CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY
(NOTE omitted)

H04 ELECTRIC COMMUNICATION TECHNIQUE
(NOTE omitted)

H04J MULTIPLEX COMMUNICATION (transmission in general H04B; peculiar to transmission of digital information H04L 5/00; systems for the simultaneous or sequential transmission of more than one television signal H04N 7/08; in exchanges H04Q 11/00; stereophonic systems H04S)

NOTE

This subclass covers

- circuits or apparatus for combining or dividing signals for the purpose of transmitting them simultaneously or sequentially over the same transmission path;
- monitoring arrangements therefor.

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.

1/00 **Frequency-division multiplex systems** (H04J 14/00 takes precedence)

1/02 . Details

1/04 . . Frequency-transposition arrangements {(modulation with carrier or side-band suppression H03C 1/52, H03C 1/60; single-band suppression H04B 1/00, H04B 15/00; telegraphic communication H04L 27/02, H04L 25/49; transference of modulation from one carrier to another, e.g. frequency- changing H03D 7/00; demodulation or transference of modulation of modulated electromagnetic waves H03D 9/00)}

1/045 . . . {Filters applied to frequency transposition}

1/05 . . . using digital techniques

1/06 . . Arrangements for supplying the carrier waves {; Arrangements for supplying synchronisation signals (synchronisation in general H03B; frequency multiplication H03B 19/00, H03B 21/00; mixing H03D 7/00, H03D 9/00; carrier supply H04L 5/10)}

1/065 . . . {Synchronisation of carrier sources at the receiving station with the carrier source at the transmitting station}

1/08 . . Arrangements for combining channels {(branching filters H01P 1/213, H03H 7/46)}

1/085 . . . {Terminal station; Combined modulator and demodulator circuits}

1/10 . . Intermediate station arrangements, e.g. for branching, for tapping-off {(repeater circuits H04B 3/36, H04B 3/58; two-way amplifiers H03F 3/62)}

1/12 . . Arrangements for reducing cross-talk between channels {(in line transmission systems H04B 3/32; in cables or lines H04B 3/26 - H04B 3/30)}

1/14 . . Arrangements providing for calling or supervisory signals

1/16 . . Monitoring arrangements {(for transmission in general H04B 17/00; for amplifiers H03F 1/52, H03F 1/523)}

1/18 . in which all the carriers are amplitude-modulated (H04J 1/02 takes precedence {in telephony H04Q 11/02, H04Q 11/023; in stereophony H04H; in telegraphy H04L 5/06; in telemetry G08C 15/02, G08C 15/04})

1/20 . in which at least one carrier is angle-modulated (H04J 1/02 takes precedence; FM without multiplex H04B 1/00, H04B 14/006, H04B 15/00; PSK H04L 5/12; impulse-modulation without multiplex H04B 14/02; time-division multiplexing for data transmission H04L 5/22; telemetry G08C 15/06 - G08C 15/12; telephony H04Q 11/00, H04Q 11/04, H04Q 11/0407)

3/00 **Time-division multiplex systems** (H04J 14/00 takes precedence; relay systems H04B 7/14; selecting techniques H04Q)

3/02 . Details (electronic switching or gating H03K 17/00)

3/025 . . {Filter arrangements (H04J 3/08 takes precedence; filters per se H03H 7/00, H03H 9/00)}

3/04 . . Distributors combined with modulators or demodulators {(pulse distributors in general H03K 5/15; pulse counters H03K 21/00 - H03K 29/06; for telegraphy H04L 5/22, H04L 13/00 - H04L 23/00, H04L 25/45; for telephony H04Q 11/04)}

3/042 . . . {Distributors with electron or gas discharge tubes}

3/045 . . . {Distributors with CRT}

3/047 . . . {Distributors with transistors or integrated circuits}

3/06 . . Synchronising arrangements {(for television systems H04N 5/04; bit-synchronisation H04L 7/00)}

