WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

Special Union for the International Patent Classification (IPC Union)

Committee of Experts

Forty-Fifth Session
Geneva, February 27 to March 1, 2013

REPORT

adopted by the Committee of Experts

INTRODUCTION

1.   The Committee of Experts of the IPC Union (hereinafter referred to as "the Committee") held its forty-fifth session in Geneva from February 27 to March 1, 2013. The following members of the Committee were represented at the session: Austria, Brazil, Canada, China, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Ireland, Israel, Japan, Mexico, Netherlands, Norway, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Serbia, Slovakia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Ukraine, United Kingdom, United States of America (31). Zambia was represented as observer. The Eurasian Patent Organization (EAPO) and the European Patent Office (EPO) were also represented. The list of participants appears as Annex I to this report.

2.   The session was opened by Mr. Antonios Farassopoulos, Director, International Classifications and Standards Division, who welcomed the participants.

OFFICERS

3.   The Committee unanimously elected Mr. John Salotto (United States of America) as Chair and Ms. Céline Magou Santiano (France) and Mr. Rastislav Marčok (Slovakia) as Vice-Chairs.

4.   Mr. Antonios Farassopoulos (WIPO) acted as Secretary of the session.

ADOPTION OF THE AGENDA

5.   The Committee unanimously adopted the agenda, with a minor modification, which appears as Annex II to this report.

6.   As decided by the Governing Bodies of WIPO at their tenth series of meetings held from September 24 to October 2, 1979 (see document AB/X/32, paragraphs 51 and 52), the report of this session reflects only the conclusions of the Committee (decisions, recommendations, opinions, etc.) and does not, in particular, reflect the statements made by any participant, except where a reservation in relation to any specific conclusion of the Committee was expressed or repeated after the conclusion was reached.

REPORT ON THE SEVENTH SESSION OF THE IP5 WG1-WORKING GROUP ON CLASSIFICATION

7.   The Committee noted a brief oral report by Japan on the seventh session of the IP5 WG1-Working Group on Classification (WG1).

8.   At its seventh session, the WG1 discussed all F projects efficiently and four of them, namely F 009, F 012, F 016 and F 018, proceeded to the IPC phase. In addition, after the WG1, six projects, namely F 008, F 010, F 011, F 013, F 015 and F 017, proceeded to the IPC phase. Concerning the new Common Hybrid Classification (CHC) proposals, the EPO and the USPTO stated that they could not start any new projects during 2012, but were in a position to start re-evaluating the CHC proposals as well as the availability of resources after the launch of Cooperative Patent Classification (CPC). The WG1 agreed on a timeline for discussing new projects toward its next session. The International Bureau presented an update on the Common Parallel Viewer (CPV), including a timeline for its implementation.

REPORT ON THE PROGRESS OF THE COOPERATIVE PATENT CLASSIFICATION (CPC)

9.   The United States of America and the EPO gave a joint oral presentation on the recent developments concerning the CPC which had been officially launched on January 1, 2013.

10.   The Committee was informed that the allocation of CPC on documents followed WIPO ST.8 with minor adaptations in several positions. It was also noted that the CPC to IPC concordance service was made available for internal and external users under the EPO's Open Patent Services.

AMENDMENTS TO THE IPC

11.   Discussions were based on project file CE 452, in particular, on Annex 10 to the project file containing amendments to the IPC approved by the IPC Revision Working Group.

12.   The Committee adopted the proposed amendments, which appear in the Technical Annexes to this report. It was decided that these amendments would be included in the next version of the IPC which would enter into force on January 1, 2014.

13.   Concerning the Revision Concordance List (RCL), discussions were based on Annex 12 to the project file containing a compilation of RCLs for each revision project. The Committee adopted the proposed RCL, which appears in Annex III to this report.

FIVE YEAR PLAN FOR THE REVISION OF THE IPC

14.   Discussions were based on Annexes 13 and 18 to project file CE 453 prepared by the International Bureau containing two versions of a proposed plan for future revision of the IPC. The Committee adopted, with some amendments, the proposal of Annex 18 which appears as Annex IV to this report and is entitled "IPC Revision Roadmap".

15.   The List of candidate areas for revision as proposed by the International Bureau in Annex 2 to the project file appears as Annex V to this report. The Committee noted that the International Bureau would update the List twice a year and make it available to the IPC E-forum under newly created project CE 456.

16.   The EPO, on behalf of the *FiveIPOffices*, made the following statement as regards the adopted IPC Revision Roadmap, which is reproduced as follows:

> *"The IP5 wished to keep the current practice as stated in paragraph 16 of the 'IPC revision policy and procedure' which sets the particular status of the IP5 cooperation framework in the context of IPC revision: 'in view of the importance of the harmonization process of the internal classification systems of the Five IP Offices through the development of the IPC, any project resulting from the harmonization process of the internal classification systems of the Five IP Offices (including Trilateral Harmony projects) will be forwarded to the IB for automatic inclusion in the IPC revision program as having met the criteria set forth in paragraphs 9 through 13. ...'"*

> *"The IP5 also wished that project proposals submitted to the IPC/CE are launched by the Committee on a case by case basis after due analysis."*

REQUESTS FOR REVISION OF THE IPC

17.   The Committee considered a revision request submitted by Germany (see Annex 47 to project file WG 020), resulting from project A 059, on how to make a distinction between automobile and non-automobile implementations in group H02P 9/00, and agreed to create a new revision project C 459 with Germany as Rapporteur.

18.   The Committee also considered a revision request submitted by Germany (see Annex 48 to project file WG 020) on how to develop the classification in groups H01L 27/142 and H01L 31/042, and agreed to create a new revision project C 460 with Germany as Rapporteur.

19.   With regard to the revision request submitted by Canada which had been considered potentially useful by the Committee at its previous session, Canada would submit a new revision request to the relevant project.

20.   Furthermore, the Committee considered a list of areas in paragraph 5 of Annex 13 to project file CE 453 to be included in the IPC revision program. The Committee agreed to create new revision projects in the following areas with the volunteering rapporteurs indicated next to each project:

C 461 (Japan)	H04B 17/00 - H04B 17/02	(No. 2)
C 462 (China)	H04B 1/38 - H04B 1/58	(No. 19)
C 463 (Republic of Korea)	G02B 1/10 - G02B 1/12	(No. 43)
C 464 (China)	A23L 1/27 - A23L 1/308	(No. 47)
C 465 (EPO)	A61K 35/00 - A61K 35/76	(No. 52)
C 466 (Japan)	A61B 19/00 - A61B 19/12	(No. 61).

AMENDMENTS TO THE *GUIDE TO THE IPC* AND OTHER BASIC IPC DOCUMENTS

21.   Discussions were based on project file CE 421 containing consolidated proposals of amendments to the *Guide to the IPC* (*Guide*) prepared by the EPO in Annex 65 and of amendments to the Guidelines for Revision of the IPC prepared by Sweden in Annex 66, which integrated proposals and comments by offices.

22.   The Committee adopted, with some modifications, the proposed amendments to paragraphs 22, 35, 39, 40(g) and 183, and the creation of a new paragraph 87bis of the *Guide* which appear in Annex VI to this report. These amendments would be included in Version 2013 of the *Guide*. The Committee decided that the definition template would remain unchanged.

23.   The Committee also considered the consolidated proposal prepared by Sweden. This proposal was adopted with some amendments and appears as Annex VII to this report.

24.   It was agreed that project CE 421 would be considered completed after this session. In order to better organize the discussions on the IPC E-forum, the Committee also agreed to create new projects CE 454 and CE 455, with the International Bureau as Rapporteur, covering the amendments to the *Guide,* and the Guidelines for Revision of the IPC and other basic IPC documents, respectively.

25.   The International Bureau was invited to cross check and amend all IPC-related documents, taking into account the amendments to the *Guide,* and the Guidelines for Revision of the IPC that were adopted at this session.

TREATMENT OF NON-RECLASSIFIED PATENT DOCUMENTS IN THE MASTER CLASSIFICATION DATABASE AND IPCRECLASS

26.   Discussions were based on project file CE 381, in particular, on Annex 18 to the project file, submitted by the International Bureau, containing a proposal on the implementation of default transfers and on Annex 17, submitted by Sweden, containing observations on the reclassification procedure.

27.   The Committee noted a table prepared by the International Bureau containing statistics on the amount of default transfers that had to be implemented for revision projects that had already entered into force up to 2008. It was also noted that the implementation of default transfers could be carried out in IPCRECLASS in a systematic way, taking into account the tremendous amount of documents to be dealt with, although it was not foreseen at the time when the system was designed.

28.   It was noted that the large amount of documents to be reclassified using default transfers was partially due to the fact that some of the offices had experienced problems when delivering the reclassification data to IPCRECLASS, although the reclassification work of certain projects in these offices had been completed. Offices were therefore invited to work closely with the International Bureau in order to deliver their reclassification data properly.

29.   The Committee agreed to postpone the implementation of default transfers mentioned above until the new function of systematic transfer in IPCRECLASS was in place. In the mean time, the International Bureau was invited to change the stage of those revision projects from Stage 3 to Stage 2, so as to allow offices to send their reclassification result lists to IPCRECLASS when available.

30.   The Committee also considered a table including statistics for projects that had entered into force in 2009 and 2010, and noted that IPCRECLASS had received reclassification data for only less than 50% of the original number of documents to be reclassified. Having noted that some of the offices had already completed their reclassification work for certain projects, however for unknown reasons the reclassification data was not recorded in the MCD. Offices were encouraged to resubmit their reclassification data. Therefore, the reclassification status in IPCRECLASS might be updated soon. The Committee decided to postpone the consideration of inclusion of additional projects to Stage 3 to its next session.

31.   The Committee was grateful to the International Bureau for providing a training course on IPCRECLASS before the session and invited offices to actively use the system in order to accumulate more experience and to allow an efficient improvement of the system.

32.   The Committee also considered comments by Sweden in Annex 17 concerning the following issues:

  (a)   a certain amount of non-reclassified documents from project M 099 for version 2010.01 should have been dealt with in the MCD by one-to-one automatic transfers;

  (b)   certain groups that appeared in the RCL did not get a new version indicator after reclassification; and

  (c)   how to deal with "out-of-scope" documents.

33.   The EPO indicated that the one-to-one automatic reclassification took place in 2009 and 2010, however, some incompleteness might exist for 2010.01 revisions as pointed out by Sweden. The EPO would further investigate the issue and re-run the process at its earliest possibility.

34.   The Committee decided to further investigate the issue (b) of discrepancy between the RCL and the scheme. Offices were encouraged to report such cases in the future, in order to help find a suitable solution to the problem. The International Bureau was invited to provide a proposal for consideration by the Committee at its next session.

35.   As far as the "out-of-scope" documents were concerned, the Committee agreed to consider it under project QC 017 (see paragraph 41, below).

MASTER CLASSIFICATION DATABASE AND RECLASSIFICATION STATUS REPORT

36.   The Committee noted that reporting on the status of IPC reclassification had been handed over to the International Bureau. It was also noted that the International Bureau posted accumulated statistics from the MCD and the current reports from IPCRECLASS (see Annex 9 to project file QC 013).

37.   The total backlog of IPC reclassification for versions 2007.01 to 2013.01 amounts to 1.5 million families. It was indicated that this figure resulted from the fact that some offices had difficulties in submitting their Results Lists to IPCRECLASS in conformity with the IPC reclassification protocol, although the reclassification had been completed in those offices.

38.   The EPO and the International Bureau explained that some discrepancies between the MCD and IPCRECLASS status should disappear over time and that the inevitable discrepancy between IPCRECLASS figures and MCD figures would be partially reduced as the EPO would send their Results Lists to IPCRECLASS. It was decided that the remaining minor discrepancy would be acceptable.

MODIFICATION OF THE RECLASSIFICATION DISTRIBUTION ALGORITHM

39.   Discussions were based on Annex 8 to project file QC 017, containing a revised proposal prepared by the EPO, concerning a modified reclassification algorithm.

40.   The Committee recalled its invitation, at its last session, to the EPO to consider the practical aspects of changing the algorithm, and noted that the proposal of Annex 8 presented the result of such consideration.

41.   The Committee adopted, therefore, with some modifications, the Algorithm as presented in Annex 9 to the project file, which would be incorporated as enhancements to the existing distribution algorithm. It was further noted that criteria 1 and 2 would solve the "out-of-scope" problem as described by Sweden in Annex 17 to project file CE 381 (see issue (c) in paragraph 32 and also see paragraph 35, above).

REPORT ON THE PROGRESS OF THE WIPO IPCRECLASS PROJECT

42.   The International Bureau made a presentation on the IPCRECLASS project. The project launched in May 2011 is now closed. The system which moved into production in April 2012 was uploaded in June 2012 with residual working lists for previous IPC revisions back to 2007.01 and the complete intellectual reclassification required for IPC 2013.01.

43.   Although the MCD remained the reference system for IPC reclassification data, IPCRECLASS should offer an easy access to IPC reclassification status and in particular the percentage of reclassification done for each project. The International Bureau and the EPO were invited to bilaterally agree on a process for updating IPCRECLASS with MCD residual working lists.

44.   The Committee considered the feedback provided under project CE 446 and during the Third IPC Workshop and agreed on the following conclusions:

–   the current MCD process for propagating information coming from reclassification remained unchanged. Offices which would have interest in changing this process may submit proposals to the IPC E-forum;

–   it was stressed that IPC result list specification should be aligned with what IPCRECLASS could accept, in particular, the tagged form of ST.8 symbols, and explicit indication of symbols to be de-activated;

–   the Committee decided that IPCRECLASS does not need to be opened to a community broader than Offices and stressed that IPC reclassification statistics from IPCRECLASS could be used for IPC warnings of incomplete reclassification in the IPC Internet publication;

–   the future implementation of new IPCRECLASS features was announced by the International Bureau, in particular automation of default transfer of families in IPC reclassification Stage 3; and

–   the Committee expressed its gratitude to the International Bureau for devoting resources in developing IPCRECLASS and making it available to Offices.

NEXT SESSION OF THE COMMITTEE

45.   The Committee noted the following tentative dates for its next regular session:

Geneva, February 24 to 28, 2014.

46.   This report was unanimously adopted by the Committee of Experts by electronic means on March 22, 2013.

[Annexes follow]

**LISTE DES PARTICIPANTS/
LIST OF PARTICIPANTS**

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	Rastislav MARČOK (Slovaquie/Slovakia)
Secrétaire/Secretary:	Antonios FARASSOPOULOS (OMPI/WIPO)

V.   BUREAU INTERNATIONAL DE L'ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE (OMPI)/INTERNATIONAL BUREAU OF THE WORLD INTELLECTUAL PROPERTY ORGANIZATION

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[L'annexe II suit/
Annex II follows]

AGENDA

1. Opening of the session

2. Election of a Chair and two Vice-Chairs

3. Adoption of the agenda

4. Report on the seventh session of the IP5 WG1-Working Group on Classification
    Oral report by the *FiveIPOffices*.

5. Report on the progress of the Cooperative Patent Classification (CPC)
    Oral report by the USPTO and the EPO.

6. Amendments to the IPC
    See project CE 452.

7. Five Year Plan for the Revision of the IPC
    See project CE 453.

8. Requests for revision of the IPC
    See project WG 020.

9. Amendments to the *Guide to the IPC* and other basic IPC documents
    See project CE 421.

10. Treatment of non-reclassified patent documents in the Master Classification Database and IPCRECLASS
    See project CE 381.

