1. This subclass covers:
   - methods, circuits, or apparatus for establishing selectively a connection between a desired number of stations (normally two), or between a main station and a desired number of substations (normally one) for the purpose of transferring information via this connection after it has been established;
   - selective calling arrangements over connections already established.
   In either case, the connection may be made by means of electric conductors or electromagnetic waves.

2. In this subclass, the following terms or expressions are used with the meanings indicated:
   - “subscriber” is a general term for terminal equipment, e.g. telephone for public use;
   - “substation” means a subscriber or monitoring equipment which may connect a single subscriber to a line without choice as to subscriber;
   - “satellite” is a kind of exchange the operation of which depends upon control signals received from a supervisory exchange;
   - “switching centres” includes exchanges and satellites.

WARNING

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.
Wiring arrangements for selector switches or relays in frames
Electrical details
Testing circuits or apparatus; Circuits or apparatus for detecting, indicating, or signalling faults or troubles
Automatic arrangements
for connection devices
[in time-division multiplex systems]
for signalling trouble in unoccupied sub-exchanges
Current-supply circuits or arrangements for selection equipment at exchanges
Signalling arrangements; Manipulation of signalling currents (multiplex systems providing for calling or supervisory signals H04J 1/14, H04Q 3/12; telephone substation equipment H04M 1/00)
using trains of dc pulses (H04Q 1/39 takes precedence)
Impulse regenerators with mechanical or other non-electrical marking arrangements
Pulse-correcting arrangements, e.g. for reducing effects due to interference
using combinations of direct currents of different amplitudes or polarities over line conductors or combination of line conductors
using coded pulse groups
whereby duration of pulse or interval between two pulses is variable
involving the position of a pulse in a cycle
using alternate current (H04Q 1/50 takes precedence)
with out-of-voice band signalling frequencies
{ using one signalling frequency }
{ using two or more signalling frequencies, transmitted in succession or simultaneously }
with voice-band signalling frequencies
using one signalling frequency (H04Q 1/46 takes precedence)
the same frequency being used for all signalling information, e.g. A.C. nr.9 system
with conversion of a single frequency signal into a digital signal
{ which is transmitted in digital form }
using multi-frequency signalling (H04Q 1/46 takes precedence)
in which m-out-of-n signalling frequencies are transmitted
{ with an additional signal transmitted for voice protection }
with conversion of multifrequency signals into digital signals
{ which are transmitted in digital form }
comprising means for distinguishing between a signalling current of predetermined frequency and a complex current containing that frequency, e.g. speech current
Induced-current signalling arrangements
Conversion between different kinds of signals
Amplifier switched-on automatically in dependence on automatically-selected lines
Balancing circuitry switched-on automatically in dependence on automatically-selected lines
Selecting arrangements (H04Q 5/00 - H04Q 11/00 take precedence)
using crossbar selectors in the switching stages
using relay selectors in the switching stages
in which the relays are arranged in a matrix configuration
[Arrangements providing connection between exchanges]
{ Details }
{ Provisions for signalling (circuitry in H04Q 1/30) }
{ Provisions for intelligent networking }
{ customer-controlled }
{ involving call modelling techniques, e.g. modifications to the basic call state model [BCSM] }
{ involving techniques for avoiding interaction of call service features }
{ involving hybrid, i.e. a mixture of public and private, or multi-vendor systems }
