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; 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 1/73; with protection against RF exposure H04B 1/3838)]

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 other relative motions of the body parts}
1/0237 . . . . . {Sliding mechanism with one degree of freedom}
1/0239 . . . . . {Sliding mechanism with two degree of freedom, e.g. translation in two different directions}
1/0241 . . . . . {using relative motion of the body parts to change the operational status of the telephone set, e.g. switching on/off, answering incoming call}
1/0243 . . . . . {using the relative angle between housings}
1/0245 . . . . . {using open/close detection}
1/0247 . . . . . {comprising more than two body parts}
1/0249 . . . . . {Details of the mechanical connection between the housing parts or relating to the method of assembly}
1/0252 . . . . . {by means of a snap-on mechanism}
1/0254 . . . . . {comprising one or a plurality of mechanically detachable modules}
1/0256 . . . . . {wherein the modules are operable in the detached state, e.g. one module for the user interface and one module for the transceiver}
1/0258 . . . . . {for a headset device (constructional features of headsets H04M 1/05; headsets for handsfree use H04M 1/6058)}
1/026 . . . . . {Details of the structure or mounting of specific components}
1/0262 . . . . . {for a battery compartment}
1/0264 . . . . . {for a camera module assembly (photo or video cameras per se G03B; television cameras per se H04N 5/225)}
1/0266 . . . . . {for a display module assembly (for fixed telephones H04M 1/0295)}
1/0268 . . . . . {including a flexible display panel}
1/027 . . . . . {including magnifying means}
1/0272 . . . . . {for a projector or beamer module assembly (constructional features of projectors per se G03B 21/00; constructional details of projectors using electronic spatial light modulators per se H04N 9/31)}
1/0274 . . . . . {for an electrical connector module}
1/0277 . . . . . {for a printed circuit board assembly}
1/0279 . . . . . {Improving the user comfort or ergonomics}
1/0281 . . . . . {for providing single handed use or left/right hand conversion}
1/0283 . . . . . {for providing a decorative aspect, e.g. customization of casings, exchangeable faceplate}
1/0285 . . . . . {Pen-type handsets}
1/0287 . . . . . {being disposable or recyclable}
1/0289 . . . . . {Telephone sets for operators}
1/0291 . . . . . {Door telephones}
1/0293 . . . . . {Terminal boxes for telephone sets}
1/0295 . . . . . {mechanical mounting details of display modules (for portable telephones H04M 1/0266)}
1/0297 . . . . . {Telephone sets adapted to be mounted on a desk or on a wall}
1/03 . . . . . . Constructional features of telephone transmitters or receivers, e.g. telephone handsets, {speakers or microphones} (transducers in general H04R 1/00)
1/035 . . . . . . {Improving the acoustic characteristics by means of constructional features of the housing, e.g. ribs, walls, resonating chambers or cavities}
1/04 . . . . . . Supports for telephone transmitters or receivers (for transducers in general H04R 1/00)
1/05 . . . . . . adapted for use on head, throat, or breast ((handsfree use of portable phones H04M 1/6041))
1/06 . . . . . . Hooks; Cradles
1/08 . . . . . . associated with switches operated by weight of receiver or hand-set
1/10 . . . . . . associated with switches operated by magnetic effect due to proximity of receiver or hand-set
1/11 . . . . . . Supports for sets, e.g. incorporating armrests
1/12 . . . . . . Adjustable supports, e.g. extensible
1/13 . . . . . . pantographic
1/14 . . . . . . with resilient means to eliminate extraneous vibrations
1/15 . . . . . . Protection of telephone cords; Guiding telephone cords; Winding-up telephone cords (in general H04G 1/00)
1/17 . . . . . . Hygienic or sanitary devices on telephone equipment (for mouthpieces or earpieces per se H04R 1/12)
1/18 . . . . . . Telephone sets modified for use in ships, mines, or other places exposed to adverse environment (H04M 1/19 takes precedence; telephone cabinets per se E04H 1/14)
1/185 . . . . . . {Improving the rigidity of the casing or resistance to shocks}
1/19 . . . . . . Arrangements of transmitters, receivers, or complete sets to prevent eavesdropping, to attenuate local noise or to prevent undesired transmission; Special mouthpieces or receivers therefor (circuit arrangements for preventing eavesdropping H04M 1/68; telephone cabinets per se E04H 1/14)
1/20 . . . . . . Arrangements for preventing acoustic feed-back (H04M 1/62 takes precedence)
1/21 . . . . . . Combinations with auxiliary equipment, e.g. with clock, with memoranda pads
1/215 . . . . . . by non-intrusive coupling means, e.g. acoustic couplers
1/2155 . . . . . . {Acoustic coupling}
1/22 . . . . . . Illuminating; Arrangements for improving visibility of characters on dials
1/23 . . . . . . Construction or mounting of dials or of equivalent devices; Means for facilitating the use thereof (by improving visibility H04M 1/22)
1/233 . . . . . . {including a pointing device, e.g. roller key, track ball, rocker switch or joystick (constructional details of pointing devices per se G06F 3/033)}
H04M