11. Master Classification Database and reclassification status report
    See project QC 013.

12. Modification of the Reclassification Distribution Algorithm
    See project QC 017.

13. Report on the progress of the WIPO IPCRECLASS project
    Presentation by the International Bureau.

14. Next session of the Committee

15. Adoption of the report

16. Closing of the session

[Annex III follows]

REVISION CONCORDANCE LIST (RCL)/TABLE DE CONCORDANCE

IPC 201301 Official	IPC [2013] Adopted	Default transfer
A		
A61		
A61M		
A61M 23/00	A61B 17/00 - A61B 17/94, A61M 25/09, A61M 29/00 - A61M 29/04	A61M 29/00 (project F009)
A63		
A63F		
A63F 13/00	A63F 13/00, A63F 13/20 - A63F 13/98	A63F 13/00 (project A056)
A63F 13/02	A63F 13/20 - A63F 13/245, A63F 13/98	A63F 13/98 (project A056)
A63F 13/04	A63F 13/219	A63F 13/219 (project A056)
A63F 13/06	A63F 13/20 - A63F 13/245	A63F 13/20 (project A056)
A63F 13/08	A63F 13/90 - A63F 13/98	A63F 13/90 (project A056)
A63F 13/10	A63F 13/40 - A63F 13/88	A63F 13/40 (project A056)
A63F 13/12	A63F 13/30 - A63F 13/88	A63F 13/30 (project A056)
B		
B23		
B23K		
B23K 26/00	B23K 26/00, B23K 26/346, B23K 26/348, B23K 26/351 - B23K 26/359, B23K 26/50 - B23K 26/57	B23K 26/00 (project A058)
B23K 26/02	B23K 26/02, B23K 26/035	B23K 26/02 (project A058)
B23K 26/04	B23K 26/04 - B23K 26/046	B23K 26/04 (project A058)
B23K 26/06	B23K 26/06 - B23K 26/066	B23K 26/06 (project A058)
B23K 26/08	B23K 26/08 - B23K 26/082	B23K 26/08 (project A058)
B23K 26/12	B23K 26/12 - B23K 26/122	B23K 26/12 (project A058)
B23K 26/14	B23K 26/14 - B23K 26/146	B23K 26/14 (project A058)
B23K 26/20	B23K 26/20 - B23K 26/211	B23K 26/20 (project A058)
B23K 26/24	B23K 26/24 - B23K 26/244	B23K 26/24 (project A058)
B23K 26/26	B23K 26/26 - B23K 26/262	B23K 26/26 (project A058)
B23K 26/28	B23K 26/28 - B23K 26/282	B23K 26/28 (project A058)
B23K 26/30	B23K 26/30 - B23K 26/302	B23K 26/30 (project A058)
B23K 26/32	B23K 26/32 - B23K 26/324	B23K 26/32 (project A058)
B23K 26/34	B23K 26/34 - B23K 26/342	B23K 26/34 (project A058)
B23K 26/36	B23K 26/36 - B23K 26/364	B23K 26/36 (project A058)
B23K 26/38	B23K 26/38 - B23K 26/388	B23K 26/38 (project A058)
B23K 26/40	B23K 26/40 - B23K 26/402	B23K 26/40 (project A058)

IPC 201301 Official	IPC ²⁰¹³ Adopted	Default transfer
B23K 26/42	B23K 26/60, B23K 26/70	B23K 26/60 (project A058)
B23K 28/00		
B23K 28/02	B23K 26/346, B23K 26/348, B23K 28/02	B23K 28/02 (project A058)
B42		
B42D		
B42D 15/00		
B42D 15/10	B42D 25/00 - B42D 25/485	B42D 25/00 (project A057)
B44		
B44F		
B44F 1/00		
B44F 1/12	B42D 25/29 - B42D 25/391	B42D 25/29 (project A057)
C		
C09		
C09D		
C09D 11/00	C09D 11/00 - C09D 11/54	C09D 11/00 (project F016)
C09D 11/02	C09D 11/02 - C09D 11/08	C09D 11/02 (project F016)
C09D 11/10	C09D 11/10 - C09D 11/108	C09D 11/10 (project F016)
C09D 11/16	C09D 11/16 - C09D 11/20	C09D 11/16 (project F016)
E		
E04		
E04D		
E04D 13/00		
E04D 13/18	E04D 13/18, H02S 20/23	E04D 13/18 (project F007)
E05		
E05B		
E05B 65/00		
E05B 65/12	E05B 77/00 - E05B 85/28	E05B 77/00 (project A048)
E05B 65/14	E05B 83/02 - E05B 83/14	E05B 83/02 (project A048)
E05B 65/16	E05B 83/10, E05B 83/12	E05B 83/12 (project A048)
E05B 65/18	E05B 83/14	E05B 83/14 (project A048)
E05B 65/19	E05B 77/08, E05B 83/16, E05B 83/24, E05B 83/26	E05B 83/16 (project A048)
E05B 65/20	E05B 77/00 - E05B 85/28	E05B 83/36 (project A048)
E05B 65/22	E05B 85/22	E05B 85/22 (project A048)
E05B 65/24	E05B 83/36, E05B 85/08 - E05B 85/12	E05B 85/08 (project A048)
E05B 65/26	E05B 85/10 - E05B 85/18	E05B 85/14 (project A048)
E05B 65/28	E05B 85/20 - E05B 85/28	E05B 85/20 (project A048)
E05B 65/30	E05B 85/24	E05B 85/24 (project A048)

IPC 201301 Official	IPC [2013] Adopted	Default transfer
E05B 65/32	E05B 85/24 - E05B 85/28	E05B 85/24 (project A048)
E05B 65/34	E05B 85/28	E05B 85/28 (project A048)
E05B 65/36	E05B 77/46 - E05B 77/50	E05B 77/46 (project A048)
E05B 65/38	E05B 77/50	E05B 77/50 (project A048)
E05B 65/40	E05B 77/52	E05B 77/52 (project A048)
E05B 65/42	E05B 77/54	E05B 77/54 (project A048)
F		
F24		
F24J		
F24J 2/00	F24J 2/00, H02S 20/00, H02S 40/44	F24J 2/00 (project F007)
F24J 2/38	F24J 2/38, H02S 20/32	F24J 2/38 (project F007)
G		
G01		
G01N		
G01N 21/00		
G01N 21/35	G01N 21/35 - G01N 21/359	G01N 21/35 (project F011)
G01N 21/55	G01N 21/55 - G01N 21/552	G01N 21/55 (project F011)
G01R		
G01R 31/00		
G01R 31/26	G01R 31/26, H02S 50/10	G01R 31/26 (project F007)
G01R 31/40	G01R 31/40, H02S 50/10	G01R 31/40 (project F007)
G03		
G03B		
G03B 7/00	G03B 7/00 - G03B 7/01, G03B 7/30	G03B 7/00 (project F012)
G03B 7/08	G03B 7/08 - G03B 7/0805	G03B 7/08 (project F012)
G03B 7/099	G03B 7/099 - G03B 7/0997	G03B 7/099 (project F012)
G03B 7/16	G03B 7/16 - G03B 7/17	G03B 7/16 (project F012)
G03B 21/00		
G03B 21/58	G03B 21/58 - G03B 21/585	G03B 21/58 (project F010)
G03B 21/60	G03B 21/60 - G03B 21/608	G03B 21/60 (project F010)
G03B 21/62	G03B 21/62 - G03B 21/625	G03B 21/62 (project F010)
H		
H01		
H01L		
H01L 25/00		
H01L 25/04	H01L 25/04, H01L 31/043	H01L 25/04 (project F007)
H01L 31/00		
H01L 31/0203	H01L 31/0203, H01L 31/048, H01L 51/44	H01L 31/0203 (project F007)

IPC 201301 Official	IPC ²⁰¹³ Adopted	Default transfer
H01L 31/0216	H01L 31/0216, H01L 31/041	H01L 31/0216 (project F007)
H01L 31/0232	H01L 31/0232, H01L 31/0236, H01L 31/054, H02S 40/20	H01L 31/0232 (project F007)
H01L 31/024	H01L 31/024, H01L 31/052	H01L 31/024 (project F007)
H01L 31/04	H01L 31/04, H01L 31/041, H01L 31/042, H02S 50/10	H01L 31/04 (project F007)
H01L 31/042	H01L 31/042, H01L 31/043, H01L 31/053, H02S 20/00 - H02S 20/32, H02S 40/38	H01L 31/042 (project F007)
H01L 31/045	H02S 30/20	H02S 30/20 (project F007)
H01L 31/048	H01L 31/048, H01L 31/049, H02S 20/00 - H02S 20/32	H01L 31/048 (project F007)
H01L 31/05	H01L 31/05, H02S 40/36	H01L 31/05 (project F007)
H01L 31/052	H01L 31/052, H01L 31/0525, H01L 31/054, H01L 31/056, H02S 40/20, H02S 40/22, H02S 40/42	H01L 31/052 (project F007)
H01L 31/055	H01L 31/055, H02S 40/22	H01L 31/055 (project F007)
H01L 31/058	H01L 31/0525, H02S 40/44	H01L 31/0525 (project F007)
H01M		
H01M 10/00		
H01M 10/50	H01M 10/60 - H01M 10/667	H01M 10/60 (project F017)
H02		
H02K		
H02K 57/00	H02K 99/00	H02K 99/00 (project M741)
H02N		
H02N 6/00	H02S 10/00 - H02S 99/00	H02S 10/00 (project F007)
H03		
H03K		
H03K 5/00		
H03K 5/13	H03K 5/13, H03K 5/131 - H03K 5/134	H03K 5/13 (project F018)
H03K 5/14	H03K 5/133 - H03K 5/134, H03K 5/14	H03K 5/133, H03K 5/14 (project F018)
H04		
H04N		
H04N 7/00		
H04N 7/26	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/28	H04N 19/94	H04N 19/94 (project A052)
H04N 7/30	H04N 19/60 - H04N 19/645	H04N 19/60 (project A052)
H04N 7/32	H04N 19/50 - H04N 19/597	H04N 19/50 (project A052)
H04N 7/34	H04N 19/593	H04N 19/593 (project A052)
H04N 7/36	H04N 19/503 - H04N 19/583	H04N 19/503 (project A052)

IPC 201301 Official	IPC ²⁰¹³ Adopted	Default transfer
H04N 7/38	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/40	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/42	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/44	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/46	H04N 19/587, H04N 19/59	H04N 19/587, H04N 19/59 (project A052)
H04N 7/48	H04N 19/00 - H04N 19/98	H04N 19/00 (project A052)
H04N 7/50	H04N 19/61 - H04N 19/615	H04N 19/61 (project A052)

[Annex IV follows/
L'annexe IV suit]

IPC REVISION ROADMAP

Plan of Future Revision of the IPC

1.   The Committee decided to take a proactive approach in identifying the areas where the IPC should be revised in the coming years. Those areas should be preferably revised where there is a large amount of patent applications from emerging countries, which are not covered by the CPC or FI, with significant growth rate, and where the number of subgroups in the IPC is not sufficient for an effective search.

Candidate Areas for Revision

2.   These areas are identified in the list of Annex V to this report, prepared by the International Bureau, containing a list of 96 IPC main groups which have had increasing growth rate during the period 2004 to 2009. This List will be updated twice a year by the International Bureau taking into account updated statistical data on the number of patent applications published in emerging countries. Areas that were recently revised and where reclassification is still incomplete would not appear in the List. In addition the International Bureau would include other areas proposed by any member State, under the condition that evidence is provided that these are rapidly growing areas in emerging countries and that the IPC is not sufficient for an effective search. The Committee will review the List at each session and monitor the revision work done.

3.   Revision requests to revise areas included in the updated List might be submitted by any member of the IPC Union to the relevant project of the IPC e-forum. The corresponding proposals should be based either on CPC or FI/F-term subdivisions, when available. Twice a year the Committee would electronically consider these proposals and decide which projects should be forwarded to the Working Group.

4.   Revision requests might also be submitted following the same procedure as stated in paragraph 3 above by the EPO/The United States of America or Japan, in areas where major reorganization of CPC or FI, respectively, would be planned, in order to avoid discrepancy with the IPC.

Revision and Publication Procedure

5.   The IPC revision procedure will initially remain unchanged. In case of unexpected increase of revision projects, the Committee will consider whether changes are needed, e.g., to create task forces dedicated to particular projects. The Working Group would give the highest priority of its work to the revision of the IPC scheme. The Working Group would be responsible for all technical or formal consideration of revision projects.

6.   In order to accelerate the entry into force of schemes approved by the Working Group, the Committee decided to delegate its authority to adopt approved schemes to the Working Group. In that respect the summer session of the Working Group would be advanced to early May. The compilation of all amendments to enter into force in the following version of the IPC would be available in the two authentic languages beginning of June for final checking. An early publication of the scheme, RCL and compilation would be available simultaneously, for checking purposes, as well as the corresponding Mater Files and the Validity File.

7. The participation of Rapporteurs and translating offices is very important in this checking phase. In order to further improve the checking work, an editorial board (second pair of eyes) should be appointed by the Working Group. The International Bureau would distribute the parts of the scheme to be checked from editorial and formal point of view to its members. The International Bureau will in particular explicitly check the correspondence between the RCL and the transfer notes and version indicators in the scheme. Some offices using the Master Files would be invited to check their correctness. This checking would last for two weeks. The International Bureau will then introduce the corrections in order to prepare the final early publication for the first of July, as usual.

8. It was noted that the International Bureau intended to modernize the IPC IT management system starting in 2013. This IT system would allow the integration of FI and CPC schemes, the possibility given to rapporteurs to submit revision and definition proposals directly to the system, the display of an approved scheme as it would be published in order to allow easy early checking, and finally the creation of all Master Files and of the publication with "a push of a button". The International Bureau would coordinate with interesting offices to adapt the automatic translation tool TAPTA, currently used in PATENTSCOPE to be used in translating the scheme or definitions in other than the authentic languages.

Role of Rapporteurs

9. In order to reduce the rapporteur work from the offices owners of CPC or FI, other offices may volunteer to act as rapporteurs of revision projects when the purpose of the project is simply to bring subdivision from a local scheme into the IPC. If an office owner of the CPC or FI/F term is willing at the same time to revise the local scheme, then it is preferable that this office has the role of Rapporteur.

10. The role of Rapporteur would be to:

- check that the additional existing subdivisions satisfy the rules for revision of the IPC;

- check the existing titles and amend them in order to improve understanding or propose adequate definitions;

- propose the appropriate new IPC symbols;

- propose the adequate depth of hierarchical level, if the original local scheme is too detailed for the needs of the IPC. In that respect the file size of existing IPC groups and the file size of the proposed groups in the local scheme should be indicated; and

- propose structural changes only when necessary to improve the use of the scheme and its compliance with IPC rules. Such structural changes should avoid as much as possible intellectual reclassification of the local Patent Collection. Decisions on structural changes should be taken by consensus.

11.   The Working Group was invited to explore the possibility to nominate for each revision project, a co-Rapporteur next to the Rapporteur. His/her role would be to check the proposals submitted by the Rapporteur, at various stages of a project, from a formal point of view, as well as their integration into the scheme. The co-Rapporteur could propose if a "light" maintenance of the scheme in the revised area is needed, e.g. in order to improve consistency in terminology.

Reclassification

12.   During the last years the Committee has made several decisions in relation to the reclassification following the experience accumulated after the reform. Since early 2012, a new reclassification tool was implemented by the International Bureau allowing a wider participation of offices in the reclassification of completed projects. Phases of reclassification have been defined allowing more offices to participate and also automatic reclassification of not reclassified documents after a certain period, i.e., default transfers.

13.   It was decided that the reclassification procedure and collaboration would not be changed. Any additional refinement, e.g. of the distribution algorithm, would be considered by the Committee in the framework of project QC 017.

Definitions

14.   In the framework of revision projects, definitions would be considered only for those places where there is a need of further explanation of the scheme or its use. New subclass definitions would be considered only in those subclasses where there is evidence that the scheme or the relation of the subclass with other places is not clear enough. Only the relevant sections of the definitions would then be drafted. The definitions should be as focused as possible. For example if the scope of a subclass is clear but its relationship with other subclasses is not clear, only the corresponding section of the definitions would be developed.

15.   It was noted that the International Bureau would commission a study on the consistency in classification of patent family members by different offices. This study could explore whether this consistency is correlated with the presence or absence of definitions. The results of this study would be presented at the 46th session of the Committee next year.

16.   The Committee noted, with appreciation, an offer by EP/US to include in an accelerated way the CPC definitions into the IPC. In view of the important workload needed to review, adapt and translate these definitions before their introduction into the IPC, it was considered preferable to make available links to the CPC definitions from the future parallel viewer, without any other adaptation.

[Annex V follows]

LIST OF CANDIDATE AREAS FOR REVISION/LISTE DES SECTEURS PROPOSÉS POUR LA RÉVISION

No.	IPC	File size (04-09)	Growth (04-09)	Number of IPC groups	File size per group	Revision Project	Version	Number of new groups per project	Total IPC groups after revision	File size per IPC group after revision	Number of FI groups	Potential file size per FI group	Number of ECLA groups	Potential file size per ECLA group	Number of new groups (File size <=200)	Number of new groups to be created	Number of future IPC groups	File size per future IPC group
1	H04L 29	44486	67%	7	6355						27	1308	276	157	215	215	222	200
2	H04B 17	3804	11%	1	3804						24	152	32	115	18	18	19	200
3	H04L 12	97439	47%	36	2707	A050	2013	88	124	786	119	629	269	319	363	350	474	206
4	G06F 17	42888	63%	20	2144						698	60	297	135	194	194	214	200
5	H04B 7	47689	70%	24	1987						13	1289	170	246	214	170	194	246
6	G09G 3	45228	24%	24	1885	A054	2013	10	34	1330	354	120	102	359	192	192	226	200
7	F25D 11	3442	31%	2	1721						38	86	5	492	15	15	17	202
8	G06T 7	5073	98%	3	1691						107	46	61	79	22	22	25	203
9	G06F 21	9924	64%	6	1654	A044	2013	49	55	180	68	134	86	108	-	-	-	-
10	H04L 1	17429	94%	11	1584						8	917	144	112	76	76	87	200
11	C09J 7	3164	53%	2	1582						3	633	29	102	14	14	16	198
12	H01M 8	18674	56%	12	1556						48	311	255	70	81	81	93	201
13	G02F 1	86462	4%	60	1441						108	515	216	313	372	290	350	247
14	H05B 37	4172	720%	3	1391						27	139	14	245	18	18	21	199
15	G06F 3	38102	54%	28	1361	A051/F006	2013/2014	13	41	929	737	50	93	315	150	150	191	199
16	H05K 1	10301	11%	8	1288						113	85	70	132	44	44	52	198
17	H04W 76	3604	319%	3	1201	A005/C435	2009				2	721	16	190	15	15	18	200
18	H04N 7	53990	39%	49	1102	A014/A052	2011/2014	154	203	266	44	581	323	145	-	-	-	-
19	H04B 1	49543	5%	45	1101	A027	2011.01	40	85	583	128	286	145	261	163	163	248	200
20	F25D 23	6406	35%	6	1068						239	26	21	237	26	26	32	200
21	F24F 11	6394	121%	6	1066						80	74	19	256	26	26	32	200
22	H01L 21	164461	2%	161	1021						1013	140	944	149	661	500	661	249
23	G08C 17	2976	196%	3	992						2	595	0	992	12	10	13	229
24	H04L 9	16682	55%	17	981						30	355	36	315	66	50	67	249
25	G06F 1	18368	17%	19	967						181	92	61	230	73	73	92	200
26	H04W 88	8690	393%	9	966	A005/C435	2009				13	395	15	362	34	25	34	256
27	A23K 1	13556	108%	15	904						84	137	47	219	53	53	68	199
28	H05K 7	8494	140%	10	849						147	54	155	51	32	32	42	202
29	H05K 13	3261	84%	4	815						61	50	44	68	12	12	14	204
30	G06F 9	25236	6%	31	814						539	44	201	109	95	95	126	200
31	H05K 5	3209	147%	4	802						37	78	24	115	12	12	16	201
32	A01G 1	3973	198%	5	795						49	74	6	361	15	15	20	199
33	G01N 35	3080	21%	4	770						44	64	38	73	11	11	15	205
34	E04C 1	3076	286%	4	769						49	58	3	439	11	11	15	205
35	H04W 4	9991	478%	13	769	A005/C435	2009				21	294	2	666	37	21	34	294
36	C08J 5	9050	60%	12	754						9	431	28	226	33	28	40	226
37	G10L 19	5249	35%	7	750	F004	2013	123	130	40	129	39	41	109	-	-	-	-
38	H04W 72	5228	360%	7	747	A005/C435	2009				16	227	40	111	19	19	26	201
39	C08L 67	4371	49%	6	729						0	729	1	624	16	16	22	199
40	C08K 3	14573	78%	20	729						0	729	13	442	53	13	33	442
41	D06F 39	4983	20%	7	712						61	73	21	178	18	18	25	199
42	F04C 29	2826	6%	4	707						82	33	24	101	10	10	14	202
43	G02B 1	4840	90%	7	691						1	605	12	255	17	12	19	255
44	B42D 15	2732	20%	4	683	A057	-				146	18	22	105	10	10	14	195
45	C09D 7	3415	27%	5	683						2	488	12	201	12	12	17	201
46	G06K 19	9368	32%	14	669						15	323	25	240	33	30	44	213
47	A23L 1	67829	146%	104	652						232	202	227	205	235	230	334	203
48	H01M 2	12589	83%	20	629						170	66	95	109	43	43	63	200
49	H04W 24	3082	446%	5	616	A005/C435	2009				1	514	0	616	10	10	15	205

