

CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

(NOTE omitted)

H04 ELECTRIC COMMUNICATION TECHNIQUE

(NOTE omitted)

H04M TELEPHONIC COMMUNICATION (counting mechanisms [G06M](#); circuits for controlling other apparatus via a telephone cable and not involving telephone switching apparatus [G08](#); reels or other take-up devices for cords [H02G 11/00](#); multiplex transmission between switching centres [H04J](#); selecting arrangements [H04Q](#); loudspeakers, microphones, gramophone pick-ups or like electromechanical transducers [H04R](#))

NOTES

- This subclass covers :
 - telephonic communication systems combined with other electrical systems;
 - testing arrangements peculiar to telephonic communication systems.
- In this subclass, the following terms or expressions are used with the meanings indicated :
 - "subscriber" is a general term for terminal equipment, e.g. telephone for public use;
 - "substation" means a subscriber or monitoring equipment which may connect a single subscriber to a line without choice as to subscriber;
 - "satellite" is a type of exchange the operation of which depends upon control signals received from a supervisory exchange;
 - "switching centres" includes exchanges and satellites.

WARNINGS

- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H04M 7/02	covered by	H04Q 3/00
H04M 7/04	covered by	H04Q 3/00
H04M 7/10	covered by	H04Q 3/00
H04M 15/02	covered by	H04M 15/888
- In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00	Substation equipment, e.g. for use by subscribers; Analogous equipment at exchanges (prepayment telephone coin boxes H04M 17/00; current supply arrangements H04M 19/00; {telephone sets particularly adapted for data transmission H04M 11/066; network interface devices H04Q 1/028})	1/021	{using combined folding and rotation motions (combined with translation movement H04M 1/0235)}
		1/0212	{with a two degrees of freedom mechanism, i.e. folding around a first axis and rotating around a second axis perpendicular to the first}
1/003	. {Telephone sets using electrooptical means in the transmission path}	1/0214	{Foldable telephones, i.e. with body parts pivoting to an open position around an axis parallel to the plane they define in closed position (combined with translation movement H04M 1/0235)}
1/006	. {Call diverting means}		
1/02	. Constructional features of telephone sets		
1/0202	. . {Portable telephone sets, e.g. cordless phones, mobile phones or bar type handsets (constructional features of telephone transmitters or receivers, e.g. of speakers or microphones H04M 1/03 ; mounting of the dialing module H04M 1/23 ; with protection against RF exposure H04B 1/3838)}	1/0216	{Foldable in one direction, i.e. using a one degree of freedom hinge}
		1/0218	{The hinge comprising input and/or output user interface means}
		1/022	{The hinge comprising two parallel pivoting axes}
2001/0204	. . . {including a battery compartment}	1/0222	{Foldable in two directions, i.e. using a two degree of freedom hinge}
1/0206	. . . {Portable telephones comprising a plurality of mechanically joined movable body parts, e.g. hinged housings}		
1/0208 {characterized by the relative motions of the body parts}		

- 1/0225 {Rotatable telephones, i.e. the body parts pivoting to an open position around an axis perpendicular to the plane they define in closed position ([combined with translation movement H04M 1/0235](#))}
- 1/0227 {Rotatable in one plane, i.e. using a one degree of freedom hinge}
- 1/0229 {The hinge comprising input and/or output user interface means}
- 1/0231 {Including a rotatable keypad body part}
- 1/0233 {Including a rotatable display body part}
- 1/0235 {Slidable or telescopic telephones, i.e. with a relative translation movement of the body parts; Telephones using a combination of translation and other relative motions of the body parts}
- 1/0237 {Sliding mechanism with one degree of freedom}
- 1/0239 {Sliding mechanism with two degree of freedom, e.g. translation in two different directions}
- 1/0241 {using relative motion of the body parts to change the operational status of the telephone set, e.g. switching on/off, answering incoming call}
- 1/0243 {using the relative angle between housings}
- 1/0245 {using open/close detection}
- 1/0247 {comprising more than two body parts}
- 1/0249 {Details of the mechanical connection between the housing parts or relating to the method of assembly}
- 1/0252 {by means of a snap-on mechanism}
- 1/0254 {comprising one or a plurality of mechanically detachable modules}
- 1/0256 {wherein the modules are operable in the detached state, e.g. one module for the user interface and one module for the transceiver}
- 1/0258 {for a headset device ([constructional features of headsets H04M 1/05](#); [headsets for handsfree use H04M 1/6058](#))}
- 1/026 {Details of the structure or mounting of specific components}
- 1/0262 {for a battery compartment}
- 1/0264 {for a camera module assembly ([photo or video cameras per se G03B](#); [television cameras per se H04N 5/225](#))}
- 1/0266 {for a display module assembly ([for fixed telephones H04M 1/0295](#))}
- 1/0268 {including a flexible display panel}
- 1/027 {including magnifying means}
- 1/0272 {for a projector or beamer module assembly ([constructional features of projectors per se G03B 21/00](#); [constructional details of projectors using electronic spatial light modulators per se H04N 9/31](#))}
- 1/0274 {for an electrical connector module}
- 1/0277 {for a printed circuit board assembly}
- 1/0279 {Improving the user comfort or ergonomics}
- 1/0281 {for providing single handed use or left/right hand conversion}
- 1/0283 {for providing a decorative aspect, e.g. customization of casings, exchangeable faceplate}
- 1/0285 {Pen-type handsets}
- 1/0287 {being disposable or recyclable}
- 1/0289 {Telephone sets for operators}
- 1/0291 {Door telephones}
- 1/0293 {Terminal boxes for telephone sets}
- 1/0295 {mechanical mounting details of display modules ([for portable telephones H04M 1/0266](#))}
- 1/0297 {Telephone sets adapted to be mounted on a desk or on a wall}
- 1/03 Constructional features of telephone transmitters or receivers, e.g. telephone handsets, {speakers or microphones} ([transducers in general H04R 1/00](#))}
- 1/035 {Improving the acoustic characteristics by means of constructional features of the housing, e.g. ribs, walls, resonating chambers or cavities}
- 1/04 Supports for telephone transmitters or receivers ([for transducers in general H04R 1/00](#))}
- 1/05 adapted for use on head, throat, or breast {([handsfree use of portable phones H04M 1/6041](#))}
- 1/06 Hooks; Cradles
- 1/08 associated with switches operated by weight of receiver or hand-set
- 1/10 associated with switches operated by magnetic effect due to proximity of receiver or hand-set
- 1/11 Supports for sets, e.g. incorporating armrests
- 1/12 Adjustable supports, e.g. extensible
- 1/13 pantographic
- 1/14 with resilient means to eliminate extraneous vibrations
- 1/15 Protection of telephone cords; Guiding telephone cords; Winding-up telephone cords ([in general H02G 11/00](#))}
- 1/17 Hygienic or sanitary devices on telephone equipment ([for mouthpieces or earpieces per se H04R 1/12](#))}
- 1/18 Telephone sets modified for use in ships, mines, or other places exposed to adverse environment ([H04M 1/19 takes precedence](#); [telephone cabinets per se E04H 1/14](#))}
- 1/185 {Improving the rigidity of the casing or resistance to shocks}
- 1/19 Arrangements of transmitters, receivers, or complete sets to prevent eavesdropping, to attenuate local noise or to prevent undesired transmission; Special mouthpieces or receivers therefor ([circuit arrangements for preventing eavesdropping H04M 1/68](#); [telephone cabinets per se E04H 1/14](#))}
- 1/20 Arrangements for preventing acoustic feed-back ([H04M 1/62 takes precedence](#))}
- 1/21 Combinations with auxiliary equipment, e.g. with clock, with memoranda pads
- 1/215 by non-intrusive coupling means, e.g. acoustic couplers
- 1/2155 {Acoustic coupling}
- 1/22 Illuminating; Arrangements for improving visibility of characters on dials

- 1/23 . . Construction or mounting of dials or of equivalent devices; Means for facilitating the use thereof (by improving visibility [H04M 1/22](#))
- 1/233 . . . {including a pointing device, e.g. roller key, track ball, rocker switch or joystick (constructional details of pointing devices [per se G06F 3/033](#))}
- 1/236 . . . {including keys on side or rear faces}
- 1/24 . Arrangements for testing (measuring electric values [G01R](#); testing transducers [H04R 29/00](#))
- 1/247 . Telephone sets including user guidance or features selection means facilitating their use; {Fixed telephone terminals for accessing a variety of communication services via the PSTN network}
- 1/2471 . . {Configurable and interactive telephone terminals with subscriber controlled features modifications, e.g. with ADSI capability [Analog Display Services Interface] (systems providing special services or facilities to subscribers [H04M 3/42](#); administration or customization of services [H04M 3/42136](#); by downloading data to substation equipment [H04M 3/42178](#))}
- 1/2472 . . . {with programmable function keys}
- 1/2473 . . {Telephone terminals interfacing a personal computer, e.g. using an API (Application Programming Interface) (details of API [H04M 7/0021](#))}
- 1/2474 . . {Telephone terminals specially adapted for disabled people ([H04M 1/72588](#) takes precedence; network based special services or facilities for hearing-impaired persons [H04M 3/42391](#); devices for conversing with the deaf-blind [G09B 21/04](#))}
- 1/2475 . . . {for a hearing impaired user (hearing-aids [per se H04R 25/00](#))}
- 1/2476 . . . {for a visually impaired user ([H04M 1/22](#) takes precedence)}
- 1/2477 . . {for selecting a function from a menu display ([H04M 1/2474](#) takes precedence)}
- 1/2478 . . {Telephone terminals specially adapted for non-voice services, e.g. email, internet access (centralized arrangements where telephones services are combined [H04M 7/0024](#); for recording text messages [H04M 3/5322](#); for accessing Internet [H04M 3/4938](#))}
- 1/253 . Telephone sets using digital voice transmission (simultaneous speech and data transmission [H04M 11/06](#); {ISDN terminal access circuits [H04Q 11/0471](#))}
- 1/2535 . . {adapted for voice communication over an Internet Protocol [IP] network (Voice over Internet Protocol (VoIP) network equipment and services [H04M 7/006](#); internet protocols [H04L 29/06095](#))}
- 1/26 . Devices for signalling identity of wanted subscriber (constructional features [H04M 1/23](#))
- 1/27 . . Devices whereby a plurality of signals may be stored simultaneously {(devices disposed in the exchange [H04M 3/424](#), [H04M 3/44](#))}
- 1/271 . . . {controlled by voice recognition}
- 1/272 . . . with provision for storing only one subscriber number at a time, e.g. by keyboard or dial
- 1/2725 {using electronic memories}
- 1/274 . . . with provision for storing more than one subscriber number at a time, e.g. using toothed disc
- 1/2745 using static electronic memories, i.e. memories whose operation does not require relative movement between storage means and a transducer, e.g. chips; {(fax machines [H04N 1/32037](#))}
- 1/274508 {Telephone number directory allowing to store a plurality of information regarding one subscriber}
- 1/274516 {whose content are provided by data transmission or downloaded}
- 1/274525 {Retrieving by scrolling on a display}
- 1/274533 {Telephone number directory management, e.g. manually editing, erasing or modifying data stored in the directory}
- 2001/274541 {Predictive input, predictive dialling by comparing the dialled sequence with the content of a telephone directory}
- 1/27455 {Retrieving by interactive graphical means or pictorial representation}
- 1/274558 {Retrieving by matching an alphabetic string}
- 1/274566 {Appending a prefix or inserting a pause to a dialling sequence}
- 1/274575 {Automatic call origination and retry systems, e.g. on off-hook or redial on busy}
- 1/274583 {Sorted according to a specific criteria, e.g. history or frequency of use}
- 1/274591 {Implemented by means of discrete electronic components, i.e. neither programmable nor microprocessor controlled ([H04M 1/274516](#) - [H04M 1/274583](#) take precedence)}
- 1/275 implemented by means of portable electronic directories
- 1/2755 whose contents are provided by optical scanning
- 1/276 using magnetic recording, e.g. on tape
- 1/2765 {implemented by means of portable magnetic cards}
- 1/278 using punched cards or tapes
- 1/30 . . Devices which can set up and transmit only one digit at a time
- 1/31 . . . by interrupting current to generate trains of pulses; by periodically opening and closing contacts to generate trains of pulses
- 1/312 {pulses produced by electronic circuits}
- 1/315 Clutches; Spring assemblies; Speed regulators, e.g. centrifugal brakes ([H04M 1/32](#) - [H04M 1/40](#) take precedence)
- 1/32 Locking setting devices during transmission to prevent interference by user
- 1/34 Lost-motion or other arrangements for ensuring a pause between successive digit transmissions
- 1/38 Pulses transmitted by a movement variably limited by the setting of a stop
- 1/40 wherein the setting-operation short-circuits or open-circuits the transmitting mechanism during a variable part of a cycle

