COOPERATIVE PATENT CLASSIFICATION

ELECTRICITY

ELECTRIC COMMUNICATION TECHNIQUE

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

1. This subclass covers:
   • 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. 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

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:

<table>
<thead>
<tr>
<th>IPC Group</th>
<th>Covered by</th>
</tr>
</thead>
<tbody>
<tr>
<td>H04M 7/02</td>
<td>H04Q 3/00</td>
</tr>
<tr>
<td>H04M 7/04</td>
<td>H04Q 3/00</td>
</tr>
<tr>
<td>H04M 7/10</td>
<td>H04Q 3/00</td>
</tr>
<tr>
<td>H04M 15/02</td>
<td>H04M 15/888</td>
</tr>
</tbody>
</table>

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;
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)

1/003 [Telephone sets using electrooptical means in the transmission path]

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 1/383)]

2001/0204 [including a battery compartment]

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)]

1/0212 [with a two degrees of freedom mechanism, i.e. folding around a first axis and rotating around a second axis perpendicular to the first]

1/0214 [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)]

1/0216 [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]
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 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 2/100; 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 \( \text{H04M 1/22} \))

1/233  . . . [including a pointing device, e.g. roller key, track ball, rocker switch or joystick (constructional details of pointing devices per se \( \text{G06F 3/033} \))]

1/236  . . . [including keys on side or rear faces]

1/24  . . . Arrangements for testing (measuring electric values \( \text{G01R}; \) testing transducers \( \text{H04R 29/00} \))

1/247  . . . Telephone sets including user guidance or features selection 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 ADSL capability \( \text{H04M 3/42}; \) management or customization of services \( \text{H04M 3/42136}; \) by downloading data to substation equipment \( \text{H04M 3/42178} \)\}

1/2472  . . . \{with programmable function keys\}

1/2473  . . . \{Telephone terminals interfacing a personal computer, e.g. using an API (Application Programming Interface) \( \text{H04M 7/0021} \)\}

1/2474  . . . \{Telephone terminals specially adapted for disabled people \( \text{H04M 1/72588} \) takes precedence; network based special services or facilities for hearing-impaired persons \( \text{H04M 3/42391}; \) devices for conversing with the deaf-blind \( \text{G09B 21/04} \)\}

1/2475  . . . \{for a hearing impaired user \( \text{per se \( \text{H04R 25/00} \)} \)\}

1/2476  . . . \{for a visually impaired user \( \text{H04M 1/22} \) takes precedence\}

1/2477  . . . \{for selecting a function from a menu display \( \text{H04M 1/2474} \) takes precedence\}

1/2478  . . . \{Telephone terminals specially adapted for non-voice services, e.g. email, internet access (centralized arrangements where telephones services are combined \( \text{H04M 7/0024}; \) for recording text messages \( \text{H04M 3/5322}; \) for accessing internet \( \text{H04M 3/4938} \)\}

1/253 . . . Telephone sets using digital voice transmission (simultaneous speech and data transmission \( \text{H04M 11/06}; \) ISDN terminal access circuits \( \text{H04Q 11/0271} \)\)

1/2535  . . . \{adapted for voice communication over an Internet Protocol [IP] network \( \text{VoIP} \); \} network equipment and services \( \text{H04M 7/006}; \) internet protocols \( \text{H04L 29/06095} \)\}

1/26  . . . Devices for signalling identity of wanted subscriber \{constructional features \( \text{H04M 1/23} \)\}

1/27  . . . Devices whereby a plurality of signals may be stored simultaneously \{devices disposed in the exchange \( \text{H04M 3/424}; \) \( \text{H04M 3/44} \)\}

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; \{\( \text{fax machines \( \text{H04N 1/32037} \)} \)\}

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\}

1/274541  . . . \{Predictive input, predictive dialling by comparing the dialled sequence with the content of a telephone 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 interactive graphical means or pictorial representation\}

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 \( \text{H04M 1/274516} - \text{H04M 1/274583} \) 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\}

1/265  . . . \{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 \( \text{H04M 1/32} - \text{H04M 1/40} \) take precedence\}

1/32  . . . \{Locking setting devices during transmission to prevent interference by user\}

1/334  . . . \{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 1/6558 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]
[With means for supporting locally a plurality of functions to increase the functionality (for selecting a function in a menu H04M 1/2477)]

[provided by software upgrading or downloading]

[provided by interfacing with an external accessory (hands-free H04M 1/0041)]