{ Personal communications services, e.g. provisions for portability of subscriber numbers (subscriber services provided at exchanges H04M 3/42) }
{ Service creation techniques }
{ using service-independent building blocks (SIBBs) or “primitives” }
{ Provisions for network management }
{ Bandwidth allocation or management }
{ customer-controlled }
{ Fault management techniques }
{ involving restoration of networks, e.g. disaster recovery, self-healing networks }
{ Network planning or design; Modelling of planned or existing networks }
{ Network testing or monitoring arrangements }
{ Congestion or overload control }
{ Specification, development or application of network management software, e.g. software re-use }
Circuit arrangements for selectors responsive to a permutation code
Circuit arrangements for receivers of routing digits
for group or trunk group selectors
for local or long-distance selectors
for PBX selectors, i.e. private branch exchange selectors
for line selectors providing transfer of routing digits
for two-way operation selectors
for marking-switches
Circuit arrangements for first stage of hunting switching
for preselectors
comprising common calling and disconnecting circuit
for line finders
comprising common calling and disconnecting circuit
3/28 . . . comprising main groups and subgroups
3/30 . . . Selector finders, i.e. allotters
3/32 . . . Circuit arrangements for second or subsequent stages of hunting switching
3/34 . . . for the second preselection stage
3/36 . . . for the second line-finder stage
3/38 . . . for stages after the group selector stage
3/40 . . . for stages after the line selector, e.g. for extension selector
3/42 . . . Circuit arrangements for indirect selecting controlled by common circuits, e.g. register controller, marker
3/44 . . . using revertive control
3/46 . . . using signals other than revertive impulses
3/47 . . . using translators
3/48 . . . using markers
3/49 . . . for end-to-end marking
3/495 . . . for routing connecting paths
3/52 . . . using static devices in switching stages, e.g. electronic switching arrangements
3/521 . . . [using semiconductors in the switching stages]
3/523 . . . [Details]
3/525 . . . [using tubes in the switching stages]
3/526 . . . [Optical switching systems]
3/528 . . . [Details]
3/54 . . . in which the logic circuitry controlling the exchange is centralised
3/542 . . . [Logic circuits or arrangements therefor (logic circuits in general H03K 19/00)]
3/545 . . . using a stored programme
3/54508 . . . [Configuration, initialization]
3/54516 . . . [Initialization, software or data downloading (G06F 9/445 takes precedence)]
3/54525 . . . [Features introduction]
3/54533 . . . [Configuration data, translation, passwords, databases]
3/54541 . . . [using multi-processor systems]
3/5455 . . . [Multi-processor, parallelism, distributed systems]
3/54558 . . . [Redundancy, stand-by]
3/54566 . . . [Intelligent peripherals, adjunct processors]
3/54575 . . . [Software application]
3/54583 . . . [Software development, e.g. procedural, object oriented, software generation, software testing]
3/54591 . . . [Supervision, e.g. fault localisation, traffic measurements, avoiding errors, failure recovery, monitoring, statistical analysis]
3/55 . . . using wired logic circuitry
3/552 . . . [Wired circuits or arrangements therefor]
3/555 . . . being comprised by electro-magnetic devices
3/56 . . . in which the control signals are multiplexed
3/58 . . . Arrangements providing connection between main exchange and sub-exchange or satellite
3/60 . . . for connecting to satellites or concentrators which connect one or more exchange lines with a group of local lines
3/602 . . . [Circuit arrangements therefor]
3/605 . . . [Arrangements in the satellite or concentrator]
3/607 . . . [Details]
3/62 . . . for connecting to private branch exchanges
3/622 . . . [Circuit arrangements therefor]
3/625 . . . [Arrangements in the private branch exchange]
3/627 . . . [Details]
3/64 . . . Distributing or queueing
3/645 . . . [Circuit arrangements therefor]
3/66 . . . Traffic distributors
3/665 . . . [Circuit arrangements therefor]
3/68 . . . Grouping or interlacing selector groups or stages