- 1/50 . . . by generating or selecting currents of predetermined frequencies or combinations of frequencies
- 1/505 {signals generated in digital form}
- 1/515 . . by generating or selecting other signals than trains of pulses of similar shape or other signals than currents of one or more different frequencies, e.g. generation of direct current signals of alternating polarity, coded pulses, impedance dialling
- 1/52 . . Arrangements wherein a dial or equivalent is mechanically coupled to a line selector
- 1/53 . . Generation of additional signals, e.g. additional pulses
- 1/54 . . . Arrangements wherein a dial or equivalent generates identifying signals, e.g. in party-line systems
- 1/56 . Arrangements for indicating or recording the called number at the calling subscriber's set
- 1/57 . Arrangements for indicating or recording the number of the calling subscriber at the called subscriber's set (at the operator set in a manual exchange [H04M 5/20](#))
- 1/571 . . {Blocking transmission of caller identification to called party}
- 1/573 . . {Line monitoring circuits for detecting caller identification}
- 1/575 . . {Means for retrieving and displaying personal data about calling party}
- 1/576 . . . {associated with a pictorial or graphical representation}
- 1/578 . . . {associated with a synthesized vocal announcement}
- 1/58 . Anti-side-tone circuits (hybrid circuits for carrier-frequency operation [H04B 1/00](#))
- 1/585 . . {implemented without inductive element}
- 1/60 . including speech amplifiers
- 1/6008 . . {in the transmitter circuit}
- 1/6016 . . {in the receiver circuit}
- 1/6025 . . {implemented as integrated speech networks}
- 1/6033 . . {for providing handsfree use or a loudspeaker mode in telephone sets (arrangements for preventing acoustic echo [H04M 9/08](#))}
- 1/6041 . . . {Portable telephones adapted for handsfree use}
- 1/605 {involving control of the receiver volume to provide a dual operational mode at close or far distance from the user}
- 1/6058 {involving the use of a headset accessory device connected to the portable telephone}
- 1/6066 {including a wireless connection}
- 1/6075 {adapted for handsfree use in a vehicle ([H04M 1/6058](#) takes precedence; arrangements for holding telephones in a vehicle [B60R 11/0241](#))}
- 1/6083 {by interfacing with the vehicle audio system}
- 1/6091 {including a wireless interface}
- 1/62 . . Constructional arrangements
- 1/64 . Automatic arrangements for answering calls; Automatic arrangements for recording messages for absent subscribers; Arrangements for recording conversations (centralised dictation systems [H04M 11/10](#))
- 1/642 . . {storing speech in digital form}
- 1/645 . . . {with speech synthesis}
- 1/647 . . {using magnetic tape ([H04M 1/642](#) takes precedence)}
- 1/65 . . Recording arrangements {for recording a message from the calling party (in the exchange [H04M 3/50](#))}
- 1/6505 {storing speech in digital form}
- 1/651 {with speech synthesis}
- 1/6515 {using magnetic tape ([H04M 1/6505](#) takes precedence)}
- 1/652 . . . Means for playing back the recorded messages by remote control over a telephone line ([H04M 1/658](#) takes precedence)
- 1/654 . . . Telephone line monitoring circuits therefor, e.g. ring detectors
- 1/6545 {mechanically actuating hook switch, e.g. lifting handset}
- 1/656 . . . for recording conversations
- 1/658 . . . Means for redirecting recorded messages to other extensions or equipment
- 1/66 . with means for preventing unauthorised or fraudulent calling (verifying user identity or authority in secret or secure digital communications [H04L 9/32](#))
- 1/663 . . Preventing unauthorised calls to a telephone set
- 1/665 by checking the validity of a code
- 1/667 . . Preventing unauthorised calls from a telephone set ([H04M 1/677](#) takes precedence)
- 1/67 by electronic means
- 1/673 the user being required to key in a code
- 1/675 the user being required to insert a coded card, e.g. a smart card carrying an integrated circuit chip {(for constructional features in portable telephones [H04B 1/3816](#))}
- 1/677 . . Preventing the dialling or sending of predetermined telephone numbers or selected types of telephone numbers, e.g. long distance
- 1/6775 {by providing access to preprogrammed keys}
- 1/68 . Circuit arrangements for preventing eavesdropping
- 1/70 . . Lock-out or secrecy arrangements in party-line systems
- 1/72 . Substation extension arrangements; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selecting {(constructional features of cordless telephones [H04M 1/0202](#))}
- 1/723 . . using two or more extensions per line ([H04M 1/725](#) takes precedence)
- 1/725 . . Cordless telephones {(for handsfree use [H04M 1/6041](#))}
- 1/72502 {with one base station connected to a single line}
- 1/72505 {Radio link set-up procedure}
- 1/72508 {using a control channel}
- 1/72511 {Searching for an available channel}
- 1/72513 {On hold, intercom or transfer communication modes}
- 1/72516 {including out-of-range alerting means}
- 1/72519 {Portable communication terminals with improved user interface to control a main telephone operation mode or to indicate the communication status}

- 1/72522 {With means for supporting locally a plurality of applications to increase the functionality (for selecting a function in a menu [H04M 1/2477](#))}
- 1/72525 {provided by software upgrading or downloading}
- 1/72527 {provided by interfacing with an external accessory (hands-free [H04M 1/6041](#))}
- 1/7253 {using a two-way short-range wireless interface}
- 1/72533 {for remote control of appliances}
- 1/72536 {for supporting an emergency service (alarm systems [G08B](#); telephonic communication systems in combination with alarm systems [H04M 11/04](#); telephone sets for disabled persons [H04M 1/2474](#))}
- 1/72538 {with automatic feature activation, e.g. upon sensing of an alarm condition}
- 1/72541 {with manual feature activation}
- 1/72544 {for supporting a game or graphical animation}
- 1/72547 {with interactive input/output means for internally managing multimedia messages (mail systems for messages comprising audio and non-audio components [H04M 3/5307](#); message switching systems [H04L 51/00](#))}
- 1/7255 {for voice messaging, e.g. dictaphone (for answering an incoming call [H04M 1/64](#))}
- 1/72552 {for text messaging, e.g. sms, e-mail}
- 1/72555 {for still or moving picture messaging (systems for transmission of still picture signals [H04N 1/00095](#); videophones [H04N 7/14](#))}
- 1/72558 {for playing back music files (portable music players [per se G11B 27/00](#))}
- 1/72561 {for supporting an internet browser application}
- 1/72563 {with means for adapting by the user the functionality or the communication capability of the terminal under specific circumstances}
- 1/72566 {according to a schedule or a calendar application (network applications for presence management [H04L 29/08684](#))}
- 1/72569 {according to context or environment related information}
- 1/72572 {according to a geographic location (user location related services provided by wireless communication networks [H04W 4/02](#); network applications adapted for the location of the user terminal [H04L 29/08657](#))}
- 1/72575 {by connection of an exchangeable housing part}
- 1/72577 {to restrict the functionality or the communication capability of the terminal (network access restriction [H04W 48/02](#))}
- 1/7258 {by using keys with multiple functionality defined by the current phone mode or status}
- 1/72583 {for operating the terminal by selecting telephonic functions from a plurality of displayed items, e.g. menus, icons (interaction techniques for Graphical User Interfaces [per se G06F 3/048](#))}
- 1/72586 {wherein the items are sorted according to a specific criteria, e.g. frequency of use}
- 1/72588 {specially adapted for disabled people (devices for conversing with the deaf-blind [G09B 21/04](#))}
- 1/72591 {for a hearing impaired user (hearing-aids [per se H04R 25/00](#))}
- 1/72594 {for a visually impaired user ([H04M 1/22](#) takes precedence)}
- 1/72597 {wherein handling of applications is triggered by incoming communication events (changing user alerting upon occurrence of events [H04M 19/04](#))}
- 1/727 Identification code transfer arrangements
- 1/73 Battery saving arrangements {(by switching on/off the receiving circuit [H04B 1/1615](#))}
- 1/733 with a plurality of base stations connected to a plurality of lines {(for selection in cordless PBX [H04W 84/16](#))}
- 1/737 characterised by transmission of electromagnetic waves other than radio waves, e.g. infra-red
- 1/738 Interface circuits for coupling substations to external telephone lines ([H04M 1/78](#) takes precedence)
- 1/7385 {Programmable or microprocessor-controlled}
- 1/74 with means for reducing interference; with means for reducing effects due to line faults
- 1/745 {Protection devices or circuits for voltages surges on the line}
- 1/76 Compensating for differences in line impedance (in general [H04B](#))
- 1/78 Circuit arrangements in which low-frequency speech signals proceed in one direction on the line, while speech signals proceeding in the other direction on the line are modulated on a high-frequency carrier signal (repeater circuits [H04B 3/38](#))
- 1/80 Telephone line holding circuits
- 1/82 Line monitoring circuits for call progress or status discrimination {(for detecting caller identity [H04M 1/573](#))}
- 3/00 Automatic or semi-automatic exchanges**
{(constructional details of telephone exchanges [H04Q 1/02](#))}
- 3/002 {Applications of echo suppressors or cancellers in telephonic connections (in two-way loud-speaking telephone systems [H04M 9/08](#), echo suppressors or cancellers [per se H04B 3/20](#))}
- 3/005 {Interface circuits for subscriber lines (current supply [H04M 19/00](#) and subgroups; supervisory, monitoring or testing arrangements [H04M 3/22](#) and subgroups; in key telephone systems [H04M 9/006](#))}
- 3/007 {Access interface units for simultaneous transmission of speech and data, e.g. digital subscriber line [DSL] access interface units (DSL access multiplexers [H04Q 11/0478](#), and [H04L 12/2856](#))}