3/1676	. .	{Time-division multiplex with pulse-position, pulse-interval, or pulse-width modulation}
3/1682	. .	{Allocation of channels according to the instantaneous demands of the users, e.g. concentrated multiplexers, statistical multiplexers}
3/1688	. . .	{the demands of the users being taken into account after redundancy removal, e.g. by predictive coding, by variable sampling (reducing bandwidth of signals in general H04B 1/66; in PCM-systems H04B 14/046; removal of redundancy in telegraph communication H03M 7/30)}
3/1694	. .	{Allocation of channels in TDM/TDMA networks, e.g. distributed multiplexers (Passive Optical Networks H04Q 11/0062)}
3/17	.	in which the transmission channel allotted to a first user may be taken away and re-allotted to a second user if the first user becomes inactive, e.g. TASI {(speech analysis or identification G10L)}
3/172	. .	{Digital speech interpolation, i.e. DSI}
3/175	. .	{Speech activity or inactivity detectors (echo suppressors H04B 3/20)}
3/177	. .	{Freeze-out systems, e.g. taking away active sources from transmission}
3/18	.	using frequency compression and subsequent expansion of the individual signals
3/20	.	using resonant transfer
3/22	.	in which the sources have different rates or codes {(simultaneous speech and digital data or video transmission H04M 11/06; see provisional also H04J 3/16)}
3/24	.	in which the allocation is indicated by an address {the different channels being transmitted sequentially}(H04J 3/17 takes precedence; in computers G06F 12/00, G06F 13/00 {code multiplex systems H04J 13/00; selecting techniques H04Q; relay systems H04B 7/14})
3/242	. .	{the frames being of variable length}
3/245	. .	{in which the allocation protocols between more than two stations share the same transmission medium (stations for satellite systems H04B 7/185)}
3/247	. .	{ATM or packet multiplexing}
3/26	. .	in which the information and the address are simultaneously transmitted
4/00		**Combined time-division and frequency-division multiplex systems** (H04J 13/00 takes precedence {; data transmission H04L 5/26; telemetry G08C 15/00})
4/005	.	{Transmultiplexing}
7/00		**Multiplex systems in which the amplitudes or durations of the signals in individual channels are characteristic of those channels**
7/02	.	in which the polarity of the amplitude is characteristic
9/00		**Multiplex systems in which each channel is represented by a different type of modulation of the carrier**
11/00		**Orthogonal multiplex systems, {e.g. using WALSH codes}**(H04J 13/00 takes precedence)
2011/0003	.	{Combination with other multiplexing techniques}