[using a two-way short-range wireless interface]

[for remote control of appliances]

[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)]

[with automatic feature activation, e.g. upon sensing of an alarm condition]

[with manual feature activation]

[for supporting a game or graphical animation]

[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)]

[for voice messaging, e.g. dictaphone (for answering an incoming call H04M 1/64)]

[for text messaging, e.g. sms, e-mail]

[for still or moving picture messaging (systems for transmission of still picture signals H04N 1/00095; videophones H04N 7/14)]

[for playing back music files (portable music players per se G11B 27/00)]

[for supporting an internet browser application]

[with means for adapting by the user the functionality or the communication capability of the terminal under specific circumstances]

[according to a schedule or a calendar application (network applications for presence management H04L 29/08684)]

[according to context or environment related information]

[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)]

[by connection of an exchangeable housing part]

[to restrict the functionality or the communication capability of the terminal (network access restriction H04W 48/02)]

[by using keys with multiple functionality defined by the current phone mode or status]
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 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 thereof]
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 3/52; 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]
Signalling or Short Message Service for fixed networks such as PSTN/ISDN, e.g. User-to-User (text-based messaging services in telephone network connectivity) to communicate in terms of media capability or Presence services providing information on location information of a target (in private branch exchanges) or in networks) 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)); in systems with telephone lines with multiple users) 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) with the subscriber having a personal network-independent number) where the same subscriber uses different terminals, i.e. nomadism) whereby the subscriber registers to the terminals for personalised service provision) in networks) with carrier/provider selection by subscriber) with number portability) with number translation services, e.g. premium-rate, freephone or vanity number services) in private branch exchanges) with CTI arrangements) with direct inward dialling) with remote access to features of PBX or home telephone systems-teleworking in a PBX) which utilize the location information of a target) where the information is provided to a monitoring entity such as a potential calling party or a call processing server) which provides information on the willingness to communicate or the ability to communicate in terms of media capability or network connectivity) where the information is provided to a monitoring entity such as a potential calling party or a call processing server) Text-based messaging services in telephone networks such as PSTN/ISDN, e.g. User-to-User Signalling or Short Message Service for fixed networks] (where the subscribers are hearing-impaired persons, e.g. telephone devices for the deaf) where the called subscriber is connected to a data network using his telephone line, e.g. dial-up connection, Internet browsing) (Call holding circuits) (Notifying, informing or entertaining a held party while on hold, e.g. Music On Hold) (Notifying a held subscriber when his held call is removed from hold) (Notifying a called subscriber of an incoming call during an ongoing call, e.g. Call Waiting) (Arrangements for calling a subscriber at a specific time, e.g. morning call service) (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)) (based on information specified by the calling party, e.g. priority or subject) (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)) (Arrangements for calling a number of substations in a predetermined sequence until an answer is obtained) (Arrangements for simultaneously calling a number of substations until an answer is obtained) (Arrangements for recalling a calling subscriber when the wanted subscriber ceases to be busy) (Arrangements for providing information services, e.g. recorded voice services, time announcements) (Non-interactive information services) (Intercept announcements) (Time announcements) (Advertisement messages) (Interactive information services, e.g. directory enquiries): Arrangements therefor, e.g. interactive voice response [IVR] systems or voice portals) (Directory assistance systems) (with operator assistance) (Connection initiated by DAS system) (Speech interaction details (speech recognition per se G10L 15/00)) (comprising a voice browser which renders and interprets, e.g. VoiceXML) (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) (Centralised call answering arrangements requiring operator intervention [, e.g. call or contact centers for telemarketing) (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 queuing]
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)]
3/532 . . . . [for recording text messages]
3/533 . . . . Voice mail systems
3/5308 . . . . [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 catagory, 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 12/18/113; 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 9/002; 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
Interconnection arrangements between switching centres (transmission arrangements in general H04B; interconnection arrangements between PSTN/ISDN switching centres H04Q 3/00))

[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.

[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.