- 3/02 . Ringing or otherwise calling substations ([selective calling H04Q](#))
- 3/04 . . calling signal supplied from final selector
- 3/06 . . calling signal supplied from subscriber's line circuit
- 3/08 . Indicating faults in circuits or apparatus
- 3/085 . . {Fault locating arrangements}
- 3/10 . . Providing fault or trouble signals
- 3/12 . . Marking faulty circuits "busy"; Enabling equipment to disengage itself from faulty circuits {; Using redundant circuits; Response of a circuit, apparatus or system to an error}
- 3/14 . . Signalling existence of persistent "off-hook" condition
- 3/16 . with lock-out or secrecy provision in party-line systems
- 3/18 . with means for reducing interference {or noise}; with means for reducing effects due to line faults {with means for protecting lines}
- 3/20 . with means for interrupting existing connections; with means for breaking-in on conversations
- 3/205 . . {Eavesdropping prevention - indication of insecurity of line or network}
- 3/22 . Supervisory, monitoring, {management, i.e. operation, administration, maintenance} or testing arrangements
- 3/2209 . . {for lines also used for data transmission}
- 3/2218 . . {Call detail recording}
- 3/2227 . . {Quality of service monitoring}
- 3/2236 . . {Quality of speech transmission monitoring}
- 3/2245 . . {Management of the local loop plant}
- 3/2254 . . {in networks}
- 3/2263 . . . {Network management}
- 3/2272 . . {Subscriber line supervision circuits, e.g. call detection circuits}
- 3/2281 . . {Call monitoring, e.g. for law enforcement purposes; Call tracing; Detection or prevention of malicious calls}
- 3/229 . . {Wire identification arrangements; Number assignment determination}
- 3/24 . . with provision for checking the normal operation
- 3/241 . . . {for stored program controlled exchanges}
- 3/242 {Software testing}
- 3/244 . . . {for multiplex systems}
- 3/245 {for ISDN systems}
- 3/247 . . . {Knowledge-based maintenance systems}
- 3/248 . . . {for metering arrangements or prepayment telephone systems ([metering arrangements per se H04M 15/00](#); [prepayment telephone systems per se H04M 17/00](#))}
- 3/26 . . with means for applying test signals {or for measuring}
- 3/28 . . . Automatic routine testing {; Fault testing; Installation testing; Test methods, test equipment or test arrangements therefor}
- 3/30 for subscriber's lines {, for the local loop}
- 3/301 {Circuit arrangements at the subscriber's side of the line}
- 3/302 {using modulation techniques for copper pairs ([for ISDN systems H04M 3/245](#); [ISDN selection or connection testing arrangements H04Q 11/045](#))}
- 3/303 {and using PCM multiplexers, e.g. pair gain systems}
- 3/304 {and using xDSL modems ([xDSL line qualification H04M 3/306](#))}
- 3/305 {testing of physical copper line parameters, e.g. capacitance or resistance ([locating faults in cables G01R 31/08](#))}
- 3/306 {for frequencies above the voice frequency, e.g. xDSL line qualification ([test methods, test equipment and test arrangements for subscriber lines using xDSL modems H04M 3/304](#); systems modifying transmission characteristics according to link quality [H04L 1/0001](#); [monitoring and/or testing of line transmission systems H04B 3/46](#))}
- 3/307 {using ringback}
- 3/308 {Craftsperson test terminals}
- 3/32 for lines between exchanges
- 3/323 {for the arrangements providing the connection (test connection, test call, call simulation)}
- 3/326 {for registers and translators}
- 3/34 . . . Testing for cross-talk ([in lines generally H04B](#))
- 3/36 . . Statistical metering, e.g. recording occasions when traffic exceeds capacity of trunks ([digital computers for evaluating statistical data G06F 17/18](#))
- 3/362 . . . {Traffic simulation}
- 3/365 . . . {Load metering of control unit}
- 3/367 . . . {Traffic or load control}
- 3/38 . Graded-service arrangements, i.e. some subscribers prevented from establishing certain connections ([queueing arrangements {H04M 3/523}](#), [H04Q 3/64](#))
- 3/382 . . {using authorisation codes or passwords}
- 3/385 . . . {using speech signals}
- 3/387 . . {using subscriber identification cards}
- 3/40 . Applications of speech amplifiers
- 3/42 . Systems providing special services or facilities to subscribers
- 3/42008 . . {Systems for anonymous communication between parties, e.g. by use of disposal contact identifiers}
- 3/42017 . . {Customized ring-back tones}
- 3/42025 . . {Calling or Called party identification service ([not used](#))}
- 3/42034 . . . {Calling party identification service ([not used](#))}
- 3/42042 {Notifying the called party of information on the calling party ([details within substation equipment H04M 1/57](#), [signalling details H04Q 3/72](#))}
- 3/42051 {where the notification is included in the ringing tone}
- 3/42059 {Making use of the calling party identifier}
- 3/42068 {where the identifier is used to access a profile}
- 3/42076 {where the identifier is a Uniform Resource Locator}
- 3/42085 . . . {Called party identification service ([not used](#))}
- 3/42093 {Notifying the calling party of information on the called or connected party}
- 3/42102 {Making use of the called party identifier}
- 3/4211 {where the identifier is used to access a profile}
- 3/42119 {where the identifier is a Uniform Resource Locator}

- 3/42127 . . {Systems providing several special services or facilities from groups [H04M 3/42008](#) - [H04M 3/58](#)}
- 3/42136 . . {Administration or customisation of services}
- 3/42144 . . . {by service provider}
- 3/42153 . . . {by subscriber}
- 3/42161 {via computer interface}
- 3/4217 . . . {Managing service interactions}
- 3/42178 . . . {by downloading data to substation equipment}
- 3/42187 . . {Lines and connections with preferential service}
- 3/42195 . . {Arrangements for calling back a calling subscriber (when the wanted subscriber ceases to be busy [H04M 3/48](#))}
- 3/42204 . . {Arrangements at the exchange for service or number selection by voice (at the terminal [H04M 1/27](#))}
- 3/42212 . . {Call pickup (comprising simultaneous alerting [H04M 3/46](#))}
- 3/42221 . . {Conversation recording systems (at the subscriber's set [H04M 1/656](#))}
- 3/42229 . . {Personal communication services, i.e. services related to one subscriber independent of his terminal and/or location (diverting calls from one subscriber to another subscriber, i.e. two different subscriptions [H04M 3/54](#); selecting arrangements in intelligent networks [H04Q 3/005](#))}
- 3/42238 . . . {in systems with telephone lines with multiple users}
- 3/42246 . . . {where the subscriber uses a multi-mode terminal which moves and accesses different networks with at least one network having a wireline access including cordless PBX}
- 3/42255 {with the subscriber having a personal network-independent number}
- 3/42263 . . . {where the same subscriber uses different terminals, i.e. nomadism}
- 3/42272 {whereby the subscriber registers to the terminals for personalised service provision}
- 3/4228 . . {in networks}
- 3/42289 . . . {with carrierprovider selection by subscriber}
- 3/42297 . . . {with number portability}
- 3/42306 . . . {Number translation services, e.g. premium-rate, freephone or vanity number services}
- 3/42314 . . {in private branch exchanges}
- 3/42323 . . . {PBX's with CTI arrangements}
- 3/42331 . . . {Direct inward dialling}
- 3/4234 . . . {Remote access to features of PBX or home telephone systems-teleworking in a PBX}
- 3/42348 . . {Location-based services which utilize the location information of a target}
- 3/42357 . . . {where the information is provided to a monitoring entity such as a potential calling party or a call processing server}
- 3/42365 . . {Presence services providing information on the willingness to communicate or the ability to communicate in terms of media capability or network connectivity}
- 3/42374 . . . {where the information is provided to a monitoring entity such as a potential calling party or a call processing server}
- 3/42382 . . {Text-based messaging services in telephone networks such as PSTN/ISDN, e.g. User-to-User Signalling or Short Message Service for fixed networks}
- 3/42391 . . {where the subscribers are hearing-impaired persons, e.g. telephone devices for the deaf}
- 3/424 . . . Arrangements for automatic redialling (at the subscriber's set [H04M 1/27](#))}
- 3/428 . . . Arrangements for placing incoming calls on hold
- 3/4281 {when the called subscriber is connected to a data network using his telephone line, e.g. dial-up connection, Internet browsing}
- 3/4283 {Call holding circuits}
- 3/4285 {Notifying, informing or entertaining a held party while on hold, e.g. Music On Hold}
- 3/4286 {Notifying a held subscriber when his held call is removed from hold}
- 3/4288 {Notifying a called subscriber of an incoming call during an ongoing call, e.g. Call Waiting}
- 3/432 . . . Arrangements for calling a subscriber at a specific time, e.g. morning call service
- 3/436 . . . Arrangements for screening incoming calls {, i.e. evaluating the characteristics of a call before deciding whether to answer it (based on the calling party profile [H04M 3/42059](#); based on location [H04M 3/42348](#); based on presence [H04M 3/42365](#); diversion [H04M 3/54](#))}
- 3/4365 {based on information specified by the calling party, e.g. priority or subject}
- 3/44 . . . Additional connecting arrangements for providing access to frequently-wanted subscribers, e.g. abbreviated dialling (at the subscriber's set [H04M 1/27](#); automatic redialling [H04M 3/424](#))}
- 3/46 . . . Arrangements for calling a number of substations in a predetermined sequence until an answer is obtained
- 3/465 {Arrangements for simultaneously calling a number of substations until an answer is obtained}
- 3/48 . . . Arrangements for recalling a calling subscriber when the wanted subscriber ceases to be busy
- 3/487 . . . Arrangements for providing information services, e.g. recorded voice services, time announcements
- 3/4872 {Non-interactive information services}
- 3/4874 {Intercept announcements}
- 3/4876 {Time announcements}
- 3/4878 {Advertisement messages}
- 3/493 Interactive information services, e.g. directory enquiries {; Arrangements therefor, e.g. interactive voice response [IVR] systems or voice portals}
- 3/4931 {Directory assistance systems}
- 3/4933 {with operator assistance}
- 3/4935 {Connection initiated by DAS system}
- 3/4936 {Speech interaction details (speech recognition per se [G10L 15/00](#))}
- 3/4938 {comprising a voice browser which renders and interprets, e.g. VoiceXML}
- 3/50 . . . Centralised arrangements for answering calls; Centralised arrangements for recording messages for absent or busy subscribers ([H04M 3/487](#) takes precedence; centralised dictation systems [H04M 11/10](#)); {Centralised arrangements for recording messages}
- 3/51 Centralised call answering arrangements requiring operator intervention {, e.g. call or contact centers for telemarketing}
- 3/5108 {Secretarial services}

