EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 824

DATE: MAY 1, 2020

PROJECT RP0121

The following classification changes will be effected by this Notice of Changes:

Action	Subclass	Group(s)
SCHEME:		
Symbols Deleted:	H04B	10/0705, 10/12, 10/14, 10/142, 10/152, 10/22, 10/225, 10/2503, 10/2504, 10/2918, 10/30, 10/611
Symbols New:	H04B	10/2589, 10/25891, 10/298, 10/65
Titles Changed:	H04B	10/25, 10/25133, 10/2519, 10/2525, 10/25253, 10/2543, 10/25753, 10/291, 10/2914, 10/2916, 10/294, 10/506, 10/532, 10/61, 10/615, 10/6166, 10/63, 10/64, 10/808
Warnings Deleted:	H04B	10/03, 10/12, 10/14, 10/22, 10/25, 10/30
Notes Modified:	H04B	10/00
DEFINITIONS:		
Definitions New:	H04B	10/25133, 10/25753, 10/2914, 10/2916, 10/506, 10/615, 10/6166, 10/808
Definitions Modified:	H04B	10/00, 10/11, 10/291, 10/294, 10/532, 10/61

The following subclasses/groups are also impacted by this Notice of Changes (indicate subclasses/groups outside of the project scope, such as those listed in the CRL):   **G02B, G02F**

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES

    ☒   A. New, Modified or Deleted Group(s)

    ☒   B. New, Modified or Deleted Warning(s)

    ☒   C. New, Modified or Deleted Note(s)

    ☐   D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

    ☒   A. New or Modified Definitions (Full definition template)

    ☒   B. Modified or Deleted Definitions (Definitions Quick Fix)

3. ☒   REVISION CONCORDANCE LIST (RCL)

4. ☒   CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. ☒   CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS H04B - TRANSMISSION (transmission systems for measured values, control or similar signals G08C; coding, decoding, code conversion, in general H03M; broadcast communication H04H; multiplex systems H04J; secret communication H04K; transmission of digital information H04L)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
D	H04B 10/0705	2	{Prevention or detection of unauthorized access, e.g. tapping}	\<Administrative transfer to H04B 10/85>
D	H04B 10/12	1	{Transmission through light guides, e.g. optical fibres (H04B 10/25 takes precedence)}	\<Administrative transfer to H04B 10/25>
D	H04B 10/14	2	{Terminal stations}	\<Administrative transfer to H04B 10/40>
D	H04B 10/142	3	{Coherent homodyne or heterodyne systems}	\<Administrative transfer to H04B 10/40, H04B 10/50 and H04B 10/60 simultaneously >
D	H04B 10/152	3	{Non-coherent direct-detection systems}	\<Administrative transfer to H04B 10/40, H04B 10/50 and H04B 10/60 simultaneously >
D	H04B 10/22	1	{Transmission between two stations which are mobile relative to each other}	\<Administrative transfer to H04B 10/11>
D	H04B 10/225	2	{using optical fibre links}	\<Administrative transfer to H04B 10/25>
T	H04B 10/25	1	Arrangements specific to fibre transmission	
D	H04B 10/2503	2	{Bidirectional transmission}	\<Administrative transfer to H04B 10/2589>
D	H04B 10/2504	2	{Transmission components (H04B 10/40 takes precedence)}	\<Administrative transfer to H04B 10/25891>
M	H04B 10/25133	4	{including a lumped electrical or optical dispersion compensator (H04B 10/2519, H04B 10/2525 takes precedence)}	
M	H04B 10/2519	4	using Bragg gratings	
M	H04B 10/2525	4	using dispersion-compensating fibres	
M	H04B 10/25253	5	{with dispersion management, i.e. using a combination of different kind of fibres in the transmission system}	
M	H04B 10/2543	3	due to fibre non-linearities, e.g. Kerr effect	
M	H04B 10/25753	4	{Distribution optical network, e.g. between a base station and a plurality of remote units}	