2011/0006	. .	{with CDM/CDMA}
2011/0009	. .	{with FDM/FDMA}
2011/0013	. .	{with TDM/TDMA}
2011/0016	. .	{with FDM/FDMA and TDM/TDMA}
2011/002	. .	{Delay multiplexing}
11/0023	.	{Interference mitigation or co-ordination (direct sequence spread spectrum [DSSS] systems H04B 1/7097; frequency hopping H04B 1/713; allocation criteria for ingress interference avoidance H04L 5/0062; frequency allocation criteria for requirements on out-of-channel emissions H04L 5/0066; arrangements for removing intersymbol interference or baseband equalisers H04L 25/03006; peak power aspects in multicarrier modulation H04L 27/2614; power management H04W 52/00; traffic scheduling H04W 72/54, H04W 72/541)}
11/0026	. .	{of multi-user interference}
11/003	. . .	{at the transmitter (transmission to multiple receive units in multiple input multiple output [MIMO] H04B 7/0452; transmit antenna weighting H04B 7/0615)}
11/0033	. . . .	{by pre-cancellation of known interference, e.g. using a matched filter, dirty paper coder or Thomlinson-Harashima precoder (correlative coding in synchronous or start-stop systems H04L 25/497)}
11/0036	. . .	{at the receiver}
11/004	. . . .	{using regenerative subtractive interference cancellation}
11/0043	. . . . .	{by grouping or ordering the users}
11/0046	. . . .	{using joint detection algorithms}
11/005	. .	{of intercell interference}
11/0053	. . .	{using co-ordinated multipoint transmission/reception (co-ordinated antenna or beam-forming aspects H04B 7/022)}
11/0056	. . .	{Inter-base station aspects}
11/0059	. . .	{Out-of-cell user aspects}
11/0063	. .	{of multipath interference, e.g. Rake receivers}
11/0066	. .	{of narrowband interference (narrowband interference reduction H04B 1/1036)}
11/0069	.	{Cell search, i.e. determining cell identity [cell-ID] (design of multiplexing codes H04J 13/00; processing access restriction or access information H04W 48/16; discovery of network devices for network data management H04W 8/005; sounding signals for channel estimation H04L 25/0226; structure of reference signals in multicarrier modulation systems H04L 27/2613; frame, time or carrier synchronisation in multicarrier modulation systems H04L 27/2655)}
11/0073	. .	{Acquisition of primary synchronisation channel, e.g. detection of cell-ID within cell-ID group}
11/0076	. .	{Acquisition of secondary synchronisation channel, e.g. detection of cell-ID group}
11/0079	. .	{Acquisition of downlink reference signals, e.g. detection of cell-ID}
11/0083	. .	{Multi-mode cell search, i.e. where several modes or systems can be used, e.g. backwards compatible, dual mode or flexible systems}
11/0086	. .	{Search parameters, e.g. search strategy, accumulation length, range of search, thresholds (code acquisition in DSSS H04B 1/7075)}
11/0089	. .	{Search hardware arrangements, e.g. sharing of correlators to reduce complexity}

11/0093	. .	{Neighbour cell search}
2011/0096	.	{Network synchronisation}

13/00 **Code division multiplex systems** (for frequency hopping H04B 1/713)

> **NOTE**
>
> When classifying in this group, any aspect of spread spectrum techniques not specific to frequency hopping, and which is considered to represent information of interest for search, may also be classified in group H04B 1/69.

13/0003	.	{Code application, i.e. aspects relating to how codes are applied to form multiplexed channels}
13/0007	.	{Code type}

> **NOTE**
>
> Code type information should be classified in addition to other relevant aspects. This should also be done in cases where the other relevant symbol refers to code type, e.g. H04J 13/14, H04J 13/20)

13/0011	. .	{Complementary}
13/0014	. . .	{Golay}
13/0018	. .	{Chaotic}
13/0022	. .	{PN, e.g. Kronecker}
13/0025	. . .	{M-sequences}
13/0029	. . .	{Gold}
13/0033	. . .	{Kasami}
2013/0037	. .	{Multilevel codes}
13/004	. .	{Orthogonal}
13/0044	. . .	{OVSF [orthogonal variable spreading factor]}
13/0048	. . .	{Walsh}
13/0051	. . .	{Orthogonal gold}
13/0055	. .	{ZCZ [zero correlation zone]}
13/0059	. . .	{CAZAC [constant-amplitude and zero auto-correlation]}
13/0062	. . . .	{Zadoff-Chu}
13/0066	. . . .	{GCL [generalized chirp-like] sequences}
13/007	. . .	{LAS, i.e. LA, LS and LAS codes}
13/0074	.	{Code shifting or hopping}
13/0077	.	{Multicode, e.g. multiple codes assigned to one user}
2013/0081	. .	{with FDM/FDMA}
2013/0085	. .	{with TDM/TDMA}
2013/0088	. .	{with FDM/FDMA and TDM/TDMA}
2013/0092	. .	{Delay multiplexing}
2013/0096	.	{Network synchronisation}
13/10	.	Code generation
13/102	. .	{Combining codes}
13/105	. . .	{by extending}
13/107	. . .	{by concatenation}
13/12	. .	Generation of orthogonal codes
13/14	. .	Generation of codes with a zero correlation zone
13/16	.	Code allocation
2013/165	. .	{Joint allocation of code together with frequency or time}
13/18	. .	Allocation of orthogonal codes
13/20	. . .	having an orthogonal variable spreading factor [OVSF]
13/22	. .	Allocation of codes with a zero correlation zone

14/00 **Optical multiplex systems**

> **WARNING**
>
> Group H04J 14/00 is impacted by reclassification into groups H04J 14/05 and H04J 14/07.
>
> All groups listed in this Warning should be considered in order to perform a complete search.