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

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

1/247 . Telephone sets including user guidance or features selection means facilitating their use; [Fixed telephone terminals for accessing a variety of communication services via the PSTN network]

1/2471 . . . [Configurable and interactive telephone terminals with subscriber controlled features modifications, e.g. with ADSI capability [Analog Display Services Interface] (systems providing special services or facilities to subscribers H04M 3/42; administration or customization of services H04M 3/42136; by downloading data to substation equipment H04M 3/42178)]

1/2472 . . . [with programmable function keys]

1/2473 . . . [Telephone terminals interfacing a personal computer, e.g. using an API [Application Programming Interface] (details of API H04M 7/0021)]

1/2474 . . . [Telephone terminals specially adapted for disabled people (H04M 1/27588 takes precedence; network based special services or facilities for hearing-impaired persons H04M 3/42391; devices for conversing with the deaf-blind G09B 21/04)]

1/2475 . . . [for a hearing impaired user (hearing-aids per see H04R 25/00)]

1/2476 . . . [for a visually impaired user (H04M 1/22 takes precedence)]

1/2477 . . . [for selecting a function from a menu display (H04M 1/2474 takes precedence)]

1/2478 . . . [Telephone terminals specially adapted for non-voice services, e.g. email, internet access (centralized arrangements where telephones services are combined H04M 7/0024; for recording text messages H04M 3/5322; for accessing Internet H04M 3/49381)]

1/253 . Telephone sets using digital voice transmission (simultaneous speech and data transmission H04M 11/06; [ISDN terminal access circuits H04Q 11/0471])

1/2535 . . . [adapted for voice communication over an Internet Protocol [IP] network (Voice over Internet Protocol [VoIP] network equipment and services H04M 7/006; internet protocols H04L 29/06951)]

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

1/27 . . . Devices whereby a plurality of signals may be stored simultaneously [(devices disposed in the exchange H04M 3/424, H04M 3/44)]

1/271 . . . [controlled by voice recognition]

1/272 . . . with provision for storing only one subscriber number at a time, e.g. by keyboard or dial

1/2725 . . . [using electronic memories]

1/274 . . . with provision for storing more than one subscriber number at a time, e.g. using toothed disc

1/2745 . . . using static electronic memories, e.g. chips

**WARNING**

Group H04M 1/2745 is impacted by reclassification into groups H04M 1/2747 and H04M 1/2753.

Groups H04M 1/2745, H04M 1/2747, and H04M 1/2753 should be considered in order to perform a complete search.

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

**WARNING**

Group H04M 1/2747 is incomplete pending reclassification of documents from group H04M 1/2745.

Groups H04M 1/2745 and H04M 1/2747 should be considered in order to perform a complete search.

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

**WARNING**

Group H04M 1/2753 is incomplete pending reclassification of documents from group H04M 1/2745.

Groups H04M 1/2745 and H04M 1/2753 should be considered in order to perform a complete search.

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]
...including speech amplifiers