- 3/5116 {for emergency applications}
- 3/5125 {with remote located operators}
- 3/5133 {Operator terminal details}
- 3/5141 {Details of processing calls and other types of contacts in an unified manner ([unified messaging in packet-switching networks H04L 51/36](#))}
- 3/515 {Night service systems}
- 3/5158 {in combination with automated outdialling systems ([devices for signalling identity of wanted subscriber H04M 1/26](#))}
- 3/5166 {in combination with interactive voice response systems or voice portals, e.g. as front-ends}
- 3/5175 {Call or contact centers supervision arrangements}
- 3/5183 {Call or contact centers with computer-telephony arrangements}
- 3/5191 {interacting with the Internet}
- 3/52 Arrangements for routing dead number calls to operators
- 3/523 with call distribution or queueing
- 3/5231 {with call back arrangements}
- 3/5232 {Call distribution algorithms}
- 3/5233 {Operator skill based call distribution}
- 3/5234 {Uniform load distribution}
- 3/5235 {Dependent on call type or called number [DNIS]}
- 3/5236 {Sequential or circular distribution}
- 3/5237 {Interconnection arrangements between ACD systems}
- 3/5238 {with waiting time or load prediction arrangements}
- 3/527 . . . Centralised call answering arrangements not requiring operator intervention
- 3/53 . . . Centralised arrangements for recording incoming messages {, i.e. mailbox systems}
- 3/5307 {for recording messages comprising any combination of audio and non-audio components}
- 3/5315 {where the non-audio components are still images or video ([still image mailbox systems H04N 1/324](#), [intermediate storage of video signals for videophones H04N 7/147](#))}
- 3/5322 {for recording text messages}
- 3/533 Voice mail systems
- 3/53308 {Message originator indirectly connected to the message centre, e.g. after detection of busy or absent state of a called party}
- 3/53316 {Messaging centre selected by message originator}
- 3/53325 {Interconnection arrangements between voice mail systems}
- 3/53333 {Message receiving aspects}
- 3/53341 {Message reply}
- 3/5335 {Message type or category, e.g. priority, indication}
- 3/53358 {Message preview}
- 3/53366 {Message disposing or creating aspects}
- 3/53375 {Message broadcasting}
- 3/53383 {Message registering commands or announcements; Greetings}
- 3/53391 {dependent on calling party}
- 3/537 Arrangements for indicating the presence of a recorded message {, whereby the presence information might include a preview or summary of the message}
- 3/54 . . . Arrangements for diverting calls for one subscriber to another predetermined subscriber {(based on the calling party profile [H04M 3/42059](#); based on location [H04M 3/42348](#); based on presence [H04M 3/42365](#); to voice mail [H04M 3/53308](#))}
- 3/541 . . . {based on information specified by the calling party}
- 3/543 . . . {Call deflection}
- 3/545 . . . {with loop avoiding arrangements}
- 3/546 . . . {in private branch exchanges}
- 3/548 . . . {with remote control}
- 3/56 . . . Arrangements for connecting several subscribers to a common circuit, i.e. affording conference facilities ({[computer conferences H04L 12/1813](#)}; [video conference systems H04N 7/15](#))
- 3/561 . . . {by multiplexing}
- 3/562 . . . {where the conference facilities are distributed}
- 3/563 . . . {User guidance or feature selection}
- 3/564 {whereby the feature is a sub-conference}
- 3/565 {relating to time schedule aspects}
- 3/566 {relating to a participants right to speak ([protocols for floor control H04L 29/06421](#), [H04L 29/06428](#), [H04L 29/06435](#))}
- 3/567 . . . {Multimedia conference systems}
- 3/568 . . . {audio processing specific to telephonic conferencing, e.g. spatial distribution, mixing of participants ([echo suppression in two-way loud-speaking telephone systems H04M 9/02](#); [sound field processing per se H04S 7/30](#))}
- 3/569 {using the instant speaker's algorithm ([speech detection per se G10L 25/78](#))}
- 3/58 . . . Arrangements for transferring received calls from one subscriber to another; Arrangements affording interim conversations between either the calling or the called party and a third party ([substation line holding circuits H04M 1/80](#))
- 3/60 . . . Semi-automatic systems, i.e. in which the numerical selection of the outgoing line is under the control of an operator
- 3/62 . . . Keyboard equipment {(in key telephone systems [H04M 9/003](#))}
- 3/64 . . . Arrangements for signalling the number or class of the calling line to the operator ([between operators in inter-exchange working H04M 5/18](#))
- 5/00 Manual exchanges (substation equipment in general [H04M 1/00](#))**
- 5/02 . . . Constructional details ([jacks, jack-plugs H01R 2201/16](#), [H01R 2201/16](#))
- 5/04 . . . Arrangements for indicating calls or supervising connections for calling or clearing
- 5/06 . . . affording automatic call distribution
- 5/08 . . . using connecting means other than cords
- 5/10 . . . using separate plug for each subscriber
- 5/12 . . . Ringing or otherwise calling substations
- 5/14 . . . Applications of speech amplifiers
- 5/16 . . . with means for reducing interference; with means for reducing effects due to line faults

- 5/18 . . Arrangements for signalling the class or number of called or calling line from one exchange to another
- 5/20 . . Number-indicating arrangements for incoming lines
- 7/00** **Interconnection arrangements between switching centres (transmission arrangements in general [H04B](#); {interconnection arrangements between PSTN/ISDN switching centres [H04Q 3/00](#)})**
- 7/0003 . . {Interconnection between telephone networks and data networks}
- WARNING**
- This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of [H04M 7/0024](#) or [H04M 7/1205](#)
- 7/0006 . . {where voice calls cross both networks}
- WARNING**
- This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of [H04M 7/0024](#) or [H04M 7/1205](#)
- 7/0009 . . {where voice calls remain entirely in the telephone network}
- WARNING**
- This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of [H04M 7/0024](#) or [H04M 7/1205](#)
- 7/0012 . . {Details of application programming interfaces [API] for telephone networks; Arrangements which combine a telephonic communication equipment and a computer, i.e. computer telephony integration [CPI] arrangements}
- 7/0015 . . {First party call control architectures}
- 7/0018 . . {Computer Telephony Resource Boards}
- 7/0021 . . {Details of Application Programming Interfaces}
- 7/0024 . . {Services and arrangements where telephone services are combined with data services (arrangements which combine a telephonic equipment and a computer [H04M 7/0012](#))}
- 7/0027 . . {Collaboration services where a computer is used for data transfer and the telephone is used for telephonic communication}
- 7/003 . . {Click to dial services}
- 7/0033 . . {Notification or handling of incoming calls by a computer}
- 7/0036 . . {where the data service is an information service}
- 7/0039 . . {where the data service is provided by a stream of packets which are rendered in real time by the receiving terminal (audio streaming or audio streaming details of combined audio and video streaming [H04L 29/06476](#))}
- 7/0042 . . {where the data service is a text-based messaging service ([H04M 7/0054](#) takes precedence)}
- 7/0045 . . . {where the text-based messaging service is an instant messaging service}
- 7/0048 . . . {where the text-based messaging service is a Short Message Service}
- 7/0051 . . {where the data service is a multimedia messaging service}
- 7/0054 . . {where the data service is an electronic mail service}
- 7/0057 . . {Services where the data services network provides a telephone service in addition or as an alternative, e.g. for backup purposes, to the telephone service provided by the telephone services network}
- 7/006 . . {Networks other than PSTN/ISDN providing telephone service, e.g. Voice over Internet Protocol (VoIP) , including next generation networks with a packet-switched transport layer ([H04L 65/00](#) takes precedence; aspects not specific to the type of network [H04M 3/00](#); special services in those networks [H04M 3/42](#))}
- 7/0063 . . {where the network is a peer-to-peer network}
- 7/0066 . . {Details of access arrangements to the networks (where the access arrangement is a PSTN/ISDN access [H04M 7/122](#))}
- 7/0069 . . . {comprising a residential gateway, e.g. those which provide an adapter for POTS or ISDN terminals}
- 7/0072 . . {Speech codec negotiation ([H04L 65/1069](#) takes precedence)}
- 7/0075 . . {Details of addressing, directories or routing tables}
- 7/0078 . . {Security; Fraud detection; Fraud prevention}
- 7/0081 . . {Network operation, administration, maintenance, or provisioning}
- 7/0084 . . . {Network monitoring; Error detection; Error recovery; Network testing}
- 7/0087 . . . {Network planning or provisioning}
- 7/009 . . {in systems involving PBX or KTS networks}
- 7/0093 . . {signalling arrangements in networks}
- 7/0096 . . {Trunk circuits}
- 7/06 . . using auxiliary connections for control or supervision { , e.g. where the auxiliary connection is a signalling system number 7 link}
- 7/063 . . {where the telephone network is a network other than PSTN/ISDN}
- 7/066 . . {where the auxiliary connection is via an Internet Protocol network (interworking of signalling system number 7 (SS7) with Internet Protocol-based session control protocols [H04M 7/1265](#), [H04M 7/127](#))}
- 7/08 . . for phantom working {(phantom working in transmission of digital information [H04L 5/20](#))}
- 7/12 . . for working between exchanges having different types of switching equipment, e.g. power-driven and step by step, decimal and non-decimal, {circuit-switched and packet-switched, i.e. gateway arrangements}
- 7/1205 . . {where the types of switching equipment comprises PSTN/ISDN equipment and switching equipment of networks other than PSTN/ISDN, e.g. Internet Protocol networks}
- 7/121 . . . {Details of network access arrangements or protocols}
- 7/1215 {where a cable TV network is used as an access to the PSTN/ISDN}

