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 1/033; 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)]
H04M

1/0227 . . . . . . {Rotatable in one plane, i.e. using a one degree of freedom hinge}
1/0229 . . . . . . {The hinge comprising input and/or output user interface means}
1/0231 . . . . . . {Including a rotatable keypad body part}
1/0233 . . . . . . {Including a rotatable display body part}
1/0235 . . . . . . {Slidable or telescopic telephones, i.e. with a relative translation movement of the body parts; Telephones using a combination of translation and other relative motions of the body parts}
1/0237 . . . . . . {Sliding mechanism with one degree of freedom}
1/0239 . . . . . . {Sliding mechanism with two degree of freedom, e.g. translation in two different directions}
1/0241 . . . . . . {using relative motion of the body parts to change the operational status of the telephone set, e.g. switching on/off, answering incoming call}
1/0243 . . . . . . {using the relative angle between housings}
1/0245 . . . . . . {using open/close detection}
1/0247 . . . . . . {comprising more than two body parts}
1/0249 . . . . . . {Details of the mechanical connection between the housing parts or relating to the method of assembly}
1/0252 . . . . . . {by means of a snap-on mechanism}
1/0254 . . . . . . {comprising one or a plurality of mechanically detachable modules}
1/0256 . . . . . . {wherein the modules are operable in the detached state, e.g. one module for the user interface and one module for the transceiver}
1/0258 . . . . . . {for a headset device (constructional features of headsets H04M 1/05; headsets for handsfree use H04M 1/6058)}
1/026 . . . . . . {Details of the structure or mounting of specific components}
1/0262 . . . . . . {for a battery compartment}
1/0264 . . . . . . {for a camera module assembly (photo or video cameras per se G03B; television cameras per se H04N 5/225)}
1/0266 . . . . . . {for a display module assembly (for fixed telephones H04M 1/0295)}
1/0268 . . . . . . {including a flexible display panel}
1/027 . . . . . . {including magnifying means}
1/0272 . . . . . . {for a projector or beamer module assembly (constructional features of projectors per se G03B 21/00; constructional details of projectors using electronic spatial light modulators per se H04N 9/31)}
1/0274 . . . . . . {for an electrical connector module}
1/0277 . . . . . . {for a printed circuit board assembly}
1/0279 . . . . . . {Improving the user comfort or ergonomics}
1/0281 . . . . . . {for providing single handed use or left/right hand conversion}
1/0283 . . . . . . {for providing a decorative aspect, e.g. customization of casings, exchangeable faceplate}
1/0285 . . . . . . {Pen-type handsets}
1/0287 . . . . . . {being disposable or recyclable}
1/0289 . . . . . . {Telephone sets for operators}
1/0291 . . . . . . {Door telephones}
1/0293 . . . . . . {Terminal boxes for telephone sets}
1/0295 . . . . . . {mechanical mounting details of display modules (for portable telephones H04M 1/0266)}
1/0297 . . . . . . {Telephone sets adapted to be mounted on a desk or on a wall}
1/03 . . . . . . {Constructional features of telephone transmitters or receivers, e.g. telephone handsets, {speakers or microphones} (transducers in general H04R 1/00)}
1/035 . . . . . . {Improving the acoustic characteristics by means of constructional features of the housing, e.g. ribs, walls, resonating chambers or cavities}
1/04 . . . . . . {Supports for telephone transmitters or receivers (for transducers in general H04R 1/00)}
1/05 . . . . . . {adapted for use on head, throat, or breast {handsfree use of portable phones H04M 1/6041})}
1/06 . . . . . . {Hooks; Cradles}
1/08 . . . . . . {associated with switches operated by weight of receiver or hand-set}
1/10 . . . . . . {associated with switches operated by magnetic effect due to proximity of receiver or hand-set}
1/11 . . . . . . {Supports for sets, e.g. incorporating armrests}
1/12 . . . . . . {Adjustable supports, e.g. extensible}
1/13 . . . . . . {pantographic}
1/14 . . . . . . {with resilient means to eliminate extraneous vibrations}
1/15 . . . . . . {Protection of telephone cords; Guiding telephone cords; Winding-up telephone cords (in general H02G 11/00)}
1/17 . . . . . . {Hygienic or sanitary devices on telephone equipment (for mouthpieces or earpieces per se H04R 1/12)}
1/18 . . . . . . {Telephone sets modified for use in ships, mines, or other places exposed to adverse environment (H04M 1/19 takes precedence; telephone cabinets per se E04H 1/14)}
1/185 . . . . . . {Improving the rigidity of the casing or resistance to shocks}
1/19 . . . . . . {Arrangements of transmitters, receivers, or complete sets to prevent eavesdropping, to attenuate local noise or to prevent undesired transmission; Special mouthpieces or receivers therefor (circuit arrangements for preventing eavesdropping H04M 1/68; telephone cabinets per se E04H 1/14)}
1/20 . . . . . . {Arrangements for preventing acoustic feed-back (H04M 1/62 takes precedence)}
1/21 . . . . . . {Combinations with auxiliary equipment, e.g. with clock, with memoranda pads}
1/215 . . . . . . {by non-intrusive coupling means, e.g. acoustic couplers}
1/2155 . . . . . . {Acoustic coupling}
1/22 . . . . . . {Illuminating; Arrangements for improving visibility of characters on dials}
1/23 . . . . . . {Construction or mounting of dials or of equivalent devices; Means for facilitating the use thereof (by improving visibility H04M 1/22)}
1/233 . . . . . . {including a pointing device, e.g. roller key, track ball, rocker switch or joystick (constructional details of pointing devices per se G06F 3/033)}
Devices for signalling identity of wanted subscriber