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CPC - 2020.05

1/315 . . . . . . . . Clutches; Spring assemblies; Speed regulators, e.g. centrifugal brakes (H04M 1/32 – H04M 1/40 take precedence)
1/32 . . . . . . . . Locking setting devices during transmission to prevent interference by user
1/34 . . . . . . . . Lost-motion or other arrangements for ensuring a pause between successive digit transmissions
1/38 . . . . . . . . Pulses transmitted by a movement variably limited by the setting of a stop
1/40 . . . . . . . . wherein the setting-operation short-circuits or open-circuits the transmitting mechanism during a variable part of a cycle
1/50 . . . . . . . . by generating or selecting currents of predetermined frequencies or combinations of frequencies
1/505 . . . . . . . . [signals generated in digital form]
1/515 . . . . . . . . by generating or selecting other signals than trains of pulses of similar shape or other signals than currents of one or more different frequencies, e.g. generation of direct current signals of alternating polarity, coded pulses, impedance dialling
1/52 . . . . . . . . Arrangements wherein a dial or equivalent is mechanically coupled to a line selector
1/53 . . . . . . . . Generation of additional signals, e.g. additional pulses
1/54 . . . . . . . . Arrangements wherein a dial or equivalent generates identifying signals, e.g. in party-line systems
1/56 . . . . . . . . Arrangements for indicating or recording the called number at the calling subscriber’s set
1/57 . . . . . . . . Arrangements for indicating or recording the number of the calling subscriber at the called subscriber’s set (at the operator set in a manual exchange H04M 5/20)
1/571 . . . . . . . . [Blocking transmission of caller identification to called party]
1/573 . . . . . . . . [Line monitoring circuits for detecting caller identification]
1/575 . . . . . . . . [Means for retrieving and displaying personal data about calling party]
1/576 . . . . . . . . [associated with a pictorial or graphical representation]
1/578 . . . . . . . . [associated with a synthesized vocal announcement]
1/58 . . . . . . . . Anti-side-tone circuits (hybrid circuits for carrier-frequency operation H04B 1/00)
1/585 . . . . . . . . [implemented without inductive element]
1/60 . . . . . . . . including speech amplifiers
1/6008 . . . . . . . . [in the transmitter circuit]
1/6016 . . . . . . . . [in the receiver circuit]
1/6025 . . . . . . . . [implemented as integrated speech networks]
1/6033 . . . . . . . . [for providing handsfree use or a loudspeaker mode in telephone sets (arrangements for preventing acoustic echo H04M 9/08)]
1/6041 . . . . . . . . [Portable telephones adapted for handsfree use]
1/605 . . . . . . . . [involving control of the receiver volume to provide a dual operational mode at close or far distance from the user]
1/6058 . . . . . . . . [involving the use of a headset accessory device connected to the portable telephone]
1/6066 . . . . . . . . [including a wireless connection]
1/6075 . . . . . . . . [adapted for handsfree use in a vehicle (H04M 1/605 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 3/501)]
1/6505 . . . . . . . . [storing speech in digital form]
1/651 . . . . . . . . . . [with speech synthesis]
1/6515 . . . . . . . . . . [using magnetic tape (H04M 1/6505 takes precedence)]
1/652 . . . . . . . . Means for playing back the recorded messages by remote control over a telephone line (H04M 1/658 takes precedence)
1/654 . . . . . . . . Telephone line monitoring circuits therefor, e.g. ring detectors
1/6545 . . . . . . . . . . [mechanically actuating hook switch, e.g. lifting handset]
1/656 . . . . . . . . . . for recording conversations
1/658 . . . . . . . . . . Means for redirecting recorded messages to other extensions or equipment
1/66 . . . . . . . . with means for preventing unauthorised or fraudulent calling (verifying user identity or authority in secret or secure digital communications H04L 9/32)
1/663 . . . . . . . . Preventing unauthorised calls to a telephone set
1/665 . . . . . . . . . . by checking the validity of a code
1/667 . . . . . . . . Preventing unauthorised calls from a telephone set (H04M 1/677 takes precedence)
1/67 . . . . . . . . . . by electronic means
1/673 . . . . . . . . . . the user being required to key in a code
1/675 . . . . . . . . . . the user being required to insert a coded card, e.g. a smart card carrying an integrated circuit chip (for constructional features in portable telephones H04B 1/3816)
1/677 . . . . . . . . Preventing the dialling or sending of predetermined telephone numbers or selected types of telephone numbers, e.g. long distance
1/6775 . . . . . . . . . . [by providing access to preprogrammed keys]
1/68 . . . . . . . . Circuit arrangements for preventing eavesdropping
1/70 . . . . . . . . . . Lock-out or secrecy arrangements in party-line systems
1/72 . . . . . . . . Substation extension arrangements; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selecting (constructional features of cordless telephones H04M 1/0202)
1/723 . . . . . . . . . . using two or more extensions per line (H04M 1/725 takes precedence)
1/725 . . . . . . . . Cordless telephones [(for handsfree use H04M 1/6041)]
Portable communication terminals with improved user interface to control a main telephone operation mode or to indicate the communication status (H04M 1/2277)

[provided by software upgrading or downloading]

[provided by interfacing with an external accessory (hands-free H04M 1/6041)]

[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 4/02)]

[by using keys with multiple functionality defined by the current phone mode or status]

[for operating the terminal by selecting telephonic functions from a plurality of displayed items, e.g. menus, icons (interaction techniques for Graphical User Interfaces per se G06F 3/048)]

[wherein the items are sorted according to a specific criteria, e.g. frequency of use]

[specially adapted for disabled people (devices for conversing with the deaf-blind G09B 21/04)]

[for a hearing impaired user (hearing-aid per se H04R 25/00)]

[for a visually impaired user (H04M 1/22 takes precedence)]

[wherein handling of applications is triggered by incoming communication events (changing user alerting upon occurrence of events H04M 19/04)]

[Identification code transfer arrangements]

[Battery saving arrangements (by switching on/off the receiving circuit H04B 1/1615)]

[with a plurality of base stations connected to a plurality of lines [(for selection in cordless PBX H04W 84/16)]

[characterised by transmission of electromagnetic waves other than radio waves, e.g. infra-red]

[Interface circuits for coupling substations to external telephone lines (H04M 1/78 takes precedence)]

[Programmable or microprocessor-controlled]

[with means for reducing interference; with means for reducing effects due to line faults]

[Protection devices or circuits for voltages surges on the line]

[Compensating for differences in line impedance (in general H04B)]