No.	IPC	File size (04-09)	Growth (04-09)	Number of IPC groups	File size per group	Revision Project	Version	Number of new groups per project	Total IPC groups after revision	File size per IPC group after revision	Number of FI groups	Potential file size per FI group	Number of ECLA groups	Potential file size per ECLA group	Number of new groups (File size <=200)	Number of new groups to be created	Number of future IPC groups	File size per future IPC group
50	H01L 33	19650	171%	32	614	A016	2010				5	531	37	285	66	40	72	273
51	C08L 23	10938	20%	18	608						0	608	18	304	37	18	36	304
52	A61K 35	23942	74%	40	599						13	452	0	599	80	13	53	452
53	A63F 13	3554	69%	6	592	A056	2014	101	107	33	21	132	1	508	-	-	-	-
54	B32B 27	12243	6%	21	583						56	159	2	532	40	40	61	201
55	G11C 7	6928	9%	12	577						22	204	21	210	23	22	34	204
56	C02F 1	25262	67%	44	574						389	58	83	199	82	82	126	200
57	G02B 5	13734	40%	24	572						29	259	64	156	45	45	69	199
58	G03F 7	21843	1%	39	560						109	148	131	128	70	70	109	200
59	H04N 5	78315	28%	141	555	A029	2011	24	165	475	319	170	168	253	227	227	392	200
60	G11C 16	9355	89%	17	550						63	117	20	253	30	30	47	199
61	A61B 19	2738	43%	5	548						20	110	39	62	9	9	14	196
62	H04W 12	3248	218%	6	541	A005/C435	2009				0	541	0	541	10	10	16	203
63	H01L 23	33793	29%	63	536						169	146	222	119	106	106	169	200
64	C22C 1	3748	132%	7	535						92	38	32	96	12	12	19	197
65	C12Q 1	19913	23%	38	524						7	443	60	203	62	60	98	203
66	C02F 9	3670	140%	7	524						45	71	9	229	11	11	18	204
67	G03G 15	14983	38%	29	517						181	71	196	67	46	46	75	200
68	C09K 3	5099	9%	10	510						258	19	21	164	15	15	25	204
69	A61B 6	4044	29%	8	506						312	13	52	67	12	12	20	202
70	C12G 3	4032	58%	8	504						24	126	3	367	12	12	20	202
71	H04L 27	13102	94%	26	504						60	152	120	90	40	40	66	199
72	C09D 11	4940	14%	10	494	F016	-				0	494	26	137	15	15	25	198
73	A61K 33	10878	50%	22	494						0	494	1	473	32	30	52	209
74	C02F 3	7890	102%	17	464						60	102	56	108	22	22	39	202
75	B32B 7	3243	20%	7	463						8	216	0	463	9	8	15	216
76	B08B 3	3225	84%	7	461						22	111	15	147	9	9	16	202
77	H01J 17	15187	56%	33	460	A031	2012				13	330	12	337	43	25	58	262
78	G06F 11	9554	17%	21	455						357	25	227	39	27	27	48	199
79	B01J 21	4474	98%	10	447						44	83	2	373	12	12	22	203
80	A47L 9	7583	17%	17	446						152	45	87	73	21	21	38	200
81	H04W 28	5799	193%	13	446	A005/C435	2009				5	322	1	414	16	6	19	305
82	C21D 8	2671	89%	6	445						35	65	56	43	7	7	13	205
83	F24F 7	3098	186%	7	443						115	25	2	344	8	8	15	207
84	G06K 7	4410	49%	10	441						67	57	60	63	12	12	22	200
85	C08K 9	2623	120%	6	437						0	437	0	437	7	7	13	202
86	A61N 5	3430	47%	8	429						24	107	34	82	9	9	17	202
87	H04W 80	2549	236%	6	425	A005/C435	2009				0	425	1	364	7	7	13	196
88	H01M 10	18542	73%	44	421	A008	2010				58	182	61	177	49	49	93	199
89	A61K 36	82588	74%	197	419						-		-		216	200	397	208
90	G02B 3	2927	22%	7	418						3	293	14	139	8	8	15	195
91	H04W 84	4529	229%	11	412	A005/C435	2009				14	181	7	252	12	12	23	197
92	G01N 33	37876	6%	93	407						361	83	247	111	96	96	189	200
93	A61L 9	5236	50%	13	403						18	169	12	209	13	13	26	201
94	C09D 175	3208	7%	8	401						0	401	0	401	8	8	16	201
95	B60J 5	2777	107%	7	397						67	38	53	46	7	7	14	198
96	C23C 14	11703	111%	30	390						179	56	95	94	29	29	59	198

Total 5017

[Annex VI follows/
L'annexe VI suit]

AMENDMENTS TO THE *GUIDE TO THE IPC*

INTERNATIONAL PATENT CLASSIFICATION
(Version 2013)

_ _ _

22.   _ _ _

    (d)   _ _ _

           Example: H01S 3/02

Subgroups are ordered in the scheme as if their numbers were decimals of the number before the oblique stroke. For example, 3/036 is to be found after 3/03 and before 3/04, and 3/0971 is to be found after 3/097 and before 3/098.

    (e)   _ _ _

ORDER OF GROUPS

35.   The groups in each subclass are arranged in a sequence intended to assist the user. For newer subclasses, the main groups are generally arranged from the most complex or highly specialised subject matter to the least complex or least specialised subject matter (see also paragraph 52, below). A residual main group (for example, 99/00 "Subject matter not provided for in other groups of this subclass"), when needed, is placed at the end of the scheme of these newer subclasses.

_ _ _

<u>Function of References</u>

39.   A reference has one of the following functions:

<u>Limiting references</u>

(a)   **Scope-limitation –** A reference which specifies subject matter which is taken to another place where it is covered, even though it is apparently covered by the title of the place where the reference appears. This type of reference is very important for the proper understanding and use of the place where it appears.

Hence a scope-limitation reference fulfils both of the following requirements:

    (i)   excludes specified subject matter from the scope of this classification place, when this subject matter would otherwise fulfil all the requirements of the classification place and its definition, i.e. would otherwise be covered by that place; and

    (ii)   indicates the place(s) where this subject matter is classified.

    Example: A47B 25/00   Card tables; Tables for other games (billiard tables
                                  A63D 15/00)

Indeed billiard tables "fit" *a priori* under tables for games other than cards, and yet they are classified in A63D 15/00 instead.

In the definitions, scope-limitation references are listed in tabular form under the heading "References relevant for classification".

(b) **Precedence** – A reference stating that another place "takes precedence" is used when subject matter is classifiable in two places, or when different aspects of the subject matter to classify are covered by different places, and it is desired that such subject matter should be classified in only one of those places (see, for example, group A01D 43/00). Such a precedence reference occurs most frequently at subgroup level; in some cases, where several groups are similarly affected, it may be replaced by a note at a higher level (see, for example, Note (2) following the title of subclass A61M).

Non-limiting references

(c) **Application-oriented –** References in function-oriented places which point to places where their subject matter is covered if it is specially adapted, used for a particular purpose or incorporated in a larger system (see paragraphs 85 to 87, 89 and 90).

Example: When considering the subject matter of lasers, i.e. devices using stimulated emission, which are covered by subclass H01S, the following are application-oriented references:

eye surgery using laser	A61F 9/008
laser printers	B41J 2/44, B41K 2/455
laser heads for recording or reproducing	G11B 7/125

In the definitions, application-oriented references are listed in tabular form under the heading "References relevant for classification".

(d) **Out of a residual place** – References appearing in residual places which point to places which provide for the subject matter under consideration.

Example: When considering the subject matter of light sources, the subclass F21K is residual to the whole of the IPC, and the following are examples of references to other places which provide for the subject matter under consideration:

candles	C11C 5/00
electric incandescent lamps	H01K
semiconductor devices adapted for light emission	H01L 33/00, H01L 51/50-H01L 51/56

In the definitions, references out of residual places are listed in tabular form under the heading "References relevant for classification".

(e) **Informative** – References indicating the location of subject matter that could be of interest for searching, but which subject matter is not within the scope of the classification place where the reference occurs.

Hence an informative reference fulfils both of the following requirements:

(i) the subject matter "does not fit" in the place under consideration, but

(ii)   that subject matter is still interesting for searching purposes.

It is instructive to compare the two conditions above with the two conditions (i) and (ii) relating to a scope-limitation reference instead.

As an application-oriented reference usually points from a function-oriented place to an application-oriented place, so an informative reference usually points from an application-oriented place to a function-oriented place.

In the definitions, informative references are listed in tabular form under the heading "Informative references".

<u>Limiting vs. non-limiting references</u>

The set of references as defined in subparagraphs (c), (d) and (e), above, are referred to as non-limiting references, as opposed to the limiting references as defined in subparagraphs (a) and (b), above.

Limiting references are included in the classification schemes and in the definition, when available. To maintain the readability of schemes while increasing the amount of useful related information provided, non-limiting references are progressively being removed from schemes and transferred to the definitions of the IPC (see also paragraph 48, below).

<u>Use and Interpretation of References</u>

40.   – – –

    (g)   – – – be read independently.

        Example: A47J   31/00   Apparatus for making beverages (household machines or implements for straining foodstuffs A47J 19/00; preparation of non-alcoholic beverages, e.g. by adding ingredients to fruit or vegetable juices, A23L 2/00; coffee or tea pots A47G 19/14; tea infusers A47G 19/16; brewing of beer C12C; preparation of wine or other alcoholic beverages C12G)

An exception is – – – by a comma.

        Example: A01L   11/00   Farriers' tools or appliances (making horseshoes by rolling B21H 7/12, by forging B21K 15/02)

– – –

FUNCTION-ORIENTED, APPLICATION-ORIENTED AND RESIDUAL PLACES

85.   – – –

87.   – – –

87bis. There are also places in the IPC which should be considered for classification if and only if no other place of the IPC provides for the subject matter under consideration. Such places are referred to as "residual places".

Expressions in the titles like:

  –   "not otherwise provided for",

  –   "not provided for in ...",

  –   "not covered by ..."

clearly designate residual places.

The residual nature of the place can be relative to other subgroups, other main groups of the same subclass, other subclasses or even to the whole of the IPC. Main groups 99/00, throughout the whole of the IPC, are special residual places.

Examples:	F21S 15/00	Non-electric lighting devices or systems employing light sources not covered by main groups F21S 11/00, F21S 13/00 or F21S 19/00
	G06Q 99/00	Subject matter not provided for in other groups of this subclass
	A99Z	SUBJECT MATTER NOT OTHERWISE PROVIDED FOR IN THIS SECTION
	F21K	LIGHT SOURCES NOT OTHERWISE PROVIDED FOR

– – –

183. This part of – – –

– – –

parallel groups (coordinate groups)		– – –
reference	=	a pointer to another place in the IPC, consisting of a phrase between round brackets describing a subject matter followed by the IPC place(s) where that subject matter is covered.
		Example:
		A47B 25/00 Card tables; Tables for other games (billiard tables A63D 15/00)
limiting reference	=	a reference of one of the two categories below: – scope-limitation reference – precedence reference
scope-limitation reference	=	a reference which clearly excludes subject matter from the place where the reference appears, that subject matter being otherwise covered by that place – see also paragraph 39(a), above.

precedence reference	=	a reference stating that another place "takes precedence", which is used when subject matter is classifiable in two places, or when different aspects of the subject matter to classify are covered by different places, and it is desired that such subject matter should be classified in only one of those places – see also paragraph 39(b), above.
non-limiting reference	=	a reference of one of the three categories below: – application-oriented reference – reference out of a residual place – informative reference
application-oriented reference	=	a reference (usually appearing in a function-oriented place) which points to a place where the subject matter under consideration is covered if it is specially adapted, used for a particular purpose or incorporated in a larger system – see also paragraph 39(c), above.
reference out of a residual place	=	a reference appearing in a residual place, illustrating places which cover (provide for) the subject matter under consideration – see also paragraph 39(d), above.
informative reference	=	a reference indicating the location of subject matter that could be of interest for searching, but which subject matter is not within the scope of the classification place where the reference occurs – see also paragraph 39(e), above.
residual main group	– – –	
residual place	=	a place which should be considered for classification if and only if no other place of the IPC covered (provided for) the subject matter under consideration — see also paragraph 87bis, above.
standardised sequence of groups	– – –	

[Annex VII follows]

AMENDMENTS TO THE *GUIDELINES FOR REVISION OF THE IPC*

GUIDELINES FOR REVISION OF THE IPC

adopted by the Committee on Experts of the IPC Union at its thirty-seventh session and modified at its forty-forth and forty-fifth sessions

– – –

27. – – –

27bis. Places in the IPC always include their subdivisions. Therefore, when an interval of groups is indicated, the end of the interval should be identified by the hierarchically highest symbol that covers the last group of the interval and is compatible with the start of the interval.

> Example: The title of H01L 31/078, "including different types of potential barriers provided for in two or more of groups H01L 31/061–H01L 31/075" correctly identifies the actual interval ending with H01L 31/077, since that group is a subgroup of H01L 31/075.

28. – – –

30. Other preferred terms and expressions:

– – –

> – The expression "arrangement of …" should be used rather than alternative expressions such as "mounting or disposition of …" when a group is intended to provide for things distinguished by a particular way of incorporating a part or detail. Example:
>
>> "Arrangement of motors in, or adjacent to, traction wheels" should be used rather than "Disposition of motor in, or adjacent to, traction wheel" (B60K 7/00)
>
> – The broader expression – – –

– – –

39. References from function-oriented to application-oriented places, and references out of residual places, should only be presented in the Definitions, under the heading "References relevant to classification", and not in the schemes.

40. – – –

109. There are two kinds of residual main groups:

> – Main groups that are residual to an entire subclass have the standard title "Subject matter not provided for in other main groups of this subclass". Such main groups should be placed at the end of the scheme and have the standard symbol 99/00 whenever possible. When this is not possible, for example when there are already classification main groups in the subclass with numbers higher than 99/00, the symbol 999/00 should be used.

–   Main groups that are only residual to a part of a subclass, for example in subclasses with multi-part titles, have a specific title. Main groups of this kind should, if possible, be placed immediately after all the groups to which they are residual. The group numbering should be different from 99/00 or 999/00. For example, A01B 76/00, "Parts, details or accessories of agricultural machines or implements, not provided for in groups A01B 51/00–A01B 75/00", is only residual to the second part of the A01B subclass title and is placed immediately after the groups related to that title part.

109bis.   Residual main groups should not be subdivided and should not contain references.

110. – – –

Appendix II to Guidelines for Revision of the IPC[*]

GUIDELINES FOR THE ORDERING OF GROUPS

1.   In parts of the IPC where a general priority rule is used the groups must by necessity be ordered in a way that ensures a useful and coherent content of each group. This usually requires careful analysis and testing.

2.   In parts of the IPC where the common rule is used the ordering of groups has no immediate effect on classification. In those parts the main object should be to order the groups in a way that is logic, predictable and easy to navigate. This can often be achieved by following the general philosophy of the standardized sequence of groups used in schemes where first place priority is applied. This order starts with the most specialized or complex matter, for example groups for specially adapted matter and combination groups. Then follow groups for less specialized or complex matter, such as the basic types of the subject matter. Groups for general details are placed at the end of the schemes and residual places, if necessary, are placed last.

3.   However, the most important principle is that groups for technically similar matter should be placed close to each other. If groups for similar matter are placed in sequence it is easy to improve the structure of a long scheme by adding a common parent group, if desirable. It also makes it easier for users to navigate the scheme. The following guidelines apply both to main groups and subgroups.

4.   When adding new groups to an existing scheme the placement of the groups should be carefully considered. New groups should be placed in the best place and not routinely added at the end of the scheme, or where there happens to be a gap in the numbering. If there is no place for a new group in its best place, or if the existing ordering of groups is inadequate, a complete renumbering should be considered.

5.   If the title of the hierarchically higher place is of multipart type, and each title part can be considered to stand alone without overlap with the other parts, groups relating to each title part should be placed together. The portions of the scheme that relate to the different title parts should be placed in the same order as the title parts.

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[*]   New text, intended to completely replace the existing Appendix II.

6.   Groups that are residual to only a part of a scheme should be placed as the last group of that part of the scheme.

7.   In schemes covering different categories of subject matter it should be considered whether groups relating to the same categories, for example products or processes, should be placed together. In some technical fields this might be useful, while in other fields it might be more useful to collect groups for similar technologies regardless of the category of subject matter. When categories are separated they should normally be arranged in this order:

      Methods of use (of products)
      Products (of manufacture)
      Processes of making products
      Apparatus for producing products
      Materials used for making products

8.   Highly specialized groups, for example particular application-type places, should be placed towards the top of the scheme and should not be mixed with groups for functional types of matter.

9.   Groups for complex systems, such as combinations involving several subsystems, should be placed towards the top of the scheme.