[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]

[First party call control architectures]

[Computer Telephony Resource Boards]

[Details of Application Programming Interfaces]

[Services and arrangements where telephone services are combined with data services (arrangements which combine a telephonic equipment and a computer H04M 7/0012)]

[Collaboration services where a computer is used for data transfer and the telephone is used for telephonic communication]

[Click to dial services]

[Notification or handling of incoming calls by a computer]

[where the data service is an information service]

[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)]

[where the data service is a text-based messaging service (H04M 7/0054 takes precedence)]

[where the text-based messaging service is an instant messaging service]

[where the text-based messaging service is a Short Message Service]

[where the data service is a multimedia messaging service]

[where the data service is an electronic mail service]

[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]

[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)]

[where the network is a peer-to-peer network]

[Details of access arrangements to the networks (where the access arrangement is a PSTN/ISDN access H04M 7/122)]

[comprising a residential gateway, e.g. those which provide an adapter for POTS or ISDN terminals]

[Speech codec negotiation (H04L 65/1069 takes precedence)]

[Details of addressing, directories or routing tables]

[Security; Fraud detection; Fraud prevention]

[Network operation, administration, maintenance, or provisioning]

[Network monitoring; Error detection; Error recovery; Network testing]

[Network planning or provisioning]

[in systems involving PBX or KTS networks]

[signalling arrangements in networks]

[Trunk circuits]

[using auxiliary connections for control or supervision (e.g. where the auxiliary connection is a signalling system number 7 link)]

[where the telephone network is a network other than PSTN/ISDN]

[where the auxiliary connection is via an Internet Protocol network (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)]

[photon working (where a cable TV network is used as an access to the PSTN/ISDN)]
Centralised switching