[Circuit arrangements in which low-frequency speech signals proceed in one direction on the line, while speech signals proceeding in the other direction on the line are modulated on a high-frequency carrier signal (repeater circuits H04B 3/38)]

[Telephone line holding circuits]

[Line monitoring circuits for call progress or status discrimination (for detecting caller identity H04M 1/573)]

[Automatic or semi-automatic exchanges (construcational details of telephone exchanges H04Q 1/02)]
3/002 . . . [Applications of echo suppressors or cancellers in telephonic connections (in two-way loud-speaking telephone systems H04M 9/08; echo suppressors or cancellers per se H04B 3/20)]

3/005 . . . [Interface circuits for subscriber lines (current supply H04M 19/00) and subgroups; supervisory, monitoring or testing arrangements H04M 3/22 and subgroups; in key telephone systems H04M 9/006]

3/007 . . . [Access interface units for simultaneous transmission of speech and data, e.g. digital subscriber line (DSL) access interface units (DSL access multiplexers H04Q 11/0478, and H04L 12/2856)]

3/02 . . . Ringing or otherwise calling substations (selective calling H04Q)

3/04 . . . calling signal supplied from final selector

3/06 . . . calling signal supplied from subscriber's line circuit

3/08 . . . Indicating faults in circuits or apparatus

3/085 . . . [Fault locating arrangements]

3/10 . . . Providing fault or trouble signals

3/12 . . . Marking faulty circuits "busy"; Enabling equipment to disengage itself from faulty circuits [Using redundant circuits; Response of a circuit, apparatus or system to an error]

3/14 . . . Signalling existence of persistent "off-hook" condition

3/16 . . . with lock-out or secrecy provision in party-line systems

3/18 . . . with means for reducing interference [or noise]; with means for reducing effects due to line faults [with means for protecting lines]

3/20 . . . with means for interrupting existing connections; with means for breaking-in on conversations

3/205 . . . [Eavesdropping prevention - indication of insecurity of line or network]

3/22 . . . Supervisory, monitoring, management, i.e. operation, administration, maintenance) or testing arrangements

3/2209 . . . [for lines also used for data transmission]

3/2218 . . . [Call detail recording]

3/2227 . . . [Quality of service monitoring]

3/2236 . . . [Quality of speech transmission monitoring]

3/2245 . . . [Management of the local loop plant]

3/2254 . . . [in networks]

3/2263 . . . [Network management]

3/2272 . . . [Subscriber line supervision circuits, e.g. call detection circuits]

3/2281 . . . [Call monitoring, e.g. for law enforcement purposes; Call tracing; Detection or prevention of malicious calls]

3/229 . . . [Wire identification arrangements; Number assignment determination]

3/24 . . . with provision for checking the normal operation

3/241 . . . [for stored program controlled exchanges]

3/242 . . . [Software testing]

3/244 . . . [for multiplex systems]

3/245 . . . [for ISDN systems]

3/247 . . . [Knowledge-based maintenance systems]

3/248 . . . [for metering arrangements or prepayment telephone systems (metering arrangements per se H04M 15/00; prepayment telephone systems per se H04M 17/00)]

3/26 . . . with means for applying test signals [or for measuring]

3/28 . . . Automatic routine testing [; Fault testing; Installation testing; Test methods, test equipment or test arrangements therefor]

3/30 . . . [for subscriber's lines relief 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 11/0451)]

3/303 . . . [and using PCM multiplexers, e.g. pair gain systems]

3/304 . . . [and using xDSL multiplexers, e.g. 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 . . . [Craftsman 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 . . . [for the arrangements providing the connection (test connection, test call, call simulation)]

3/36 . . . [Statistical metering, e.g. recording occasions when traffic exceeds capacity of trunks (digital computers for evaluating statistical data G06F 17/18)]

3/362 . . . [Traffic simulation]

3/365 . . . [Load metering of control unit]

3/367 . . . [Traffic or load control]

3/38 . . . Graded-service arrangements, i.e. some subscribers prevented from establishing certain connections (queueing arrangements H04M 3/523, H04Q 3/64)

3/382 . . . [using authorisation codes or passwords]

3/385 . . . [using speech signals]

3/387 . . . [using subscriber identification cards]

3/40 . . . Applications of speech amplifiers

3/42 . . . Systems providing special services or facilities to subscribers

3/42008 . . . [Systems for anonymous communication between parties, e.g. by use of disposal contact identifiers]

3/42017 . . . [Customized ring-back tones]

3/42025 . . . [Calling or Called party identification service]

3/42034 . . . [Calling party identification service]

3/42042 . . . [Notifying the called party of information on the calling party (details within substation equipment H04M 1/37, signalling details H04Q 3/72)]

3/42051 . . . [where the notification is included in the ringing tone]
location information of a target

