Données, avec Routage	France	95 09928		FR	ETS 300 652	
INRIA	Installation de Transmission de Données de Type Réseau Radio, et Procédé Correspondant	France	93 00750		FR	ETS 300 652	
INRIA	Installation de Transmission de Données de Type Réseau Radio, et Procédé Correspondant	Japan	6-516756		JP	ETS 300 652	
INRIA	Installation de Transmission de Données de Type Réseau Radio, et Procédé Correspondant	USA	08/307,578		US	ETS 300 652	

Table H.2: Notified IPRs for PSTN standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
AT&T	Transmission During Ringing	Belgium		0,150,181	BE	ETS 300 659-1	
AT&T	Transmission During Ringing	Canada		1,225,726	CA	ETS 300 659-1	
AT&T	Transmission During Ringing	France		0,150,181	FR	ETS 300 659-1	
AT&T	Transmission During Ringing	Germany		3,376,377	DE	ETS 300 659-1	
AT&T	Transmission During Ringing	IPC		WO 85/00488	AT, AU, BE, BR, CH, DE, DK, FI, FR, GB, JP, LU, NL, NO, SE, SU	ETS 300 659-1	
AT&T	Transmission During Ringing	Japan		1,832,616	JP	ETS 300 659-1	
AT&T	Transmission During Ringing	Netherlands		0,150,181	NL	ETS 300 659-1	
AT&T	Transmission During Ringing	Sweden		0,150,181	SE	ETS 300 659-1	
AT&T	Transmission During Ringing	United Kingdom		0,150,181	GB	ETS 300 659-1	
AT&T	Transmission During Ringing	USA		4,582,956	US	ETS 300 659-1	
Northern Telecom Ltd		United Kingdom		GB 2 2588 119 B	GB	ETS 300 659-2	

Table H.3: Notified IPRs for TFTS standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
BT	Skyphone Fax Coder	IPC		GB 92/02102			
BT	Skyphone Fax Coder	PCT	PCT/GB 92/02102	Published WO93/10623	AT, DE, DK, ES, FR, GB, GR, IE, IT, NL, SE		

Table H.4: Notified IPRs for DAB standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Grundig E.M.V.	Verfahren und Schaltungsanordung zur digitalen Rahmensynchronisation	Germany	DE 44 05 752		DE		
Grundig E.M.V.	Verfahren zur Übertragung regional unterschiedlicher Informationen in Gleichwellennetze	EPC	93108160.8	EP 0 580 976	AT, BE, DE, FR, GB, IT	ETS 300 401	
Grundig E.M.V.	Gleichwellennetze und Empfänger zum Durchführen der empfangsseitigen Maßnahmen		HEI-5-169296			ETS 300 401	
Grundig E.M.V.	Verfahren und Schaltungsanordung zur digitalen Rahmensynchronisation	EPC	96100540.4	EP 0 670 643 A1	AT, BE, DE, CH, ES, FR, GB, IT, LI, LU, NL, PT, SE		
Grundig E.M.V.	Verfahren und Schaltungsanordnung zur Realisierung eines Rückübertragungskanals vom Empfänger zum Sender in einem Gleichwellennetz	Germany	DE 44 44 889		DE		
Grundig E.M.V.	Process Sender and Receiver for Transmitting and Selecting Local radio programs in a Common-wave Broadcasting Network	Germany	DE 44 24 778		DE		
Grundig E.M.V.	Process Sender and Receiver for Transmitting and Selecting Local radio programs in a Common-wave Broadcasting Network	PCT	PCT/EP95/02751	WO 96/02988	AU, BR, CA, CN, CZ, FI, JP, KR, MX, NO, PL, US, EPC		
Grundig E.M.V.	Method for the Adaptive Assignment of the Transmission Capacity of a Transmission Channel	Germany	DE 44 25 973		DE	ETS	
Grundig E.M.V.	Method for the Adaptive Assignment of the Transmission Capacity of a Transmission Channel	PCT	PCT/EP95/02853	WO 96/03841	AU, BR, CA, CN, CZ, FI, JP, KR, MX, NO, PL, US, EPC	ETS	
Grundig E.M.V.	Verfahren und Schaltungsanordnung zum Einfügen von Daten in ein Gleichwellenübertragungssignal	Germany	DE 43 41 211		DE		
Grundig E.M.V.	Verfahren und Schaltungsanordnung zum Einfügen von Daten in ein Gleichwellenübertragungssignal	EPC	94118808.8	EP 0 656 702 A1	AT, BE, CH, DE, FR, GB, IT, LI, PT		
Grundig E.M.V.	Verfahren und Schaltungsanordnung zur Bestimmung des geographischen Standortes eines Empfängers in einem Gleichwellenntz	Germany	DE 42 23 194		DE		
Grundig E.M.V.	Procedure for the Identification of Transmitter or REGION in Common-wave Broadcasting Network	Germany	DE 41 02 408		DE		

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Table H.4 (concluded): Notified IPRs for DAB standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Grundig E.M.V.	Procedure for the Identification of Transmitter or Region in Common-wave Broadcasting Networks	PCT	WO 92/13403		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, JP, LU, MC, NL, SZ, US		
Grundig E.M.V.	Verfahren zur Übertragung Regional Unterschiedlicher Informationen in Gleichwellennetze	Germany	DE 42 22 877		DE	ETS 300 401	
Telefunken Sendertechnik GmbH		Germany		P 41 38 770	DE	ETS 300 401	
Telefunken Sendertechnik GmbH		Germany		P 41 28 713	DE	ETS 300 401	

Table H.5: Notified IPRs for Television systems standards

Company	Title	Country	Application number	Patent number	Countries applicable	standard	Notes
Philips		EPC		EP-A 0 538 466		300 732	

History

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