

CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

(NOTE omitted)

H04 ELECTRIC COMMUNICATION TECHNIQUE

(NOTE omitted)

H04M TELEPHONIC COMMUNICATION (circuits for controlling other apparatus [via](#) a telephone cable and not involving telephone switching apparatus [G08](#))

NOTES

1. This subclass [covers](#) :
 - substation equipment;
 - telephonic communication systems combined with other electrical systems;
 - testing arrangements peculiar to telephonic communication systems.
2. In this subclass, the following terms or expressions are used with the meanings indicated :
 - "subscriber" is a general term for terminal equipment, e.g. fixed, wireless, mobile or cellular phones, or for a user of terminal equipment;
 - "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" include exchanges and satellites.

WARNINGS

1. 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
2. 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 (subscriber services or facilities provided at exchanges H04M 3/00 ; prepayment telephone coin boxes H04M 17/00 ; current supply arrangements H04M 19/08)	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}
		1/0222 {Foldable in two directions, i.e. using a two degree of freedom hinge}
2001/0204	. . . {including a battery compartment}	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)}
1/0206	. . . {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}	
1/021	. . . . . {using combined folding and rotation motions (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}
- 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 hand-sets
- 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
- 1/05 . . . specially adapted for use on head, throat or breast
- 1/06 . . . Hooks; Cradles
- 1/08 associated with switches operated by the weight of the 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 . . . Protecting or guiding telephone cords
- 1/17 . . . Hygienic or sanitary devices on telephone equipment ([for mouthpieces or earpieces per se H04R 1/12](#))
- 1/18 . . . Telephone sets specially adapted for use in ships, mines, or other places exposed to adverse environment ([H04M 1/19 takes precedence](#))
- 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; Mouthpieces or receivers specially adapted therefor ([circuit arrangements for preventing eavesdropping H04M 1/68](#); [telephone cabinets 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 clocks or memoranda pads
- 1/215 . . . by non-intrusive coupling means, e.g. acoustic couplers
- 1/2155 {Acoustic coupling}
- 1/22 . . . Illumination; Arrangements for improving the 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

- 1/247 . . . Telephone sets including user guidance or feature selection means facilitating their use ([user interfaces specially adapted for cordless or mobile telephones H04M 1/724](#))
- WARNING**
- Group [H04M 1/247](#) is impacted by reclassification into groups [H04M 1/724](#), [H04M 1/72403](#), [H04M 1/72406](#), [H04M 1/72409](#), [H04M 1/72412](#), [H04M 1/72415](#), [H04M 1/72418](#), [H04M 1/72421](#), [H04M 1/72424](#), [H04M 1/72427](#), [H04M 1/7243](#), [H04M 1/72433](#), [H04M 1/72436](#), [H04M 1/72439](#), [H04M 1/72442](#), [H04M 1/72445](#), [H04M 1/72448](#), [H04M 1/72451](#), [H04M 1/72454](#), [H04M 1/72457](#), [H04M 1/7246](#), [H04M 1/72463](#), [H04M 1/72466](#), [H04M 1/72469](#), [H04M 1/72472](#), [H04M 1/72475](#), [H04M 1/72478](#), [H04M 1/72481](#), and [H04M 1/72484](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 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 ([user interfaces for cordless or mobile telephones specially adapted for disabled users H04M 1/72475](#); 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}
- 1/2476 . . . {for a visually impaired user ([illuminating or arrangements for improving visibility of characters on dials H04M 1/22](#))}
- 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
- 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 calling a subscriber ([H04M 1/66 takes precedence](#))
- 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, e.g. chips
- 1/27453 Directories allowing storage of additional subscriber data, e.g. metadata
- 1/27457 Management thereof, e.g. manual editing of data
- 1/2746 Sorting, e.g. according to history or frequency of use
- 1/27463 {Predictive input, predictive dialling by comparing the dialled sequence with the content of a telephone directory}
- 1/27467 Methods of retrieving data
- 1/2747 Scrolling on a display
- 1/27475 using interactive graphical means or pictorial representations
- 1/2748 by matching character strings
- 1/27485 Appending a prefix to or inserting a pause into a dialling sequence
- 1/2749 Automatic dialling or redialling systems, e.g. on off-hook or redial on busy
- 1/27495 implemented by means of discrete electronic components, i.e. neither programmable nor microprocessor-controlled ([H04M 1/27457-H04M 1/2749 take precedence](#))
- 1/275 implemented by means of portable electronic directories
- 1/2753 providing data content
- 1/2755 by optical scanning
- 1/2757 by data transmission, e.g. downloading
- 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 signals other than trains of pulses of similar shape, or signals other than currents of one or more different frequencies, e.g. generation of dc signals of alternating polarity, coded pulses or impedance dialling
 - 1/52 . . Arrangements wherein a dial or the like is mechanically coupled to a line selector
 - 1/53 . . Generation of additional signals, e.g. additional pulses
 - 1/54 . . . Arrangements wherein a dial or the like 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
 - 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 numbers
 - 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
 - 1/71 . Substation extension arrangements
- WARNING**
- Group H04M 1/71 is incomplete pending reclassification of documents from group H04M 1/72.
- Groups H04M 1/72 and H04M 1/71 should be considered in order to perform a complete search.
- 1/715 . . using two or more extensions per line (cordless telephones H04M 1/725)
 - 1/72 . Mobile telephones; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selection
- WARNING**
- Group H04M 1/72 is impacted by reclassification into group H04M 1/71.
- Groups H04M 1/72 and H04M 1/71 should be considered in order to perform a complete search.