- 7/122 {where the PSTN/ISDN access is used as an access to networks other than PSTN/ISDN (access arrangements to networks other than PSTN/ISDN [H04M 7/0066](#); access arrangements to public data networks [H04L 12/2856](#))}
- 7/1225 . . . {Details of core network interconnection arrangements}
- 7/123 {where the packet-switched network is an Internet Protocol Multimedia System-type network}
- 7/1235 {where one of the core networks is a wireless network}
- 7/124 . . . {where PSTN/ISDN interconnects two networks other than PSTN/ISDN}
- 7/1245 . . . {where a network other than PSTN/ISDN interconnects two PSTN/ISDN networks}
- 7/125 . . . {Details of gateway equipment}
- 7/1255 {where the switching fabric and the switching logic are decomposed such as in Media Gateway Control}
- 7/126 . . . {Interworking of session control protocols}
- 7/1265 {where the session control protocols comprise H.323 and SS7}
- 7/127 {where the session control protocols comprise SIP and SS7}
- 7/1275 . . . {Methods and means to improve the telephone service quality, e.g. reservation, prioritisation or admission control}
- 7/128 . . . {Details of addressing, directories or routing tables}
- 7/1285 . . . {Details of finding and selecting a gateway for a particular call}
- 7/129 . . . {Details of providing call progress tones or announcements}
- 7/1295 . . . {Details of dual tone multiple frequency signalling}
- 7/14 . . . in systems involving main and subordinate switching centres
- 7/16 . . . in systems employing carrier frequencies
- 9/00 Interconnection arrangements not involving centralised switching**
- 9/001 . . . {Two-way communication systems between a limited number of parties}
- 9/002 . . . {with subscriber controlled access to a line, i.e. key telephone systems}
- 9/003 . . . {Transmission of control signals from or to the key telephone set; signalling equipment at key telephone set, e.g. keyboard or display equipment (keyboard equipment in semi-automatic systems [H04M 3/62](#))}
- 9/005 . . . {with subscriber controlled access to an exchange line}
- 9/006 . . . {Exchange line circuits (subscriber line circuits [H04M 3/005](#))}
- 9/007 . . . {wherein the key telephone sets are star-connected to a central unit by a limited number of lines}
- 9/008 . . . {Multiplex systems}
- 9/02 . . . involving a common line for all parties
- 9/022 . . . {Multiplex systems}
- 9/025 . . . {Time division multiplex systems, e.g. loop systems}
- 9/027 . . . {Frequency division multiplex systems}
- 9/04 . . . involving a separate line for each pair of parties
- 9/06 . . . involving combinations of interconnecting lines
- 9/08 . . . Two-way loud-speaking telephone systems with means for suppressing echoes or otherwise conditioning for one or other direction of traffic (for line transmission in general [H04B 3/20](#))
- 9/082 . . . {using echo cancellers (echo cancellers [per se H04B 3/23](#))}
- 9/085 . . . {using digital techniques ([H04M 9/082](#) takes precedence)}
- 9/087 . . . {using different frequency bands for transmitting and receiving paths (for line transmission in general [H04B 3/21](#)); using phase shifting arrangements}
- 9/10 . . . with switching of direction of transmission by voice frequency
- 11/00 Telephonic communication systems adapted for combination with other electrical systems**
- 11/002 . . . {with telemetering systems (telemetering in general [G08C](#))}
- 11/005 . . . {using recorded signals, e.g. speech}
- 11/007 . . . {with remote control systems (remote control in general [G08C](#))}
- 11/02 . . . with bell or annunciator systems (such systems in general [G08](#))
- 11/022 . . . {Paging systems (personal calling arrangements or devices [G08B 3/1008](#); selective calling networks [H04W 84/022](#))}
- 11/025 . . . {Door telephones (adapted for television [H04N 7/186](#))}
- 11/027 . . . {Annunciator systems for hospitals}
- 11/04 . . . with fire, police, burglar, or other alarm systems (such systems in general [G08](#))
- 11/045 . . . {using recorded signals, e.g. speech}
- 11/06 . . . Simultaneous speech and telegraphic or other data transmission over the same conductors (telegraphy in general [H04L](#))
- 11/062 . . . {using different frequency bands for speech and other data}
- 11/064 . . . {Data transmission during pauses in telephone conversation}
- 11/066 . . . {Telephone sets adapted for data transmission}
- 11/068 . . . {using time division multiplex techniques; (integrated services digital networks [H04Q 11/0428](#))}
- 11/08 . . . adapted for optional reception of entertainment or informative matter (systems in which the information is continuously available on a carrier over the whole network [H04H 20/81](#))
- 11/085 . . . {using a television receiver, e.g. viewdata system}
- 11/10 . . . with dictation recording and playback systems (such systems in general [G11B](#))
- 13/00 Party-line systems** (substation equipment [H04M 1/00](#); exchange equipment [H04M 3/00](#), [H04M 5/00](#); metering arrangements [H04M 15/36](#))
- 15/00 Arrangements for metering, time-control or time indication {; Metering, charging or billing arrangements for voice wireline or wireless communications, e.g. VoIP}**
- 15/04 . . . Recording calls {, or communications} in printed, perforated or other permanent form

- 15/06 . . Recording class or number of calling {, i.e. A-party} or called party {, i.e. B-party}
- 15/07 . {Split billing, i.e. both A-party and B-party charged for the communication}
- 15/08 . Metering calls to called party {, i.e. B-party charged for the communication}
- 15/09 . {Third party charged communications}
- 15/10 . Metering calls from calling party {, i.e. A-party charged for the communication}
- 15/12 . . Discriminative metering {, charging or billing}
- 15/14 . . . according to class of calling party
- 15/16 . . . according to connection obtained
- 15/18 . . . according to duration of the call {, or the communication}
- 15/20 Operator's time recording or indicating arrangements
- 15/22 . . . according to time of day
- 15/24 . . . preventing metering of tax-free calls to certain lines, e.g. to fire or ambulance stations
- 15/26 . . with a meter {or performing charging or billing} at the exchange controlled by an operator
- 15/28 . with meter at substation {or with calculation of charges at terminal}
- 15/30 . . the meter {or calculation of charges} not being controlled from an exchange
- 15/31 . {Distributed metering or calculation of charges}
- 15/32 . {Charging, billing or} metering arrangements for satellites or concentrators which connect one or more exchange lines with a group of local lines
- 15/34 . {Charging, billing or} metering arrangements for private branch exchanges
- 15/36 . {Charging, billing or} metering arrangements for party-lines
- 15/38 . {Charging, billing or} metering by apparatus other than mechanical step-by-step counter type
- 15/39 . {Arrangements for preventing metering, charging or billing}
- 15/41 . {Billing record details, i.e. parameters, identifiers, structure of call data record [CDR]}
- 15/42 . {Dynamic individual rates per user}
- 15/43 . {Billing software details}
- 15/44 . {Augmented, consolidated or itemized billing statement or bill presentation}
- 15/46 . {Real-time negotiation between users and providers or operators}
- 15/47 . {Fraud detection or prevention means}
- 15/48 . {Secure or trusted billing, e.g. trusted elements or encryption}
- 15/49 . {Connection to several service providers}
- 15/50 . {for cross-charging network operators}
- 15/51 . {for resellers, retailers or service providers}
- 15/52 . {for operator independent billing system}
- 15/53 . {using mediation}
- 15/54 . {for revenue sharing}
- 15/55 . {for hybrid networks}
- 15/56 . {for VoIP communications}
- 15/57 . {for integrated multimedia messaging subsystem [IMS]}
- 15/58 . {based on statistics of usage or network monitoring}
- 15/59 . {based on real time}
- 15/60 . {based on actual use of network resources}
- 15/61 . {based on the service used}
- 15/62 . {based on trigger specification}
- 15/63 . {based on the content carried by the session initiation protocol [SIP] messages}
- 15/64 . {On-line charging system [OCS]}
- 15/65 . {Off-line charging system}
- 15/66 . {Policy and charging system}
- 15/67 . {Transmitting arrangements for sending billing related information}
- 15/68 . {Payment of value-added services}
- 15/70 . {Administration or customization aspects; Counter-checking correct charges}
- 15/705 . . {Account settings, e.g. limits or numbers or payment}
- 15/71 . . {Modifying recharging resources}
- 15/715 . . {Activating new subscriber or card}
- 15/72 . . {by the user}
- 15/721 . . . {using the Internet}
- 15/723 . . . {using the user's device}
- 15/725 . . {by the operator}
- 15/73 . . {Validating charges}
- 15/735 . . {Re-crediting user}
- 15/74 . . {Backing up}
- 15/745 . . {Customizing according to wishes of subscriber, e.g. friends or family}
- 15/75 . . {Account location specifications}
- 15/751 . . . {Card based account, e.g. smart card, SIM card or USIM}
- 15/752 . . . {Terminal based account}
- 15/753 . . . {Network based account}
- 15/755 . . {Account identification}
- 15/7553 . . . {via service number, e.g. calling card}
- 15/7556 . . . {by SIM, e.g. smart card account in SCP, SDP or SN}
- 15/76 . . {Synchronization of distributed accounts}
- 15/765 . . {Linked or grouped accounts, e.g. of users or devices}
- 15/7652 . . . {shared by users}
- 15/7655 . . . {shared by technologies}
- 15/7657 . . . {for closed subscriber group [CSG]}
- 15/77 . . {involving multiple accounts per user}
- 15/771 . . . {per terminal or location, e.g. mobile device with multiple directory numbers}
- 15/772 . . . {per service, e.g. prepay or post-pay}
- 15/773 . . . {per technology, e.g. PSTN or wireless}
- 15/774 . . . {per card}
- 15/775 . . {Account specifications on parallel communications}
- 15/78 . . {Redistributing amount between accounts}
- 15/781 . . . {dynamically}
- 15/783 . . . {by user request}
- 15/785 . . {Reserving amount on the account}
- 15/79 . . {Virtual purses}
- 15/80 . {Rating or billing plans; Tariff determination aspects}
- 15/8005 . . {Flat-fee}
- 15/8011 . . {using class of subscriber}
- 15/8016 . . {based on quality of service [QoS]}
- 15/8022 . . {Determining tariff or charge band}
- 15/8027 . . {based on network load situation}
- 15/8033 . . {location-dependent, e.g. business or home}
- 15/8038 . . {Roaming or handoff}
- 15/8044 . . {Least cost routing}
- 15/805 . . . {Bidding}