14/002	.	{Coherencemultiplexing}
14/005	.	{Optical Code Multiplex}
14/007	. .	{Orthogonal Optical Code Multiplex}
14/02	.	Wavelength-division multiplex systems

> **WARNING**
>
> Group H04J 14/02 is impacted by reclassification into groups H04J 14/03, H04J 14/0305 and H04J 14/0307.
>
> All groups listed in this Warning should be considered in order to perform a complete search.

14/0201	. .	{Add-and-drop multiplexing}
14/0202	. . .	{Arrangements therefor}
14/0204	. . . .	{Broadcast and select arrangements, e.g. with an optical splitter at the input before adding or dropping}
14/0205	. . . .	{Select and combine arrangements, e.g. with an optical combiner at the output after adding or dropping}
14/0206	. . . .	{Express channels arrangements}
14/0208	. . . .	{Interleaved arrangements}
14/0209	. . . .	{Multi-stage arrangements, e.g. by cascading multiplexers or demultiplexers}
14/021	. . . .	{Reconfigurable arrangements, e.g. reconfigurable optical add/drop multiplexers [ROADM] or tunable optical add/drop multiplexers [TOADM]}

> **WARNING**
>
> Group H04J 14/021 is impacted by reclassification into groups H04J 14/02122 and H04J 14/02126.
>
> Groups H04J 14/021, H04J 14/02122 and H04J 14/02126 should be considered in order to perform a complete search.

14/0212	. . . . .	{using optical switches or wavelength selective switches [WSS]}

> **WARNING**
>
> Group H04J 14/0212 is impacted by reclassification into groups H04J 14/02122 and H04J 14/02126.
>
> Groups H04J 14/0212, H04J 14/02122 and H04J 14/02126 should be considered in order to perform a complete search.

14/02122   • • • • •   {Colourless, directionless or contentionless [CDC] arrangements}

> **WARNING**
>
> Group H04J 14/02122 is incomplete pending reclassification of documents from groups H04J 14/021 and H04J 14/0212.
>
> Groups H04J 14/021, H04J 14/0212 and H04J 14/02122 should be considered in order to perform a complete search.

14/02126   • • • • •   {Multicast switch arrangements}

> **WARNING**
>
> Group H04J 14/02126 is incomplete pending reclassification of documents from groups H04J 14/021 and H04J 14/0212.
>
> Groups H04J 14/021, H04J 14/0212 and H04J 14/02126 should be considered in order to perform a complete search.

14/0213   • • • •   {Groups of channels or wave bands arrangements}

14/0215   • • •   {Architecture aspects}

14/0216   • • • •   {Bidirectional architectures}

14/0217   • • • •   {Multi-degree architectures, e.g. having a connection degree greater than two}

14/0219   • • • •   {Modular or upgradable architectures}

14/022   • • • •   {For interconnection of WDM optical networks}

14/0221   • •   {Power control, e.g. to keep the total optical power constant}

> **WARNING**
>
> Group H04J 14/0221 is impacted by reclassification into groups H04J 14/02212, H04J 14/02214, H04J 14/02216, H04J 14/02218 and H04J 14/02219.
>
> All groups listed in this Warning should be considered in order to perform a complete search.

14/02212   • • •   {by addition of a dummy signal}

> **WARNING**
>
> Group H04J 14/02212 is incomplete pending reclassification of documents from group H04J 14/0221.
>
> Groups H04J 14/0221 and H04J 14/02212 should be considered in order to perform a complete search.