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
U	H04B 10/2587	2	using a single light source for multiple stations	
N	H04B 10/2589	2	{Bidirectional transmission}	
N	H04B 10/25891	3	{Transmission components (H04B10/40 takes precedence)}	
M	H04B 10/291	2	in which processing or amplification is carried out without conversion of the main signal from optical form	
M	H04B 10/2914	4	{using lumped semiconductor optical amplifiers [SOA]}	
M	H04B 10/2916	4	{using Raman or Brillouin amplifiers}	
D	H04B 10/2918	3	{Two-way repeaters, i.e. repeaters amplifying separate upward and downward lines}	<Administrative transfer to H04B 10/298>
M	H04B 10/294	4	in a multiwavelength system, e.g. gain equalisation	
U	H04B10/2972	4	{Each direction being amplified separately}	
N	H04B 10/298	3	{Two-way repeaters, i.e. repeaters amplifying separate upward and downward lines}	
D	H04B 10/30	1	{Transmission systems employing beams of corpuscular radiation (arrangements for handling beams of corpuscular radiation, e.g. focusing, moderating, G21K1/00)}	<Administrative transfer to H04B 10/70 and H04B 10/90 simultaneously >
M	H04B 10/506	3	{Multiwavelength transmitters}	
M	H04B 10/532	3	Polarisation modulation {, e.g. polarisation switching or transmission of a single data stream on two orthogonal polarisations}	
M	H04B 10/61	2	Coherent receivers {, i.e. optical receivers using an optical local oscillator (delay line interferometer based DPSK optical receivers H04B 10/677)}	
D	H04B 10/611	3	{Intradyne, i.e., coherent receivers with a free running local oscillator having a frequency close but not phase-locked to the carrier signal}	<Administrative transfer to H04B10/65>
M	H04B 10/615	3	{Arrangements affecting the optical part of the receiver}	
M	H04B 10/6166	4	{Polarisation demultiplexing, tracking or alignment of orthogonal polarisation components}	
M	H04B10/63	3	Homodyne {, i.e. coherent receivers where the local oscillator is locked in frequency and phase to the carrier signal}	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H04B10/64	3	Heterodyne {, i.e. coherent receivers where, after the opto-electronic conversion, an electrical signal at an intermediate frequency [fIF] is obtained}	
N	H04B 10/65	3	{Intradyne, i.e. coherent receivers with a free running local oscillator having a frequency close but not phase-locked to the carrier signal}	
M	H04B 10/808	3	{Electrical power feeding of an optical transmission system}	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; E= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:
- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- For U groups, the minimum requirement is to include the U group located immediately prior to the N group or N group array, in order to show the N group hierarchy and improve the readability and understanding of the scheme. Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types except "D" which requires only a symbol.
- #"Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>" or "<administrative transfer to XX and YY simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be "invention information", unless otherwise indicated, and to 2000 series groups is assumed to be "additional information".

B. New, Modified or Deleted Warning notice(s)

SUBCLASS H04B - TRANSMISSION (transmission systems for measured values, control or similar signals G08C; coding, decoding, code conversion, in general H03M; broadcast communication H04H; multiplex systems H04J; secret communication H04K; transmission of digital information H04L)

Type*	Location	Old Warning notice	New/Modified Warning notice
D	H04B 10/03	This group and its subgroups are not complete pending reclassification; see also H04B 10/07 and subgroups H04B 10/071 - H04B 10/0799	
D	H04B 10/12	This group and its subgroups is no longer used for classification of new documents as from March 1, 2012. If not indicated differently for a particular subgroup, the backlog of its subgroups is being continuously reclassified to H04B 10/25 - H04B 10/2587	
D	H04B 10/14	This group and its subgroups is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and its subgroups is being continuously reclassified to H04B 10/40 - H04B 10/69	
D	H04B 10/22	This group and its subgroup is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and subgroup is being continuously reclassified to H04B 10/25 - H04B 10/2587 and H04B 10/70	
D	H04B 10/25	This group and its subgroups are not complete pending reclassification; see also H04B 10/12 and its subgroups	
D	H04B 10/30	This group is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and its subgroups is being continuously reclassified to H04B 10/80 and H04B 10/90	

*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

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C. New, Modified or Deleted Note(s)

SUBCLASS H04B - TRANSMISSION (transmission systems for measured values, control or similar signals G08C; coding, decoding, code conversion, in general H03M; broadcast communication H04H; multiplex systems H04J; secret communication H04K; transmission of digital information H04L)

Type*	Location	Old Note	New/Modified Note
M	H04B 10/00	Groups H04B 10/03, H04B 10/07, H04B 10/11, H04B 10/25, H04B 10/27, H04B 10/29 and H04B 10/40 - H04B 10/90, and their subgroups are based on IPC2013.01	In this group, non-optical transmission systems are classified in group H04B 10/90.

*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

Insert: The following <u>new</u> definitions.

H04B 10/25133

Insert: The following <u>new</u> Limiting reference section and table rows.

References

Limiting references

This place does not cover:

Using Bragg gratings	H04B 10/2519
Using dispersion-compensating fibres	H04B 10/2525

Insert: The following <u>new</u> Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Optical dispersion compensators involving optical fibres per se	G02B 6/293

H04B 10/25753

Insert: The following <u>new</u> Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

WDM networks in general	H04J 14/0278

H04B 10/2914

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Semiconductor optical amplifiers per se	H01S 5/50

H04B 10/2916

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Raman or Brillouin amplifiers per se	H01S 3/302

H04B 10/506

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

WDM systems in general	H04J 14/02

H04B 10/615

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Use of polarisation beam splitters	H04B 10/614
Adjustment of the frequency or phase of the local oscillator in homodyne receivers	H04B 10/63

H04B 10/6166

Insert: The following <u>new</u> Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Polarisation multiplex systems	H04J 14/06

H04B 10/808

Insert: The following <u>new</u> Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Power feeding arrangements in general	H04B 3/44

2. A. DEFINITIONS (modified)

Insert: The following <u>new</u> modifications.