Interconnection arrangements not involving centralised switching

9/00

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 3/25))
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 systems adapted for data transmission)
11/068 (using time division multiplex techniques; (integrated services digital networks H04Q 11/04/28))
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
. . . Recording class or number of calling (i.e. A-party) or called party (i.e. B-party)
. . . (Split billing, i.e. both A-party and B-party charged for the communication)
. . . Metering calls to called party (i.e. B-party charged for the communication)
. . . (Third party charged communications)
. . . Metering calls from calling party (i.e. A-party charged for the communication)
. . . Discriminative metering (charging or billing) according to class of calling party
. . . according to duration of the call (or the communication)
. . . Operator’s time recording or indicating arrangements
. . . according to time of day
. . . preventing metering of tax-free calls to certain lines, e.g. to fire or ambulance stations
. . . with a meter (or performing charging or billing) at the exchange controlled by an operator
. . . with meter at substation (or with calculation of charges at terminal)
. . . the meter (or calculation of charges) not being controlled from an exchange
. . . (Distributed metering or calculation of charges)
. . . (Charging, billing or) metering arrangements for satellites or concentrators which connect one or more exchange lines with a group of local lines
. . . (Charging, billing or) metering arrangements for private branch exchanges
. . . (Charging, billing or) metering arrangements for party-lines
. . . (Charging, billing or) metering by apparatus other than mechanical step-by-step counter type
. . . (Arrangements for preventing metering, charging or billing)
. . . (Billing record details, i.e. parameters, identifiers, structure of call data record [CDR])
. . . (Dynamic individual rates per user)
. . . (Billing software details)
. . . [Augmented, consolidated or itemized billing statement or bill presentation]
. . . (Real-time negotiation between users and providers or operators)
. . . (Fraud detection or prevention means)
. . . (Secure or trusted billing, e.g. trusted elements or encryption)
. . . (Connection to several service providers)
. . . (for cross-charging network operators)
. . . (for resellers, retailers or service providers)
. . . (for operator independent billing system)
. . . (using mediation)
. . . (for revenue sharing)
. . . (for hybrid networks)
. . . (for VoIP communications)
. . . (for integrated multimedia messaging subsystem [IMS])
. . . [based on statistics of usage or network monitoring]
. . . (based on real time)
. . . (based on actual use of network resources)
. . . (based on the service used)
. . . (based on trigger specification)
. . . [based on the content carried by the session initiation protocol [SIP] messages]
. . . [On-line charging system [OCS]]
. . . [Off-line charging system]
. . . [Policy and charging system]
. . . [Transmitting arrangements for sending billing related information]
. . . [Payment of value-added services]
. . . [Administration or customization aspects; CountercHECKing correct charges]
. . . [Account settings, e.g. limits or numbers or payment]
. . . [Modifying recharging resources]
. . . [Activating new subscriber or card]
. . . [by the user]
. . . [using the Internet]
. . . [using the user's device]
. . . [by the operator]
. . . [Validating charges]
. . . [Re-crediting user]
. . . [Backing up]
. . . [Customizing according to wishes of subscriber, e.g. friends or family]
. . . [Account location specifications]
. . . [Card based account, e.g. smart card, SIM card or USIM]
. . . [Terminal based account]
. . . [Network based account]
. . . [Account identification]
. . . [via service number, e.g. calling card]
. . . [by SIM, e.g. smart card account in SCP, SDP or SN]
. . . [Synchronization of distributed accounts]
. . . [Linked or grouped accounts, e.g. of users or devices]
. . . [shared by users]
. . . [shared by technologies]
. . . [for closed subscriber group [CSG]]
. . . [involving multiple accounts per user]
. . . [per terminal or location, e.g. mobile device with multiple directory numbers]
. . . [per service, e.g. prepay or post-pay]
. . . [per technology, e.g. PSTN or wireless]
. . . [per card]
. . . [Account specifications on parallel communications]
. . . [Redistributing amount between accounts]
. . . [dynamically]
. . . [by user request]
. . . [Reserving amount on the account]
. . . [Virtual purses]
. . . [Rating or billing plans; Tariff determination aspects]
. . . [Flat-fee]
. . . [using class of subscriber]
. . . [based on quality of service [QoS]]
. . . [Determining tariff or charge band]
. . . [based on network load situation]
. . . [Location-dependent, e.g. business or home]
. . . [Roaming or handoff]
. . . [Least cost routing]
. . . [Bidding]
15/855 . . . (Selecting cheaper transport technology for a given service)
15/856 . . . (Selecting least cost route depending on origin or type of service)
15/8566 . . . (According to the number of recipients)
15/8572 . . . (Group, conference or multi-party call)
15/8577 . . . (Group MMS or SMS; Point-to-multi-point services or broadcast services)
15/8583 . . . (involving reduced rates or discounts, e.g. time-of-day reductions or volume discounts)
15/8588 . . . (involving increased rates, e.g. spam messaging billing differentiation)
15/8594 . . . (Trial service, i.e. free of charge service for trial purposes)
15/8597 . . . (Dynamic pricing, e.g. change of tariff during call)
15/86 . . . (Criteria or parameters used for performing billing operations)
15/8607 . . . (Time based data metric aspects, e.g. VoIP or circuit switched packet data)
15/8614 . . . (Data or packet based)
15/8621 . . . (Message based)
15/8628 . . . (Session based)
15/8635 . . . (Access based)
15/8642 . . . (Transaction based)
15/8659 . . . (based on the number of used channels, e.g. bundling channels, frequencies or CDMA codes)
15/8657 . . . (Unit based)
15/8664 . . . (Pulse based)
15/8671 . . . (Based on the number of used services, e.g. call forwarding or call barring)
15/8678 . . . (Event based)
15/8685 . . . (Money or currency based)
15/8692 . . . (Charging for signaling or unsuccessful connection)
15/88 . . . (Notification aspects)
15/8835 . . . (Time or frequency of notifications, e.g. Advice of Charge [AoC])
15/8851 . . . (before establishing a communication)
15/8853 . . . (during the communication)
15/8855 . . . (after the end of the communication)
15/8856 . . . (in regular intervals)
15/8858 . . . (Dynamic change of the length or frequency of the notification interval)
15/886 . . . (Types of notifications)
15/8862 . . . (Announcement, e.g. IVR dialogue)
15/8864 . . . (Message, e.g. SMS)
15/8866 . . . (optical, e.g. icon)
15/8868 . . . (Tone, e.g. beeper)
15/8868 . . . (characterised by the type of condition triggering a notification)
15/8871 . . . (Determined tariff)
15/8872 . . . (Low balance or limit reached)
15/8873 . . . (Calculate maximum communication time or volume)
15/8874 . . . (Available credit)
15/8875 . . . (Successful event)
15/8876 . . . (Unsuccessful event)
15/8877 . . . (Cumulative charges)
15/8878 . . . (Request users acknowledgement prior to use)
15/8879 . . . (Recipients of the notification)
15/8880 . . . (multiple parties, e.g. multi party AOC)
15/8881 . . . (a predetermined or undetermined destination, e.g. notifying a prepaid accounting server of a successful delivery of a service)
15/8882 . . . (for continuing the call beyond the limit using an alternative, e.g. alternative account)
15/8883 . . . (linked escalation limits, i.e. establish, first or second limit)
15/8885 . . . (limit per application)
15/8886 . . . (limit per terminal)
15/8887 . . . (limit per user or user related number)
15/8888 . . . (severing connection after predetermined time or data)
15/889 . . . (using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN])
15/8893 . . . (using near field or similar technologies)