- 15/8055 . . . {Selecting cheaper transport technology for a given service}
- 15/8061 . . . {Selecting least cost route depending on origin or type of service}
- 15/8066 . . {According to the number of recipients}
- 15/8072 . . . {Group, conference or multi-party call}
- 15/8077 . . . {Group MMS or SMS; Point-to-multi-point services or broadcast services}
- 15/8083 . . {involving reduced rates or discounts, e.g. time-of-day reductions or volume discounts}
- 15/8088 . . {involving increased rates, e.g. spam messaging billing differentiation}
- 15/8094 . . {Trial service, i.e. free of charge service for trial purposes}
- 15/81 . {Dynamic pricing, e.g. change of tariff during call}
- 15/82 . {Criteria or parameters used for performing billing operations}
- 15/8207 . . {Time based data metric aspects, e.g. VoIP or circuit switched packet data}
- 15/8214 . . {Data or packet based}
- 15/8221 . . {Message based}
- 15/8228 . . {Session based}
- 15/8235 . . {Access based}
- 15/8242 . . {Transaction based}
- 15/825 . . {based on the number of used channels, e.g. bundling channels, frequencies or CDMA codes}
- 15/8257 . . {Unit based}
- 15/8264 . . {Pulse based}
- 15/8271 . . {Based on the number of used services, e.g. call forwarding or call barring}
- 15/8278 . . {Event based}
- 15/8285 . . {Money or currency based}
- 15/8292 . . {Charging for signaling or unsuccessful connection}
- 15/83 . {Notification aspects}
- 15/835 . . {Time or frequency of notifications, e.g. Advice of Charge [AoC]}
- 15/8351 . . . {before establishing a communication}
- 15/8353 . . . {during the communication}
- 15/8355 . . . {after the end of the communication}
- 15/8356 . . . {in regular intervals}
- 15/8358 . . . {Dynamic change of the length or frequency of the notification interval}
- 15/84 . . {Types of notifications}
- 15/842 . . . {Announcement, e.g. IVR dialogue}
- 15/844 . . . {Message, e.g. SMS}
- 15/846 . . . {optical, e.g. icon}
- 15/848 . . . {Tone, e.g. beeper}
- 15/85 . . {characterised by the type of condition triggering a notification}
- 15/851 . . . {Determined tariff}
- 15/852 . . . {Low balance or limit reached}
- 15/853 . . . {Calculate maximum communication time or volume}
- 15/854 . . . {Available credit}
- 15/855 . . . {Successful event}
- 15/856 . . . {Unsuccessful event}
- 15/857 . . . {Cumulative charges}
- 15/858 . . . {Request users acknowledgement prior to use}
- 15/86 . . {Recipients of the notification}
- 15/863 . . . {multiple parties, e.g. multi party AOC}
- 15/866 . . . {a predetermined or undetermined destination, e.g. notifying a prepaid accounting server of a successful delivery of a service}
- 15/88 . . {Provision for limiting connection, or expenditure}
- 15/881 . . {for continuing the call beyond the limit using allow grace}
- 15/882 . . {for continuing the call beyond the limit using an alternative, e.g. alternative account}
- 15/883 . . {linked escalation limits, i.e. establish, first or second limit}
- 15/885 . . {limit per application}
- 15/886 . . {limit per terminal}
- 15/887 . . {limit per user or user related number}
- 15/888 . . {severing connection after predetermined time or data}
- 15/90 . {using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN]}
- 15/93 . {using near field or similar technologies}
- 17/00** **Prepayment {of wireline communication systems, wireless communication systems or} telephone systems (using a coded card to authorise calls from a telephone set H04M 1/675)**
- 17/005 . {Disposable prepaid communication devices}
- 17/01 . {Cocot systems, i.e. private ownership of payphones}
- 17/02 . Coin-freed or check-freed systems {, e.g. mobile- or card-operated phones, public telephones or booths}
- 17/023 . . {Circuit arrangements}
- 17/026 . . {Constructional features}
- 17/10 . {Account details or usage}
- 17/103 . . {using SIMs (USIMs) or calling cards}
- 17/106 . . {using commercial credit or debit cards}
- 2017/12 . {using calling, telephone credit/debit cards}
- 2017/14 . {using commercial credit/debit cards, e.g. VISA, AMEX}
- 17/20 . {with provision for recharging the prepaid account or card, or for credit establishment}
- 17/201 . . {automatic recharging with predetermined amount at threshold}
- 17/202 . . {selecting interactively a payment method}
- 17/203 . . . {cash-based recharging, i.e. physical input of coins or bank notes}
- 17/204 . . {on-line recharging, e.g. cashless}
- 17/205 . . . {by calling a service number, e.g. interactive voice response [IVR] or menu}
- 17/206 . . . {by sending a message, e.g. SMS, MMS or EMS}
- 17/207 . . . {using signaling, e.g. USSD, UUS or DTMF}
- 17/208 . . . {using WAP or Internet, i.e. including electronic payment, e.g. e-cash}
- 2017/22 . {with automatic recharging of account/card, e.g. if limit is reached during connection the account is recharged automatically}
- 2017/222 . . {at threshold}
- 2017/225 . . {with predetermined amount}
- 2017/227 . . {with amount selected interactively}
- 2017/24 . {with on-line recharging of an account or card, e.g. cashless}
- 2017/241 . . {by calling a service number IVR, menu}
- 2017/243 . . {by sending a message, e.g. SMS, MMS, EMS}
- 2017/245 . . {using money, i.e. physical input of coins or bank notes}
- 2017/246 . . {using signalling, e.g. USSD, UUS, DTMF}

- 2017/248 . . {using WAP or Internet, i.e. including electronic payment, e-cash, etc.}
- 2017/25 . {using a code}
- 2017/2506 . . {code input or reading}
- 2017/2512 . . . {from communication terminal display}
- 2017/2518 . . . {from material card, using a magnetic stripe card}
- 2017/2525 . . . {optical code recognition [OCR], e.g. bar code reader}
- 2017/2531 . . . {wireless, e.g. Bluetooth, RFID}
- 2017/2537 . . {code reader}
- 2017/2543 . . . {public, e.g. public recharge point}
- 2017/255 . . . {local at the terminal itself}
- 2017/2556 . . {code type}
- 2017/2562 . . . {alphanumeric}
- 2017/2568 . . . {bar code}
- 2017/2575 . . . {pattern, i.e. single or changing sequences of pictures or patterns}
- 2017/2581 . . . {punched holes}
- 2017/2587 . . . {temporarily valid code}
- 2017/2593 . . {code management}
- 2017/26 . {with real-time recharging of account/card, e.g. if limit is reached during connection user is asked if he wants to recharge or not}
- 17/30 . {using a code}
- 17/301 . . {Code input or reading}
- 17/302 . . . {from communication terminal display}
- 17/303 . . . {from material cards, i.e. magnetic stripe card}
- 17/304 . . . {Optical code recognition [OCR], e.g. bar code reader}
- 17/305 . . . {Wireless codes, e.g. Bluetooth or RFID}
- 17/306 . . . {using public code readers, e.g. public payment or recharge point}
- 17/307 . . {Code type, e.g. alphanumeric code, bar code}
- 17/308 . . {Code management}
- 17/35 . {Pay as you go}
- 19/00 Current supply arrangements for telephone systems (for selecting-equipment H04Q 1/28)**
- 19/001 . {Current supply source at the exchanger providing current to substations}
- 19/003 . . {Arrangements for compensation of the DC flux in line transformers}
- 19/005 . . {Feeding arrangements without the use of line transformers}
- 19/006 . . {Circuits for increasing the range of current supply source}
- 19/008 . . {Using DC/DC converters (DC/DC converters per se H02M 3/28)}
- 19/02 . providing ringing current or supervisory tones, e.g. dialling tone, busy tone
- 19/023 . . {by reversing the polarity of the current at the exchange}
- 19/026 . . {Arrangements for interrupting the ringing current}
- 19/04 . . ringing-current generated at substation
- 19/041 . . . {Encoding the ringing signal, i.e. providing distinctive or selective ringing capability}
- 19/042 . . . {with variable loudness of the ringing tone, e.g. variable envelope or amplitude of ring signal}
- 19/044 {according to the level of ambient noise}
- 19/045 . . . {Call privacy arrangements, e.g. timely inhibiting the ring signal}
- 19/047 . . . {Vibrating means for incoming calls}
- 19/048 . . . {Arrangements providing optical indication of the incoming call, e.g. flasher circuits}
- 19/06 . Current supply sources at subordinate switching centre charged from main exchange
- 19/08 . Current supply sources at substation ([generating ringing current H04M 19/04](#))
- 99/00 Subject matter not provided for in other groups of this subclass**
- 2201/00 Electronic components, circuits, software, systems or apparatus used in telephone systems**
- 2201/02 . Diodes
- 2201/04 . Transistors
- 2201/06 . Integrated circuits
- 2201/08 . Magnetic elements
- 2201/10 . Logic circuits
- 2201/12 . Counting circuits
- 2201/14 . Delay circuits; Timers
- 2201/16 . Sequence circuits
- 2201/18 . Comparators
- 2201/20 . Scanners
- 2201/22 . Synchronisation circuits
- 2201/26 . A/D convertors
- 2201/28 . S/P convertors
- 2201/30 . PCM
- 2201/32 . Personal computers
- 2201/34 . Microprocessors
- 2201/36 . Memories
- 2201/38 . Displays
- 2201/39 . using speech synthesis ([speech synthesis per se G10L 13/00](#))
- 2201/40 . using speech recognition ([speech recognition per se G10L 15/00](#))
- 2201/405 . . involving speaker-dependent recognition ([adaptation to speaker for speech recognition G10L 15/07](#))
- 2201/41 . using speaker recognition ([speaker recognition per se G10L 17/00](#))
- 2201/42 . Graphical user interfaces
- 2201/50 . Telephonic communication in combination with video communication
- 2201/52 . Telephonic communication in combination with fax communication
- 2201/54 . Object oriented software
- 2201/60 . Medium conversion
- 2201/80 . line protection circuits such as current or overvoltage protection circuits
- 2203/00 Aspects of automatic or semi-automatic exchanges**
- 2203/05 . related to OAM&P
- 2203/051 . . technician dispatch system
- 2203/052 . . software update
- 2203/053 . . remote terminal provisioning, e.g. of applets
- 2203/055 . . loopback testing
- 2203/056 . . non-invasive testing, i.e. in operation testing without service interruption
- 2203/057 . . distortion monitoring ([QoS monitoring H04M 3/2227](#); [quality of speech transmission monitoring H04M 3/2236](#))
- 2203/058 . . signature devices
- 2203/10 . related to the purpose or context of the telephonic communication