H04M

Telephone sets using digital voice transmission

H04Q 11/0471
H04M 11/06

(simultaneous speech and data transmission

Telephone sets using digital voice transmission

H04L 29/00)

(H04M 3/42; administration or customization of services
(H04M 3/42136; by downloading data to
substation equipment (H04M 3/42176))

Devices whereby a plurality of signals may be
controlled by voice recognition

H04M 3/42391
H04M 3/42136
H04M 3/42176

with programmable function keys

H04M 1/2474

(centralized arrangements where telephones
services are combined H04M 7/0024

(H04M 1/2753, H04M 1/27467).

Methods of retrieving data

H04M 3/42136
H04M 3/42176

using static electronic memories, e.g. chips

H04M 7/0021)

Methods of accessing Internet

H04M 3/4938
H04M 7/0024

Telephone terminals specially adapted for
disabled people (H04M 3/42788 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))

H04M 7/0021

for selecting a function from a menu display

H04M 1/2474

[H04M 1/2753

Groups H04M 1/2745, H04M 1/27467,
and H04M 1/2753 should be considered in
order to perform a complete search.

Methods of retrieving data

H04M 3/42391
H04M 3/42136
H04M 3/42176

using static electronic memories, e.g. chips

H04M 7/0021)

Methods of accessing Internet

H04M 3/4938
H04M 7/0024

using static electronic memories, e.g. chips
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)

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}

{Line monitoring circuits for detecting caller identification} 1/573

{Means for retrieving and displaying personal data about calling party} 1/575

{associated with a pictorial or graphical representation} 1/576

{associated with a synthesized vocal announcement} 1/578

Anti-side-tone circuits (hybrid circuits for carrier-frequency operation H04B 1/00) 1/58

{implemented without inductive element} 1/585

including speech amplifiers 1/60

in the transmitter circuit 1/6008

in the receiver circuit 1/6016

{implemented as integrated speech networks} 1/6025

{for providing handsfree use or a loudspeaker mode in telephone sets (arrangements for preventing acoustic echo H04M 9/08)} 1/6033

{Portable telephones adapted for handsfree use} 1/6041

{including control of the receiver volume to provide a dual operational mode at close or far distance from the user} 1/605

{including the use of a headset accessory device connected to the portable telephone} 1/6058

{including a wireless connection} 1/6066

{adapted for handsfree use in a vehicle (H04M 1/6058 takes precedence; arrangements for holding telephones in a vehicle H04R 11/0241))} 1/6075

(by interfacing with the vehicle audio system) 1/6083

{including a wireless interface} 1/6091

Constructional arrangements 1/62

Automatic arrangements for answering calls; Automatic arrangements for recording messages for absent subscribers; Arrangements for recording conversations (centralised dictation systems H04M 11/10) 1/64

{storing speech in digital form} 1/642

{with speech synthesis} 1/645

{using magnetic tape (H04M 1/642 takes precedence)} 1/647

Recording arrangements {for recording a message from the calling party (in the exchange H04M 3/501)} 1/65

{storing speech in digital form} 1/6505

{with speech synthesis} 1/651

{using magnetic tape (H04M 1/6505 takes precedence)} 1/6515

Means for playing back the recorded messages by remote control over a telephone line (H04M 1/658 takes precedence) 1/652

Telephone line monitoring circuits therefor, e.g. ring detectors 1/654

{mechanically actuating hook switch, e.g. lifting handset} 1/6545

for recording conversations 1/656

Means for redirecting recorded messages to other extensions or equipment 1/658

with means for preventing unauthorised or fraudulent calling (verifying user identity or authority in secret or secure digital communications H04L 9/32) 1/66

Preventing unauthorised calls to a telephone set 1/663

by checking the validity of a code 1/665

Preventing unauthorised calls from a telephone set (H04M 1/677 takes precedence) 1/667

by electronic means 1/67

the user being required to key in a code 1/673

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)) 1/675

Preventing the dialling or sending of predetermined telephone numbers or selected types of telephone numbers, e.g. long distance 1/677

{by providing access to preprogrammed keys} 1/6775

Circuit arrangements for preventing eavesdropping 1/68

Lock-out or secrecy arrangements in party-line systems 1/70

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) 1/72

using two or more extensions per line (H04M 1/725 takes precedence) 1/723

Cordless telephones [(for handsfree use H04M 1/6041)] 1/725
telephone operation mode or to indicate the improved user interface to control a main
portable communication terminal with
circumstances

functionality or the communication
capability of the terminal under specific
the functionality or communication