10.   Groups for different aspects of the same type of subject matter should be placed together, for example control aspects, electrical aspects, chemical aspects, material aspects, mechanical aspects, safety aspects and property aspects.

11.   Groups for details that are only applicable with a particular type of matter should be placed together with other groups for that type of matter, for example as subgroups.

12.   Groups for details of more general applicability should be placed towards the end of the scheme.

13.   Groups that are given precedence should be placed above the groups from which precedence is given.

Appendix IV to Guidelines for Revision of the IPC:

_ _ _

7.   When more than ten one-dot groups are created under a new main group, or when one-dot groups are otherwise added to an existing main group and the principle of paragraph 6, above, cannot be applied, the group numbers should as far as possible be chosen so that the intervals between the new groups are similar. The same applies when new subdivisions are inserted in an existing scheme. In the light of that, for the addition of further subdivisions, the numbering of each subdivision should be the rounded result of:

$n_x = A + (x * r)$

where:

n_x is the subgroup number of the xth new group ($1 \leq x \leq N$)
A is the subgroup number of the group before the interval
B is the subgroup number of the group after the interval
$r = (B - A) / (N + 1)$
N is the number of desired subdivisions

For example:

(a)   When adding two-dot: - - -

[Technical Annexes follow]

List of projects contained in these Technical Annexes:

A048; **A052**; **A056**; **A057**; **A058**; **D160**; **D221**; **D269**; **D270**; **D274**; **D275**; **D278**; **D279**; **D280**; **D285**; **D289**; **D290**; **D293**; **D295**; **D296**; **D297**; **F007**; **F009**; **F010**; **F011**; **F012**; **F016**; **F017**; **F018**; **M010**; **M013**; **M014**; **M736**; **M737**; **M738**; **M739**; **M740**; **M741**; **M743**

ANNEX 1E   **A01K**   **[Project-Rapporteur : D269/GB] <CE45>**

adopt M **1/00**   **Housing animals; Equipment therefor**

adopt M 1/035 ˙ ˙   Devices for use in keeping domestic animals, e.g. fittings in housings or dog beds

adopt M 1/06 ˙   Devices for fastening animals, e.g. halters, toggles, neck-bars or chain fastenings

adopt M 1/10 ˙   Feed racks

adopt M **3/00**   **Pasturing equipment, e.g. tethering devices; Grids for preventing cattle from straying; Electrified wire fencing** (electric circuits or apparatus for supplying electric wire fencing **H05C**)

adopt M **5/00**   **Feeding devices for stock or game** (**A01K 1/10** takes precedence; feeding devices for poultry or other birds **A01K 39/00**)

adopt M 5/015 ˙   Licking-stone holders

adopt M 7/02 ·   Automatic devices

adopt M **11/00 Marking of animals** (marking poultry or other birds **A01K 35/00**)

adopt M **13/00 Devices for grooming or caring of animals, e.g. curry-combs; Fetlock rings; Tail-holders** (as part of the harness **B68B 5/04**) **; Devices for preventing crib-biting; Washing devices; Protection against weather conditions or insects**

adopt M **14/00 Removing the fleece from live sheep or similar animals** (hand-held clippers or shavers with a plurality of cutting edges, specially adapted for shearing animals, e.g. sheep, **B26B 19/24**)

adopt M **15/00 Devices for taming animals, e.g. nose-rings or hobbles; Devices for overturning animals in general; Training or exercising equipment; Covering boxes**

adopt M **21/00 Devices for assisting or preventing mating**

adopt M **27/00 Leads or collars, e.g. for dogs**

adopt M 31/02 ·   Door appliances; Automatic door-openers

adopt M 39/02 ·   Drinking appliances (**A01K 39/04** takes precedence)

adopt M 43/08 · ·   according to weight

adopt M 47/06 · Other details of beehives, e.g. ventilating devices, entrances to hives, guards, partitions or bee escapes

adopt M **55/00** **Bee-smokers; Bee-keepers' accessories, e.g. veils**

adopt M **61/00** **Culture of fish, mussels, crayfish, lobsters, sponges, pearls, or the like**

adopt M 63/04 · Arrangements for treating water specially adapted to receptacles for live fish

adopt M 63/06 · Arrangements for heating or lighting in, or attached to, receptacles for live fish

adopt M **67/00** **Rearing or breeding animals, not otherwise provided for; New breeds of animals**

adopt M 67/02 · Breeding vertebrates

adopt M 67/033 · Rearing or breeding invertebrates; New breeds of invertebrates

adopt M 75/04 · Floats

adopt M 75/06 · Sinkers

adopt M 79/02 · by electrocution

adopt M **80/00** **Harvesting oysters, mussels, sponges or the like**

adopt M 85/08 · Artificial flies

adopt M 91/06 · Apparatus on lines not otherwise provided for, e.g. automatic hookers

adopt M 91/18 · Trotlines, longlines; Accessories therefor, e.g. baiting devices, lifters or setting reelers

adopt M 97/04 · Containers for bait; Preparation of bait

adopt M 97/05 · · Containers for live bait kept in water, e.g. for minnows or shrimps

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ANNEX 2E **A01M** **[Project-Rapporteur : D221/GB] <CE45>**

adopt M **Title** **CATCHING, TRAPPING OR SCARING OF ANIMALS** (appliances for catching swarms or drone-catching **A01K 57/00**; fishing **A01K 69/00**-**A01K 97/00**; biocides, pest repellants or attractants **A01N**) **; APPARATUS FOR THE DESTRUCTION OF NOXIOUS ANIMALS OR NOXIOUS PLANTS**

adopt M **7/00** **Special adaptations or arrangements of liquid-spraying apparatus for purposes covered by this subclass**

adopt M **9/00** **Special adaptations or arrangements of powder-spraying apparatus for purposes covered by this subclass**

adopt M **11/00** **Special adaptations or arrangements of combined liquid- and powder-spraying apparatus for purposes covered by this subclass**

adopt M **15/00** **Flame-throwers specially adapted for purposes covered by this subclass**

adopt M **21/00** **Apparatus for the destruction of unwanted vegetation, e.g. weeds** (control of undesirable vegetation on roads or permanent ways of railways **E01H 11/00**)

adopt M 31/02 · Shooting stands

ANNEX 3E **A22C** **[Project-Rapporteur : M014/IB]** **<CE45>**

adopt U 13/02 < unchanged >

ANNEX 4E **A41C** **[Project-Rapporteur : D290/RU]** **<CE45>**

adopt M **1/00** **Corsets or girdles**

adopt M 3/10 · with stiffening or bust-forming inserts

ANNEX 5E **A45B** **[Project-Rapporteur : D295/BR]** **<CE45>**

adopt M **Title** **WALKING STICKS** (walking aids, e.g. sticks, for blind persons **A61H 3/06**) **;**
UMBRELLAS; LADIES' OR LIKE FANS (cane or umbrella stands or holders **A47G
25/12**)

adopt M 1/04 ·   Walking sticks with means for hanging-up or with locks

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ANNEX 6E   **A45C**   **[Project-Rapporteur : D270/BR]** **<CE45>**

adopt M **Title** **PURSES; LUGGAGE; HAND CARRIED BAGS**

adopt M 1/10 ·   Money-bags for conductors or like people; Money-bags with rigid coin-holders

adopt M 1/12 ·   Savings boxes

adopt M **3/00** **Flexible luggage; Hand bags** (collapsible or extensible luggage, bags or the like
A45C 7/00)

adopt M 5/02 ·   Materials therefor

adopt M **9/00** **Luggage or bags convertible into objects for other use** (sacks or packs carried on
the body and convertible into other articles **A45F 4/02**; trunk-wardrobes **A47B 61/06**;
trunk-beds **A47C 17/82**)

adopt M **11/00** **Receptacles for purposes not provided for in groups A45C 1/00-A45C 9/00**
(specially adapted for toilet or cosmetic equipment **A45D 29/20**, **A45D 44/18**;
travelling sewing kits **A45F 3/48**)

adopt M 11/06 · ·   Making of spectacle or pince-nez cases

adopt M 11/34 ·   Pencil boxes; Pencil etuis or the like

adopt M 11/36 ·   Cases for drawing or like instruments

adopt M **13/00** **Details; Accessories**

adopt M 13/10 ·   Arrangement of fasteners

adopt M 13/26 ·   Special adaptations of handles (**A45C 13/22** takes precedence)

ANNEX 7E   **A61K**   **[Project-Rapporteur : M738/CA]** **<CE45>**

adopt M 31/635 · ·   having a heterocyclic ring, e.g. sulfadiazine

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ANNEX 8E   **A61M**   **[Project-Rapporteur : F009/EP]** **<CE45>**

adopt M Subclass
index

SUCTION OR PUMPING DEVICES	**1/00**
SYRINGES; IRRIGATORS; BATHS FOR THE INTESTINES	**3/00**, **5/00**; **9/00**
SPRAYERS, ATOMISERS; INSUFFLATORS	**11/00**; **13/00**

INHALING DEVICES	**15/00**, **16/00**
DEVICES FOR PRODUCING OR ENDING SLEEP OR ANAESTHESIA	**16/00**, **19/00**, **21/00**
PROBES, CATHETERS; DRAINS; DILATORS	**25/00**; **27/00**; **29/00**
TUBES, TUBE CONNECTORS, TUBE COUPLINGS, VALVES, ACCESS SITES OR THE LIKE, SPECIALLY ADAPTED FOR MEDICAL USE	**39/00**
OTHER DEVICES FOR INTRODUCING OR RETAINING REMEDIES IN THE BODY	**31/00**, **37/00**
OTHER DEVICES FOR SPREADING REMEDIES ON THE BODY	**35/00**
APPLYING RADIOACTIVE MATERIAL TO THE BODY	**36/00**

adopt D 23/00 (transferred to **A61M 25/09**,**A61M 29/00**,**A61B 17/00**)

ANNEX 9E   A63B   [Project-Rapporteur : M014/IB]   <CE45>

adopt M **33/00** **Swimming equipment attachable to the head, e.g. swim caps or goggles** (diving masks **B63C 11/12**; breathing aids, e.g. snorkels, **B63C 11/18**)

ANNEX 10E   A63F   [Project-Rapporteur : A056/EP]   <CE45>

adopt M **Title** **CARD, BOARD OR ROULETTE GAMES; INDOOR GAMES USING SMALL MOVING PLAYING BODIES; VIDEO GAMES; GAMES NOT OTHERWISE PROVIDED FOR**

adopt C *13/00* *Video games, i.e. games using an electronically generated display having two or more dimensions*

adopt D 13/02 (transferred to **A63F 13/20**-**A63F 13/245**,**A63F 13/98**)

adopt D 13/04 (transferred to **A63F 13/219**)

adopt D 13/06 (transferred to **A63F 13/20**-**A63F 13/245**)

adopt D 13/08 (transferred to **A63F 13/90**-**A63F 13/98**)

adopt D 13/10 (transferred to **A63F 13/40**-**A63F 13/88**)

adopt D 13/12 (transferred to **A63F 13/30**-**A63F 13/88**)

adopt N 13/20 · *Input arrangements for video game devices*

adopt N 13/21 · · *characterised by their sensors, purposes or types*

adopt N 13/211 · · · *using inertial sensors, e.g. accelerometers or gyroscopes*

adopt N 13/212 · · · *using sensors worn by the player, e.g. for measuring heart beat or leg activity*

adopt N 13/213 · · · *comprising photodetecting means, e.g. cameras, photodiodes or infrared cells* (**A63F 13/219, A63F 13/655** *take precedence*)

adopt N 13/214 · · · *for locating contacts on a surface, e.g. floor mats or touch pads*

adopt N 13/2145 · · · · *the surface being also a display device, e.g. touch screens*

adopt N *13/215* · · · *comprising means for detecting acoustic signals, e.g. using a microphone*

adopt N *13/216* · · · *using geographical information, e.g. location of the game device or player using GPS*

adopt N *13/217* · · · *using environment-related information, i.e. information generated otherwise than by the player, e.g. ambient temperature or humidity*

adopt N *13/218* · · · *using pressure sensors, e.g. generating a signal proportional to the pressure applied by the player*

adopt N *13/219* · · · *for aiming at specific areas on the display, e.g. light-guns*

adopt N *13/22* · · *Setup operations, e.g. calibration, key configuration or button assignment*

adopt N *13/23* · · *for interfacing with the game device, e.g. specific interfaces between game controller and console*

adopt N *13/235* · · · *using a wireless connection, e.g. infrared or piconet*

adopt N *13/24* · · *Constructional details thereof, e.g. game controllers with detachable joystick handles*

adopt N *13/245* · · · *specially adapted to a particular type of game, e.g. steering wheels*

adopt N *13/25* ·   *Output arrangements for video game devices*

adopt N *13/26* · ·   *having at least one additional display device, e.g. on the game controller or outside a game booth*

adopt N *13/27* · ·   *characterised by a large display in a public venue, e.g. in a movie theatre, stadium or game arena*

adopt N *13/28* · ·   *responding to control signals received from the game device for affecting ambient conditions, e.g. for vibrating players' seats, activating scent dispensers or affecting temperature or light (controlling the output signals based on the game progress* **A63F 13/50**)

adopt N *13/285* · · ·   *Generating tactile feedback signals via the game input device, e.g. force feedback*

adopt N *13/30* ·   *Interconnection arrangements between game servers and game devices; Interconnection arrangements between game devices; Interconnection arrangements between game servers*

adopt N *13/31* · ·   *Communication aspects specific to video games, e.g. between several handheld game devices at close range*

adopt N *13/32* · ·   *using local area network [LAN] connections*

adopt N *13/323* · · ·   *between game devices with different hardware characteristics, e.g. hand-held game devices connectable to game consoles or arcade machines*

adopt N *13/327* · · · *using wireless networks, e.g. Wi-Fi or piconet*

adopt N *13/33* · · *using wide area network [WAN] connections*

adopt N *13/332* · · · *using wireless networks, e.g. cellular phone networks*

adopt N *13/335* · · · *using Internet*

adopt N *13/338* · · · *using television networks*

adopt N *13/34* · · *using peer-to-peer connections*

adopt N *13/35* · · *Details of game servers*

adopt N *13/352* · · · *involving special game server arrangements, e.g. regional servers connected to a national server or a plurality of servers managing partitions of the game world*

adopt N *13/355* · · · *Performing operations on behalf of clients with restricted processing capabilities, e.g. servers transform changing game scene into an MPEG-stream for transmitting to a mobile phone or a thin client*

adopt N *13/358* · · · *Adapting the game course according to the network or server load, e.g. for reducing latency due to different connection speeds between clients*

adopt N *13/40* ·   *Processing input control signals of video game devices, e.g. signals generated by the player or derived from the environment*

adopt N *13/42* · ·   *by mapping the input signals into game commands, e.g. mapping the displacement of a stylus on a touch screen to the steering angle of a virtual vehicle*

adopt N *13/422* · · ·   *automatically for the purpose of assisting the player, e.g. automatic braking in a driving game*

adopt N *13/424* · · ·   *involving acoustic input signals, e.g. by using the results of pitch or rhythm extraction or voice recognition*

adopt N *13/426* · · ·   *involving on-screen location information, e.g. screen coordinates of an area at which the player is aiming with a light gun*

adopt N *13/428* · · ·   *involving motion or position input signals, e.g. signals representing the rotation of an input controller or a player's arm motions sensed by accelerometers or gyroscopes*

adopt N *13/44* · ·   *involving timing of operations, e.g. performing an action within a time slot*

adopt N *13/45* ·   *Controlling the progress of the video game*

adopt N *13/46* · ·   *Computing the game score*

adopt N *13/47* · ·   *involving branching, e.g. choosing one of several possible scenarios at a given*

point in time

adopt N *13/48* · ·   *Starting a game, e.g. activating a game device or waiting for other players to join a multiplayer session*

adopt N *13/49* · ·   *Saving the game status; Pausing or ending the game*

adopt N *13/493* · · · *Resuming a game, e.g. after pausing, malfunction or power failure*

adopt N *13/497* · · · *Partially or entirely replaying previous game actions*

adopt N *13/50* ·   *Controlling the output signals based on the game progress*

adopt N *13/52* · ·   *involving aspects of the displayed game scene*

adopt N *13/525* · · · *Changing parameters of virtual cameras*

adopt N *13/5252* · · · ·   *using two or more virtual cameras concurrently or sequentially, e.g. automatically switching between fixed virtual cameras when a character changes room or displaying a rear-mirror view in a car-driving game*

adopt N *13/5255* · · · ·   *according to dedicated instructions from a player, e.g. using a secondary joystick to rotate the camera around a player's character*

adopt N *13/5258* · · · ·   *by dynamically adapting the position of the virtual camera to keep a game object or game character in its viewing frustum, e.g. for tracking a character or a ball*

adopt N *13/53* · ·   *involving additional visual information provided to the game scene, e.g. by overlay to simulate a head-up display [HUD] or displaying a laser sight in a shooting game*

adopt N *13/533* · · ·   *for prompting the player, e.g. by displaying a game menu*

adopt N *13/537* · · ·   *using indicators, e.g. showing the condition of a game character on screen*

adopt N *13/5372* · · · ·   *for tagging characters, objects or locations in the game scene, e.g. displaying a circle under the character controlled by the player*

adopt N *13/5375* · · · ·   *for graphically or textually suggesting an action, e.g. by displaying an arrow indicating a turn in a driving game*

adopt N *13/5378* · · · ·   *for displaying an additional top view, e.g. radar screens or maps (using two or more virtual cameras concurrently **A63F 13/5252**)*

adopt N *13/54* · ·   *involving acoustic signals, e.g. for simulating revolution-dependent engine sound in a driving game or reverberation against a virtual wall*

adopt N *13/55* ·   *Controlling game characters or game objects based on the game progress*

adopt N *13/56* · ·   *Computing the motion of game characters with respect to other game*

characters, game objects or elements of the game scene, e.g. for simulating the behaviour of a group of virtual soldiers or for path finding