- 1/724 . . . User interfaces specially adapted for cordless or mobile telephones

WARNING

Groups [H04M 1/724](#) - [H04M 1/72484](#) are incomplete pending reclassification of documents from group [H04M 1/247](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- 1/72403 . . . with means for local support of applications that increase the functionality
- 1/72406 by software upgrading or downloading
- 1/72409 by interfacing with external accessories ([hands-free H04M 1/60](#))
- 1/72412 using two-way short-range wireless interfaces
- 1/72415 for remote control of appliances
- 1/72418 for supporting emergency services
- 1/72421 with automatic activation of emergency service functions, e.g. upon sensing an alarm
- 1/72424 with manual activation of emergency-service functions
- 1/72427 for supporting games or graphical animations
- 1/7243 with interactive means for internal management of messages
- 1/72433 for voice messaging, e.g. dictaphones ([for answering incoming calls H04M 1/64](#))
- 1/72436 for text messaging, e.g. SMS or e-mail
- 1/72439 for image or video messaging
- 1/72442 for playing music files
- 1/72445 for supporting Internet browser applications
- 1/72448 with means for adapting the functionality of the device according to specific conditions
- 1/72451 according to schedules, e.g. using calendar applications
- 1/72454 according to context-related or environment-related conditions
- 1/72457 according to geographic location
- 1/7246 by connection of exchangeable housing parts
- 1/72463 to restrict the functionality of the device
- 1/72466 with selection means, e.g. keys, having functions defined by the mode or the status of the device
- 1/72469 for operating the device by selecting functions from two or more displayed items, e.g. menus or icons
- 1/72472 wherein the items are sorted according to specific criteria, e.g. frequency of use
- 1/72475 specially adapted for disabled users
- 1/72478 for hearing-impaired users
- 1/72481 for visually impaired users
- 1/72484 wherein functions are triggered by incoming communication events
- 1/725 . . . Cordless telephones ([user interfaces specially adapted therefor H04M 1/724](#))
- 1/72502 with one base station connected to a single line
- 1/72505 Radio link set-up procedures
- 1/72508 using a control channel
- 1/72511 Searching for available channels
- 1/72513 On hold, intercom or transfer communication modes