{ 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 applications 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 1/6041)}

{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 48/02))

(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
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-aids
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)
H04M

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 equipment or test arrangements therefor}

3/30 . for subscriber's lines {, for the local loop}

3/301 . {Circuit arrangements at the subscriber's side of the line}

3/302 . {using modulation techniques for copper pairs (for ISDN systems H04M 3/245; ISDN selection or connection testing arrangements H04Q 11/0451)

3/303 . {and using PCM multiplexers, e.g. pair gain systems}

3/304 . {and using xDSL modems (xDSL line qualification H04M 3/306)

3/305 . {testing of physical copper line parameters, e.g. capacitance or resistance (locating faults in cables G01R 31/08)

3/306 . {for frequencies above the voice frequency, e.g. xDSL line qualification (test methods, test equipment and test arrangements for subscriber lines using xDSL modems H04M 3/304; systems modifying transmission characteristics according to link quality H04L 1/0001; monitoring and/or testing of line transmission systems H04B 3/46)

3/307 . {using ringback}

3/308 . {Craftsperson test terminals}

3/32 . {for lines between exchanges}

3/323 . {for the arrangements providing the connection (test connection, test call, call simulation)}

3/326 . {for registers and translators}

3/34 . {Testing for cross-talk (in lines generally H04B)

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

3/362 . {Traffic simulation}

3/365 . {Load metering of control unit}

3/367 . {Traffic or load control}

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

3/382 . {using authorisation codes or passwords}

3/385 . {using speech signals}

3/387 . {using subscriber identification cards}

3/40 . Applications of speech amplifiers

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

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

3/42017 . {Customized ring-back tones}

3/42025 . {Calling or Called party identification service}

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
in private branch exchanges }

in networks

{ Personal communication services, i.e. services
; selecting arrangements

{ Conversation recording systems ( at the

{ Call pickup ( comprising simultaneous alerting

{ Addressing recording systems ( at the

{ 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
call processing server } }

{ 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 3/4224) }

{ 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 }

{ Location-based services which utilize the
location information of a target }
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; arrangements for recording messages for absent or busy subscribers (H04M 3/487 takes precedence; centralised dictation systems H04M 11/10); Centralised arrangements for recording messages
3/51 . . . Centralised call answering arrangements requiring operator intervention, e.g. call or contact centers for telemarketing
3/5108 . . . . [Secretarial services]
3/5116 . . . . [for emergency applications]
3/5125 . . . . [with remote located operators]
3/5133 . . . . [Operator terminal details]
3/5141 . . . . [Details of processing calls and other types of contacts in an unified manner (unified messaging in packet-switching networks H04L 51/36)]
3/515 . . . . [Night service systems]
3/5158 . . . . [in combination with automated outdialling systems (devices for signalling identity of wanted subscriber H04M 1/26)]
3/5166 . . . . [in combination with interactive voice response systems or voice portals, e.g. as front-ends]
3/5175 . . . . [Call or contact centers supervision arrangements]
3/5183 . . . . [Call or contact centers with computer-telephony arrangements]
3/5191 . . . . [interacting with the Internet]
3/52 . . . . . . . Arrangements for routing dead number calls to operators
3/523 . . . . . . . with call distribution or queueing
3/5231 . . . . . . . [with call back arrangements]
3/5232 . . . . . . . [Call distribution algorithms]
3/5233 . . . . . . . [Operator skill based call distribution]
3/5234 . . . . . . . [Uniform load distribution]
3/5235 . . . . . . . [Dependent on call type or called number (DNIS)]
3/5236 . . . . . . . [Sequential or circular distribution]
3/5237 . . . . . . . [Interconnection arrangements between ACD systems]
3/5238 . . . . . . . [with waiting time or load prediction arrangements]
3/527 . . . . . . . Centralised call answering arrangements not requiring operator intervention
3/53 . . . . . . . Centralised arrangements for recording incoming messages, i.e. mailbox systems
3/5307 . . . . . . . [for recording messages comprising any combination of audio and non-audio components]
3/5315 . . . . . . . [where the non-audio components are still images or video (still image mailbox systems H04N 1/324, intermediate storage of video signals for videophones H04N 7/142)]
3/5322 . . . . . . . [for recording text messages]
3/533 . . . . . . . Voice mail systems
3/53308 . . . . . . . [Message originator indirectly connected to the message centre, e.g. after detection of busy or absent state of a called party]
3/53316 . . . . . . . [Messaging centre selected by message originator]
3/53325 . . . . . . . [Interconnection arrangements between voice mail systems]
3/5333 . . . . . . . [Message receiving aspects]
3/53341 . . . . . . . [Message reply]
3/5335 . . . . . . . [Message type or category, e.g. priority, indication]
3/53358 . . . . . . . [Message preview]
3/5336 . . . . . . . [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 3/42343; based on presence H04M 3/42365; to voice mail H04M 3/53308)]
3/541 . . . . . . . [based on information specified by the calling party]
3/543 . . . . . . . [Call deflection]
3/545 . . . . . . . [with loop avoiding arrangements]
3/546 . . . . . . . [in private branch exchanges]
3/548 . . . . . . . [with remote control]
3/56 . . . . . . . Arrangements for connecting several subscribers to a common circuit, i.e. affording conference facilities (computer conferences H04L 12/1813; video conference systems H04N 7/15)
3/561 . . . . . . . [by multiplexing]
3/562 . . . . . . . [where the conference facilities are distributed]
3/563 . . . . . . . [User guidance or feature selection]
3/564 . . . . . . . [whereby the feature is a sub-conference]
3/565 . . . . . . . [relating to time schedule aspects]
3/566 . . . . . . . [relating to a participants right to speak (protocols for floor control H04L 29/06421, H04L 29/06428, H04L 29/06435)]
3/567 . . . . . . . [Multimedia conference systems]
3/568 . . . . . . . [audio processing specific to telephonic conferencing, e.g. spatial distribution, mixing of participants (echo suppression in two-way loud-speaking telephone systems H04M 9/02; sound field processing per se 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 . . . . . . . [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)
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]
9/005 . . . [with subscriber controlled access to an exchange line]
9/006 . . . [Exchange line circuits (subscriber line circuits H04M 3/005)]
9/007 . . . [wherein the key telephone sets are star-connected to a central unit by a limited number of lines]
9/008 . . . [Multiplex systems]
9/02 . . involving a common line for all parties
9/022 . . . [Multiplex systems]
9/025 . . . [Time division multiplex systems, e.g. loop systems]
9/027 . . . [Frequency division multiplex systems]
9/04 . . involving a separate line for each pair of parties
9/06 . . involving combinations of interconnecting lines
9/08 . . Two-way loud-speaking telephone systems with means for suppressing echoes or otherwise conditioning for one or other direction of traffic (for line transmission in general H04B 3/20)
9/082 . . . [using echo cancellers (echo cancellers per se H04B 3/23)]
9/085 . . . [using digital techniques (H04M 9/082 takes precedence)]
9/087 . . . [using different frequency bands for transmitting and receiving paths (for line transmission in general H04B 3/21); using phase shifting arrangements]
9/10 . . with switching of direction of transmission by voice frequency