{ Location-based services which utilize the
  networks } { in intelligent networks H04Q 3/005

subscriptions H04M 3/54

subscriber to another subscriber, i.e. two different
related to one subscriber independent of his
{ selecting arrangements

subscriber's set H04M 1/656
}

{ Conversation recording systems ( at the
  subscriber's set H04M 1/27)

or number selection by voice ( at the terminal
be busy H04M 3/48)

{ Arrangements for calling back a calling
subscriber (when the wanted subscriber ceases to be busy H04M 3/48)

{ Arrangements at the exchange for service
or number selection by voice (at the terminal
H04M 1/27)

{ Call pickup (comprising simultaneous alerting
H04M 3/46)

{ Conversation recording systems (at the
subscriber's set H04M 1/656)

{ 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)

{ 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

{ Number translation services, e.g. premium-
rate, freephone or vanity number services

{ in private branch exchanges

{ PBX's with CTI arrangements

{ Direct inward dialling

{ Remote access to features of PBX or home
telephone systems-teleswitching in a PBX

{ Location-based services 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

{ Presence services providing 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

{ Arrangements for automatic redialling (at the
subscriber's set H04M 1/27)

{ Arrangements for placing incoming calls on hold

{ when 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

{ [Connection assistance systems

{ [Connection assistance systems

{ Connection initiated by DAS system

{ Advertisement messages

{ Interactive information services, e.g. directory
enquiries [; Arrangements therefor, e.g.
interactive voice response [IVR] systems or
voice portals

{ Directory assistance systems

{ [Connection assistance systems

{ [Connection assistance systems

{ Connection initiated by DAS system


{ where the identifier is used to access a
profile

{ where the identifier is a Uniform
Resource Locator

{ Called party identification service

{ Notifying the calling party of information
on the called or connected party

{ Making use of the called party identifier

{ where the identifier is used to access a
profile

{ where the identifier is a Uniform
Resource Locator

{ Systems providing several special
services or facilities from groups
H04M 3/42008 - H04M 3/58

{ Administration or customisation of services

{ [by service provider]

{ [by subscriber]

{ [via computer interface]

{ [Managing service interactions]

{ [by downloading data to substation equipment]

{ [Lines and connections with preferential service]

{ Arrangements for calling back a calling
subscriber (when the wanted subscriber ceases to be busy H04M 3/48)

{ Arrangements at the exchange for service
or number selection by voice (at the terminal
H04M 1/27)

{ Call pickup (comprising simultaneous alerting
H04M 3/46)

{ Conversation recording systems (at the
subscriber's set H04M 1/656)

{ 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)

{ 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

{ Number translation services, e.g. premium-
rate, freephone or vanity number services

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{ Location-based services which utilize the
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{ Arrangements for calling a subscriber at a specific
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{ 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)

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{ Interactive information services, e.g. directory
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{ Directory assistance systems

{ [Connection assistance systems

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{ Advertisement messages

{ Interactive information services, e.g. directory
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{ Directory assistance systems