adopt N 13/57 · ·   *Simulating properties, behaviour or motion of objects in the game world, e.g. computing tyre load in a car race game (**A63F 13/56** takes precedence)*

adopt N 13/573 · · ·   *using trajectories of game objects, e.g. of a golf ball according to the point of impact*

adopt N 13/577 · · ·   *using determination of contact between game characters or objects, e.g. to avoid collision between virtual racing cars*

adopt N 13/58 · ·   *by computing conditions of game characters, e.g. stamina, strength, motivation or energy level*

adopt N 13/60 ·   *Generating or modifying game content before or while executing the game program, e.g. authoring tools specially adapted for game development or game-integrated level editor*

adopt N 13/61 · ·   *using advertising information*

adopt N 13/63 · ·   *by the player, e.g. authoring using a level editor*

adopt N 13/65 · ·   *automatically by game devices or servers from real world data, e.g. measurement in live racing competition*

adopt N 13/655 · · ·   *by importing photos, e.g. of the player*

adopt N *13/67* · · *adaptively or by learning from player actions, e.g. skill level adjustment or by storing successful combat sequences for re-use*

adopt N *13/69* · · *by enabling or updating specific game elements, e.g. unlocking hidden features, items, levels or versions*

adopt N *13/70* · *Game security or game management aspects*

adopt N *13/71* · · *using secure communication between game devices and game servers, e.g. by encrypting game data or authenticating players*

adopt N *13/73* · · *Authorising game programs or game devices, e.g. checking authenticity*

adopt N *13/75* · · *Enforcing rules, e.g. detecting foul play or generating lists of cheating players*

adopt N *13/77* · · *involving data related to game devices or game servers, e.g. configuration data, software version or amount of memory*

adopt N *13/79* · · *involving player-related data, e.g. identities, accounts, preferences or play histories*

adopt N *13/792* · · · *for payment purposes, e.g. monthly subscriptions*

adopt N *13/795* · · · *for finding other players; for building a team; for providing a buddy list*

adopt N *13/798* · · · *for assessing skills or for ranking players, e.g. for generating a hall of fame (computing the game score A63F 13/46)*

adopt N *13/80* · *Special adaptations for executing a specific game genre or game mode*

adopt N *13/803* · · *Driving vehicles or crafts, e.g. cars, airplanes, ships, robots or tanks*

adopt N *13/807* · · *Gliding or sliding on surfaces, e.g. using skis, skates or boards*

adopt N *13/812* · · *Ball games, e.g. soccer or baseball*

adopt N *13/814* · · *Musical performances, e.g. by evaluating the player's ability to follow a notation*

adopt N *13/816* · · *Athletics, e.g. track-and-field sports*

adopt N *13/818* · · *Fishing*

adopt N *13/822* · · *Strategy games; Role-playing games (A63F 13/825, A63F 13/828 take precedence)*

adopt N *13/825* · · *Fostering virtual characters*

adopt N *13/828* · · *Managing virtual sport teams*

adopt N *13/833* · · *Hand-to-hand fighting, e.g. martial arts competition (**A63F 13/837** takes precedence)*

adopt N *13/837* · · *Shooting of targets*

adopt N *13/843* · · *involving concurrently two or more players on the same game device, e.g. requiring the use of a plurality of controllers, or of a split-screen or of a specific view of game data for each player*

adopt N *13/847* · · *Cooperative playing, e.g. requiring coordinated actions from several players to achieve a common goal*

adopt N *13/85* · *Providing additional services to players*

adopt N *13/86* · · *Watching games played by other players*

adopt N *13/87* · · *Communicating with other players during game play, e.g. by e-mail or chat*

adopt N *13/88* · · *Mini-games executed independently while main games are being loaded*

adopt N *13/90* · *Constructional details or arrangements of video game devices not provided for in groups **A63F 13/20** or **A63F 13/25**, e.g. housing, wiring, connections or cabinets*

adopt N *13/92* · · *Video game devices specially adapted to be hand-held while playing*

adopt N *13/95* · · *Storage media specially adapted for storing game information, e.g. video game cartridges*

adopt N *13/98* · · *Accessories, i.e. detachable arrangements optional for the use of the video game device, e.g. grip supports of game controllers*

ANNEX 11E   A63J   [Project-Rapporteur : M014/IB]   <CE45>

adopt M **9/00   Centrifugal tracks, loop-the-loops or the like**

ANNEX 12E   B23G   [Project-Rapporteur : M010/IB]   <CE45>

adopt M **Title   THREAD CUTTING; WORKING OF SCREWS, BOLT HEADS, OR NUTS, IN CONJUNCTION THEREWITH** (thread-forming by corrugating tubes **B21D 15/04**, by rolling **B21H 3/02**, by forging, pressing, or hammering **B21K 1/56**; making helical grooves by turning **B23B 5/48**, by milling **B23C 3/32**, by grinding **B24B 19/02**; arrangements for copying or controlling **B23Q**)

ANNEX 13E   B23K   [Project-Rapporteur : A058/EP]   <CE45>

adopt C *26/00* *Working by laser beam, e.g. welding, cutting or boring*

adopt N *Note 26/00*

1. This main group <u>covers</u> :

    - *laser working for making a weakened layer, with or without removing material;* ***[new]***

    - *laser shock processing;* ***[new]***

    - *apparatus for laser surface treatment;* ***[new]***

    - *laser ablation.* ***[new]***

2. This main group <u>does not cover</u> :

    - *laser assisted deposition which is covered by subclass **C23C**;* ***[new]***

    - *laser sintering which is covered by group **B22F 3/105** for metallic powder, by group **B29C 67/04** for plastics, by group **C03B 19/06** for glass or by group **C04B 35/64** for ceramics;* ***[new]***

    - *laser assisted chemical etching which is covered by group **C23F 1/00**.* ***[new]***

adopt C *26/02* · *Positioning or observing the workpiece, e.g. with respect to the point of impact; Aligning, aiming or focusing the laser beam*

adopt M 26/03 · · Observing, e.g. monitoring, the workpiece

adopt N *26/035* · · *Aligning the laser beam (automatically **B23K 26/042**)*

adopt C *26/04* · · *Automatically aligning, aiming or focusing the laser beam, e.g. using the back-scattered light*

adopt N *26/042* · · · *Automatically aligning the laser beam*

adopt N *26/044* · · · · *Seam tracking*

adopt N *26/046* · · · *Automatically focusing the laser beam*

adopt C *26/06* · ·   *Shaping the laser beam, e.g. by masks or multi-focusing*

adopt N *26/062* · · ·   *by direct control of the laser beam*

adopt N *26/0622* · · · ·   *by shaping pulses*

adopt N *26/064* · · ·   *by means of optical elements, e.g. lenses, mirrors or prisms*

adopt N *26/066* · · · ·   *by using masks*

adopt C *26/08* ·   *Devices involving relative movement between laser beam and workpiece*

adopt N *26/082* · ·   *Scanning systems, i.e. devices involving movement of the laser beam relative to the laser head*

adopt C *26/12* ·   *in a special environment or atmosphere, e.g. in an enclosure*

adopt N *26/122* · ·   *in a liquid, e.g. underwater*

adopt C *26/14* ·   *using a fluid stream, e.g. a jet of gas, in conjunction with the laser beam; Nozzles therefor (**B23K 26/12** takes precedence)*

adopt N *26/142* · ·   *for the removal of by-products*

adopt N *26/144* · ·   *the fluid stream containing particles, e.g. powder*

adopt N *26/146* · ·   *the fluid stream containing a liquid*

adopt M 26/16 ·   Removal of by-products, e.g. particles or vapours produced during treatment of a workpiece (by a fluid stream **B23K 26/142**)

adopt M 26/18 ·   using absorbing layers on the workpiece, e.g. for marking or protecting purposes

adopt C *26/20* ·   *Bonding (soldering by means of radiant energy **B23K 1/005**; joining of preformed plastics parts by heating using laser beam **B29C 65/16**)*

adopt N *26/21* · ·   *by welding*

adopt N *26/211* · · ·   *with interposition of special material to facilitate connection of the parts*

adopt M 26/22 < Add 1 dot(s) >

adopt C 26/24 < Add 1 dot(s) >

adopt N *26/242* · · · ·   *Fillet welding, i.e. involving a weld of substantially triangular cross section joining two parts*

adopt N *26/244* · · · ·   *Overlap seam welding*

adopt C 26/26 < Add 1 dot(s) >

adopt N *26/262* · · · · ·   *of longitudinal seams of tubes*

adopt C 26/28 < Add 1 dot(s) >

adopt N *26/282* · · · · ·   *of tube sections*

adopt C 26/30 < Add 1 dot(s) >

adopt N *26/302* · · · · ·   *of helicoidal seams*

adopt C *26/32* · ·   *taking account of the properties of the material involved*

adopt N *26/322* · · ·   *involving coated metal parts (using absorbing layers on the workpiece **B23K 26/18**)*

adopt N *26/323* · · ·   *involving parts made of dissimilar metallic material*

adopt N *26/324* · · ·   *involving non-metallic parts*

adopt C *26/34* ⋅   *Laser welding for purposes other than joining*

adopt N *26/342* ⋅ ⋅   *Build-up welding*

adopt N *26/346* ⋅   *in combination with welding or cutting covered by groups **B23K 5/00-B23K 25/00**, e.g. in combination with resistance welding*

adopt N *26/348* ⋅ ⋅   *in combination with arc heating, e.g. TIG [tungsten inert gas], MIG [metal inert gas] or plasma welding (laser beam for starting a welding or cutting arc **B23K 9/067**)*

adopt N *26/351* ⋅   *for trimming or tuning of electrical components*

adopt N *26/352* ⋅   *for surface treatment*

adopt N *26/354* ⋅ ⋅   *by melting*

adopt N *26/356* ⋅ ⋅   *by shock processing*

adopt N *26/359* ⋅ ⋅   *by providing a line or line pattern, e.g. a dotted break initiation line*

adopt C *26/36* ⋅   *Removing material (**B23K 26/55**, **B23K 26/57** take precedence)*

adopt N *26/361* · ·   *for deburring or mechanical trimming (**B23K 26/351** takes precedence)*

adopt N *26/362* · ·   *Laser etching*

adopt N *26/364* · · ·   *for making a groove or trench, e.g. for scribing a break initiation groove*

adopt C *26/38* · ·   *by boring or cutting*

adopt N *26/382* · · ·   *by boring*

adopt N *26/384* · · · ·   *of specially shaped holes*

adopt N *26/386* · · · ·   *of blind holes*

adopt N *26/388* · · · ·   *Trepanning, i.e. boring by moving the beam spot about an axis*

adopt C *26/40* · ·   *taking account of the properties of the material involved*

adopt N *26/402* · · ·   *involving non-metallic material, e.g. isolators*

adopt D 26/42 (transferred to **B23K 26/60**,**B23K 26/70**)

adopt N *26/50* ˙   *Working by transmitting the laser beam through or within the workpiece*

adopt N *26/53* ˙ ˙   *for modifying or reforming the material inside the workpiece, e.g. for producing break initiation cracks*

adopt N *26/55* ˙ ˙   *for creating voids inside the workpiece, e.g. for forming flow passages or flow patterns*

adopt N *26/57* ˙ ˙   *the laser beam entering a face of the workpiece from which it is transmitted through the workpiece material to work on a different workpiece face, e.g. for effecting removal, fusion splicing, modifying or reforming*

adopt N *26/60* ˙   *Preliminary treatment*

adopt N *26/70* ˙   *Auxiliary operations or equipment*

adopt C *28/02* ˙   *Combined welding or cutting procedures or apparatus*

ANNEX 14E   **B29C**   **[Project-Rapporteur : M010/IB]**   **<CE45>**

adopt M   **Title**   **SHAPING OR JOINING OF PLASTICS; SHAPING OF SUBSTANCES IN A PLASTIC STATE, IN GENERAL; AFTER-TREATMENT OF THE SHAPED PRODUCTS, e.g. REPAIRING** (working in the manner of metal **B23**; grinding, polishing **B24**; cutting **B26D**, **B26F**; making preforms **B29B 11/00**; making laminated products by combining previously unconnected layers which become one product whose layers will remain together **B32B 37/00**-**B32B 41/00**)

ANNEX 15E   B29K   **[Project-Rapporteur : D296/BR] <CE45>**

adopt M 96/02 ˙   Graft polymers

adopt M 96/04 ˙   Block polymers

adopt M 105/08 ˙ ˙   of continuous length, e.g. cords, rovings, mats, fabrics, strands or yarns

adopt M 105/12 ˙ ˙   of short lengths, e.g. chopped filaments, staple fibres or bristles

adopt M 296/02 ˙   Graft polymers

adopt M 296/04 ˙   Block polymers

adopt M 311/06 ˙   Bone, horn or ivory

adopt M 311/14 ˙   Wood, e.g. woodboard or fibreboard

adopt M 496/02 ˙   Graft polymers

adopt M 496/04 ˙   Block polymers

adopt M 505/14 ˙ ˙   Noble metals, e.g. silver, gold or platinum

adopt M 511/06 ˙   Bone, horn or ivory

adopt M 511/10 ˙   Natural fibres, e.g. wool or cotton

adopt M 511/14 ˙   Wood, e.g. woodboard or fibreboard

adopt M 696/02 ˙   Graft polymers

adopt M 696/04 ˙   Block polymers

adopt M 705/14 ˙ ˙   Noble metals, e.g. silver, gold or platinum

adopt M 711/06 ˙   Bone, horn or ivory

adopt M 711/10 ˙   Natural fibres, e.g. wool or cotton

adopt M 711/14 ˙   Wood, e.g. woodboard or fibreboard

ANNEX 16E   B42D   [Project-Rapporteur : A057/EP] <CE45>

adopt M **Title** **BOOKS; BOOK COVERS; LOOSE LEAVES; PRINTED MATTER CHARACTERISED BY IDENTIFICATION OR SECURITY FEATURES; PRINTED MATTER OF SPECIAL FORMAT OR STYLE NOT OTHERWISE PROVIDED FOR; DEVICES FOR USE THEREWITH AND NOT OTHERWISE PROVIDED FOR; MOVABLE-STRIP WRITING OR READING APPARATUS**

adopt M 15/02 · Postcards; Greeting, menu, business or like cards; Letter cards or letter-sheets (**B42D 25/00** takes precedence)

adopt D 15/10 (transferred to **B42D 25/00**)

adopt N *25/00* *Information-bearing cards or sheet-like structures characterised by identification or security features; Manufacture thereof* (printing processes to produce identification or security features **B41M 3/14**)

adopt N *25/20* · *characterised by a particular use or purpose*

adopt N *25/21* · · *for multiple purposes*

adopt N *25/22* · · *for use in combination with accessories specially adapted for information-bearing cards*

adopt N *25/23* · · *Identity cards*

adopt N *25/24* · · *Passports*

adopt N *25/25* · · *Public transport tickets (apparatus for printing and issuing **G07B**)*

adopt N *25/26* · · *Entrance cards; Admission tickets*

adopt N *25/27* · · *Lots, e.g. lottery tickets*

adopt N *25/28* · · *for use in medical treatment or therapy*

adopt N *25/29* · · *Securities; Bank notes*

adopt N *25/30* · *Identification or security features, e.g. for preventing forgery*

adopt N *25/305* · · *Associated digital information (record carriers for use with machines and with at least a part designed to carry digital markings* **G06K 19/00**)

adopt N *25/309* · · *Photographs*

adopt N *25/313* · · *Fingerprints*

adopt N *25/318* · · *Signatures*

adopt N *25/324* · · *Reliefs*

adopt N *25/328* · ·   *Diffraction gratings; Holograms*

adopt N *25/333* · ·   *Watermarks*

adopt N *25/337* · ·   *Guilloche patterns*

adopt N *25/342* · ·   *Moiré effects*

adopt N *25/346* · ·   *Perforations*

adopt N *25/351* · ·   *Translucent or partly translucent parts, e.g. windows*

adopt N *25/355* · ·   *Security threads*

adopt N *25/36* · ·   *comprising special materials*

adopt N *25/364* · · ·   *Liquid crystals*

adopt N *25/369* · · ·   *Magnetised or magnetisable materials*

adopt N *25/373* · · ·   *Metallic materials*

adopt N *25/378* · · · *Special inks*

adopt N *25/382* · · · · *absorbing or reflecting infra-red light*

adopt N *25/387* · · · · *absorbing or reflecting ultra-violet light*

adopt N *25/391* · · · · *absorbing or reflecting polarised light*

adopt N *25/40* · *Manufacture*

adopt N *25/405* · · *Marking*

adopt N *25/41* · · · *using electromagnetic radiation (**B42D 25/435** takes precedence)*

adopt N *25/415* · · · *using chemicals (**B42D 25/445** takes precedence)*

adopt N *25/42* · · · · *by photographic processes*

adopt N *25/425* · · · *by deformation, e.g. embossing*

adopt N *25/43* · · · *by removal of material*

adopt N *25/435* · · · ·   *using electromagnetic radiation, e.g. laser*

adopt N *25/44* · · · ·   *using mechanical means, e.g. engraving*

adopt N *25/445* · · · ·   *using chemical means, e.g. etching*

adopt N *25/45* · ·   *Associating two or more layers*

adopt N *25/455* · · ·   *using heat*

adopt N *25/46* · · ·   *using pressure*

adopt N *25/465* · · ·   *using chemicals or adhesives*

adopt N *25/47* · · · ·   *using adhesives*

adopt N *25/475* · ·   *Cutting cards*

adopt N *25/48* · ·   *Controlling the manufacturing process*

adopt N *25/485* · · ·   *by electronic processing means*

adopt D 101/00 <deleted without transferred to / covered by>

adopt D 103/00 <deleted without transferred to / covered by>

adopt D 105/00 <deleted without transferred to / covered by>

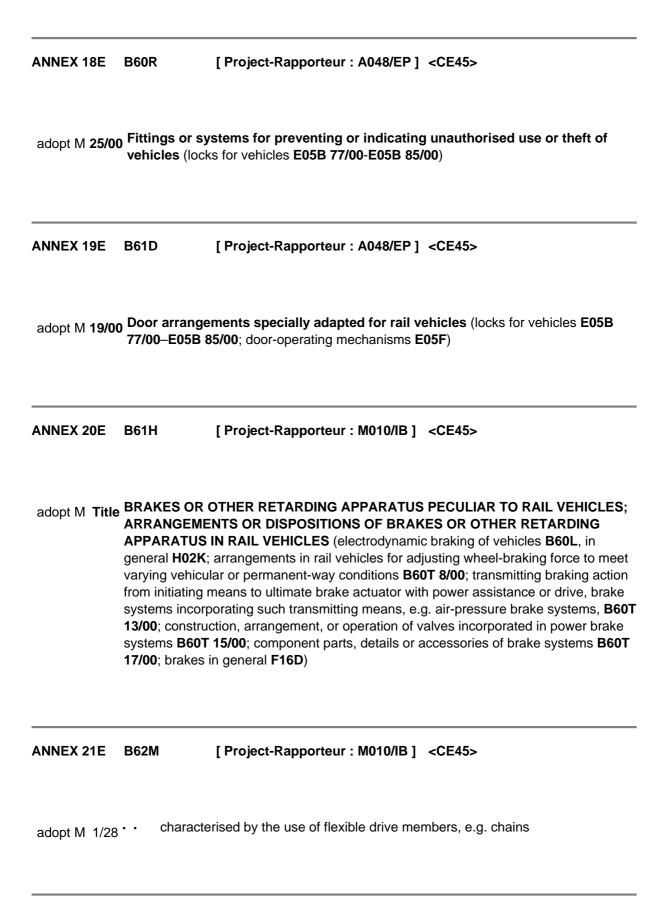adopt D 107/00 <deleted without transferred to / covered by>