11/00 Telephonic communication systems adapted for combination with other electrical systems

11/002 . . . [with telemetering systems (telemetering in general G08C)]
11/005 . . . [using recorded signals, e.g. speech]
11/007 . . . [with remote control systems (remote control in general G08C)]
11/02 . . with bell or annunciator systems (such systems in general G08)
11/022 . . . [Paging systems (personal calling arrangements or devices G08B 3/1008; selective calling networks H04W 84/022)]
11/025 . . . (Door telephones (adapted for television H04N 7/186))
11/027 . . . (Annunciator systems for hospitals)
11/04 . . with fire, police, burglar, or other alarm systems (such systems in general G08)
11/045 . . . [using recorded signals, e.g. speech]
11/06 . . Simultaneous speech and telegraphic or other data transmission over the same conductors (telegraphy in general H04L)
11/062 . . . [using different frequency bands for speech and other data]
11/064 . . . [Data transmission during pauses in telephone conversation]
11/066 . . . (Telephone sets adapted for data transmission)
11/068 . . . [using time division multiplex techniques; (integrated services digital networks H04Q 11/0428)]
11/08 . . adapted for optional reception of entertainment or informative matter (systems in which the information is continuously available on a carrier over the whole network H04H 20/81)
11/085 . . [using a television receiver, e.g. viewdata system]
11/10 . . with dictation recording and playback systems (such systems in general G11B)
13/00 Party-line systems (substation equipment
H04M 1/00: exchange equipment H04M 3/00,
H04M 5/00: metering arrangements H04M 15/36)
15/00 Arrangements for metering, time-control or
time indication ; Metering, charging or billing
arrangements for voice wireline or wireless
communications, e.g. VoIP]
15/04 . . Recording calls [or communications] in printed, perforated or other permanent form
15/06 . . Recording class or number of calling [i.e. A-
party] or called party [i.e. B-party]
15/07 . . [Split billing, i.e. both A-party and B-party charged for the communication]
15/08 . . Metering calls to called party [i.e. B-party charged for the communication]
15/09 . . [Third party charged communications]
15/10 . . Metering calls from calling party [i.e. A-party charged for the communication]
15/12 . . . Discriminative metering [charging or billing]
15/14 . . . according to class of calling party
15/16 . . . according to connection obtained
15/18 . . . according to duration of the call [or the communication]
15/20 . . . . Operator’s time recording or indicating
arrangements
15/22 . . . . according to time of day
15/24 . . . . preventing metering of tax-free calls to certain lines, e.g. to fire or ambulance stations
15/26 . . . . with a meter [or performing charging or billing] at the exchange controlled by an operator
15/28 . . . with meter at substation [or with calculation of charges at terminal]
15/30 . . . . the meter [or calculation of charges] not being controlled from an exchange
15/31 . . . [Distributed metering or calculation of charges]
15/32 . . . [Charging, billing or] metering arrangements for satellites or concentrators which connect one or more exchange lines with a group of local lines
15/34 . . . [Charging, billing or] metering arrangements for private branch exchanges
15/36 . . . [Charging, billing or] metering arrangements for party-lines
15/38 . . . [Charging, billing or] metering by apparatus other than mechanical step-by-step counter type
15/39 . . . [Arrangements for preventing metering, charging or billing]
15/41 . . . [Billing record details, i.e. parameters, identifiers, structure of call data record [CDRI]]
15/42 . . . [Dynamic individual rates per user]
15/43 . . . [Billing software details]
15/44 . . . [Augmented, consolidated or itemized billing statement or bill presentation]
15/46 . . . [Real-time negotiation between users and providers or operators]
15/47 . . . [Fraud detection or prevention means]
15/48 . . . [Secure or trusted billing, e.g. trusted elements or encryption]
15/49 . . . [Connection to several service providers]
15/50 . . . [for cross-charging network operators]
15/51 . . . [for resellers, retailers or service providers]
15/52 . . . [for operator independent billing system]
15/53 . . . [using mediation]
15/54 . . . [for revenue sharing]
15/55 . . . [for hybrid networks]
15/56 . . . [for VoIP communications]
15/57 . . . [for integrated multimedia messaging subsystem [IMS]]
15/58 . . . [based on statistics of usage or network monitoring]
15/59 . . . [based on real time]
15/60 . . . [based on actual use of network resources]
15/61 . . . [based on the service used]
15/62 . . . [based on trigger specification]
15/63 . . . [based on the content carried by the session initiation protocol [SIP] messages]
15/64 . . . [On-line charging system [OCS]]
15/65 . . . [Off-line charging system]
15/66 . . . [Policy and charging system]
15/67 . . . [Transmitting arrangements for sending billing related information]
15/68 . . . [Payment of value-added services]
15/70 . . . [Administration or customization aspects; Counter-checking correct charges]