3/685 . . . [Circuit arrangements therefor]
3/70 . . . Identification of class of calling subscriber
3/72 . . . Finding out and indicating number of calling subscriber
3/74 . . . Identification of subscriber calling from a party-line
3/76 . . . Translation from the called subscriber's number to the outgoing or incoming control information
3/78 . . . Temporary storage of information of calling or called subscriber (intermediate storage means for telegraphic communication H04L 13/08)

5/00 Selecting arrangements wherein two or more subscriber stations are connected by the same line to the exchange
5/02 . . . with direct connection for all subscribers, i.e. party-line systems (H04Q 5/24 takes precedence)
5/04 . . . Signalling by currents in one or other or both line wires or additional wires
5/06 . . . Signalling by amplitude or polarity of dc
5/08 . . . Signalling by continuous ac
5/10 . . . using single frequencies for different subscribers
5/12 . . . using combinations of frequencies
5/14 . . . Signalling by pulses
5/16 . . . by predetermined number of pulses
5/18 . . . with indirect connection, i.e. through subordinate switching centre
5/20 . . . the subordinate centre permitting interconnection of subscribers connected thereto
5/22 . . . the subordinate centre not permitting interconnection of subscribers connected thereto
5/24 . . . for two-party-line systems
5/245 . . . [Circuit arrangements in which for one subscriber low frequency speech and/or signalling signals proceed on the line, while for the other subscriber the low frequency speech and/or signalling signals are modulated upon a high frequency carrier signal]

9/00 Arrangements in telecontrol or telemetry systems for selectively calling a substation from a main station, in which substation desired apparatus is selected for applying a control signal thereto or for obtaining measured values therefrom
9/02 . . . Automatically-operated arrangements
9/04 . . . Arrangements for synchronous operation
9/06 . . . Calling by using amplitude or polarity of dc
9/08 . . . Calling by using continuous ac
9/10 . . . using single different frequencies
9/12 . . . using combinations of frequencies
9/14 . . . Calling by using pulses
9/16 . . . by predetermined number of pulses

11/00 Selecting arrangements for multiplex systems (multiplex systems H04J)
11/0001 . . . [using optical switching]
H04Q

11/0003 . . . {Details}
11/0005 . . . {Switch and router aspects}
2011/0007 . . . {Construction}
11/0009 . . . . {using wavelength filters}
11/0011 . . . . {using wavelength conversion}
11/0013 . . . . {using gating amplifiers}
11/0015 . . . . {using splitting combining}
11/0016 . . . . {using wavelength multiplexing or demultiplexing}
11/0018 . . . . {using tunable transmitters or receivers}
11/002 . . . . {using optical delay lines or optical buffers or optical recirculation}
11/0022 . . . . {using fibre gratings}
11/0024 . . . . {using space switching}
11/0026 . . . . {using free space propagation (e.g. lenses, mirrors)}
11/0028 . . . . {using holograms}
11/003 . . . . {using switches based on microelectromechanical systems [MEMS]}
11/0032 . . . . {using static wavelength routers (e.g. arrayed waveguide grating router [AWGR])}
11/0033 . . . . {using time division switching}
11/0035 . . . . {using miscellaneous components, e.g. circulator, polarisation, acousto/thermo optical}
11/0037 . . . . {Operation}
11/0039 . . . . {Electrical control}
11/0041 . . . . {Optical control}
11/0043 . . . . {Fault tolerance}
11/0045 . . . . {Synchronisation}
11/0047 . . . . {Broadcast; Multicast}
11/0049 . . . . {Crosstalk reduction; Noise; Power budget}
11/005 . . . . {Arbitration and scheduling}
11/0052 . . . . {Interconnection of switches}
11/0054 . . . . {Distribute-route}
11/0056 . . . . {Clos}
11/0058 . . . . {Crossbar; Matrix}
11/006 . . . . {Full mesh}
11/0062 . . . . {Network aspects}
11/0064 . . . . {Arbitration, scheduling or medium access control aspects}
11/0066 . . . . {Provisions for optical burst or packet networks}