- 1/72516 with means for out-of-range alerting
- 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 waves
- 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
- 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
- 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**
- 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 . . . Calling substations, e.g. by ringing ([selective calling H04Q](#))
- 3/04 . . . the calling signal being supplied from the final selector
- 3/06 . . . the calling signal being supplied from the 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 . Arrangements for supervision, monitoring or testing
- 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
- 3/36 . . Statistical metering, e.g. recording occasions when traffic exceeds capacity of trunks
- 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 ([queuing arrangements 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 ([specially adapted for wireless communication networks H04W 4/00](#))
- 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}
- 3/42034 {Calling party identification service}
- 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}
- 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 or 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 a 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 (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 24/58](#))
 - 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 . . . Calling substations, e.g. by ringing
 - 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 . . . Arrangements for indicating the numbers of the incoming lines
 - 7/00 Arrangements for interconnection between switching centres**
 - 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 or decimal and non-decimal
- 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 Arrangements for interconnection 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 conditioning the signal, e.g. for suppressing echoes for one or both directions of traffic
- 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 specially 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
- 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 alarm systems, e.g. fire, police or burglar alarm systems
- 11/045 . . {using recorded signals, e.g. speech}
- 11/06 . . Simultaneous speech and data transmission, e.g. telegraphic transmission over the same conductors
- 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 . . specially adapted for optional reception of entertainment or informative matter
- 11/085 . . {using a television receiver, e.g. viewdata system}
- 11/10 . . with dictation recording and playback systems
- 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}	2201/30	. PCM
17/304	. . . {Optical code recognition [OCR], e.g. bar code reader}	2201/32	. Personal computers
17/305	. . . {Wireless codes, e.g. Bluetooth or RFID}	2201/34	. Microprocessors
17/306	. . . {using public code readers, e.g. public payment or recharge point}	2201/36	. Memories
17/307	. . {Code type, e.g. alphanumeric code, bar code}	2201/38	. Displays
17/308	. . {Code management}	2201/39	. using speech synthesis (speech synthesis per se G10L 13/00)
17/35	. {Pay as you go}	2201/40	. using speech recognition (speech recognition per se G10L 15/00)
19/00	Current supply arrangements for telephone systems (for selecting-equipment H04Q 1/28)	2201/405	. . involving speaker-dependent recognition (adaptation to speaker for speech recognition G10L 15/07)
19/001	. {Current supply source at the exchanger providing current to substations}	2201/41	. using speaker recognition (speaker recognition per se G10L 17/00)
19/003	. . {Arrangements for compensation of the DC flux in line transformers}	2201/42	. Graphical user interfaces
19/005	. . {Feeding arrangements without the use of line transformers}	2201/50	. Telephonic communication in combination with video communication
19/006	. . {Circuits for increasing the range of current supply source}	2201/52	. Telephonic communication in combination with fax communication
19/008	. . {Using DC/DC converters (DC/DC converters per se H02M 3/28)}	2201/54	. Object oriented software
19/02	. providing ringing current or supervisory tones, e.g. dialling tone or busy tone	2201/60	. Medium conversion
19/023	. . {by reversing the polarity of the current at the exchange}	2201/80	. line protection circuits such as current or overvoltage protection circuits
19/026	. . {Arrangements for interrupting the ringing current}	2203/00	Aspects of automatic or semi-automatic exchanges
19/04	. . the ringing-current being generated at the substations	2203/05	. related to OAM&P
19/041	. . . {Encoding the ringing signal, i.e. providing distinctive or selective ringing capability}	2203/051	. . technician dispatch system
19/042	. . . {with variable loudness of the ringing tone, e.g. variable envelope or amplitude of ring signal}	2203/052	. . software update
19/044	. . . . {according to the level of ambient noise}	2203/053	. . remote terminal provisioning, e.g. of applets
19/045	. . . {Call privacy arrangements, e.g. timely inhibiting the ring signal}	2203/055	. . loopback testing
19/047	. . . {Vibrating means for incoming calls}	2203/056	. . non-invasive testing, i.e. in operation testing without service interruption
19/048	. . . {Arrangements providing optical indication of the incoming call, e.g. flasher circuits}	2203/057	. . distortion monitoring (QoS monitoring H04M 3/2227 ; quality of speech transmission monitoring H04M 3/2236)
19/06	. in which current supply sources at subordinate switching centres are charged from the main exchange	2203/058	. . signature devices