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- 2203/1008 . . Calls without connection establishment for implicit information transfer or as a service trigger
- 2203/1016 . . Telecontrol
- 2203/1025 . . . of avatars
- 2203/1033 . . Remote administration, e.g. of web servers
- 2203/1041 . . Televoting
- 2203/105 . . Financial transactions and auctions, e.g. bidding ([auctioneering devices in packet switching networks H04L 12/1804](#))
- 2203/1058 . . Shopping and product ordering
- 2203/1066 . . Game playing
- 2203/1075 . . Telemetry, e.g. transmission of ambient measurements
- 2203/1083 . . for hotels
- 2203/1091 . . Fixed mobile conversion
- 2203/15 . . related to dial plan and call routing
- 2203/152 . . Temporary dial plan
- 2203/154 . . Functional or symbolic dial plan such as license plate numbers
- 2203/156 . . On-line status dependent routing
- 2203/158 . . Call-type dependent routing ([route determination based on the nature of the carried application in packet switching networks H04L 45/306](#))
- 2203/20 . . related to features of supplementary services
- 2203/2005 . . Temporarily overriding a service configuration
- 2203/2011 . . Service processing based on information specified by a party before or during a call, e.g. information, tone or routing selection
- 2203/2016 . . Call initiation by network rather than by subscriber
- 2203/2022 . . Path replacement
- 2203/2027 . . Live party detection
- 2203/2033 . . Call handling or answering restrictions, e.g. specified by the calling party
- 2203/2038 . . Call context notifications
- 2203/2044 . . Group features, e.g. closed user group
- 2203/205 . . Broadcasting ([broadcasting in packet switching networks H04L 12/18](#))
- 2203/2055 . . Line restrictions
- 2203/2061 . . Language aspects
- 2203/2066 . . Call type detection of indication, e.g. voice or fax, mobile of fixed, PSTN or IP
- 2203/2072 . . Schedules, e.g. personal calendars
- 2203/2077 . . Call queuing apart from automatic call distribution
- 2203/2083 . . Confirmation by serviced party
- 2203/2088 . . Call or conference reconnect, e.g. resulting from isdn terminal portability
- 2203/2094 . . Proximity
- 2203/25 . . related to user interface aspects of the telephonic communication service
- 2203/251 . . where a voice mode or a visual mode can be used interchangeably
- 2203/252 . . . where a voice mode is enhanced with visual information
- 2203/253 . . . where a visual mode is used instead of a voice mode
- 2203/254 where the visual mode comprises menus
- 2203/255 . . comprising a personalized user interface
- 2203/256 . . comprising a service specific user interface
- 2203/257 . . remote control of substation user interface for telephonic services, e.g. by ISDN stimulus, ADSI, wireless telephony application WTA, MExE or BREW
- 2203/258 . . Service state indications
- 2203/30 . . related to audio recordings in general
- 2203/301 . . Management of recordings
- 2203/303 . . Marking
- 2203/305 . . Recording playback features, e.g. increased speed
- 2203/306 . . Prerecordings to be used during a voice call
- 2203/308 . . Personal name recording
- 2203/35 . . related to information services provided via a voice call
- 2203/351 . . Pre or post-call/conference information service
- 2203/352 . . In-call/conference information service
- 2203/353 . . where the information comprises non-audio but is provided over voice channels ([protocols for multimedia information services per se H04L 65/00](#))
- 2203/354 . . Reverse directory service
- 2203/355 . . Interactive dialogue design tools, features or methods
- 2203/356 . . Phonecasting
- 2203/357 . . Autocues for dialog assistance
- 2203/358 . . Digital rights management
- 2203/359 . . Augmented reality
- 2203/40 . . related to call centers
- 2203/401 . . Performance feedback
- 2203/402 . . Agent or workforce management
- 2203/403 . . Agent or workforce training
- 2203/404 . . Collaboration among agents
- 2203/405 . . Competitive bidding for work items
- 2203/406 . . Rerouting calls between call centers
- 2203/407 . . Call center operated for multiple customers
- 2203/408 . . Customer-specific call routing plans
- 2203/45 . . related to voicemail messaging
- 2203/4509 . . Unified messaging with single point of access to voicemail and other mail or messaging systems ([unified messaging in packet switching networks H04L 51/36](#))
- 2203/4518 . . Attachments to voicemail ([messages including annexed information, e.g. Attachments, in packet switching networks H04L 51/08](#))
- 2203/4527 . . Voicemail attached to other kind of message
- 2203/4536 . . Voicemail combined with text-based messaging
- 2203/4545 . . Message forwarding ([selective message forwarding in packet switching networks H04L 51/14](#))
- 2203/4554 . . Sender-side editing
- 2203/4563 . . Voicemail monitoring during recording
- 2203/4572 . . Voicemail RSS
- 2203/4581 . . Sending message identifiers instead of whole messages ([notification of incoming messages in packet-switching networks H04L 51/24](#))
- 2203/459 . . Calling party redirected to message centre on called party request
- 2203/50 . . related to audio conference
- 2203/5009 . . Adding a party to an existing conference ([conducting a computer conference, e.g. admission detection H04L 12/1822](#))

- 2203/5018 . . Initiating a conference during a two-party conversation, i.e. three-party-service or three-way-call ([computer conference organisation arrangements H04L 12/1818](#))
- 2203/5027 . . Dropping a party from a conference ([conducting a computer conference, e.g. admission detection H04L 12/1822](#))
- 2203/5036 . . using conference for collection of feedback
- 2203/5045 . . Selection of bridge/multipoint control unit ([network arrangements for computer conference optimisation H04L 12/1827](#))
- 2203/5054 . . Meet-me conference, i.e. participants dial-in
- 2203/5063 . . Centrally initiated conference, i.e. Conference server dials participants ([computer conference organisation arrangements H04L 12/1818](#))
- 2203/5072 . . Multiple active speakers ([conducting a computer conference, e.g. Admission detection H04L 12/1822](#))
- 2203/5081 . . Inform conference party of participants, e.g. of change of participants ([conducting a computer conference, e.g. admission detection, H04L 12/1822](#))
- 2203/509 . . Microphone arrays
- 2203/55 . . related to network data storage and management
- 2203/551 . . Call history ([recording a computer conference H04L 12/1831](#))
- 2203/552 . . Call annotations
- 2203/553 . . Data upload
- 2203/554 . . Data synchronization
- 2203/555 . . Statistics, e.g. about subscribers but not being call statistics
- 2203/556 . . . Statistical analysis and interpretation
- 2203/557 . . Portable profiles
- 2203/558 . . Databases
- 2203/559 . . Sorting systems
- 2203/60 . . related to security aspects in telephonic communication systems ([network architectures or network communication protocols for network security H04L 63/00](#))
- 2203/6009 . . Personal information, e.g. profiles or personal directories being only provided to authorised persons
- 2203/6018 . . Subscriber or terminal logon/logoff
- 2203/6027 . . Fraud preventions
- 2203/6036 . . Anti virus measures
- 2203/6045 . . Identity confirmation
- 2203/6054 . . Biometric subscriber identification
- 2203/6063 . . Authentication using cards
- 2203/6072 . . Authentication using challenger response
- 2203/6081 . . Service authorization mechanisms
- 2203/609 . . Secret communication
- 2203/65 . . related to applications where calls are combined with other types of communication
- 2203/651 . . Text message transmission triggered by call ([automatic reactions in messaging within packet-switching networks H04L 51/02](#))
- 2203/652 . . Call initiation triggered by text message
- 2203/654 . . Pre, in or post-call message
- 2203/655 . . Combination of telephone service and social networking ([messaging within social networks H04L 51/32](#))
- 2203/657 . . Combination of voice and fax calls
- 2203/658 . . Combination of voice calls and paging
- 2207/00 Type of exchange or network, i.e. telephonic medium, in which the telephonic communication takes place**
- 2207/08 . . ISDN systems
- 2207/12 . . intelligent networks
- 2207/14 . . cable networks
- 2207/18 . . wireless networks
- 2207/182 . . . wireless circuit-switched
- 2207/185 . . . wireless packet-switched
- 2207/187 . . . combining circuit and packet-switched, e.g. GPRS
- 2207/20 . . hybrid systems
- 2207/203 . . . composed of PSTN and data network, e.g. the Internet
- 2207/206 . . . composed of PSTN and wireless network
- 2207/30 . . third party service providers
- 2207/35 . . virtual private networks
- 2207/40 . . terminals with audio html browser
- 2207/45 . . public-private interworking, e.g. centrex
- 2215/00 Metering arrangements; Time controlling arrangements; Time indicating arrangements**
- 2215/01 . . Details of billing arrangements
- 2215/0104 . . . Augmented, consolidated or itemised billing statement, e.g. additional billing information, bill presentation, layout, format, e-mail, fax, printout, itemised bill per service or per account, cumulative billing, consolidated billing
- 2215/0108 . . . Customization according to wishes of subscriber, e.g. customer preferences, friends and family, selecting services or billing options, Personal Communication Systems [PCS]
- 2215/0112 . . . Dynamic pricing, e.g. change of tariff during call
- 2215/0116 . . . Provision for limiting expenditure, e.g. limit on call expenses or account
- 2215/012 . . . Continue allow grace, e.g. accept negative balance
- 2215/0124 . . . Continue alternative, i.e. alternative account to continue use
- 2215/0128 . . . Linked escalation limits, establish, first or second limit
- 2215/0132 Limit per application
- 2215/0136 Limit per terminal
- 2215/014 Limit per user or user related number
- 2215/0144 Release upon reaching limit
- 2215/0148 . . . Fraud detection or prevention means
- 2215/0152 . . . General billing plans, rate plans, e.g. charge rates, numbering plans, rate centers, customer accounts
- 2215/0156 . . . Secure and trusted billing, e.g. trusted elements, encryption, digital signature, codes or double check mechanisms to secure billing calculation and information
- 2215/016 . . . Billing using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN]
- 2215/0164 . . . Billing record, e.g. Call Data Record [CDR], Toll Ticket[TT], Automatic Message Accounting [AMA], Call Line Identifier [CLI], details, i.e. parameters, identifiers, structure
- 2215/0168 . . . On line or real-time flexible customization or negotiation according to wishes of subscriber
- 2215/0172 . . . Mediation, i.e. device or program to reformat CDRS from one or more switches in order to adapt to one or more billing programs formats
- 2215/0176 . . . Billing arrangements using internet