11/0067 . . . . {Provisions for optical access or distribution networks, e.g. Gigabit Ethernet Passive Optical Network (GE-PON), ATM-based Passive Optical Network (A-PON), PON-Ring}
11/0069 . . . . {using dedicated optical channels}
11/0071 . . . . {Provisions for the electrical-optical layer interface}
11/0073 . . . . {Provisions for forwarding or routing, e.g. lookup tables}
11/0075 . . . . {Wavelength grouping or hierarchical aspects}
11/0077 . . . . {Labelling aspects, e.g. multiprotocol label switching [MPLS], G-MPLS, MPAS}
11/0079 . . . . {Operation or maintenance aspects}
11/0081 . . . . {Fault tolerance; Redundancy; Recovery; Reconfigurability}
11/0083 . . . . {Testing; Monitoring}
11/0084 . . . . {Quality of service aspects}
11/0086 . . . . {Network resource allocation, dimensioning or optimisation}
11/0088 . . . . {Signalling aspects}
2011/009 . . . . {Topography aspects}
2011/0092 . . . . {Ring}
2011/0094 . . . . {Star}
2011/0096 . . . . {Tree}
2011/0098 . . . . {Mesh}
11/02 . . . for frequency-division multiplexing (H04Q 11/0001 takes precedence)
11/023 . . . {using a stored programme control}
11/026 . . . {Details}
11/04 . . . for time-division multiplexing (H04Q 11/0001 takes precedence)
11/0407 . . . {using a stored programme control}
11/0414 . . . {Details}
11/0421 . . . {Circuit arrangements therefor}
11/0428 . . . {Integrated services digital network, i.e. systems for transmission of different types of digitised signals, e.g. speech, data, telecentral, television signals}
11/0435 . . . {Details}
11/0442 . . . {Exchange access circuits}
11/045 . . . {Selection or connection testing arrangements}
11/0457 . . . {Connection protocols}
11/0464 . . . {Primary rate access circuits}
11/0471 . . . {Terminal access circuits}
11/0478 . . . {Provisions for broadband connections}
11/0485 . . . {Circuit arrangements therefor}
11/0492 . . . . {Details}
11/06 . . . {Time-space-time switching}
11/08 . . . {Time only switching}
2201/00 . . . {Constructional details of selecting arrangements}
2201/02 . . . {Details of frames}
2201/04 . . . {Modular construction}
2201/06 . . . {Cooling arrangements}
2201/08 . . . {Pivotal parts}
2201/10 . . . {Housing details}
2201/12 . . . {Printed circuits}
2201/14 . . . {Screening, grounding or crosstalk reduction details}
2201/16 . . . {Coaxial cable connectors}
2201/18 . . . {Rails}
2201/80 . . . {in specific systems}
2201/802 . . . {in data transmission systems}
2201/804 . . . {in optical transmission systems}
2201/806 . . . {in PBX or KTS systems}
2201/808 . . . {in wireless transmission systems}
2209/00 . . . {Arrangements in telecontrol or telemetry systems}
2209/10 . . . {using a centralized architecture}
2209/20 . . . {using a distributed architecture}
2209/25 . . . {using a mesh network, e.g. a public urban network such as public lighting, bus stops or traffic lights}
2209/30 . . . {using a wired architecture}
2209/40 . . . {using a wireless architecture}
2209/43 . . . {using wireless personal area networks [WPAN], e.g. 802.15, 802.15.1, 802.15.4, Bluetooth or ZigBee}
2209/47 . . . {using RFID associated with sensors}
2209/50 . . . {using a mobile data collecting device, e.g. walk by or drive by}
2209/60 . . . {for transmitting utility meters data, i.e. transmission of data from the reader of the utility meter}
2209/70 . Arrangements in the main station, i.e. central controller
2209/75 . by polling or interrogating the sub-stations
2209/753 . where the polling of the sub-stations is synchronous
2209/756 . where the polling of the sub-stations is cyclic, e.g. round-robin
2209/80 . Arrangements in the sub-station, i.e. sensing device
2209/82 . where the sensing device takes the initiative of sending data
2209/823 . where the data is sent when the measured values exceed a threshold, e.g. sending an alarm
2209/826 . where the data is sent periodically
2209/84 . Measuring functions
2209/845 . where the measuring is synchronized between sensing devices
2209/86 . Performing a diagnostic of the sensing device
2209/88 . Providing power supply at the sub-station
2209/883 . where the sensing device enters an active or inactive mode
2209/886 . using energy harvesting, e.g. solar, wind or mechanical