14/02214   • • •   {by re-allocation of data channels}

> **WARNING**
>
> Group H04J 14/02214 is incomplete pending reclassification of documents from group H04J 14/0221.
>
> Groups H04J 14/0221 and H04J 14/02214 should be considered in order to perform a complete search.

14/02216   • • •   {by gain equalization}

> **WARNING**
>
> Group H04J 14/02216 is incomplete pending reclassification of documents from group H04J 14/0221.
>
> Groups H04J 14/0221 and H04J 14/02216 should be considered in order to perform a complete search.

14/02218   • • •   {Centralized control}

> **WARNING**
>
> Group H04J 14/02218 is incomplete pending reclassification of documents from group H04J 14/0221.
>
> Groups H04J 14/0221 and H04J 14/02218 should be considered in order to perform a complete search.

14/02219   • • •   {Distributed control}

> **WARNING**
>
> Group H04J 14/02219 is incomplete pending reclassification of documents from group H04J 14/0221.
>
> Groups H04J 14/0221 and H04J 14/02219 should be considered in order to perform a complete search.

14/0223   • •   {Conversion to or from optical TDM}

14/0224   • •   {Irregular wavelength spacing, e.g. to accommodate interference to all wavelengths}

14/0226   • •   {Fixed carrier allocation, e.g. according to service}

14/0227   • •   {Operation, administration, maintenance or provisioning [OAMP] of WDM networks, e.g. media access, routing or wavelength allocation}

14/0228   • • •   {Wavelength allocation for communications one-to-all, e.g. broadcasting wavelengths}

14/023   • • • •   {in WDM passive optical networks [WDM-PON]}

14/0232   • • • • •   {for downstream transmission}

14/0234   • • • • • •   {using multiple wavelengths}

14/0235   • • • • •   {for upstream transmission}

14/0236   • • • • • •   {using multiple wavelengths}

14/0238   • • •   {Wavelength allocation for communications one-to-many, e.g. multicasting wavelengths}

14/0239   • • • •   {in WDM-PON sharing multiple downstream wavelengths for groups of optical network units [ONU], e.g. multicasting wavelengths}

14/0241   • • •   {Wavelength allocation for communications one-to-one, e.g. unicasting wavelengths}

14/0242   • • • •   {in WDM-PON}

14/0245   • • • • •   {for downstream transmission, e.g. optical line terminal [OLT] to ONU}

14/0246   • • • • • •   {using one wavelength per ONU}

14/0247   • • • • • •   {Sharing one wavelength for at least a group of ONUs}

14/0249   • • • • •   {for upstream transmission, e.g. ONU-to-OLT or ONU-to-ONU}

14/025   • • • • •   {using one wavelength per ONU, e.g. for transmissions from-ONU-to-OLT or from-ONU-to-ONU}

H04J

14/0252 · · · · · · {Sharing one wavelength for at least a group of ONUs, e.g. for transmissions from-ONU-to-OLT or from-ONU-to-ONU}

2014/0253 · · · · · {Allocation of downstream wavelengths for upstream transmission}

14/0254 · · · {Optical medium access}

> **WARNING**
>
> Group H04J 14/0254 is impacted by reclassification into groups H04J 14/02762 and H04J 14/02764.
>
> Groups H04J 14/0254, H04J 14/02762 and H04J 14/02764 should be considered in order to perform a complete search.

14/0256 · · · · {at the optical channel layer}

14/0257 · · · · · {Wavelength assignment algorithms}

14/0258 · · · · · {Wavelength identification or labelling}

14/026 · · · · · {using WDM channels of different transmission rates}

14/0261 · · · · {at the optical multiplex section layer}

14/0263 · · · · · {Multiplex section layer wavelength assignment algorithms}

14/0264 · · · · · {Multiplex identification or labelling}

14/0265 · · · · · {Multiplex arrangements in bidirectional systems, e.g. interleaved allocation of wavelengths or allocation of wavelength groups}