15/705 . . . [Account settings, e.g. limits or numbers or payment]
15/71 . . . [Modifying recharging resources]
15/715 . . . [Activating new subscriber or card]
15/72 . . . . [by the user]
15/721 . . . . [using the Internet]
15/723 . . . . [using the user's device]
15/725 . . . . [by the operator]
15/73 . . . . [Validating charges]
15/735 . . . . [Re-crediting user]
15/74 . . . . [Backing up]
15/745 . . . . [Customizing according to wishes of subscriber, e.g. friends or family]
15/75 . . . . [Account location specifications]
15/751 . . . . [Card based account, e.g. smart card, SIM card or USIM]
15/752 . . . . [Terminal based account]
15/753 . . . . [Network based account]
15/755 . . . . [Account identification]
15/7553 . . . . [via service number, e.g. calling card]
15/7556 . . . . [by SIM, e.g. smart card account in SCP, SDP or SN]
15/76 . . . . [Synchronization of distributed accounts]
15/765 . . . . [Linked or grouped accounts, e.g. of users or devices]
15/7652 . . . . [shared by users]
15/7655 . . . . [shared by technologies]
15/7657 . . . . [for closed subscriber group [CSG]]
15/77 . . . . [involving multiple accounts per user]
15/771 . . . . [per terminal or location, e.g. mobile device with multiple directory numbers]
15/772 . . . . [per service, e.g. prepay or post-pay]
15/773 . . . . [per technology, e.g. PSTN or wireless]
15/774 . . . . [per card]
15/775 . . . . [Account specifications on parallel communications]
15/78 . . . . [Redistributing amount between accounts]
15/781 . . . . [dynamically]
15/783 . . . . [by user request]
15/805 . . . [Flat-fee]
15/8011 . . . [using class of subscriber]
15/8016 . . . [based on quality of service [QoS]]
15/8022 . . . [Determining tariff or charge band]
15/8027 . . . [based on network load situation]
15/8033 . . . [location-dependent, e.g. business or home]
15/8038 . . . [Roaming or handoff]
15/8044 . . . [Least cost routing]
15/805 . . . [Bidding]
15/8055 . . . [Selecting cheaper transport technology for a given service]
15/8061 . . . [Selecting least cost route depending on origin or type of service]
15/8066 . . . [According to the number of recipients]
15/8072 . . . [Group, conference or multi-party call]
15/8077 . . . [Group MMS or SMS; Point-to-multi-point services or broadcast services]
15/8083 . . . [involving reduced rates or discounts, e.g. time-of-day reductions or volume discounts]
15/8088 . . . [involving increased rates, e.g. spam messaging billing differentiation]
15/8094 . . . [Trial service, i.e. free of charge service for trial purposes]
15/81 . . . [Dynamic pricing, e.g. change of tariff during call]
15/82 . . . [Criteria or parameters used for performing billing operations]
15/8207 . . . [Time based data metric aspects, e.g. VoIP or circuit switched packet data]
15/8214 . . . [Data or packet based]
15/8221 . . . [Message based]
15/8228 . . . [Session based]
15/8235 . . . [Access based]
15/8242 . . . [Transaction based]
15/825 . . . [based on the number of used channels, e.g. bundling channels, frequencies or CDMA codes]
15/8257 . . . [Unit based]
15/8264 . . . [Pulse based]
15/8271 . . . [Based on the number of used services, e.g. call forwarding or call barring]
15/8278 . . . [Event based]
15/8285 . . . [Money or currency based]
15/8292 . . . [Charging for signaling or unsuccessful connection]
15/83 . . . [Notification aspects]
15/835 . . . [Time or frequency of notifications, e.g. Advice of Charge [AoC]]
15/8351 . . . [before establishing a communication]
15/8353 . . . [during the communication]
15/8355 . . . [after the end of the communication]
15/8356 . . . [in regular intervals]
15/8358 . . . [Dynamic change of the length or frequency of the notification interval]
15/84 . . . [Types of notifications]
15/842 . . . [Announcement, e.g. IVR dialogue]
15/844 . . . [Message, e.g. SMS]
15/846 . . . [optical, e.g. icon]
15/848 . . . [Tone, e.g. beeper]
15/85 . . . [characterised by the type of condition triggering a notification]
15/851 . . . [Determined tariff]
15/852 . . . [Low balance or limit reached]
15/853 . . . [Calculate maximum communication time or volume]
15/854 . . . [Available credit]
15/855 . . . [Successful event]
15/856 . . . [Unsuccessful event]
15/857 . . . [Cumulative charges]
15/858 . . . [Request users acknowledgement prior to use]
15/859 . . . [Recipients of the notification]
15/863 . . . [multiple parties, e.g. multi party AOC]
15/866 . . . [a predetermined or undetermined destination, e.g. notifying a prepaid accounting server of a successful delivery of a service]
15/88 . . . [Provision for limiting connection, or expenditure]
15/881 . . . [for continuing the call beyond the limit using allow grace]
15/882 . . . [for continuing the call beyond the limit using an alternative, e.g. alternative account]
15/883 . . . [linked escalation limits, i.e. establish, first or second limit]
15/885 . . . [limit per application]
15/886 . . . [limit per terminal]
15/887 . . . [limit per user or user related number]
15/888 . . . [severing connection after predetermined time or data]
15/99 . . . [using Intelligent Networks [IN] or Advanced Intelligent Networks [AIN]]
15/93 . . . [using near field or similar technologies]