2213/00 Indexing scheme relating to selecting arrangements in general and for multiplex systems

2213/001 . Motorselectors
2213/002 . Graphical representation
2213/003 . Constructional details
2213/011 . Periodic optical structures, e.g. gratings, holograms
2213/012 . Tunable optical systems
2213/013 . Optical shutters, e.g. LCD arrays
2213/014 . Optical storage, not delay lines
2213/015 . 3D-optical arrangement
2213/016 . Optical subcarrier modulation
2213/017 . Optical polarisation
2213/02 . Relay switches
2213/03 . PAM
2213/031 . PCM
2213/032 . Delta modulation
2213/033 . Other modulation methods
2213/034 . Codec; PCM compression
2213/036 . Series parallel conversion; Parallel bit transmission
2213/037 . Resonant transfer; Sample and hold
2213/038 . Optical modulation
2213/04 . Coordinate switches; Crossbar switches
2213/042 . Elements placed in matrix relation, not serving as connection switch
2213/046 . Binary switch (Beta element)
2213/05 . Software aspects
2213/052 . Multi-tasking
2213/053 . Priority levels
2213/054 . Expert systems, e.g. neural networks
2213/055 . Linked lists
2213/056 . Software routines, e.g. finite state machines
2213/058 . IRQ
2213/061 . Preselector; Second line switch
2213/062 . Finder switch (e.g. line finder, call finder)
2213/063 . Strowger-switch as finder switch
2213/064 . Cascaded finder or preselector switches
2213/065 . Group selector
2213/066 . Switch with two or more wipersets
2213/067 . Finder switch serving as final selector
2213/068 . Final selector
2213/069 . Panel switches
2213/07 . Call distribution; Call detection; Call signalling by common apparatus
2213/072 . Sequence circuits
2213/076 . Distributing frame; Cross connect
2213/08 . Power supply
2213/082 . Phantom circuits
2213/09 . Subscriber related equipment; Analog terminal
2213/091 . Indication of kind/number of subscriber
2213/092 . Scanning of (subscriber) lines, registers, translators
2213/093 . Personal computer
2213/094 . Range extender
2213/095 . User access; PIN code
2213/096 . Digital subscriber terminal
2213/097 . Numbering
2213/098 . Mobile subscriber
2213/099 . Loop multiplexer (not ISDN BRI/PRI; not 381), e.g. loop splitter
2213/10 . Register
2213/101 . Discriminating selectors
2213/102 . Common translator
2213/103 . Memories
2213/104 . Central control; Computer control
2213/106 . Microcomputer; Microprocessor
2213/107 . Control equipment for part of the connection
2213/109 . Initialising; Downloading of parameters or program routines
2213/11 . Sequence switches
2213/12 . Call indicator, e.g. number indicator
2213/121 . Marker
2213/124 . Pulse distributor
2213/13 . Charging
2213/13001 . Step by step switches
2213/13003 . Constructional details of switching devices
2213/1301 . Optical transmission, optical switches
2213/13012 . Hybrid fiber coax, HFC
2213/13016 . Optical subcarrier modulation
2213/1302 . Relay switches
2213/1303 . Pulse amplitude modulation, PAM
2213/13031 . Pulse code modulation, PCM
2213/13034 . A/D conversion, code compression/expansion
2213/13036 . Serial/parallel conversion, parallel bit transmission
2213/13038 . Optical modulation
2213/13039 . Asymmetrical two-way transmission, e.g. ADSL, HDSL
2213/1304 . Coordinate switches, crossbar, 4/2 with relays, coupling field
2213/13046 . Binary switch, β-element
2213/1305 . Software aspects
2213/13051 . Software generation
2213/13052 . Multitasking
2213/13053 . Priority levels
2213/13054 . Expert system
2213/13056 . Routines, finite state machines
2213/13057 . Object-oriented software
2213/13058 . Interrupt request
2213/1307 . Call setup
2213/13072 . Sequence circuits for call signaling, ACD systems
2213/13076 . Distributing frame, MDF, cross-connect switch
2213/1308 . Power supply
2213/13082 . Power supply via phantom line
Multiple-zone-metering
Modem, modulation
Connection circuit/link/trunk/junction, bridge,
Amplifier, attenuation circuit, echo suppressor
Control signals
visual indication
Graphical user interface [GUI], WWW interface,
Busy signals
Error Correction
Redundant apparatus
Fault prevention
Traffic (registration, measurement,...)