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ANNEX 17EF   B44F   **[Project-Rapporteur : A057/EP]   <CE45>**

adopt D 1/12 (transferred to **B42D 25/29**,**B42D 25/30**)

ANNEX 18E **B60R** [**Project-Rapporteur : A048/EP**] **<CE45>**

adopt M **25/00** **Fittings or systems for preventing or indicating unauthorised use or theft of vehicles** (locks for vehicles **E05B 77/00**-**E05B 85/00**)

ANNEX 19E **B61D** [**Project-Rapporteur : A048/EP**] **<CE45>**

adopt M **19/00** **Door arrangements specially adapted for rail vehicles** (locks for vehicles **E05B 77/00**–**E05B 85/00**; door-operating mechanisms **E05F**)

ANNEX 20E **B61H** [**Project-Rapporteur : M010/IB**] **<CE45>**

adopt M **Title** **BRAKES OR OTHER RETARDING APPARATUS PECULIAR TO RAIL VEHICLES; ARRANGEMENTS OR DISPOSITIONS OF BRAKES OR OTHER RETARDING APPARATUS IN RAIL VEHICLES** (electrodynamic braking of vehicles **B60L**, in general **H02K**; arrangements in rail vehicles for adjusting wheel-braking force to meet varying vehicular or permanent-way conditions **B60T 8/00**; transmitting braking action from initiating means to ultimate brake actuator with power assistance or drive, brake systems incorporating such transmitting means, e.g. air-pressure brake systems, **B60T 13/00**; construction, arrangement, or operation of valves incorporated in power brake systems **B60T 15/00**; component parts, details or accessories of brake systems **B60T 17/00**; brakes in general **F16D**)

ANNEX 21E **B62M** [**Project-Rapporteur : M010/IB**] **<CE45>**

adopt M 1/28 · · characterised by the use of flexible drive members, e.g. chains

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ANNEX 22E   B63B   [Project-Rapporteur : M014/IB]   <CE45>

adopt U 11/04 < unchanged >

adopt M 19/02 ˙   Windows specially adapted for ships or other waterborne vessels, e.g. clear-view screens or portholes

adopt M 22/22 ˙   Inflatable buoys with gas generating means (**B63B 22/12** takes precedence)

adopt U **57/00** < unchanged >

ANNEX 23E   B63C   [Project-Rapporteur : M014/IB]   <CE45>

adopt M 11/12 ˙ ˙   Diving masks

ANNEX 24E   B65G   [Project-Rapporteur : D160/SE]   <CE45>

adopt M **Title** **TRANSPORT OR STORAGE DEVICES, e.g. CONVEYORS FOR LOADING OR TIPPING, SHOP CONVEYOR SYSTEMS OR PNEUMATIC TUBE CONVEYORS** (packaging **B65B**; handling thin or filamentary materials, e.g. paper sheets or thread, **B65H**; cranes **B66C**; portable or mobile lifting or hauling appliances, e.g. hoists, **B66D**; devices for lifting or lowering goods for loading or unloading purposes, e.g. fork-lift trucks, **B66F 9/00**; emptying bottles, jars, cans, casks, barrels or similar containers, not otherwise provided for, **B67C 9/00**; delivering or transferring liquids **B67D**; filling or discharging vessels for liquefied, solidified or compressed gases **F17C**; pipe-line systems for fluids **F17D**)

adopt N *Note* This subclass does not cover road or railway vehicles, waterborne vessels or aircraft *B65G* per se , or their adaptation for transport purposes. This subject matter is covered by

classes **B60**-**B64**, for example in the following places:

- *vehicles adapted for load transportation **B60P**;* **[new]**

- *railway wagons adapted for load transportation **B61D**;* **[new]**

- *hand carts **B62B**;* **[new]**

- *superstructures for load-carrying vehicles **B62D 33/00**;* **[new]**

- *loading or load-accommodating arrangements on ships or vessels **B63B 25/00**, **B63B 27/00**;* **[new]**

- *equipment for handling freight in aircraft **B64D 9/00**.* **[new]**

adopt M Subclass index

HANDLING AND STORAGE	
Loading and unloading	**65/00**, **67/00**, **69/00**
Transfer, trans-shipment	**63/00**
Storage	**1/00**, **3/00**, **5/00**
Piling, unpiling	
of articles	**57/00-61/00**
of loose material	**65/28**
Assisting manual handling	**7/00**, **9/00**
CONVEYORS, CHUTES	
Mechanical	
with endless element	**15/00-23/00**
with particular movement	**25/00**, **27/00**, **29/00**, **33/00**
other kinds	**35/00**
combinations or systems of general use	**37/00**, **49/00**
chutes; roller-ways; projectors	**11/00**; **13/00**; **31/00**
Parts or auxiliary devices applicable to different kinds	
rollers; frames; auxiliary handling	**39/00**; **41/00**; **47/00**
control, safety; maintenance	**43/00**; **45/00**
Non-mechanical	**51/00**, **53/00**, **54/00**

adopt M **1/00** **Storing articles, individually or in orderly arrangement, in warehouses or magazines** (conveyor combinations in warehouses, magazines or workshops **B65G 37/00**; stacking of articles **B65G 57/00**; removing articles from stacks **B65G 59/00**; loading machines **B65G 65/02**)

adopt M 1/02 · Storage devices (furniture **A47B**; shop fittings **A47F**)

adopt M 1/137 · · · with arrangements or automatic control means for selecting which articles are to be removed

adopt M **3/00 Storing bulk material or loose, i.e. disorderly, articles** (filling or emptying storage spaces or containers, spreading-out or piling-up bulk material or loose articles **B65G 65/28**, **B65G 65/30**, **B65G 69/04**)

adopt M **5/00 Storing fluids in natural or artificial cavities or chambers in the earth**

adopt M **7/00 Devices for assisting manual moving or tilting heavy loads** (roller-ways **B65G 13/00**; for tilting and emptying barrels or casks **B65G 65/24**)

adopt M 7/02 · Devices adapted to be interposed between loads and the ground or floor, e.g. crowbars with means for assisting conveyance of loads

adopt M **9/00 Apparatus for assisting manual handling having suspended load-carriers movable by hand or gravity**

adopt M Guidance heading 11/00-37/00 **Chutes**; **Kinds or types of conveyors**; **Constructional features, details or auxiliary devices peculiar to conveyors of particular types**

adopt M **11/00 Chutes** (used as storage devices **B65G 1/02**)

adopt M **13/00 Roller-ways** (storage devices comprising roller-ways **B65G 1/02**; endless-chain conveyors comprising load-supporting rollers **B65G 17/00**; rollers or arrangements thereof **B65G 39/00**)

adopt M **15/00** **Conveyors having endless load-conveying surfaces, i.e. belts and like continuous members, to which tractive effort is transmitted by means other than endless driving elements of similar configuration** (having load-conveying surfaces formed by interconnected longitudinal links **B65G 17/06**)

adopt M 15/18 · · · the belts being sealed at their edges

adopt M 15/20 · · · arranged side by side, e.g. for conveyance of flat articles in vertical position

adopt M 15/28 · Conveyors with a load-conveying surface formed by a single flat belt, not otherwise provided for

adopt M 15/30 · Belts or like endless load-carriers (co-operating with rails or the like **B65G 21/22**; with rollers **B65G 39/20**)

adopt M 15/60 · Arrangements for supporting or guiding belts, e.g. by fluid jets

adopt M **17/00** **Conveyors having an endless traction element, e.g. a chain, transmitting movement to a continuous or substantially-continuous load-carrying surface or to a series of individual load-carriers; Endless-chain conveyors in which the chains form the load-carrying surface**

adopt M 17/22 · with oppositely-moving parts of the conveyor located in a common plane

adopt M 17/32 · · Individual load-carriers

adopt M 17/38 · · Chains or like traction elements (drive chains **F16G 13/00**) ; Connections between traction elements and load-carriers

adopt M **19/00** **Conveyors comprising an impeller or a series of impellers carried by an endless traction element and arranged to move articles or materials over a supporting surface or underlying material, e.g. endless scraper conveyors**

adopt M **21/00** **Supporting or protective framework or housings for endless load-carriers or traction elements of belt or chain conveyors**

adopt M 21/16 · for conveyors having endless load-carriers movable in curved paths

adopt M 21/20 · Means incorporated in, or attached to, framework or housings for guiding load-carriers, traction elements or loads supported on moving surfaces (arrangements for supporting belts **B65G 15/60**; rollers or roller arrangements **B65G 39/00**)

adopt M **23/00** **Driving gear for endless conveyors; Belt- or chain-tensioning arrangements**

adopt M 23/10 · · · arranged intermediate the ends of the conveyors

adopt M 23/32 · for effecting drive at two or more points spaced along the length of the conveyors

adopt M 23/36 · · comprising two or more driving motors each coupled to a separate driving element, e.g. at either end of the conveyors

adopt M **25/00** **Conveyors comprising a cyclically-moving, e.g. reciprocating, carrier or**

impeller which is disengaged from the load during the return part of its movement (jigging **B65G 27/00**)

adopt M 25/02 · the carrier or impeller having different forward and return paths of movement, e.g. walking-beam conveyors

adopt M 25/04 · the carrier or impeller having identical forward and return paths of movement, e.g. reciprocating conveyors

adopt M **27/00** **Jigging conveyors**

adopt M 27/02 · comprising helical or spiral channels or conduits for elevation of materials

adopt M 27/30 · · · by means of an oppositely-moving mass, e.g. a second conveyor

adopt M **29/00** **Rotary conveyors, e.g. rotating discs, arms, star-wheels or cones** (mechanical projectors **B65G 31/00**; screw or rotary spiral conveyors **B65G 33/00**)

adopt M 29/02 · for inclined or vertical transit

adopt M **31/00** **Mechanical throwing machines for articles or solid materials**

adopt M **33/00** **Screw or rotary spiral conveyors**

adopt M 33/26 · ·   Screws

adopt M **35/00** **Mechanical conveyors not otherwise provided for**

adopt M 35/04 ·   comprising a flexible load-carrier, e.g. a belt, which is wound-up at one end and paid-out at the other (reciprocating belt conveyors **B65G 25/06**)

adopt M 35/06 ·   comprising a load-carrier moving along a path, e.g. a closed path, and adapted to be engaged by any one of a series of traction elements spaced along the path (effecting drive at two or more points spaced along the length of an endless conveyor **B65G 23/32**)

adopt M **37/00** **Combinations of mechanical conveyors of the same kind, or of different kinds, of interest apart from their application in particular machines or use in particular manufacturing processes** (series of co-operating belt conveyor units **B65G 15/22**; series of co-operating chain conveyor units **B65G 17/26**; sequence control of combined conveyors **B65G 43/10**)

adopt M 37/02 ·   Flow sheets for conveyor combinations in warehouses, magazines or workshops

adopt M Guidance heading 39/00-47/00   **Common features or details of, or auxiliary devices applicable to, conveyors of different kinds or types**; **Feeding or discharging devices incorporated in, or operatively associated with, conveyors**

adopt M **39/00** **Rollers, e.g. drive rollers, or arrangements thereof incorporated in roller-ways or other types of mechanical conveyors** (driving gear for rollers of roller-ways **B65G 13/06**)

adopt M 39/08 · ·   the rollers being magnetic

adopt M 39/16 · · · for aligning belts or chains

adopt M 39/20 · · attached to moving belts or chains

adopt M **41/00** **Supporting frames or bases for conveyors as a whole, e.g. transportable conveyor frames**

adopt M **43/00** **Control devices, e.g. for safety, warning or fault-correcting**

adopt M 43/10 · Sequence control of conveyors operating in combination

adopt M **47/00** **Article or material-handling devices associated with conveyors; Methods employing such devices**

adopt M 47/02 · Devices for feeding articles or materials to conveyors

adopt M 47/06 · · · from a single group of articles arranged in orderly pattern, e.g. workpieces in magazines (de-stacking devices **B65G 59/00**)

adopt M 47/08 · · · · spacing or grouping the articles during feeding (during transit by conveyor **B65G 47/28**)

adopt M 47/14 · · · · arranging or orientating the articles by mechanical or pneumatic means during feeding (during transit by conveyor **B65G 47/24**, **B65G 47/26**)

adopt M 47/19 · · · ·   having means for controlling material flow, e.g. to prevent overloading

adopt M 47/22 ·   Devices influencing the relative position or the attitude of articles during transit by conveyors (during feeding **B65G 47/14**)

adopt M 47/26 · ·   arranging the articles, e.g. varying spacing between individual articles

adopt M 47/28 · · · during transit by a single conveyor

adopt M 47/30 · · · during transit by a series of conveyors

adopt M 47/31 · · · ·   by varying the relative speeds of the conveyors forming the series

adopt M 47/34 ·   Devices for discharging articles or materials from conveyors (**B65G 47/256** takes precedence)

adopt M 47/40 · · · by tilting conveyor buckets

adopt M 47/46 · ·   with distribution, e.g. automatically, to desired points (in tube mail systems **B65G 51/36**)

adopt M 47/48 · · · according to bodily destination marks on either articles or load-carriers

adopt M 47/50 · · · according to destination signals stored in separate systems

adopt M 47/51 · · · according to unprogrammed signals, e.g. influenced by supply situation at destination

adopt M 47/52 · Devices for transferring articles or materials between conveyors, i.e. discharging or feeding devices (loading or unloading by means not incorporated in, or not operatively associated with, conveyors **B65G 65/00**; transfer of workpieces during metal rolling **B21B 41/00**)

adopt M 47/53 · · between conveyors which cross one another

adopt M 47/56 · · to or from inclined or vertical conveyor sections

adopt M 47/60 · · to or from conveyors of the suspended, e.g. trolley, type

adopt M 47/64 · · Switching conveyors

adopt M 47/66 · · Fixed platforms or combs, e.g. bridges between conveyors

adopt M 47/68 · · adapted to receive articles arriving in one layer from one conveyor and to transfer them in individual layers to more than one conveyor, or _vice versa_ , e.g. combining the flows of articles conveyed by more than one conveyor

adopt M 47/71 · · · the articles being discharged to several conveyors

adopt M 47/72 · · transferring materials in bulk from one conveyor to several conveyors or <u>vice versa</u>

adopt M **49/00** **Conveying systems characterised by their application for specified purposes not otherwise provided for**

adopt M 49/06 · · for fragile sheets, e.g. glass

adopt M 49/07 · · for semiconductor wafers

adopt M 49/08 · · for ceramic mouldings

adopt M **51/00** **Conveying articles through pipes or tubes by fluid flow or pressure; Conveying articles over a flat surface, e.g. the base of a trough, by jets located in the surface**

adopt M 51/08 · · Controlling or conditioning the operating medium

adopt M **53/00** **Conveying materials in bulk through troughs, pipes or tubes by floating the materials or by flow of gas, liquid or foam**

adopt M 53/02 · Floating material troughs

adopt M 53/32 ·   Conveying concrete, e.g. for distributing same at building sites (mixing concrete on or by conveyors **B28C 5/34**)

adopt M 53/42 · · ·   Nozzles

adopt M 53/44 · · ·   Endless conveyors

adopt M 53/48 · · ·   Screws or like rotary conveyors

adopt M **54/00** **Non-mechanical conveyors not otherwise provided for**

adopt M **57/00** **Stacking of articles** (**B65G 60/00** takes precedence; feeding, piling or stacking sheets **B65H**)

adopt M 57/11 · ·   the articles being stacked by direct action of the feeding conveyor

adopt M 57/112 · · ·   the conveyor being adjustable in height

adopt M 57/14 · · ·   the articles being transferred from carriers moving in an endless path adjacent to the stacks

adopt M **61/00** **Use of pick-up or transfer devices or of manipulators for stacking or de-stacking articles not otherwise provided for**

adopt M **63/00** **Transferring or trans-shipping at storage areas, railway yards or harbours; Marshalling yard installations**

adopt M 63/04 · with essentially-horizontal transit by bridges equipped with conveyors

adopt M 63/06 · with essentially-vertical transit

adopt M **65/00** **Loading or unloading** (of vehicles **B65G 67/00**)

adopt M 65/02 · Loading or unloading machines comprising essentially a conveyor for moving the loads associated with a device for picking-up the loads

adopt M 65/06 · · with endless scraping or elevating pick-up conveyors

adopt M 65/08 · · with reciprocating pick-up conveyors

adopt M 65/12 · · · · operations at positions off-set from the conveyor centreline

adopt M 65/14 · · with jigging pick-up conveyors, e.g. duck-bills

adopt M 65/16 · · with rotary pick-up conveyors

adopt M 65/32 · · Filling devices

adopt M 65/34 · ·   Emptying devices (conveyor construction **B65G 15/00**-**B65G 35/00**; devices similar to vehicle tipplers **B65G 67/48**)

adopt M 65/42 · · ·   using belt or chain conveyors

adopt M 65/44 · · ·   using reciprocating conveyors, e.g. jigging conveyors

adopt M 65/46 · · ·   using screw conveyors

adopt M **67/00** **Loading or unloading vehicles** (by means incorporated in the vehicles **B60**-**B64**, e.g. **B60P 1/00**, **B61D 9/00**, **B63B 27/00**, **B64D 9/00**; ground or aircraft-carrier-deck installations for aircraft **B64F 1/32**)

adopt M 67/08 · · ·   using endless conveyors

adopt M 67/10 · · ·   using conveyors covering the whole length of vehicle trains

adopt M 67/18 · · ·   Refuelling locomotives with solid fuels

adopt M 67/28 · · · ·   External transverse blades attached to endless conveyors

adopt M 67/34 · · · ·   Apparatus for tipping wagons or mine cars (inverting wagons **B65G 67/48**)

adopt M 67/48 · · · ·   Vehicle tipplers

adopt M 67/60 ·   Loading or unloading ships (arrangement of ship-based loading or unloading equipment for cargo or passengers **B63B 27/00**)

adopt M 67/62 · ·   using devices influenced by the tide or by the movements of the ship, e.g. devices on pontoons

adopt M **69/00** **Auxiliary measures taken, or devices used, in connection with loading or unloading** (by means incorporated in, or operatively associated with, conveyors **B65G 47/00**; preventing fire **A62C 3/00**; in vehicles, <u>see</u> the relevant subclasses, e.g. **B60P 1/58**, **B61D 7/32**, **B62D 33/00**, **B63B 25/00**, **B64D 9/00**)

adopt M 69/08 ·   Devices for emptying storage spaces as completely as possible (devices preventing the formation of bridges in large containers **B65D 88/64**)

adopt M 69/10 ·   Obtaining an average product from stored bulk material

adopt M 69/22 ·   Horizontal loading or unloading platforms (as road or railway equipment **B61B 1/00**, **E01F 1/00**)

adopt M 69/28 ·   Loading ramps; Loading docks (as road or railway equipment **B61B 1/00**, **E01F 1/00**)