14/0267 · · · · {Optical signaling or routing}

14/0268 · · · · · {Restoration of optical paths, e.g. p-cycles}

14/0269 · · · · · {using tables for routing}

14/0271 · · · · · {Impairment aware routing}

14/0272 · · · · {Transmission of OAMP information}

14/0273 · · · · · {using optical overhead, e.g. overhead processing}

14/0275 · · · · · {using an optical service channel}

14/0276 · · · · · {using pilot tones}

14/02762 · · · · {Spectrum slot allocation}

> **WARNING**
>
> Group H04J 14/02762 is incomplete pending reclassification of documents from group H04J 14/0254.
>
> Groups H04J 14/0254 and H04J 14/02762 should be considered in order to perform a complete search.

14/02764 · · · · {Multiplex arrangements for radio-frequency networks access; policies therefor (radio over fibre arrangement H04B 10/2575)}

> **WARNING**
>
> Group H04J 14/02764 is incomplete pending reclassification of documents from group H04J 14/0254.
>
> Groups H04J 14/0254 and H04J 14/02764 should be considered in order to perform a complete search.

14/0278 · · {WDM optical network architectures}

> **WARNING**
>
> Group H04J 14/0278 is impacted by reclassification into group H04J 14/02862.
>
> Groups H04J 14/0278 and H04J 14/02862 should be considered in order to perform a complete search.

14/0279 · · · {WDM point-to-point architectures}

14/028 · · · {WDM bus architectures}

14/0282 · · · {WDM tree architectures}

14/0283 · · · {WDM ring architectures}

14/0284 · · · {WDM mesh architectures}

14/0286 · · · {WDM hierarchical architectures}

14/02862 · · · {WDM data centre network [DCN] architectures}

> **WARNING**
>
> Group H04J 14/02862 is incomplete pending reclassification of documents from group H04J 14/0278.
>
> Groups H04J 14/0278 and H04J 14/02862 should be considered in order to perform a complete search.

14/0287 · · {Protection in WDM systems}

14/0289 · · · {Optical multiplex section protection}

14/029 · · · · {Dedicated protection at the optical multiplex section (1+1)}

14/0291 · · · · {Shared protection at the optical multiplex section (1:1, n:m)}

14/0293 · · · {Optical channel protection}

14/0294 · · · · {Dedicated protection at the optical channel (1+1)}

14/0295 · · · · {Shared protection at the optical channel (1:1, n:m)}

14/0297 · · · {Optical equipment protection}

14/0298 · · {with sub-carrier multiplexing [SCM]}

14/03 · · {WDM arrangements (ADM arrangements H04J 14/0202; WDM network architectures H04J 14/0278)}

> **WARNING**
>
> Groups H04J 14/03, H04J 14/0305 and H04J 14/0307 are incomplete pending reclassification of documents from group H04J 14/02.
>
> All groups listed in this Warning should be considered in order to perform a complete search.

14/0305 · · · {in end terminals}

14/0307 · · · {Multiplexers; Demultiplexers}

14/04 · Mode multiplex systems

> **WARNING**
>
> Group H04J 14/04 is impacted by reclassification into group H04J 14/052.
>
> Groups H04J 14/04 and H04J 14/052 should be considered in order to perform a complete search.

14/05	.	{Spatial multiplexing systems}

> **WARNING**
>
> Group H04J 14/05 is incomplete pending reclassification of documents from group H04J 14/00.
>
> Groups H04J 14/00 and H04J 14/05 should be considered in order to perform a complete search.

14/052	. .	{using multicore fibre (mode multiplex systems H04J 14/04)}

> **WARNING**
>
> Group H04J 14/052 is incomplete pending reclassification of documents from group H04J 14/04.
>
> Groups H04J 14/04 and H04J 14/052 should be considered in order to perform a complete search.

14/06	.	Polarisation multiplex systems
14/07	.	{Orbital angular momentum [OAM] multiplex systems}

> **WARNING**
>
> Group H04J 14/07 is incomplete pending reclassification of documents from group H04J 14/00.
>
> Groups H04J 14/00 and H04J 14/07 should be considered in order to perform a complete search.