Fault alarm
Fault indication and localisation
Service observation, testing
Automatic digit redialling, automatic call retry
Callback
Call waiting
Call back
Automatic digit redialling, automatic call retry
Service observation, testing
Fault indication and localisation
Fault alarm
Traffic (registration, measurement,...)
Fault prevention
Redundant apparatus
Error Correction
Supervisory signals
Busy signals
Data transmission, file transfer
Graphical user interface [GUI], WWW interface,
visual indication
Common channel signaling, CCS7
Control signals
Fax, still picture
Ringing
Amplifier, attenuation circuit, echo suppressor
Repeater
Four wire connection, transmission
Connection circuit/link/trunk/junction, bridge,
router, gateway
Modem, modulation
Multiple-zone-metering
Change-over of service during connection
Network termination [NT]
H04Q

2213/1334  . Key telephone systems
2213/1335  . Simulation, emulation
2213/1336  . Store & forward, messaging systems (email H04Q 2213/13375)
2213/1337  . Picturephone, videotelephony
2213/1338  . Do-not-disturb
2213/1339  . Ciphering, encryption, security
2213/1340  . Configuration within the switch
2213/1341  . Connections within the switch
2213/1342  . Arrangement of switches in the network
2213/1343  . Neural networks
2213/1344  . Overflow
2213/1345  . Intelligent networks, SCP
2213/1346  . Channel/line reservation
2213/1349  . Network management
2213/1352  . Self-routing networks, real-time routing
2213/1353  . Routing table, map memory
2213/1356  . Synchronisation
2213/1361  . Synchronous systems
2213/1362  . Asynchronous systems
2213/1363  . Pulse stuffing, bit stuffing
2213/1367  . Hierarchical multiplexing, add-drop multiplexing
2213/1377  . Recorded announcement
2213/1378  . Speech recognition, speech analysis
2213/1381  . Pair-gain system, digital loop carriers
2213/1383  . Hierarchy of switches, main and subexchange, e.g. satellite exchange
2213/1384  . Inter-PBX traffic, PBX networks, e.g. corporate networks
2213/1385  . Off-net subscriber
2213/1386  . Line concentrator
2213/1387  . Call gapping
2213/1388  . Saturation signaling systems
2213/1389  . LAN, internet
2213/1391  . Channel assigned to connections
2213/1392  . Channels assigned according to rules
2213/1393  . Time slot switching, T-stage, time slot interchanging, TSI
2213/1395  . Permanent channel, leased line
2213/1396  . Signaling in general, in-band signalling
2213/1399  . Virtual channel/circuits
2213/1391  . Coin box
2213/1402  . Data transmission out of voice frequency band (ADSL H04Q 2213/13039)
2213/1405  . Dual frequency signaling, DTMF
2213/1407  . Detection of data transmission mode
2213/135  . Service creation
2213/13501  . Feature interactions
2213/13502  . primitives - inc. service-independent building blocks [SIBBs]
2213/13503  . object-oriented systems
2213/13504  . client/server architectures
2213/13505  . management information base [MIB]
2213/13511  . reservation
2213/13512  . 800 - freephone
2213/13513  . UPT - personal as opposed to terminal mobility, inc. number portability
2213/13514  . quality of service - inc. grade of service
2213/13515  . authentication, authorisation - fraud prevention
2213/13516  . agents or brokers - user, terminal etc., also OSI agent/managers
2213/13517  . SLEE - service logic execution
2213/13521  . fault management
2213/13522  . traffic management
2213/13523  . bandwidth management, e.g. capacity management
2213/13524  . cost management (least cost H04Q 2213/13138)
2213/13525  . GUI - graphical user interface, inc. for service creation
2213/13526  . resource management
2213/13527  . protocols - X.25, TCAP etc.