ANNEX 25E   C07C   **[Project-Rapporteur : M738/CA] <CE45>**

adopt M 279/20 ˙   containing any of the groups

any atom, e.g. acylguanidines

X being a hetero atom, Y being

ANNEX 26E   C09D   [Project-Rapporteur : F016/EP]   <CE45>

adopt C **11/00** *Inks*

adopt C *11/02* ˙   *Printing inks (C09D 11/30 takes precedence)*

adopt N *11/023* ˙ ˙   *Emulsion inks*

adopt N *11/0235* ˙ ˙ ˙   *Duplicating inks, e.g. for stencil printing*

adopt N *11/03* ˙ ˙   *characterised by features other than the chemical nature of the binder*

adopt N *11/033* ˙ ˙ ˙   *characterised by the solvent*

adopt N *11/037* ˙ ˙ ˙   *characterised by the pigment*

adopt C *11/10* · ·   *based on artificial resins*

adopt N *11/101* · · ·   *Inks specially adapted for printing processes involving curing by wave energy or particle radiation, e.g. with UV-curing following the printing*

adopt N *11/102* · · ·   *containing macromolecular compounds obtained by reactions other than those only involving unsaturated carbon-to-carbon bonds*

adopt N *11/103* · · · ·   *of aldehydes, e.g. phenol-formaldehyde resins*

adopt N *11/104* · · · ·   *Polyesters*

adopt N *11/105* · · · · ·   *Alkyd resins*

adopt N *11/106* · · ·   *containing macromolecular compounds obtained by reactions only involving carbon-to-carbon unsaturated bonds*

adopt N *11/107* · · · ·   *from unsaturated acids or derivatives thereof*

adopt N *11/108* · · · ·   *Hydrocarbon resins*

adopt C *11/16* ·   *Writing inks*

adopt N *11/17* · ·   *characterised by colouring agents*

adopt U 11/18 < unchanged >

adopt N *11/30* ·   *Inkjet printing inks*

adopt N *11/32* · ·   *characterised by colouring agents*

adopt N *11/322* · · ·   *Pigment inks*

adopt N *11/324* · · · ·   *containing carbon black*

adopt N *11/326* · · · ·   *characterised by the pigment dispersant*

adopt N *11/328* · · ·   *characterised by dyes*

adopt N *11/34* · ·   *Hot-melt inks*

adopt N *11/36* · ·   *based on non-aqueous solvents*

adopt N *11/38* · ·   *characterised by non-macromolecular additives other than solvents, pigments or dyes*

adopt N *11/40* · · *Ink-sets specially adapted for multi-colour inkjet printing*

adopt N *11/50* · *Sympathetic, colour-changing or similar inks*

adopt N *11/52* · *Electrically conductive inks*

adopt N *11/54* · *Inks based on two liquids, one liquid being the ink, the other liquid being a reaction solution, a fixer or a treatment solution for the ink*

ANNEX 27E   C11C   [Project-Rapporteur : M740/RU] <CE45>

adopt M **Title FATTY ACIDS OBTAINED FROM FATS, OILS OR WAXES; CANDLES; FATS, OILS OR FATTY ACIDS OBTAINED BY CHEMICAL MODIFICATION OF FATS, OILS OR FATTY ACIDS**

adopt M **3/00 Fats, oils or fatty acids obtained by chemical modification of fats, oils or fatty acids, e.g. by ozonolysis** (sulfonated fats or oils **C07C 309/62**; epoxidised fats **C07D 303/42**; vulcanised oils, e.g. factice **C08H 3/00**)

ANNEX 28E   C12F   [Project-Rapporteur : D293/BR] <CE45>

adopt M 3/06 · from beer or wine (**C12F 3/02** takes precedence; removal of yeast of wine **C12G 1/08**)

ANNEX 29E   C21B   [Project-Rapporteur : D278/EP] <CE45>

adopt M **Title** **MANUFACTURE OF IRON OR STEEL** (preliminary treatment of ferrous ores or scrap **C22B 1/00**)

adopt M 3/06 · · Treatment of liquid slag

adopt M 5/06 · using top gas in the blast furnace process

adopt M **7/00** **Blast furnaces**

adopt M 7/04 · with special refractories

adopt M 9/12 · · Hot-blast valves or slides for blast furnaces

adopt M **15/00** **Other processes for the manufacture of iron from iron compounds** (by electrolysis **C25C 1/06**)

ANNEX 30E **C21C** [Project-Rapporteur : D279/EP] <CE45>

adopt M **Title** **PROCESSING OF PIG-IRON, e.g. REFINING, MANUFACTURE OF WROUGHT-IRON OR STEEL; TREATMENT IN MOLTEN STATE OF FERROUS ALLOYS**

adopt M 5/52 · Manufacture of steel in electric furnaces

adopt M **7/00** **Treating molten ferrous alloys, e.g. steel, not covered by groups C21C 1/00-C21C 5/00** (treating molten metals during moulding **B22D 1/00**, **B22D 27/00**)

ANNEX 31E   C21D   [Project-Rapporteur : D280/EP]   <CE45>

adopt M **1/00** **General methods or devices for heat treatment, e.g. annealing, hardening, quenching or tempering**

adopt M 1/55 · Hardenability tests, e.g. end-quench tests

adopt M 1/64 · · · with circulating liquids

adopt M 1/74 · Methods of treatment in inert gas, controlled atmosphere, vacuum, or pulverulent material

adopt M 1/82 · Descaling by thermal stresses (mechanically **B21**, **B23**; chemically **C23**; electrolytically **C25F 1/00**)

adopt M **3/00** **Diffusion processes for extraction of non-metals; Furnaces therefor** (local protective coatings **C21D 1/72**)

adopt M **9/00** **Heat treatment, e.g. annealing, hardening, quenching or tempering, adapted for particular articles; Furnaces therefor**

adopt M 9/04 · for rails

adopt M 9/14 · ·   wear-resistant or pressure-resistant pipes

adopt M 9/44 ·   for equipment for lining mine shafts, e.g. segments, rings or props

adopt M 9/68 · · · Furnace coilers; Hot coilers (cold coilers **B21C 47/00**)

adopt M **11/00** **Process control or regulation for heat treatments**

ANNEX 32E   C25D   [Project-Rapporteur : M739/DE] <CE45>

adopt U **3/00** < unchanged >

adopt U 3/10 < unchanged >

adopt U 3/32 < unchanged >

adopt U 3/36 < unchanged >

adopt U 3/52 < unchanged >

adopt U **5/00** < unchanged >

adopt U 5/02 < unchanged >

adopt U 5/04 < unchanged >

adopt U 5/06 < unchanged >

adopt U 5/08 < unchanged >

adopt U 5/10 < unchanged >

adopt U 5/16 < unchanged >

adopt U 5/18 < unchanged >

adopt U 5/20 < unchanged >

adopt U 5/22 < unchanged >

adopt U 5/24 < unchanged >

adopt U 5/54 < unchanged >

adopt U **7/00** < unchanged >

adopt U **9/00** < unchanged >

adopt U **11/00** < unchanged >

adopt M **13/00** **Electrophoretic coating characterised by the process** (**C25D 15/00** takes

precedence; compositions for electrophoretic coating **C09D 5/44**)

adopt U 13/10 < unchanged >

adopt U 13/12 < unchanged >

adopt U **19/00** < unchanged >

ANNEX 33E   D21B   [Project-Rapporteur : D285/BR] <CE45>

adopt M **1/00** **Fibrous raw materials or their mechanical treatment** (pretreatment of the finely-
divided materials before digesting **D21C 1/00**; methods of beating or refining
pulp **D21D 1/00**; purification of the pulp suspension by mechanical means **D21D 5/00**)

adopt M 1/04 · by dividing raw materials into small particles, e.g. fibres (breaking-up or cutting
wood or the like by dry methods **B27L**; mechanical separation of fibres from plant
material **D01B 1/00**; hackling or heckling machines **D01B 5/00**)

adopt M 1/14 · · · Disintegrating in mills

ANNEX 34E   D21H   [Project-Rapporteur : A057/EP] <CE45>

adopt M 21/40 · · Agents facilitating proof of genuineness or preventing fraudulent alteration, e.g.
for security paper (watermarking **B41M 3/10**, **D21F 1/44**; security printing **B41M 3/14**;
securities or banknotes characterised by colour effects **B42D 25/29**, **B42D 25/30**;
testing paper currency or valuable papers for genuineness **G07D 7/00**)

ANNEX 35E   E04C   **[Project-Rapporteur : M014/IB]   <CE45>**

adopt M 3/28 · ·   of materials not covered by groups **E04C 3/04**-**E04C 3/20**

adopt M 3/36 · ·   of materials not covered by groups **E04C 3/32** or **E04C 3/34**; of a combination of
two or more materials

adopt M 3/46 · ·   of materials not covered by groups **E04C 3/40**-**E04C 3/44**; of a combination of
two or more materials

ANNEX 36E   E04D   **[Project-Rapporteur : F007/EP]   <CE45>**

adopt C *13/18* ·   *Roof covering aspects of energy collecting devices, e.g. including solar panels*
(supporting structures of photovoltaic modules specially adapted for roof structures
H02S 20/23*)*

ANNEX 37E   E05B   **[Project-Rapporteur : A048/EP]   <CE45>**

adopt N *Note*   1.   *Operating or controlling of locks for vehicle wings are classified in groups*
E05B   ***E05B 77/00****-****E05B 81/00****.*   **[new]**

              2.   *Knobs, handles or press buttons for locks of vehicle wings are classified in*
*groups **E05B 79/00****-****E05B 85/00****.*   **[new]**

adopt M *Subclass*
index

LOCKS WITH TUMBLERS	
Moved by rotation of the key	**21/00**, **23/00**, **25/00**
Set by pushing the key in	**27/00**-**33/00**
LOCKS FOR USE WITH SPECIAL KEYS OR KEY SETS	**35/00**
PERMUTATION OR PUZZLE LOCKS	**37/00**, **49/00**
PADLOCKS	**67/00**, **37/00**
LOCKS WITH INDICATING OR TIMING DEVICES	**39/00**-**45/00**

LOCKS WITH PROVISION FOR LATCHING	**55/00-61/00**
LOCKS WITH OTHER SPECIAL STRUCTURAL FEATURES	**63/00**
LOCKS FOR SPECIAL USE	**65/00**, **69/00-75/00**
LOCKS FOR VEHICLES	**77/00-85/00**
OPERATION OR CONTROL OF LOCKS	**47/00-53/00**
OPERATION OR CONTROL OF LOCKS FOR VEHICLES	**77/00-81/00**
DETAILS OR ACCESSORIES OF LOCKS OR THE LIKE, KEYS	
Knobs or handles	**1/00-7/00**
Knobs or handles for vehicles	**79/00**, **85/00**
Other details or accessories of locks or latches	**9/00-17/00**
Keys	**19/00**
HANDCUFFS	**75/00**

adopt M **9/00** **Lock casings or latch-mechanism casings** (padlock casings **E05B 67/02**; for vehicles **E05B 79/04**, **E05B 85/02**)

adopt M **53/00** **Operation or control of locks by mechanical transmissions, e.g. from a distance**

adopt M 63/12 ·   with means carried by the bolt for interlocking with the keeper

adopt D 65/12 (transferred to **E05B 77/00**-**E05B 85/00**)

adopt D 65/14 (transferred to **E05B 83/02**)

adopt D 65/16 (transferred to **E05B 83/10**,**E05B 83/12**)

adopt D 65/18 (transferred to **E05B 83/14**)

adopt D 65/19 (transferred to **E05B 77/08**,**E05B 83/16**,**E05B 83/24**,**E05B 83/26**)

adopt D 65/20 (transferred to **E05B 77/00**-**E05B 85/00**)

adopt D 65/22 (transferred to **E05B 85/22**)

adopt D 65/24 (transferred to **E05B 83/36**,**E05B 85/08**-**E05B 85/12**)

adopt D 65/26 (transferred to **E05B 85/10**)

adopt D 65/28 (transferred to **E05B 85/20**)

adopt D 65/30 (transferred to **E05B 85/24**)

adopt D 65/32 (transferred to **E05B 85/24**)

adopt D 65/34 (transferred to **E05B 85/28**)

adopt D 65/36 (transferred to **E05B 77/46**)

adopt D 65/38 (transferred to **E05B 77/50**)

adopt D 65/40 (transferred to **E05B 77/52**)

adopt D 65/42 (transferred to **E05B 77/54**)

adopt N *Guidance* **Locks for vehicles other than bicycles**
heading
77/00-
85/00

adopt N **77/00** **Vehicle locks characterised by special functions or purposes** *(locks specially adapted for bicycles* **E05B 71/00***; locking arrangements for non-fixed vehicle roofs* **B60J 7/185***)*

adopt N *77/02* · *for accident situations*

adopt N *77/04* · · *Preventing unwanted lock actuation, e.g. unlatching, at the moment of collision*

adopt N *77/06* · · · *by means of inertial forces*

adopt N *77/08* · · *Arrangements for protection of pedestrians*

adopt N *77/10* · · *Allowing opening in case of deformed bodywork, e.g. by preventing deformation of lock parts*

adopt N *77/12* · · *Automatic locking or unlocking at the moment of collision*

adopt N *77/14* · *Specially controlled locking actions in case of open doors or in case of doors moved from an open to a closed position, e.g. lock-out prevention or self-cancelling*

adopt N *77/16* · · *Preventing locking with the bolt in the unlatched position, i.e. when the door is open*

adopt N *77/18* · · *Keyless locking with self-cancellation, e.g. resulting in an unlocking action when the door is being closed*

adopt N *77/20* · · · *Override of self-cancellation, e.g. by actuation of the handle while the door is being closed*

adopt N *77/22* · *Functions related to actuation of locks from the passenger compartment of the vehicle*

adopt N *77/24* · · *preventing use of an inner door handle, sill button, lock knob or the like*

adopt N *77/26* · · · *specially adapted for child safety*

adopt N *77/28* · · · *for anti-theft purposes, e.g. double-locking or super-locking*

adopt N *77/30* · · *allowing opening by means of an inner door handle, even if the door is locked*

adopt N *77/32* · *allowing simultaneous actuation of locking or unlocking elements and a handle, e.g. preventing interference between an unlocking and an unlatching action*

adopt N *77/34* · *Protection against weather or dirt, e.g. against water ingress (closures or guards for keyholes **E05B 17/14**)*

adopt N *77/36* · *Noise prevention; Anti-rattling means*

adopt N *77/38* · · *Cushion elements, elastic guiding elements or holding elements, e.g. for cushioning or damping the impact of the bolt against the striker during closing of the wing*

adopt N *77/40* · · *Lock elements covered by silencing layers, e.g. coatings*

adopt N *77/42* · *Means for damping the movement of lock parts, e.g. slowing down the return movement of a handle (**E05B 77/38** takes precedence)*

adopt N *77/44* · *Burglar prevention, e.g. protecting against opening by unauthorised tools (**E05B 77/28** takes precedence)*

adopt N *77/46* · *Locking several wings simultaneously*

adopt N *77/48* · · *by electrical means*

adopt N *77/50* · · *by pneumatic or hydraulic means*

adopt N *77/52* · *Locking one wing by shutting another*

adopt N *77/54* · *Automatic securing or unlocking of bolts triggered by certain vehicle parameters, e.g. exceeding a speed threshold (triggered by vehicle collision **E05B 77/12**)*