19/08	. with current supply sources at the substations (generating ringing current H04M 19/04)	2203/10	. related to the purpose or context of the telephonic communication
99/00	Subject matter not provided for in other groups of this subclass	2203/1008	. . Calls without connection establishment for implicit information transfer or as a service trigger
2201/00	Electronic components, circuits, software, systems or apparatus used in telephone systems	2203/1016	. . Telecontrol
2201/02	. Diodes	2203/1025	. . . of avatars
2201/04	. Transistors	2203/1033	. . Remote administration, e.g. of web servers
2201/06	. Integrated circuits	2203/1041	. . Televoting
2201/08	. Magnetic elements	2203/105	. . Financial transactions and auctions, e.g. bidding (auctioneering devices in packet switching networks H04L 12/1804)
2201/10	. Logic circuits	2203/1058	. . Shopping and product ordering
2201/12	. Counting circuits	2203/1066	. . Game playing
2201/14	. Delay circuits; Timers	2203/1075	. . Telemetering, e.g. transmission of ambient measurements
2201/16	. Sequence circuits	2203/1083	. . for hotels
2201/18	. Comparators	2203/1091	. . Fixed mobile conversion
2201/20	. Scanners	2203/15	. related to dial plan and call routing
2201/22	. Synchronisation circuits	2203/152	. . Temporary dial plan
2201/26	. A/D convertors	2203/154	. . Functional or symbolic dial plan such as license plate numbers
2201/28	. S/P convertors	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	2215/0108	. . Customization according to wishes of subscriber, e.g. customer preferences, friends and family, selecting services or billing options, Personal Communication Systems [PCS]
2203/557	. . Portable profiles	2215/0112	. . Dynamic pricing, e.g. change of tariff during call
2203/558	. . Databases	2215/0116	. . Provision for limiting expenditure, e.g. limit on call expenses or account
2203/559	. . Sorting systems	2215/012	. . . Continue allow grace, e.g. accept negative balance
2203/60	. related to security aspects in telephonic communication systems (network architectures or network communication protocols for network security H04L 63/00)	2215/0124	. . . Continue alternative, i.e. alternative account to continue use
2203/6009	. . Personal information, e.g. profiles or personal directories being only provided to authorised persons	2215/0128	. . . Linked escalation limits, establish, first or second limit
2203/6018	. . Subscriber or terminal logon/logoff	2215/0132	. . . Limit per application
2203/6027	. . Fraud preventions	2215/0136	. . . Limit per terminal
2203/6036	. . Anti virus measures	2215/014	. . . Limit per user or user related number
2203/6045	. . Identity confirmation	2215/0144	. . . Release upon reaching limit
2203/6054	. . Biometric subscriber identification	2215/0148	. . Fraud detection or prevention means
2203/6063	. . Authentication using cards	2215/0152	. . General billing plans, rate plans, e.g. charge rates, numbering plans, rate centers, customer accounts
2203/6072	. . Authentication using challenger response	2215/0156	. . Secure and trusted billing, e.g. trusted elements, encryption, digital signature, codes or double check mechanisms to secure billing calculation and information
2203/6081	. . Service authorization mechanisms	2215/016	. . Billing using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN]
2203/609	. . Secret communication	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
2203/65	. related to applications where calls are combined with other types of communication	2215/0168	. . On line or real-time flexible customization or negotiation according to wishes of subscriber
2203/651	. . Text message transmission triggered by call (automatic reactions in messaging within packet-switching networks H04L 51/02)	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
2203/652	. . Call initiation triggered by text message	2215/0176	. . Billing arrangements using internet
2203/654	. . Pre, in or post-call message	2215/018	. . On-line real-time billing, able to see billing information while in communication, e.g. via the internet
2203/655	. . Combination of telephone service and social networking (messaging within social networks H04L 51/32)	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
2203/657	. . Combination of voice and fax calls	2215/0188	. . Network monitoring; statistics on usage on called/ calling number
2203/658	. . Combination of voice calls and paging	2215/0192	. . Sponsored, subsidised calls via advertising, e.g. calling cards with ads or connecting to special ads, free calling time by purchasing goods
2207/00	Type of exchange or network, i.e. telephonic medium, in which the telephonic communication takes place	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
2207/08	. ISDN systems	2215/14	. Billing aspects relating to the actual charge
2207/12	. intelligent networks	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
2207/14	. cable networks	2215/146	. . Data billing, e.g. wherein the user is charged based only on the time he receives data
2207/18	. wireless networks	2215/20	. Technology dependant metering
2207/182	. . wireless circuit-switched	2215/2006	. . Fixed telephone network, e.g. POTS, ISDN
2207/185	. . wireless packet-switched	2215/2013	. . Fixed data network, e.g. PDN, ATM, B-ISDN
2207/187	. . combining circuit and packet-switched, e.g. GPRS	2215/202	. . VoIP; Packet switched telephony
2207/20	. hybrid systems	2215/2026	. . Wireless network, e.g. GSM, PCS, TACS
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		