2213/13528  . SCP architecture
2213/13531  . virtual networks - inc. PVN
2213/13532  . mobile networks
2213/13533  . multivendor and hybrid, e.g. public/private, networks, inc. international
2213/13534  . Internet - WWW, HTML, browsers etc.
2213/13535  . distributed systems - also domains in service creation
2213/13541  . routing
2213/13542  . numbering plans, e.g. number re-allocation
2213/13543  . network planning, configuration management, e.g. for growth
2213/13544  . modeling or simulation, particularly of networks
2213/13545  . monitoring of signaling messages, intelligent network
2213/13546  . Intelligent Peripheral
2213/13547  . subscriber, e.g. profile, database, database access
2213/13548  . call modeling, e.g. Basic Call State Model
2213/13561  . congestion - inc. overflow
2213/13562  . blocking
2213/13563  . call gapping, e.g. to prevent congestion
2213/13564  . load balancing
2213/13565  . restoration, e.g. disaster recovery, self-healing networks
2213/13566  . mediation
2213/13567  . negotiation, management policy, goals
2213/136  . Collect call, e.g. 800 service
2213/138  . Least cost routing
2213/141  . Hunting for free outlet, circuit, channel
2213/144  . Searching a free path through cascaded switching stages
2213/145  . Rerouting, e.g. on failure
2213/146  . Rearrangement
2213/15  . Waiting
2213/152  . Automatic call retry
2213/156  . Automatic redialling
2213/16  . Service observation; Fault circuit; Testing
2213/161  . Blocking or cutoff of faulty apparatus, e.g. timed out
2213/162  . Fault indication, e.g. localisation
2213/163  . Fault alarm
2213/164  . Traffic registration; Adaptation of traffic possibilities
2213/166  . Prevention of faults
2213/167  . Redundancy
2213/171. Number indicating signals (no dial signals)
2213/172. Supervisory signals
2213/173. Busy signal
2213/174. Data transmission
2213/175. Other signals
2213/176. Common channel signalling
2213/177. Number sending signals, e.g. dialling tone, proceed to send
2213/178. Control signals, e.g. also service connection
2213/179. Facsimile; Fax, e.g. still picture
2213/18. Ringing
2213/182. Ring trip
2213/19. Echo-cancelling; Hybrid; Amplifier; Attenuator
2213/191. Repeater
2213/192. Common amplifier for bidirectional traffic
2213/194. Four-wire connection or transmission
2213/196. Connection-circuit; Trunk; Junction circuit
2213/197. Ping-pong transmission
2213/198. Temporary associated devices; Pooled adapters
2213/199. Modem
2213/20. ISDN
2213/201. Change-over service
2213/202. Network termination [NT]
2213/203. Exchange termination [ET]
2213/204. ISDN protocol; ISO 7
2213/205. Primary rate access
2213/206. User-to-user signalling
2213/208. Inverse multiplexing; Time slot sequence integrity [TSSI] aspects
2213/209. Impulse transmission
2213/21. Impulse correction or reshaping
2213/212. Absorbing of digits
2213/214. Phase shifted impulses; Clock signals; Timing
2213/215. Code checking
2213/216. Code signals; Framing (not synchronizing)
2213/217. Setting of switch by means of pulses
2213/218. Bistable relays, e.g. Ferreed
2213/22. PBX
2213/222. PBX circuits in public exchange (Centrex)
2213/23. Partyline
2213/24. Conference circuit
2213/242. Broadcast and multicast (1:N)
2213/243. Con-cast, e.g. multipoint-point (N:1)
2213/246. Instant speaker's algorithm [ISA]
2213/25. Preferential service
2213/251. Restricted service
2213/252. Breaking-in on existing connection
2213/256. Call screening
2213/26. Call-back
2213/27. Release
2213/271. Forced release