- 2215/018 . . On-line real-time billing, able to see billing information while in communication, e.g. via the internet
- 2215/0184 . . involving reduced rates or discounts, e.g. time-of-day reductions, volume discounts, cell discounts, group billing, frequent calling destination(s) or user history list
- 2215/0188 . . Network monitoring; statistics on usage on called/calling number
- 2215/0192 . . Sponsored, subsidised calls via advertising, e.g. calling cards with ads or connecting to special ads, free calling time by purchasing goods
- 2215/0196 . . Payment of value-added services, mainly when their charges are added on the telephone bill, e.g. payment of non-telecom services, e-commerce, on-line banking
- 2215/14 . . Billing aspects relating to the actual charge
- 2215/143 . . Non communication time, i.e. billing the user for the actual time used by the service, not for the time awaiting responses due to network problems; Billing the user when there is a satisfied QoS
- 2215/146 . . Data billing, e.g. wherein the user is charged based only on the time he receives data
- 2215/20 . . Technology dependant metering
- 2215/2006 . . Fixed telephone network, e.g. POTS, ISDN
- 2215/2013 . . Fixed data network, e.g. PDN, ATM, B-ISDN
- 2215/202 . . VoIP; Packet switched telephony
- 2215/2026 . . Wireless network, e.g. GSM, PCS, TACS
- 2215/2033 . . WLAN
- 2215/204 . . UMTS; GPRS
- 2215/2046 . . Hybrid network
- 2215/2053 . . In based PPS
- 2215/206 . . CDMA, i.e. Code Division Multiple Access
- 2215/2066 . . Service node based PPS
- 2215/2073 . . Multipoint, e.g. messaging, broadcast or group SMS
- 2215/208 . . IMS, i.e. Integrated Multimedia messaging Subsystem
- 2215/2086 . . xDSL Modem lines, e.g. HDSL or ADSL
- 2215/2093 . . Push to talk
- 2215/22 . . Bandwidth or usage-sensitive billing
- 2215/24 . . Voice over IP billing
- 2215/26 . . Data billing charged as a voice call, i.e. based on time or unit charging
- 2215/28 . . SMS billing
- 2215/32 . . Involving wireless systems
- 2215/34 . . Roaming
- 2215/42 . . Least cost routing, i.e. provision for selecting the lowest cost tariff
- 2215/44 . . Charging/billing arrangements for connection made over different networks, e.g. wireless and PSTN, ISDN, etc.
- 2215/46 . . Connection to several service providers
- 2215/48 . . Sending information over a non-traffic network channel or another connection than the one actually used, e.g. signalling, D-channel, data and voice
- 2215/52 . . Interconnection, inter-exchange, reseller billing, billing agreements between different operators, e.g. billing identifier added on the CDR in order to cross charge the other operator, inter-operator accounting, reconciliation, bill directly resellers customers
- 2215/54 . . Resellers-retail or service providers billing, e.g. agreements with telephone service operator, activation, charging/recharging of accounts
- 2215/56 . . On line or real-time flexible agreements between service providers and telecom operators
- 2215/62 . . Called party billing, e.g. reverse billing, freephone, collect call, 0800 or 0900
- 2215/64 . . Split billing, sharing the cost of calls, e.g. between calling and called parties
- 2215/66 . . Third party billing, i.e. third party can also be the predetermined telephone line of the caller if he is calling from another telephone set
- 2215/68 . . Billing calls completely to the calling party, except POTS, e.g. charge on caller's choice service
- 2215/70 . . Administration aspects, modify settings or limits or counter-check correct charges
- 2215/7009 . . Account settings, e.g. users, terminals, limits, numbers or payment
- 2215/7018 . . Modify recharging resources, e.g. banking, credit, debit or phone account
- 2215/7027 . . Activate new subscriber or card
- 2215/7036 . . Administer via user
- 2215/7045 . . . Using Internet or WAP
- 2215/7054 . . . Using the phone
- 2215/7063 . . Administer via operator
- 2215/7072 . . Validate charges
- 2215/7081 . . . Re-credit user, e.g. repay user with the amount or free time after finding an error in calculating the charges
- 2215/709 . . Backup
- 2215/72 . . Account specifications
- 2215/7204 . . Account location
- 2215/7209 . . . Card based, e.g. smart card, SIM card or USIM
- 2215/7213 . . . Terminal based
- 2215/7218 . . . Network based
- 2215/7222 . . Account identification
- 2215/7227 . . . via service number, e.g. calling card
- 2215/7231 . . . by SIM, e.g. smart card account in SCP, SDP or SN
- 2215/7236 . . Synchronisation of distributed accounts
- 2215/724 . . Linked accounts
- 2215/7245 . . . Shared by users, e.g. group accounts or one account for different users
- 2215/725 . . . Shared by technologies, e.g. one account for different access technologies
- 2215/7254 . . . Multiple accounts per user
- 2215/7259 per terminal or location; Mobile with multiple directory numbers
- 2215/7263 per service, e.g. prepaid and post-pay
- 2215/7268 per technology, e.g. PSTN or wireless
- 2215/7272 per card
- 2215/7277 . . Account specifications on parallel communications
- 2215/7281 Redistribute amount between accounts
- 2215/7286 Dynamically
- 2215/729 by user request
- 2215/7295 Reserve amount, e.g. according to estimated costs for a typical communication duration or according to the estimated volume to be transferred
- 2215/74 . . Rating aspects, e.g. rating parameters or tariff determination aspects
- 2215/7407 . . class of subscriber
- 2215/7414 . . QoS
- 2215/7421 . . Determine tariff or charge band

- 2215/7428 . . . Load situation, e.g. Current network load, traffic load or available resources
- 2215/7435 . . . Location dependent, e.g. Business or home
- 2215/7442 . . . Roaming
- 2215/745 . . . Least cost routing, e.g. Automatic or manual, call by call or by preselection
- 2215/7457 Bidding
- 2215/7464 Select transport technology for a given service, e.g. use for data connection WLAN rather than GSM/UMTS/GPRS or use company's communication network rather than a public network
- 2215/7471 Select route depending on origin or type of service, e.g. route TDMA voice calls differently than VoIP calls
- 2215/7478 . . . According to the number of recipients
- 2215/7485 Group call; Conference call; Multi Party Call
- 2215/7492 Group MMS or SMS; Point-to-multi-point services, broadcast services
- 2215/78 . . . Metric aspects
- 2215/7806 Time based
- 2215/7813 Time based data, e.g. VoIP or circuit switched packet data
- 2215/782 Data or packet based
- 2215/7826 Message based
- 2215/7833 Session based
- 2215/784 Access based
- 2215/7846 Transaction based
- 2215/7853 Based on the number of used channels, e.g. bundling channels or frequencies or CDMA codes
- 2215/786 Unit based
- 2215/7866 Pulse based
- 2215/7873 Based on the number of used services, e.g. call forwarding or call barring
- 2215/788 Event based
- 2215/7886 Apply cheapest or best package, e.g. selection among available tariffs or packages ([least cost routing H04M 2215/42](#))
- 2215/7893 Money or currency based
- 2215/81 Notifying aspects, e.g. notifications or displays to the user
- 2215/8104 Time or frequency of notification
- 2215/8108 before establishing a communication
- 2215/8112 during the communication
- 2215/8116 after the end of the communication
- 2215/812 in regular intervals
- 2215/8125 Dynamic change of the length/frequency of the length of the notification interval, e.g. depending on the remaining available prepaid credit
- 2215/8129 Type of notification
- 2215/8133 Announcement, e.g. IVR dialogue, intelligent peripheral or switch
- 2215/8137 Message, e.g. alphanumeric text, SMS, MMS, EMS or www-based messaging service
- 2215/8141 Optical, e.g. flashing indication of a lamp, icon, soft-key or symbol
- 2215/8145 Tone, e.g. beeper, sound, wave
- 2215/815 Notification when a specific condition, service or event is met
- 2215/8154 Determined tariff
- 2215/8158 Low balance or limit reached
- 2215/8162 Calculate maximum communication time or volume
- 2215/8166 Available credit
- 2215/817 Successful event, e.g. successful recharge or delivery of a service
- 2215/8175 Unsuccessful event, e.g. service rejected due to low credit
- 2215/8179 Cumulative charges
- 2215/8183 Request users acknowledgement prior to use
- 2215/8187 Send to
- 2215/8191 multiple parties, e.g. multi party AOC
- 2215/8195 a predetermined or undetermined destination, e.g. notifying a prepaid accounting server of a successful delivery of a service, a connection, or chargeable content to a mobile terminal
- 2215/82 . . . Advice-of-Charge [AOC], i.e. notify subscriber of charges/cumulative charge; meter at the substation
- 2215/825 Select from different charging routines or algorithms or formulas
- 2215/92 Autonomous calculations of charges in terminal, i.e. meter not controlled from exchange
- 2215/96 Distributed calculation of charges, e.g. in different nodes like for mobiles between HLR and VLR, or between the terminal and the billing function
- 2242/00 Special services or facilities**
- 2242/02 . . . Broadcasting
- 2242/04 . . . for emergency applications
- 2242/06 . . . Lines and connections with preferential service
- 2242/08 . . . menus for interactive user guidance
- 2242/10 . . . Secret communications
- 2242/12 . . . Language recognition, selection or translation arrangements
- 2242/14 . . . with services dependent on location ([where the service is an information service H04M 2242/15; services independent of location H04M 3/42229](#))
- 2242/15 . . . Information service where the information is dependent on the location of the subscriber
- 2242/16 . . . with computer telephone integration
- 2242/18 . . . Automated outdialling systems
- 2242/20 . . . Televoting service
- 2242/22 . . . Automatic class or number identification arrangements
- 2242/24 . . . Detection or indication of type terminal or call, (e.g. fax, broadband)
- 2242/26 . . . Paging systems
- 2242/28 . . . Services making use of subscriber schedule information
- 2242/30 . . . Determination of the location of a subscriber
- 2242/40 . . . Data synchronization between user terminals and central server
- 2242/405 . . . Incremental backup
- 2250/00 Details of telephonic subscriber devices**
- 2250/02 . . . including a Bluetooth interface
- 2250/04 . . . including near field communication means, e.g. RFID
- 2250/06 . . . including a wireless LAN interface
- 2250/08 . . . home cordless telephone systems using the DECT standard
- 2250/10 . . . including a GPS signal receiver
- 2250/12 . . . including a sensor for measuring a physical value, e.g. temperature or motion ([telephones including GPS signal receivers H04M 2250/10](#))

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- 2250/14 . including a card reading device
- 2250/16 . including more than one display unit
- 2250/18 . including more than one keyboard unit
- 2250/20 . including a rotatable camera
- 2250/22 . including a touch pad, a touch sensor or a touch detector ([digitizers for touch screens G06F 3/041](#))
- 2250/52 . including functional features of a camera ([constructional features concerning the integration of cameras in portable phones H04M 1/0264](#))
- 2250/54 . including functional features of a projector or beamer module assembly ([constructional features concerning the integration of projectors in portable phones H04M 1/0272](#))
- 2250/56 . including a user help function
- 2250/58 . including a multilanguage function
- 2250/60 . logging of communication history, e.g. outgoing or incoming calls, missed calls, messages or URLs ([logging of telephone numbers H04M 1/56](#), [H04M 1/57](#))
- 2250/62 . user interface aspects of conference calls
- 2250/64 . file transfer between terminals ([download of applications H04M 1/72525](#); [transfer of messages, e.g. SMS, e-mail or MMS H04M 1/72547](#))
- 2250/66 . user interface aspects for indicating selection options for a communication line
- 2250/68 . with means for recording information, e.g. telephone number during a conversation ([recording of telephone conversations H04M 1/656](#))
- 2250/70 . methods for entering alphabetical characters, e.g. multi-tap or dictionary disambiguation ([methods for entering alphabetical characters per se G06F 3/0237](#))
- 2250/72 . user manuals of subscriber equipments, e.g. of mobile phones
- 2250/74 . with voice recognition means ([voice activated dialling H04M 1/271](#); [voice recognition algorithms G10L 15/00](#))