17/000 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)
17/0005 . . . (Disposable prepaid accounting devices)
17/001 . . . (Cocot systems, i.e. private ownership of payphones)
17/02 . . . (Coin-free or check-free systems , e.g. mobile- or card-operated phones, public telephones or booths)
17/023 . . . ([Circuit arrangements])
17/026 . . . ([Constructional features])
17/09 . . . ([Account details or usage])
17/0103 . . . ([using SIMs (USIMs) or calling cards])
17/0106 . . . ([using commercial credit or debit cards])
17/0112 . . . ([using calling, telephone credit/debit cards])
17/0114 . . . ([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])
17/2012 . . . ([with automatic recharging of account/card, e.g. if limit is reached during connection the account is recharged automatically])
17/2022 . . . ([at threshold])
17/2025 . . . ([with predetermined amount])
17/2027 . . . ([with amount selected interactively])
17/2024 . . . ([with on-line recharging of an account or card, e.g. cashless])
17/20241 . . . ([by calling a service number IVR, menu])
17/20243 . . . ([by sending a message, e.g. SMS, MMS, EMS])
17/20245 . . . ([using money, i.e. physical input of coins or bank notes])
17/20246 . . . ([using signalling, e.g. USSD, UUS, DTMF])
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 . . . {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 3/223; quality of speech transmission monitoring H04M 3/223)
2203/058 . . . . signature devices
2203/10 . . . related to the purpose or context of the telephonic communication
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 . . Telemetering, 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 calenders
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 . . Prererecordings 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)
Initiating a conference during a two-party conversation, i.e. three-party-service or threeway-call (computer conference organisation arrangements H04L 12/1818)

Dropping a party from a conference (conducting a computer conference, e.g. admission detection H04L 12/1822)

using conference for collection of feedback

Selection of bridge/multipoint control unit (network arrangements for computer conference optimisation H04L 12/1827)

Meet-me conference, i.e. participants dial-in

Centrally initiated conference, i.e. Conference server dials participants (computer conference organisation arrangements H04L 12/1818)

Multiple active speakers (conducting a computer conference, e.g. Admission detection H04L 12/1822)

Inform conference party of participants, e.g. of change of participants (conducting a computer conference, e.g. admission detection, H04L 12/1822)

Microphone arrays

related to network data storage and management

Call history (recording a computer conference H04L 12/1831)

Call annotations

Data upload

Data synchronization

Statistics, e.g. about subscribers but not being call statistics

Statistical analysis and interpretation

Portable profiles

Databases

Sorting systems

related to security aspects in telephonic communication systems (network architectures or network communication protocols for network security H04L 63/00)

Personal information, e.g. profiles or personal directories being only provided to authorised persons

Subscriber or terminal logon/logoff

Fraud protections

Anti virus measures

Identity confirmation

Biometric subscriber identification

Authentication using cards

Authentication using challenger response

Service authorization mechanisms

Secret communication

related to applications where calls are combined with other types of communication

Text message transmission triggered by call (automatic reactions in messaging within packet-switching networks H04L 51/02)

Call initiation triggered by text message

Pre, in or post-call message

Combination of telephone service and social networking (messaging within social networks H04L 51/32)

Combination of voice and fax calls

Combination of voice calls and paging

Type of exchange or network, i.e. telephonic medium, in which the telephonic communication takes place

ISDN systems

intelligent networks

cable networks

wireless networks

wireless circuit-switched

wireless packet-switched

combining circuit and packet-switched, e.g. GPRS

hybrid systems

composed of PSTN and data network, e.g. the Internet

composed of PSTN and wireless network

third party service providers

virtual private networks

terminals with audio html browser

public-private interworking, e.g. centrex

Metering arrangements; Time controlling arrangements; Time indicating arrangements

details of billing arrangements

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

Customization according to wishes of subscriber, e.g. customer preferences, friends and family, selecting services or billing options, Personal Communication Systems [PCS]

Dynamic pricing, e.g. change of tariff during call

Provision for limiting expenditure, e.g. limit on call expenses or account

Continue allow grace, e.g. accept negative balance

Continue alternative, i.e. alternative account to continue use

Linked escalation limits, establish, first or second limit

Limit per application

Limit per terminal

Limit per user or user related number

Release upon reaching limit

Fraud detection or prevention means

General billing plans, rate plans, e.g. charge rates, numbering plans, rate centers, customer accounts