{ [Connection assistance systems

{ [Connection assistance systems

{ Connection initiated by DAS system

{ Making use of the calling party identifier

{ where the identifier is used to access a
profile

{ where the identifier is a Uniform
Resource Locator
3/4936 . . . . [Speech interaction details (speech recognition per se G10L. 15/00)]
3/4938 . . . . [comprising a voice browser which renders and interprets, e.g. VoiceXML]
3/50 . . . . Centralised arrangements for answering calls; Centralised arrangements for recording messages for absent or busy subscribers (H04M 3/487 takes precedence; centralised dictation systems H04M 11/10); Centralised arrangements for recording messages
3/51 . . . . Centralised call answering arrangements requiring operator intervention , e.g. call or contact centers for telemarketing
3/5108 . . . . [Secretarial services]
3/5116 . . . . [for emergency applications]
3/5125 . . . . [with remote located operators]
3/5133 . . . . [Operator terminal details]
3/5141 . . . . [Details of processing calls and other types of contacts in an unified manner (unified messaging in packet-switching networks H04L. 51/36)]
3/515 . . . . [Night service systems]
3/518 . . . . [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)]
3/532 . . . . [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]
3/5333 . . . . [Message receiving aspects]
3/53341 . . . . [Message reply]
3/5335 . . . . [Message type or category, e.g. priority, indication]
3/53358 . . . . [Message preview]
3/53366 . . . . [Message disposing or creating aspects]
3/53375 . . . . [Message broadcasting]
3/53383 . . . . [Message registering commands or announcements; Greetings]
3/53391 . . . . [dependent on calling party]
3/537 . . . . Arrangements for indicating the presence of a recorded message , whereby the presence information might include a preview or summary of the message
3/54 . . . . Arrangements for diverting calls for one subscriber to another predetermined subscriber (based on the calling party profile H04M 3/42059; based on location H04M 3/42348; based on presence H04M 3/42365; to voice mail H04M 3/53308]
3/541 . . . . [Based on information specified by the calling party]
3/543 . . . . [Call deflection]
3/545 . . . . [with loop avoiding arrangements]
3/546 . . . . [in private branch exchanges]
3/548 . . . . [with remote control]
3/56 . . . . Arrangements for connecting several subscribers to a common circuit, i.e. affording conference facilities (computer conferences H04L. 12/18133; 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 . . . . [wherby 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 G10S. 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 substation
5/14 Applications of speech amplifiers
5/16 with means for reducing interference; with means for reducing effects due to line faults
5/18 Arrangements for signalling the class or number of called or calling line from one exchange to another
5/20 Number-indicating arrangements for incoming lines
7/00 Interconnection arrangements between switching centres (transmission arrangements in general H04B; interconnection arrangements between PSTN/ISDN switching centres H04Q 3/00))
7/0003 Interconnection between telephone networks and data networks
WARNING This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of H04M 7/0024 or H04M 7/1205
7/0006 where voice calls cross both networks
WARNING This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of H04M 7/0024 or H04M 7/1205
7/0009 where voice calls remain entirely in the telephone network
WARNING This group is no longer used for the classification of new documents as from February 1, 2007. The backlog of this group is being continuously reclassified to subgroups of H04M 7/0024 or H04M 7/1205
7/0012 Details of application programming interfaces [API] for telephone networks; Arrangements which combine a telephonic communication equipment and a computer, i.e. computer telephony integration [CPI] arrangements
7/0015 First party call control architectures
7/0018 Computer Telephony Resource Boards
7/0021 Details of Application Programming Interfaces
7/0024 Services and arrangements where telephone services are combined with data services (arrangements which combine a telephonic equipment and a computer H04M 7/0012)
7/0027 Collaboration services where a computer is used for data transfer and the telephone is used for telephonic communication
7/003 Click to dial services
7/0033 Notification or handling of incoming calls by a computer
7/0036 where the data service is an information service
7/0039 where the data service is provided by a stream of packets which are rendered in real time by the receiving terminal (audio streaming or audio streaming details of combined audio and video streaming H04L 29/06476)
7/0042 where the data service is a text-based messaging service (H04M 7/0054 takes precedence)
7/0045 where the text-based messaging service is an instant messaging service
7/0048 where the text-based messaging service is a Short Message Service
7/0051 where the data service is a multimedia messaging service
7/0054 where the data service is an electronic mail service
7/0057 Services where the data services network provides a telephone service in addition or as an alternative, e.g. for backup purposes, to the telephone service provided by the telephone service 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)
7/065 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 7/122)
7/08 for phantom working (phantom working in transmission of digital information H04L 5/20)
for working between exchanges having different types of switching equipment, e.g. power-driven and step by step, decimal and non-decimal, [circuit-switched and packet-switched, i.e. gateway arrangements]

[where the types of switching equipment comprises PSTN/ISDN equipment and switching equipment of networks other than PSTN/ISDN, e.g. Internet Protocol networks]

[Details of network access arrangements or protocols]

[where a cable TV network is used as an access to the PSTN/ISDN]

[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)]

[Details of core network interconnection arrangements]

[where the packet-switched network is an Internet Protocol Multimedia System-type network]

[where one of the core networks is a wireless network]

[where PSTN/ISDN interconnects two networks other than PSTN/ISDN]

[where a network other than PSTN/ISDN interconnects two PSTN/ISDN networks]

[Details of gateway equipment]

[where the switching fabric and the switching logic are decomposed such as in Media Gateway Control]

[Intertwining of session control protocols]

[where the session control protocols comprise H.323 and SS7]

[where the session control protocols comprise SIP and SS7]

[Methods and means to improve the telephone service quality, e.g. reservation, prioritisation or admission control]

[Details of addressing, directories or routing tables]

[Details of finding and selecting a gateway for a particular call]

[Details of providing call progress tones or announcements]

[Details of dual tone multiple frequency signalling]

in systems involving main and subordinate switching centres

in systems employing carrier frequencies

Interconnection arrangements not involving centralised switching

[Two-way communication systems between a limited number of parties]

[with subscriber controlled access to a line, i.e. key telephone systems]

[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)]

[with subscriber controlled access to an exchange line]

[Exchange line circuits (subscriber line circuits H04M 3/005)]

[wherein the key telephone sets are star-connected to a central unit by a limited number of lines]

[Multiplex systems]

[involving a common line for all parties]

[Multiplex systems]

[Time division multiplex systems, e.g. loop systems]

[Frequency division multiplex systems]

[involving a separate line for each pair of parties]

[involving combinations of interconnecting lines]

[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)]

[using echo cancellers (echo cancellers per se H04B 3/23)]

[using digital techniques (H04M 9/082 takes precedence)]

[using different frequency bands for transmitting and receiving paths (for line transmission in general H04B 3/21): using phase shifting arrangements]

[with switching of direction of transmission by voice frequency]

Telephonic communication systems adapted for combination with other electrical systems

[with telemetering systems (telemetering in general G08C)]