2213/272. Premature release
2213/274. Call rejection
2213/28. Call transfer
2213/281. Prepared call transfer, e.g. night service, interrupting service
2213/282. Call forwarding
2213/284. Call tracing
2213/286. Direct inward dialling [PBX]
2213/287. Call service, e.g. morning call service
2213/29. ATM
2213/291. Frequency division multiplex
2213/292. Time (de)multiplexing
2213/293. Irregular time switching, e.g. TASI; Burst switching
2213/294. Other multiplexing systems, e.g. codemultiplex, TDM, FDM, FDM and Space division, TDM and Space division
2213/295. Wavelength division multiplex
2213/296. Packet switching
2213/297. Coupling circuits between different (rate) TDM systems
2213/298. Loop or ring system
2213/299. Bus
2213/301. Tubes and other non-linear elements with 2 electrodes, e.g. diodes
2213/302. Magnetic elements
2213/303. Tubes and other non-linear elements with more than two electrodes
2213/304. Superconductors; Thermistors; Varistors
2213/305. Transistors
2213/306. Ferro-electric elements
2213/307. Hall elements
2213/308. Photo conductors; Photo elements
2213/31. Delay devices; Circuits, e.g. shift memories
2213/32. Logic elements
2213/322. Integrated circuit
2213/33. Special systems; Special service
2213/331. Abbreviated dialing
2213/332. Broadband system
2213/333. Systems with earth-satellites
2213/334. Key telephone system
2213/335. Simulation
2213/336. Store and forward, e.g. message switching
2213/337. Picturephone
2213/338. Do not disturb
2213/339. Ciphertext/encryption
2213/34. General scheme; Position of components in an exchange
2213/341. Contactbank connections
2213/342. General scheme; Position of exchanges
2213/343. Neural network
2213/344. Overflow
2213/345. Intelligent network
2213/346. Switch with inverted grouping
2213/347. Nodal network
2213/348. Reservation of lines/channels
2213/349. Network management; Expert system
2213/35. Separate control and speech paths, e.g. route-searching planes
2213/352. Self-routing switch
2213/353. Map memory
2213/356. Dynamic multiplexing
2213/351. Synchronisation
2213/361. Synchronous system
2213/362. Asynchronous system
2213/363. Bit or pulse stuffing
2213/366. Integrated systems, e.g. transparency
2213/367. Multiple multiplexing; Hierarchical multiplexing
2213/37. Operator
2213/372. Intervention by operator; Intercepting operator
2213/374. Paging
2213/375. Electronic mail
2213/376. Information service
2213/377. Recorded announcement
2213/378 . Speech recognition; Speech analysis
2213/38 . Interexchange connections, e.g. connections of different kinds of networks
2213/381 . Pair gain system
2213/382 . Provisions for interexchange traffic in the local exchange
2213/383 . Main and subexchange, e.g. satellite exchanges
2213/384 . Inter-PBX traffic; PBX networks
2213/385 . Traffic in PBX to and from public exchange
2213/386 . Line concentrator
2213/388 . Saturation signalling system
2213/39 . Channels assigned to subscribers
2213/391 . Channel allocation to connections
2213/392 . Channel allocation - special rules
2213/393 . Channel interchanging, e.g. time slot switching
2213/394 . Channel assignment without time slot switching
2213/395 . (Semi)permanent channels, e.g. leased lines
2213/396 . Signalling in general; Special register channel
2213/399 . Virtual channel allocation
2213/401 . DC and voltages of different kinds or values
2213/402 . AC outside voice band
2213/403 . Voice frequency
2213/405 . Voice frequency current used for digit selection
2213/407 . Push-button dialling (not H04Q 2213/405)