17/00 Prepayment [of wireline communication systems, wireless communication systems or] telephone systems (using a coded card to authorise calls from a telephone set H04M 1/675)

17/005 . . . [Disposable prepaid communication devices]
17/01 . . . [Cocot systems, i.e. private ownership of payphones]
17/02 . . . [Coin-free or check-free systems, e.g. mobile- or card-operated phones, public telephones or booths]
17/023 . . . [Circuit arrangements]
17/026 . . . [Constructional features]
17/10 . . . [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, USS or DTMF]
17/208 . . . [using WAP or Internet, i.e. including electronic payment, e.g. e-cash]
Current supply arrangements for telephone systems (for selecting-equipment H04Q 1/28)

19/00 . Current supply arrangements for telephone systems (for selecting-equipment H04Q 1/28)

19/001 . (Current supply source at the exchanger providing ringing current or supervisory tones, e.g. dialling tone, busy tone
19/023 . (by reversing the polarity of the current at the exchange
19/026 . [Arrangements for interrupting the ringing current]
19/04 . ringing-current generated at substation
19/041 . . . [Encoding the ringing signal, i.e. providing distinctive or selective ringing capability]
19/042 . . . [with variable loudness of the ringing tone, e.g. variable envelope or amplitude of ring signal]
19/044 . . . [according to the level of ambient noise]
19/045 . . . [Call privacy arrangements, e.g. timely inhibiting the ring signal]
19/047 . . . [Vibrating means for incoming calls]
19/048 . . . [Arrangements providing optical indication of the incoming call, e.g. flasher circuits]
19/06 . Current supply sources at subordinate switching centre charged from main exchange
19/08 . Current supply sources at substation (generating ringing current H04M 19/04)

99/00 Subject matter not provided for in other groups of this subclass

2201/00 Electronic components, circuits, software, systems or apparatus used in telephone systems