[using recorded signals, e.g. speech]

[with remote control systems (remote control in general G08C)]

[with bell or annunciator systems (such systems in general G08)]

[Paging systems (personal calling arrangements or devices G08B 3/1008; selective calling networks H04W 84/022)]

[Door telephones (adapted for television H04N 7/186)]

[Annunciator systems for hospitals]

[with fire, police, burglar, or other alarm systems (such systems in general G08)]

[using recorded signals, e.g. speech]

[Simultaneous speech and telegraphic or other data transmission over the same conductors (telegraphy in general H04L)]

[using different frequency bands for speech and other data]

[Data transmission during pauses in telephone conversation]

[Telephone sets adapted for data transmission]

[using time division multiplex techniques; (integrated services digital networks H04Q 11/0428)]

[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)]
13/00 Party-line systems (substation equipment
H04M 100: exchange equipment H04M 3/00,
H04M 500: 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 [i.e. 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
tlines, e.g. 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 . . [Distribution 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)
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]
17/2012 . . . [using calling, telephone credit/debit cards]
17/2014 . . . [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, MMS or DTMF]
17/208 . . . [using WAP or Internet, i.e. including electronic payment, e.g. e-cash]
Current supply arrangements for telephone systems

[with real-time recharging of account/card, e.g. if limit is reached during connection the account is recharged automatically]

[by calling a service number IVR, menu]
[by sending a message, e.g. SMS, MMS, EMS]
[using money, i.e. physical input of coins or bank notes]
[using signalling, e.g. USSD, USS, DTMF]
[using WAP or Internet, i.e. including electronic payment, e-cash, etc.]
[using a code]
[from communication terminal display]
[from material card, using a magnetic stripe card]
[optical code recognition [OCR], e.g. bar code reader]
[wireless, e.g. Bluetooth, RFID]
[code reader]
[public, e.g. public recharge point]
[local at the terminal itself]
[code type]
[alphanumeric]
[bar code]
[pattern, i.e. single or changing sequences of pictures or patterns]
[punched holes]
[temporarily valid code]
[code management]
[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]
[using a code]
[from communication terminal display]
[from material cards, i.e. magnetic stripe card]
[Optical code recognition [OCR], e.g. bar code reader]
[Wireless codes, e.g. Bluetooth or RFID]
[using public code readers, e.g. public payment or recharge point]
[Code type, e.g. alphanumeric, bar code]
[Code management]

Pay as you go

Current supply arrangements for telephone systems

(for selecting-equipment H04Q 1/28)

(providing ringing current or supervisory tones, e.g. dialling tone, busy tone)

(by reversing the polarity of the current at the exchange)

{Arrangements for interrupting the ringing current}

ringing-current generated at substation

Encoding the ringing signal, i.e. providing distinctive or selective ringing capability

{with variable loudness of the ringing tone, e.g. variable envelope or amplitude of ring signal]

{according to the level of ambient noise]

{Call privacy arrangements, e.g. timely inhibiting the ring signal]

{Vibrating means for incoming calls]

{Arrangements providing optical indication of the incoming call, e.g. flasher circuits]

Current supply sources at subordinate switching centre charged from main exchange

Current supply sources at substation (generating ringing current H04M 19/04)

Subject matter not provided for in other groups of this subclass

Electronic components, circuits, software, systems or apparatus used in telephone systems

Diodes

Transistors

Integrated circuits

Magnetic elements

Logic circuits

Counting circuits

Delay circuits; Timers

Sequence circuits

Comparators

Scanners

Synchronisation circuits

A/D convertors

S/P convertors

PCM

Personal computers

Microprocessors

Memories

Displays

using speech synthesis (speech synthesis per se G10L 13/00)

using speech recognition (speech recognition per se G10L 15/00)

involving speaker-dependent recognition

(adaptation to speaker for speech recognition G10L 15/07)

using speaker recognition (speaker recognition per se G10L 17/00)

Graphical user interfaces

Telephonic communication in combination with video communication

Telephonic communication in combination with fax communication

Object oriented software

Medium conversion

line protection circuits such as current or overvoltage protection circuits
Aspects of automatic or semi-automatic exchanges

- related to OAM&P
- technician dispatch system
- software update
- remote terminal provisioning, e.g. of applets
- loopback testing
- non-invasive testing, i.e. in operation testing without service interruption
- distortion monitoring (QoS monitoring)