H04B 10/11

References

Limiting references

Delete: The entire Limiting reference and section.

Insert: The following <u>new</u> Informative reference section and table row.

        References

        Informative references

        Attention is drawn to the following places, which may be of interest for search:

Light signal transmission through water	H04B 10/80

H04B 10/291

Insert: The following <u>new</u> Informative reference section and table row.

        References

        Informative references

        Attention is drawn to the following places, which may be of interest for search:

Fibre optical amplifiers per se	H01S 3/067

H04B 10/294

Insert: The following <u>new</u> Informative reference section and table row.

        References

        Informative references

Attention is drawn to the following places, which may be of interest for search:

Power control in WDM systems in general	H04J 14/0221

H04B 10/532

Insert: The following <u>new</u> Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Polarisation multiplexed systems	H04J 14/06

H04B 10/61

Insert: The following <u>new</u> Limiting reference section and table row.

References

Limiting references

This place does not cover:

Delay line interferometer based DPSK optical receivers	H04B 10/677

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2. B. DEFINITIONS QUICK FIX

Symbol	**Location of change** (e.g., section title)	**Existing reference symbol or text**	**Action; New symbol; New text**
H04B10/00	Synonyms and Keywords	PSK Phase Shift Keying	Delete duplicate (2nd instance) of this row
H04B10/00	Synonyms and Keywords	DPSK Differential PSK	Delete duplicate (2nd instance) of this row

NOTES:
- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.

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3.   REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
D	H04B 10/0705	<Administrative transfer to H04B 10/85>
D	H04B 10/12	<Administrative transfer to H04B 10/25>
D	H04B 10/14	<Administrative transfer to H04B 10/40>
D	H04B 10/142	<Administrative transfer to H04B 10/40, H04B 10/50 and H04B 10/60 simultaneously >
D	H04B 10/152	<Administrative transfer to H04B 10/40, H04B 10/50 and H04B 10/60 simultaneously >
D	H04B 10/22	<Administrative transfer to H04B 10/11>
D	H04B 10/225	<Administrative transfer to H04B 10/25>
D	H04B 10/2503	<Administrative transfer to H04B 10/2589>
D	H04B 10/2504	<Administrative transfer to H04B 10/25891>
D	H04B 10/2918	<Administrative transfer to H04B 10/298>
D	H04B 10/30	<Administrative transfer to H04B 10/70 and H04B 10/90 simultaneously >
D	H04B 10/611	<Administrative transfer to H04B 10/65>

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:
- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the "To" column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("To") symbol, however it is required to specify "<no transfer>" in the "To" column for such cases.
- RCL is not needed for finalisation projects.

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

CPC	**IPC**	**Action***
H04B 10/0705	H04B10/07	DELETE
H04B 10/12	H04B10/00	DELETE
H04B 10/14	H04B10/00	DELETE
H04B 10/142	H04B10/00	DELETE
H04B 10/152	H04B10/00	DELETE
H04B 10/22	H04B10/00	DELETE
H04B 10/225	H04B10/00	DELETE
H04B 10/2503	H04B10/25	DELETE
H04B 10/2504	H04B10/25	DELETE
H04B 10/2589	H04B10/25	NEW
H04B 10/25891	H04B10/25	NEW
H04B 10/2918	H04B10/29	DELETE
H04B 10/298	H04B10/291	NEW
H04B 10/30	H04B10/00	DELETE
H04B 10/611	H04B10/61	DELETE
H04B 10/65	H04B10/61	NEW

*Action column:
- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with "UPDATED."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

NOTES:
- F symbols are not included in the CICL table above.
- E and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

Location of reference to be changed	Referenced subclass or group to be changed	Action; New reference symbol; New text
G02F2/002	H04B10/142	Replace: The entire limiting reference "homodyne, heterodyne systems H04B 10/142" with: "homodyne systems H04B10/63; heterodyne systems H04B10/64"
G02B6/3598	H04B10/152	H04B10/508

NOTES:
- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions inside the project scope will be reflected in the "scheme change" template or one of the "definition" templates.
- In addition to other changes proposed in the tables above, in the column titled "Referenced subclass or group to be changed," **referenced** D symbols should indicate an action of "delete" or should indicate a replacement symbol and **referenced** F symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.