2201/02 . Diodes
2201/04 . Transistors
2201/06 . Integrated circuits
2201/08 . Magnetic elements
2201/10 . Logic circuits
2201/12 . Counting circuits
2201/14 . Delay circuits; Timers
2201/16 . Sequence circuits
2201/18 . Comparators
2201/20 . Scanners
2201/22 . Synchronisation circuits
2201/26 . A/D convertors
2201/28 . S/P convertors
2201/30 . PCM
2201/32 . Personal computers
2201/34 . Microprocessors
2201/36 . Memories
2201/38 . Displays
2201/39 . using speech synthesis (speech synthesis per se
2201/40 . using speech recognition (speech recognition per se
2201/405 . . . involving speaker-dependent recognition
2201/41 . using speaker recognition (speaker recognition per se G10L 15/00)
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
<table>
<thead>
<tr>
<th>CPC Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2203/00</td>
<td>Aspects of automatic or semi-automatic exchanges</td>
</tr>
<tr>
<td>2203/05</td>
<td>related to OAM&amp;P</td>
</tr>
<tr>
<td>2203/051</td>
<td>technician dispatch system</td>
</tr>
<tr>
<td>2203/052</td>
<td>software update</td>
</tr>
<tr>
<td>2203/053</td>
<td>remote terminal provisioning, e.g. of applets</td>
</tr>
<tr>
<td>2203/055</td>
<td>loopback testing</td>
</tr>
<tr>
<td>2203/056</td>
<td>non-invasive testing, i.e. in operation testing without service interruption</td>
</tr>
<tr>
<td>2203/057</td>
<td>distortion monitoring (QoS monitoring quality of speech transmission and monitoring H04M 3/2227)</td>
</tr>
<tr>
<td>2203/058</td>
<td>signature devices</td>
</tr>
<tr>
<td>2203/10</td>
<td>related to the purpose or context of the telephonic communication</td>
</tr>
<tr>
<td>2203/1008</td>
<td>Calls without connection establishment for implicit information transfer or as a service trigger</td>
</tr>
<tr>
<td>2203/1016</td>
<td>Telecontrol</td>
</tr>
<tr>
<td>2203/1025</td>
<td>of avatars</td>
</tr>
<tr>
<td>2203/1033</td>
<td>Remote administration, e.g. of web servers</td>
</tr>
<tr>
<td>2203/1041</td>
<td>Televoting</td>
</tr>
<tr>
<td>2203/105</td>
<td>Financial transactions and auctions, e.g. bidding (auctioneering devices in packet switching networks H04L 12/1804)</td>
</tr>
<tr>
<td>2203/1058</td>
<td>Shopping and product ordering</td>
</tr>
<tr>
<td>2203/1066</td>
<td>Game playing</td>
</tr>
<tr>
<td>2203/1075</td>
<td>Telemetering, e.g. transmission of ambient measurements</td>
</tr>
<tr>
<td>2203/1083</td>
<td>for hotels</td>
</tr>
<tr>
<td>2203/1091</td>
<td>Fixed mobile conversion</td>
</tr>
<tr>
<td>2203/15</td>
<td>related to dial plan and call routing</td>
</tr>
<tr>
<td>2203/152</td>
<td>Temporary dial plan</td>
</tr>
<tr>
<td>2203/154</td>
<td>Functional or symbolic dial plan such as license plate numbers</td>
</tr>
<tr>
<td>2203/156</td>
<td>On-line status dependent routing</td>
</tr>
<tr>
<td>2203/158</td>
<td>Call-type dependent routing (route determination based on the nature of the carried application in packet switching networks H04L 45/306)</td>
</tr>
<tr>
<td>2203/20</td>
<td>related to features of supplementary services</td>
</tr>
<tr>
<td>2203/2005</td>
<td>Temporarily overriding a service configuration</td>
</tr>
<tr>
<td>2203/2011</td>
<td>Service processing based on information specified by a party before or during a call, e.g. information, tone or routing selection</td>
</tr>
<tr>
<td>2203/2016</td>
<td>Call initiation by network rather than by subscriber</td>
</tr>
<tr>
<td>2203/2022</td>
<td>Path replacement</td>
</tr>
<tr>
<td>2203/2027</td>
<td>Live party detection</td>
</tr>
<tr>
<td>2203/2033</td>
<td>Call handling or answering restrictions, e.g. specified by the calling party</td>
</tr>
<tr>
<td>2203/2038</td>
<td>Call context notifications</td>
</tr>
<tr>
<td>2203/2044</td>
<td>Group features, e.g. closed user group</td>
</tr>
<tr>
<td>2203/205</td>
<td>Broadcasting (broadcasting in packet switching networks H04L 12/18)</td>
</tr>
<tr>
<td>2203/2055</td>
<td>Line restrictions</td>
</tr>
<tr>
<td>2203/2061</td>
<td>Language aspects</td>
</tr>
<tr>
<td>2203/2066</td>
<td>Call type detection of indication, e.g. voice or fax, mobile of fixed, PSTN or IP</td>
</tr>
<tr>
<td>2203/2072</td>
<td>Schedules, e.g. personal calendars</td>
</tr>
<tr>
<td>2203/2077</td>
<td>Call queuing apart from automatic call distribution</td>
</tr>
<tr>
<td>2203/2083</td>
<td>Confirmation by serviced party</td>
</tr>
<tr>
<td>2203/2088</td>
<td>Call or conference reconnect, e.g. resulting from isdn terminal portability</td>
</tr>
</tbody>
</table>