- signature devices
- related to the purpose or context of the telephonic communication
- Calls without connection establishment for implicit information transfer or as a service trigger
- Telecontrol
- of avatars
- Remote administration, e.g. of web servers
- Televoting
- Financial transactions and auctions, e.g. bidding (auctioneering devices in packet switching networks H04L 12/1804)
- Shopping and product ordering
- Game playing
- Telemetering, e.g. transmission of ambient measurements
- for hotels
- Fixed mobile conversion
- related to dial plan and call routing
- Temporary dial plan
- Functional or symbolic dial plan such as license plate numbers
- On-line status dependent routing
- Call-type dependent routing (route determination based on the nature of the carried application in packet switching networks H04L 45/306)
- related to features of supplementary services
- Temporarily overriding a service configuration
- Service processing based on information specified by a party before or during a call, e.g. information, tone or routing selection
- Call initiation by network rather than by subscriber
- Path replacement
- Live party detection
- Call handling or answering restrictions, e.g. specified by the calling party
- Call context notifications
- Group features, e.g. closed user group
- Broadcasting (broadcasting in packet switching networks H04L 12/18)
- Line restrictions
- Language aspects
- Call type detection of indication, e.g. voice or fax, mobile of fixed, PSTN or IP
- Schedules, e.g. personal calendars
- Call queuing apart from automatic call distribution
- Confirmation by serviced party
- Call or conference reconnect, e.g. resulting from isdn terminal portability

- Proximity
- related to user interface aspects of the telephonic communication service
- where a voice mode or a visual mode can be used interchangeably
- where a voice mode is enhanced with visual information
- where a visual mode is used instead of a voice mode
- where the visual mode comprises menus
- comprising a personalized user interface
- comprising a service specific user interface
- remote control of substation user interface for telephonic services, e.g. by ISDN stimulus, ADSL, wireless telephony application WTA, MExE or BREW
- Service state indications
- related to audio recordings in general
- Management of recordings
- Marking
- Recording playback features, e.g. increased speed
- Prerecordings to be used during a voice call
- Personal name recording
- related to information services provided via a voice call
- Pre or post-call/confERENCE information service
- In-call/confERENCE information service
- where the information comprises non-audio but is provided over voice channels (protocols for multimedia information services per se H04L 65/00)
- Reverse directory service
- Interactive dialogue design tools, features or methods
- Phonceasting
- Autocues for dialog assistance
- Digital rights management
- Augmented reality
- related to call centers
- Performance feedback
- Agent or workforce management
- Agent or workforce training
- Collaboration among agents
- Competitive bidding for work items
- Rerouting calls between call centers
- Call center operated for multiple customers
- Customer-specific call routing plans
- related to voicemail messaging
- Unified messaging with single point of access to voicemail and other mail or messaging systems (unified messaging in packet switching networks H04L 51/36)
- Attachments to voicemail (messages including annexed information, e.g. Attachments, in packet switching networks H04L 51/08)
- Voicemail attached to other kind of message
- Voicemail combined with text-based messaging
- Message forwarding (selective message forwarding in packet switching networks H04L 51/14)
- Sender-side editing
- Voicemail monitoring during recording
- Voicemail RSS
. . Sending message identifiers instead of whole messages (notification of incoming messages in packet-switching networks H04L 51/24)

. . Calling party redirected to message centre on called party request

. . related to audio conference

. . 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 preventions

. . Antivirus 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

On-line real-time billing, able to see billing information while in communication, e.g. via the internet

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

Network monitoring; statistics on usage on called/calling number

Sponsored, subsidised calls via advertising, e.g. calling cards with ads or connecting to special ads, free calling time by purchasing goods

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

Billing aspects relating to the actual charge

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

Data billing, e.g. wherein the user is charged based only on the time he receives data

Technology dependant metering

Fixed telephone network, e.g. POTS, ISDN

Fixed data network, e.g. PDN, ATM, B-ISDN

Voice over IP; Packet switched telephony

Wireless network, e.g. GSM, PCS, TACS

WLAN

UMTS; GPRS

Hybrid network

In based PPS

CDMA, i.e. Code Division Multiple Access

Service node based PPS

Multipoint, e.g. messaging, broadcast or group SMS

IMS, i.e. Integrated Multimedia messaging Subsystem

xDSL Modem lines, e.g. HDSL or ADSL

Push to talk

Bandwidth or usage-sensitive billing

Voice over IP billing

Data billing charged as a voice call, i.e. based on time or unit charging

SMS billing

Involving wireless systems

Roaming

Least cost routing, i.e. provision for selecting the lowest cost tariff

Charging/billing arrangements for connection made over different networks, e.g. wireless and PSTN, ISDN, etc.
Dynamically
by user request
Reserve amount, e.g. according to estimated costs for a typical communication duration or according to the estimated volume to be transferred
Rating aspects, e.g. rating parameters or tariff determination aspects
class of subscriber
QoS
Determine tariff or charge band
Load situation, e.g. Current network load, traffic load or available resources
Location dependent, e.g. Bussiness or home
Roaming
Least cost routing, e.g. Automatic or manual, call by call or by preselection
Biding
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 H04M 2215/42)
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
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 H04M 2242/15; services independent of location H04M 3/42229)
Information service where the information is dependent on the location of the subscriber
with computer telephone integration
Automated outdialling systems
Televoting 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 H04M 2250/10)
- 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)