2215/2033	. . WLAN	2215/72	. Account specifications
2215/204	. . UMTS; GPRS	2215/7204	. . Account location
2215/2046	. . Hybrid network	2215/7209	. . . Card based, e.g. smart card, SIM card or USIM
2215/2053	. . In based PPS	2215/7213	. . . Terminal based
2215/206	. . CDMA, i.e. Code Division Multiple Access	2215/7218	. . . Network based
2215/2066	. . Service node based PPS	2215/7222	. . Account identification
2215/2073	. . Multipoint, e.g. messaging, broadcast or group SMS	2215/7227	. . . via service number, e.g. calling card
2215/208	. . IMS, i.e. Integrated Multimedia messaging Subsystem	2215/7231	. . . by SIM, e.g. smart card account in SCP, SDP or SN
2215/2086	. . xDSL Modem lines, e.g. HDSL or ADSL	2215/7236	. . Synchronisation of distributed accounts
2215/2093	. . Push to talk	2215/724	. . Linked accounts
2215/22	. Bandwidth or usage-sensitive billing	2215/7245	. . . Shared by users, e.g. group accounts or one account for different users
2215/24	. Voice over IP billing	2215/725	. . . Shared by technologies, e.g. one account for different access technologies
2215/26	. Data billing charged as a voice call, i.e. based on time or unit charging	2215/7254	. . . Multiple accounts per user
2215/28	. SMS billing	2215/7259	. . . . per terminal or location; Mobile with multiple directory numbers
2215/32	. Involving wireless systems	2215/7263	. . . . per service, e.g. prepay and post-pay
2215/34	. Roaming	2215/7268	. . . . per technology, e.g. PSTN or wireless
2215/42	. Least cost routing, i.e. provision for selecting the lowest cost tariff	2215/7272	. . . . per card
2215/44	. Charging/billing arrangements for connection made over different networks, e.g. wireless and PSTN, ISDN, etc.	2215/7277	. . Account specifications on parallel communications
2215/46	. Connection to several service providers	2215/7281	. . . Redistribute amount between accounts
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	2215/7286	. . . . Dynamically
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	2215/729	. . . . by user request
2215/54	. Resellers-retail or service providers billing, e.g. agreements with telephone service operator, activation, charging/recharging of accounts	2215/7295	. . . Reserve amount, e.g. according to estimated costs for a typical communication duration or according to the estimated volume to be transferred
2215/56	. On line or real-time flexible agreements between service providers and telecoms operators	2215/74	. Rating aspects, e.g. rating parameters or tariff determination aspects
2215/62	. Called party billing, e.g. reverse billing, freephone, collect call, 0800 or 0900	2215/7407	. . class of subscriber
2215/64	. Split billing, sharing the cost of calls, e.g. between calling and called parties	2215/7414	. . QoS
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	2215/7421	. . Determine tariff or charge band
2215/68	. Billing calls completely to the calling party, except POTS, e.g. charge on caller's choice service	2215/7428	. . Load situation, e.g. Current network load, traffic load or available resources
2215/70	. Administration aspects, modify settings or limits or counter-check correct charges	2215/7435	. . Location dependent, e.g. Business or home
2215/7009	. . Account settings, e.g. users, terminals, limits, numbers or payment	2215/7442	. . Roaming
2215/7018	. . Modify recharging resources, e.g. banking, credit, debit or phone account	2215/745	. . Least cost routing, e.g. Automatic or manual, call by call or by preselection
2215/7027	. . Activate new subscriber or card	2215/7457	. . . Bidding
2215/7036	. . Administer via user	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
2215/7045	. . . Using Internet or WAP	2215/7471	. . . Select route depending on origin or type of service, e.g. route TDMA voice calls differently than VoIP calls
2215/7054	. . . Using the phone	2215/7478	. . According to the number of recipients
2215/7063	. . Administer via operator	2215/7485	. . . Group call; Conference call; Multi Party Call
2215/7072	. . Validate charges	2215/7492	. . . Group MMS or SMS; Point-to-multi-point services, broadcast services
2215/7081	. . . Re-credit user, e.g. repay user with the amount or free time after finding an error in calculating the charges	2215/78	. Metric aspects
2215/709	. . Backup	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	2242/10	. Secret communications
2215/786	. . Unit based	2242/12	. Language recognition, selection or translation arrangements