2203/2094 | . . . related to user interface aspects of the telephonic communication service |
2203/225 | . . . where a voice mode or a visual mode can be used interchangeably |
2203/2251 | . . . where a voice mode is enhanced with visual information |
2203/2252 | . . . where a voice mode is used instead of a voice mode |
2203/2253 | . . . where the visual mode comprises menus |
2203/2254 | . . . comprising a personalized user interface |
2203/2255 | . . . comprising a service specific user interface |
2203/2256 | remote control of substation user interface for telephonic services, e.g. by ISDN stimulus, ADSI, wireless telephony application WTA, MExE or BREW |
2203/2257 | . . . related to information services provided via a voice call |
2203/2258 | . . . Service state indications |
2203/2259 | . . . related to audio recordings in general |
2203/2259 | Management of recordings |
2203/2259 | Marking |
2203/2259 | Recording playback features, e.g. increased speed |
2203/2259 | Prerecordings to be used during a voice call |
2203/2259 | Personal name recording |
2203/2259 | . . . related to in-call services provided via a voice call |
2203/2259 | . Pre or post-call/conference information service |
2203/2259 | In-call/conference information service |
2203/2259 | where the information comprises non-audio but is provided over voice channels (protocols for multimedia information services per H04L 65/00) |
2203/2259 | Reverse directory service |
2203/2259 | Interactive dialogue design tools, features or methods |
2203/2259 | Phonecasting |
2203/2259 | Autocues for dialog assistance |
2203/2259 | Digital rights management |
2203/2259 | Augmented reality |
2203/2259 | . related to call centers |
2203/2259 | Performance feedback |
2203/2259 | . . . Agent or workforce management |
2203/2259 | . . . Agent or workforce training |
2203/2259 | Collaboration among agents |
2203/2259 | Competitive bidding for work items |
2203/2259 | . . . Rerouting calls between call centers |
2203/2259 | Call center operated for multiple customers |
2203/2259 | . . . Customer-specific call routing plans |
2203/2259 | related to voicemail messaging |
2203/2259 | Unified messaging with single point of access to voicemail and other mail or messaging systems (unified messaging in packet switching networks H04L 51/36) |
2203/2259 | Attachments to voicemail (messages including annexed information, e.g. Attachments, in packet switching networks H04L 51/08) |
2203/2259 | Voicemail attached to other kind of message |
2203/2259 | Voicemail combined with text-based messaging |
2203/2259 | Message forwarding (selective message forwarding in packet switching networks H04L 51/14) |
2203/2259 | Sender-side editing |
2203/2259 | Voicemail monitoring during recording |
2203/2259 | Voicemail RSS |
with other types of communication related to applications where calls are combined with other types of 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
Account specifications on parallel: Billing agreements between different operators, e.g. 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.


the user

Metric aspects

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

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

Special services or facilities
<table>
<thead>
<tr>
<th>2250/00</th>
<th>Details of telephonic subscriber devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>2250/02</td>
<td>including a Bluetooth interface</td>
</tr>
<tr>
<td>2250/04</td>
<td>including near field communication means, e.g. RFID</td>
</tr>
<tr>
<td>2250/06</td>
<td>including a wireless LAN interface</td>
</tr>
<tr>
<td>2250/08</td>
<td>home cordless telephone systems using the DECT standard</td>
</tr>
<tr>
<td>2250/10</td>
<td>including a GPS signal receiver</td>
</tr>
<tr>
<td>2250/12</td>
<td>including a sensor for measuring a physical value, e.g. temperature or motion (telephones including GPS signal receivers H04M 2250/10)</td>
</tr>
<tr>
<td>2250/14</td>
<td>including a card reading device</td>
</tr>
<tr>
<td>2250/16</td>
<td>including more than one display unit</td>
</tr>
<tr>
<td>2250/18</td>
<td>including more than one keyboard unit</td>
</tr>
<tr>
<td>2250/20</td>
<td>including a rotatable camera</td>
</tr>
<tr>
<td>2250/22</td>
<td>including a touch pad, a touch sensor or a touch detector (digitizers for touch screens G06F 3/041)</td>
</tr>
<tr>
<td>2250/52</td>
<td>including functional features of a camera (constructional features concerning the integration of cameras in portable phones H04M 1/0264)</td>
</tr>
<tr>
<td>2250/54</td>
<td>including functional features of a projector or beamer module assembly (constructional features concerning the integration of projectors in portable phones H04M 1/0272)</td>
</tr>
<tr>
<td>2250/56</td>
<td>including a user help function</td>
</tr>
<tr>
<td>2250/58</td>
<td>including a multilanguage function</td>
</tr>
<tr>
<td>2250/60</td>
<td>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)</td>
</tr>
<tr>
<td>2250/62</td>
<td>user interface aspects of conference calls</td>
</tr>
<tr>
<td>2250/64</td>
<td>file transfer between terminals (download of applications H04M 1/72525; transfer of messages, e.g. SMS, e-mail or MMS H04M 1/72547)</td>
</tr>
<tr>
<td>2250/66</td>
<td>user interface aspects for indicating selection options for a communication line</td>
</tr>
<tr>
<td>2250/68</td>
<td>with means for recording information, e.g. telephone number during a conversation (recording of telephone conversations H04M 1/656)</td>
</tr>
<tr>
<td>2250/70</td>
<td>methods for entering alphabetical characters, e.g. multi-tap or dictionary disambiguation (methods for entering alphabetical characters per se G06F 3/0237)</td>
</tr>
<tr>
<td>2250/72</td>
<td>user manuals of subscriber equipments, e.g. of mobile phones</td>
</tr>
<tr>
<td>2250/74</td>
<td>with voice recognition means (voice activated dialling H04M 1/271; voice recognition algorithms G10L 15/90)</td>
</tr>
</tbody>
</table>