Secure and trusted billing, e.g. trusted elements, encryption, digital signature, codes or double check mechanisms to secure billing calculation and information

Billing using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN]

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

On line or real-time flexible customization or negotiation according to wishes of subscriber

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

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
2215/256 . . Data billing charged as a voice call, i.e. based on time or unit charging
2215/258 . . 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 telecoms 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. prepay 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
Details of telephonic subscriber devices

Special services or facilities

Broadcasting
for emergency applications
Lines and connections with preferential service
menus for interactive user guidance
Secret communications
Language recognition, selection or translation arrangements
with services dependent on location (where the service is an information service
services independent of location
Information service where the information is dependent on the location of the subscriber
with computer telephone integration
Automated dialling systems
Televing service
Automatic class or number identification arrangements
Detection or indication of type terminal or call, (e.g. fax, broadband)
Paging systems
Services making use of subscriber schedule information
Determination of the location of a subscriber
Data synchronization between user terminals and central server
Incremental backup
Details of telephonic subscriber devices
including a Bluetooth interface
including near field communication means, e.g. RFID
including a wireless LAN interface
home cordless telephone systems using the DECT standard
including a GPS signal receiver
including a sensor for measuring a physical value, e.g. temperature or motion (telephones including GPS signal receivers)

Load situation, e.g. Current network load, traffic load or available resources
Location dependent, e.g. Business or home
Roaming
Least cost routing, e.g. Automatic or manual, call by call or by preselection
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
Select route depending on origin or type of service, e.g. route TDMA voice calls differently than VoIP calls
According to the number of recipients
Group call; Conference call; Multi Party Call
Group MMS or SMS; Point-to-multi-point services, broadcast services
Metric aspects
Time based
Time based data, e.g. VoIP or circuit switched packet data
Data or packet based
Message based
Session based
Access based
Transaction based
Based on the number of used channels, e.g. bundling channels or frequencies or CDMA codes
Unit based
Pulse based
Based on the number of used services, e.g. call forwarding or call barring
Event based
Apply cheapest or best package, e.g. selection among available tariffs or packages (least cost routing)
Money or currency based
Notifying aspects, e.g. notifications or displays to the user
Time or frequency of notification
before establishing a communication
during the communication
after the end of the communication
in regular intervals
Dynamic change of the length/frequency of the length of the notification interval, e.g. depending on the remaining available prepaid credit
Type of notification
Announcement, e.g. IVR dialogue, intelligent peripheral or switch
Message, e.g. alphanumeric text, SMS, MMS, EMS or www-based messaging service
Optical, e.g. flashing indication of a lamp, icon, soft-key or symbol
Tone, e.g. beeper, sound, wave
Notification when a specific condition, service or event is met
Determined tariff
Low balance or limit reached
Calculate maximum communication time or volume
Available credit
Successful event, e.g. successful recharge or delivery of a service
Unsuccessful event, e.g. service rejected due to low credit
Cumulative charges
Request users acknowledgement prior to use
Send to
multiple parties, e.g. multi party AOC
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
Advice-of-Charge [AOC], i.e. notify subscriber of charges/cumulative charge; meter at the substation
Select from different charging routines or algorithms or formulas
Autonomous calculations of charges in terminal, i.e. meter not controlled from exchange
Distributed calculation of charges, e.g. in different nodes like for mobiles between HLR and VLR, or between the terminal and the billing function
including a card reading device
including more than one display unit
including more than one keyboard unit
including a rotatable camera
including a touch pad, a touch sensor or a touch
detector (digitizers for touch screens G06F 3/041)
including functional features of a camera
(constructional features concerning the integration
of cameras in portable phones H04M 1/0264)
including functional features of a projector or
beamer module assembly (constructional features
concerning the integration of projectors in portable
phones H04M 1/0272)
including a user help function
including a multilanguage function
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)
user interface aspects of conference calls
file transfer between terminals (download of
applications H04M 1/72525; transfer of messages,
e.g. SMS, e-mail or MMS H04M 1/72547)
user interface aspects for indicating selection
options for a communication line
with means for recording information, e.g.
telephone number during a conversation (recording
of telephone conversations H04M 1/656)
methods for entering alphabetical characters,
e.g. multi-tap or dictionary disambiguation
(methods for entering alphabetical characters per se
G06F 3/0237)
user manuals of subscriber equipments, e.g. of
mobile phones
with voice recognition means (voice activated
dialling H04M 1/271; voice recognition algorithms
G10L 15/00)