2215/7866	. . Pulse based	2242/14	. with services dependent on location (where the service is an information service H04M 2242/15; services independent of location H04M 3/42229)
2215/7873	. . Based on the number of used services, e.g. call forwarding or call barring	2242/15	. Information service where the information is dependent on the location of the subscriber
2215/788	. . Event based	2242/16	. with computer telephone integration
2215/7886	. . Apply cheapest or best package, e.g. selection among available tariffs or packages (least cost routing H04M 2215/42)	2242/18	. Automated outdialling systems
2215/7893	. . Money or currency based	2242/20	. Televoting service
2215/81	. Notifying aspects, e.g. notifications or displays to the user	2242/22	. Automatic class or number identification arrangements
2215/8104	. . Time or frequency of notification	2242/24	. Detection or indication of type terminal or call, (e.g. fax, broadband)
2215/8108	. . . before establishing a communication	2242/26	. Paging systems
2215/8112	. . . during the communication	2242/28	. Services making use of subscriber schedule information
2215/8116	. . . after the end of the communication	2242/30	. Determination of the location of a subscriber
2215/812	. . . in regular intervals	2242/40	. Data synchronization between user terminals and central server
2215/8125	. . . Dynamic change of the length/frequency of the length of the notification interval, e.g. depending on the remaining available prepaid credit	2242/405	. . Incremental backup
2215/8129	. . Type of notification	2250/00	Details of telephonic subscriber devices
2215/8133	. . . Announcement, e.g. IVR dialogue, intelligent peripheral or switch	2250/02	. including a Bluetooth interface
2215/8137	. . . Message, e.g. alphanumeric text, SMS, MMS, EMS or www-based messaging service	2250/04	. including near field communication means, e.g. RFID
2215/8141	. . . Optical, e.g. flashing indication of a lamp, icon, soft-key or symbol	2250/06	. including a wireless LAN interface
2215/8145	. . . Tone, e.g. beeper, sound, wave	2250/08	. home cordless telephone systems using the DECT standard
2215/815	. . Notification when a specific condition, service or event is met	2250/10	. including a GPS signal receiver
2215/8154	. . . Determined tariff	2250/12	. including a sensor for measuring a physical value, e.g. temperature or motion (telephones including GPS signal receivers H04M 2250/10)
2215/8158	. . . Low balance or limit reached	2250/14	. including a card reading device
2215/8162	. . . Calculate maximum communication time or volume	2250/16	. including more than one display unit
2215/8166	. . . Available credit	2250/18	. including more than one keyboard unit
2215/817	. . . Successful event, e.g. successful recharge or delivery of a service	2250/20	. including a rotatable camera
2215/8175	. . . Unsuccessful event, e.g. service rejected due to low credit	2250/22	. including a touch pad, a touch sensor or a touch detector (digitizers for touch screens G06F 3/041)
2215/8179	. . . Cumulative charges	2250/52	. including functional features of a camera (constructional features concerning the integration of cameras in portable phones H04M 1/0264)
2215/8183	. . . Request users acknowledgement prior to use	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)
2215/8187	. . Send to	2250/56	. including a user help function
2215/8191	. . . multiple parties, e.g. multi party AOC	2250/58	. including a multilanguage function
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	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)
2215/82	. Advice-of-Charge [AOC], i.e. notify subscriber of charges/cumulative charge; meter at the substation	2250/62	. user interface aspects of conference calls
2215/825	. . Select from different charging routines or algorithms or formulas	2250/64	. file transfer between terminals (download of applications H04M 1/72406; transfer of messages, e.g. SMS, e-mail or MMS H04M 1/7243)
2215/92	. Autonomous calculations of charges in terminal, i.e. meter not controlled from exchange	2250/66	. user interface aspects for indicating selection options for a communication line
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	2250/68	. with means for recording information, e.g. telephone number during a conversation (recording of telephone conversations H04M 1/656)
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		

H04M

- 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](#))