14/08	.	Time-division multiplex systems
14/083	. .	{Add and drop multiplexing}
14/086	. .	{Medium access (H04J 3/16 takes precedence)}
99/00		**Subject matter not provided for in other groups of this subclass**

2203/00		**Aspects of optical multiplex systems other than those covered by H04J 14/05 and H04J 14/07**
2203/0001	.	Provisions for broadband connections in integrated services digital network using frames of the Optical Transport Network [OTN] or using synchronous transfer mode [STM], e.g. SONET, SDH
2203/0003	. .	Switching fabrics, e.g. transport network, control network
2203/0005	. . .	Switching elements
2203/0007	. . . .	Space switch details
2203/0008	. . . .	Time switch details
2203/001	. . . .	using a shared central buffer
2203/0012	. . .	Switching modules and their interconnections
2203/0014	. . . .	Clos
2203/0016	. . . .	Crossbar
2203/0017	. . . .	Parallel switch planes
2203/0019	. . .	Multicast/broadcast capabilities
2203/0021	. . .	Control mechanisms
2203/0023	. . .	Routing/path finding
2203/0025	. . .	Peripheral units
2203/0026	. . .	Physical details
2203/0028	. .	Local loop
2203/003	. . .	Medium of transmission, e.g. fibre, cable, radio
2203/0032	. . . .	Fibre
2203/0033	. . . .	Metallic
2203/0035	. . . .	Radio
2203/0037	. . . .	Satellite
2203/0039	. . .	Topology
2203/0041	. . . .	Star, e.g. cross-connect, concentrator, subscriber group equipment, remote electronics
2203/0042	. . . .	Ring
2203/0044	. . . .	Bus, e.g. DQDB
2203/0046	. .	User Network Interface
2203/0048	. .	Network termination, e.g. NT1, NT2, PBX
2203/005	. .	Terminal equipment, e.g. codecs, synch
2203/0051	. .	Network Node Interface, e.g. tandem connections, transit switching
2203/0053	. . .	Routing
2203/0055	. . .	Network design, dimensioning, topology or optimisation
2203/0057	. .	Operations, administration and maintenance [OAM]
2203/0058	. . .	Network management, e.g. Intelligent nets
2203/006	. . .	Fault tolerance and recovery
2203/0062	. .	Testing
2203/0064	. .	Admission Control
2203/0066	. . .	Signalling, e.g. protocols, reference model
2203/0067	. . .	Resource management and allocation
2203/0069	. . . .	Channel allocation
2203/0071	. . . .	Monitoring
2203/0073	. .	Services, e.g. multimedia, GOS, QOS
2203/0075	. . .	Connection-oriented
2203/0076	. . .	Channel characteristics, e.g. BER, error detection, error correction, delay, jitter
2203/0078	. . .	Support of N-ISDN
2203/008	. . .	Support of video
2203/0082	. . .	Interaction of SDH with non-ATM protocols
2203/0083	. . . .	Support of the IP protocol
2203/0085	. . . .	Support of Ethernet
2203/0087	. . .	Support of voice
2203/0089	. .	Multiplexing, e.g. coding, scrambling, SONET
2203/0091	. . .	Time slot assignment
2203/0092	. . .	Code Division Multiple Access [CDMA]
2203/0094	. . .	Virtual Concatenation
2203/0096	. . .	Serial Concatenation
2203/0098	. .	Traffic aspects, e.g. arbitration, load balancing, smoothing, buffer management

2211/00		**Orthogonal indexing scheme relating to orthogonal multiplex systems**
2211/001	.	using small cells within macro cells, e.g. femto, pico or microcells
2211/003	.	within particular systems or standards
2211/005	. .	Long term evolution [LTE]
2211/006	. .	Single carrier frequency division multiple access [SC FDMA]
2211/008	. .	Interleaved frequency division multiple access [IFDMA]