adopt N **79/00** **Mounting or connecting vehicle locks or parts thereof**

adopt N *79/02* · *Mounting of vehicle locks or parts thereof*

adopt N *79/04* · · *Mounting of lock casings to the vehicle, e.g. to the wing*

adopt N *79/06* · · *Mounting of handles, e.g. to the wing or to the lock*

adopt N *79/08* · · *Mounting of individual lock elements in the lock, e.g. levers*

adopt N *79/10* · *Connections between movable lock parts*

adopt N *79/12* · · *using connecting rods*

adopt N *79/14* · · · *the rods being linked to each other*

adopt N *79/16* · · · *characterised by means for linking the rods to other lock parts, e.g. to levers*

adopt N *79/18* · · · *Rod guides*

adopt N *79/20* · · *using flexible connections, e.g. Bowden cables*

adopt N *79/22* · · *Operative connections between handles, sill buttons or lock knobs and the lock unit (mounting of non-movable base elements of a handle to a lock **E05B 79/06**)*

adopt N **81/00** ***Power-actuated vehicle locks***

adopt N *81/02* · *characterised by the type of actuators used*

adopt N *81/04* · · *Electrical (electrical circuits **E05B 81/54**)*

adopt N *81/06* · · · *using rotary motors*

adopt N *81/08* · · · *using electromagnets or solenoids*

adopt N *81/10* · · *Hydraulic or pneumatic (hydraulic or pneumatic circuits **E05B 81/52**)*

adopt N *81/12* · *characterised by the function or purpose of the powered actuators*

adopt N *81/14* · · *operating on bolt detents, e.g. for unlatching the bolt*

adopt N *81/16* · · *operating on locking elements for locking or unlocking action*

adopt N *81/18* · · *to effect movement of bolts (**E05B 81/20** takes precedence)*

adopt N *81/20* · · *for assisting final closing or for initiating opening*

adopt N *81/22* · · · *by movement of the striker*

adopt N *81/24* · *characterised by constructional features of the actuator or the power transmission*

adopt N *81/26* · · *Output elements*

adopt N *81/28* · · · *Linearly reciprocating elements*

adopt N *81/30* · · · *Rotary elements*

adopt N *81/32* · · *Details of the actuator transmission*

adopt N *81/34* · · · *of geared transmissions*

adopt N *81/36* · · · · *Geared sectors, e.g. fan-shaped gears*

adopt N *81/38* · · · · *Planetary gears*

adopt N *81/40* · · · *Nuts or nut-like elements moving along a driven threaded axle*

adopt N *81/42* · · · *Cams*

adopt N *81/44* · · · ·   *in the form of grooves*

adopt N *81/46* · · · *Clutches*

adopt N *81/48* · · *Actuators being driven in a single direction*

adopt N *81/50* · · *Powered actuators with automatic return to the neutral position by non-powered means, e.g. by springs*

adopt N *81/52* · *Pneumatic or hydraulic circuits (for locking several wings simultaneously **E05B 77/50**)*

adopt N *81/54* · *Electrical circuits (for locking several wings simultaneously **E05B 77/48**)*

adopt N *81/56* · · *Control of actuators*

adopt N *81/58* · · · *involving time control, e.g. for controlling run-time of electric motors*

adopt N *81/60* · · · *using pulse control, e.g. pulse-width modulation*

adopt N *81/62* · · · *for opening or closing of a circuit depending on electrical parameters, e.g. increase of motor current*

adopt N *81/64* · ·   *Monitoring or sensing, e.g. by using switches or sensors*

adopt N *81/66* · · ·   *the bolt position, i.e. the latching status*

adopt N *81/68* · · · ·   *by sensing the position of the detent*

adopt N *81/70* · · ·   *the wing position*

adopt N *81/72* · · ·   *the lock status, i.e. locked or unlocked condition*

adopt N *81/74* · · · ·   *by sensing the state of the actuator*

adopt N *81/76* · · ·   *Detection of handle operation; Detection of a user approaching a handle; Electrical switching actions performed by handles*

adopt N *81/78* · · · ·   *as part of a hands-free locking or unlocking operation*

adopt N *81/80* · ·   *characterised by the power supply; Emergency power operation*

adopt N *81/82* · · ·   *using batteries other than the vehicle main battery*

adopt N *81/84* · · ·   *using manually operated generator means*

adopt N *81/86* · · · *using capacitors*

adopt N *81/88* · · · *using inductive energy transmission*

adopt N *81/90* · *Manual override in case of power failure*

adopt N **83/00** **Vehicle locks specially adapted for particular types of wing or vehicle** (locks *specially adapted for bicycles **E05B 71/00**; locking arrangements for non-fixed vehicle roofs **B60J 7/185**; latching means for sideboards or tailgates of open load compartments **B62D 33/037***)

adopt N *83/02* · *Locks for railway freight-cars, freight containers or the like; Locks for the cargo compartments of commercial lorries, trucks or vans*

adopt N *83/04* · · *for sliding wings*

adopt N *83/06* · · · *of railway freight-cars*

adopt N *83/08* · · *with elongated bars for actuating the fastening means*

adopt N *83/10* · · · *Rotary bars*

adopt N *83/12* · · *for back doors of vans (**E05B 83/04**, **E05B 83/08** take precedence)*

adopt N *83/14* ˙ ˙   *with provisions for sealing*

adopt N *83/16* ˙   *Locks for luggage compartments, car boot lids or car bonnets*

adopt N *83/18* ˙ ˙   *for car boot lids or rear luggage compartments*

adopt N *83/20* ˙ ˙ ˙   *with two or more wings, which together close a single compartment*

adopt N *83/22* ˙ ˙   *for luggage compartments at the side of the vehicle, e.g. of buses or camper vans*

adopt N *83/24* ˙ ˙   *for car bonnets*

adopt N *83/26* ˙ ˙   *Emergency opening means for persons trapped in the luggage compartment*

adopt N *83/28* ˙   *Locks for glove compartments, console boxes, fuel inlet covers or the like*

adopt N *83/30* ˙ ˙   *for glove compartments*

adopt N *83/32* ˙ ˙   *for console boxes, e.g. between passenger seats*

adopt N *83/34* ˙ ˙   *for fuel inlet covers essentially flush with the vehicle surface*

adopt N *83/36* ·   *Locks for passenger or like doors*

adopt N *83/38* · ·   *for pillar-less vehicles, i.e.vehicles where a front and a back door engage each other in the closed position*

adopt N *83/40* · ·   *for sliding doors*

adopt N *83/42* · ·   *for large commercial vehicles, e.g. trucks, construction vehicles or vehicles for mass transport*

adopt N *83/44* · ·   *for recreational vehicles, e.g. caravans or camper vans*

adopt N **85/00** ***Details of vehicle locks not provided for in groups E05B 77/00-E05B 83/00***

adopt N *85/02* ·   *Lock casings (mounting of lock casings **E05B 79/04**)*

adopt N *85/04* ·   *Strikers*

adopt N *85/06* ·   *Lock cylinder arrangements*

adopt N *85/08* ·   *Sill-buttons, garnish buttons or inner door lock knobs*

adopt N *85/10* ·   *Handles*

adopt N *85/12* · ·   *Inner door handles*

adopt N *85/14* · ·   *Handles pivoted about an axis parallel to the wing*

adopt N *85/16* · · ·   *a longitudinal grip part being pivoted at one end about an axis perpendicular to the longitudinal axis of the grip part*

adopt N *85/18* · · ·   *a longitudinal grip part being pivoted about an axis parallel to the longitudinal axis of the grip part*

adopt N *85/20* ·   *Bolts or detents*

adopt N *85/22* · ·   *Rectilinearly moving bolts*

adopt N *85/24* · ·   *Bolts rotating about an axis*

adopt N *85/26* · · ·   *Cooperation between bolts and detents*

adopt N *85/28* · · ·   *in which the member engaging the keeper is shaped as a toothed wheel or the like*

ANNEX 38E   F23   **[Project-Rapporteur : M737/SE] <CE45>**

adopt M Note In this class, the following terms or expressions are used with the meanings indicated:

F23
- "combustion" means a heat-producing sequence of chemical reactions between a burnable substance and molecular oxygen, e.g. in air, in most cases generating light in the form of flames or a glow;

- "combustion chamber" means a chamber in which fuel is burned to establish a self-supporting fire or flame and which surrounds that fire or flame;

- "burner" means a device by which fluid fuel, or solid fuel suspended in air, is passed to a combustion space where it burns to produce a self-supporting flame;

- "air" means a mixture of gases containing free oxygen and able to promote or support combustion.

ANNEX 39E   F24F   [Project-Rapporteur : M014/IB]   <CE45>

adopt M 3/02 · characterised by the pressure or velocity of the primary air

adopt M 3/048 · · with temperature control at constant rate of air-flow

adopt M 3/056 · · the air at least partially flowing over lighting fixtures, the heat of which is dissipated or used (outlets for directing or distributing air into rooms or spaces combined with lighting fixtures **F24F 13/078**)

adopt M 3/06 · characterised by the arrangements for the supply of heat-exchange fluid for the subsequent treatment of primary air in the room units

adopt M 3/12 · characterised by the treatment of the air otherwise than by heating and cooling

adopt M 6/14 · · using nozzles

adopt M 7/02 ·   Roof ventilation (ventilation of roof coverings **E04D**)

adopt M **9/00** **Use of air currents for screening, e.g. air curtain**

adopt M **11/00** **Control or safety systems or apparatus**

adopt M 11/04 · ·   solely for controlling the rate of air-flow

adopt M **12/00** **Use of energy recovery systems in air conditioning, ventilation or screening**
       (with both heat and humidity transfer between supplied and exhausted air **F24F 3/147**)

adopt M 13/04 · ·   Air-mixing units (**F24F 13/06** takes precedence)

adopt M 13/062 · · ·   having one or more bowls or cones diverging in the flow direction

adopt M 13/065 · · ·   formed as cylindrical or spherical bodies which are rotatable

adopt M 13/078 · · ·   combined with lighting fixtures

adopt M 13/08 ·   Air-flow control members, e.g. louvres, grilles, flaps or guide plates (**F24F 7/013**, **F24F 13/06** take precedence)

adopt M 13/10 ··   movable, e.g. dampers

ANNEX 40E   F24J   **[Project-Rapporteur : F007/EP]   <CE45>**

adopt C *2/00*   ***Use of solar heat, e.g. solar heat collectors*** *(distillation or evaporation of water using solar energy **C02F 1/14**; roof covering aspects of energy collecting devices **E04D 13/18**; devices for producing mechanical power from solar energy **F03G 6/00**; semiconductor devices specially adapted for converting solar energy into electrical energy **H01L 31/00**; photovoltaic [PV] cells including means directly associated with the PV cell to utilise heat energy **H01L 31/0525**; PV modules including means associated with the PV module to utilise heat energy **H02S 40/44**)*

adopt N *Note* *Supporting structures also intended for use with photovoltaic modules should further*
      2/00 *be classified in the relevant groups of subclass **H02S**.*   ***[new]***

adopt C *2/38* ·   *employing tracking means (**F24J 2/02**, **F24J 2/06** take precedence; rotary supports or mountings therefor **F24J 2/54**; supporting structures of photovoltaic modules for generation of electric power specially adapted for solar tracking systems **H02S 20/32**)*

ANNEX 41E   F41B   **[Project-Rapporteur : M014/IB]   <CE45>**

adopt M 11/71 ··   Electric or electronic control systems, e.g. for safety purposes

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ANNEX 42E   G01N   **[Project-Rapporteur : F011/EP]   <CE45>**

adopt M **21/00** **Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible or ultra-violet light** (**G01N 3/00**-**G01N 19/00** take precedence)

adopt C *21/35* ˙ ˙ ˙ ˙   *using infra-red light (**G01N 21/39** takes precedence)*

adopt N *21/3504* ˙ ˙ ˙ ˙ ˙   *for analysing gases, e.g. multi-gas analysis*

adopt N *21/3518* ˙ ˙ ˙ ˙ ˙ ˙   *Devices using gas filter correlation techniques; Devices using gas pressure modulation techniques*

adopt N *Note 21/3518*   *This group also <u>covers</u> devices without instrumental sources, e.g. radiometric-type devices using ambient infra-red light.*   **[new]**

adopt N *21/3554* ˙ ˙ ˙ ˙ ˙   *for determining moisture content*

adopt N *21/3559* ˙ ˙ ˙ ˙ ˙ ˙   *in sheets, e.g. in paper*

adopt N *21/3563* ˙ ˙ ˙ ˙ ˙   *for analysing solids; Preparation of samples therefor*

adopt N *21/3577* ˙ ˙ ˙ ˙ ˙   *for analysing liquids, e.g. polluted water*

adopt N *21/3581* ˙ ˙ ˙ ˙ ˙   *using far infra-red light; using Terahertz radiation*

adopt N *21/3586* ˙ ˙ ˙ ˙ ˙ ˙   *by Terahertz time domain spectroscopy [THz-TDS]*

adopt N *21/359* ˙ ˙ ˙ ˙ ˙   *using near infra-red light*

adopt C *21/55* · ·   *Specular reflectivity*

adopt N *21/552* · · ·   *Attenuated total reflection*

ANNEX 43E   G01R   [Project-Rapporteur : F007/EP]   <CE45>

adopt C *31/26* ·   *Testing of individual semiconductor devices (testing or measuring during manufacture or treatment **H01L 21/66**; testing of photovoltaic devices **H02S 50/10**)*

adopt C *31/40* ·   *Testing power supplies (testing photovoltaic devices **H02S 50/10**)*

ANNEX 44E   G03B   [Project-Rapporteur : F012/JP]   <CE45>

adopt C *7/00* **Control of exposure by setting shutters, diaphragms or filters, separately or conjointly** *(control of exposure in television cameras by means of circuitry for compensating for variation in the brightness of the object **H04N 5/235**)*

adopt N *7/01* ·   *with selection of either manual or automatic mode*

adopt C *7/08* ·   *Control effected solely on the basis of the response, to the intensity of the light received by the camera, of a built-in light-sensitive device*

adopt N *7/0805* · ·   *Setting of priority modes*

adopt C *7/099* · ·   *Arrangement of photoelectric elements in or on the camera*

adopt N *7/0993* · · ·   *in the camera*

adopt N *7/0997* · · · ·   *Through the lens [TTL] measuring*

adopt C *7/16* ·   *in accordance with both the intensity of the flash source and the distance of the flash source from the object, e.g. in accordance with the "guide number" of the flash bulb and the focusing of the camera*

adopt N *7/17* · ·   *Selection of modes in flash units by exposure control arrangements*

adopt N *7/30* ·   *Safety arrangements for control of exposure*

ANNEX 45E   G03B   [Project-Rapporteur : F010/EP]   <CE45>

adopt C *21/58* · · ·   *collapsible, e.g. foldable; of variable area*

adopt N *21/585* · · · ·   *Inflatable screens*

adopt C *21/60* · · ·   *characterised by the nature of the surface*

adopt N *21/602* · · · ·   *Lenticular screens (**G03B 21/625** takes precedence)*

adopt N *21/604* · · · ·   *Polarised screens*

adopt N *21/606* · · · ·   *for relief projection*

adopt N *21/608* · · · ·   *Fluid screens*

adopt C *21/62* · · · ·   *Translucent screens*

adopt N *21/625* · · · · ·   *Lenticular translucent screens*

ANNEX 46E   G04D   [Project-Rapporteur : D289/RU]   <CE45>

adopt M **Title APPARATUS OR TOOLS SPECIALLY DESIGNED FOR MAKING OR
MAINTAINING CLOCKS OR WATCHES**

adopt M **9/00 Demagnetising devices**

ANNEX 47E   G05G   [Project-Rapporteur : A056/EP]   <CE45>

adopt M Note   1.   This subclass <u>covers</u> :
G05G
                   • members of general applicability for mechanical control;

- mechanical systems for moving members to one or more definite settings.

2. Systems peculiar to the control of particular machines or apparatus provided for in a single other class are classified in the relevant class for such machines or apparatus, for example:

A61G 13/02	Controls for adjusting operating tables **[6]**
A61G 15/02	Controls for adjusting operating chairs **[6]**
A63F 13/20,	
A63F 13/98	Accessories for games using an electronically generated display **[7]**
B25J	Manipulators, e.g. controls therefor **[6]**
B60K 26/00	Arrangement or mounting of propulsion-unit control devices in vehicles **[6]**
B60T 7/00	Vehicle brake-action initiating means **[6]**
B62D 33/073	Adaptations of control devices for movable vehicle cabs **[6]**
B62K 21/00	Cycle-steering devices **[6]**
B62K 23/00	Rider-operated controls specially adapted for cycles **[6]**
B62L 3/00	Brake-actuating mechanisms specially adapted for cycles **[6]**
B63H 25/02	Marine steering initiating means **[6]**
B66B 1/00	Controls for elevators **[6]**
B66C 13/18	Control systems or devices for cranes **[6]**
B66C 13/56	Arrangements of handles or pedals for crane operation **[6]**
E02F 9/20	Control devices for dredging or soil shifting machines **[6]**
F16C 3/28	Adjustable cranks or eccentrics **[6]**
F16D 43/00	Automatic clutches **[6]**
F16K 31/00,	
F16K 33/00	Controls for valves **[6]**
F16P 3/00	Safety devices acting in conjunction with the control or operation of a machine **[6]**
F16P 7/02	Stopping machines on occurrence of dangerous conditions therein **[6]**
G02B 21/32	Micromanipulators structurally combined with microscopes **[6]**
G04B 1/00-	
G04B 18/00	Driving mechanisms in clocks or watches **[6]**
G06C	Digital computers in which all the computation is effected mechanically **[6]**
G06F 3/01	Manual computer input arrangements **[6]**
G06K 11/00	Converting a pattern of mechanical parameters into electric signals **[6]**
G21C 7/08	Displacement of solid control elements in nuclear reactors **[6]**
H01H	Mechanisms for operating switch contacts **[6]**
H03J 1/00	Mechanical control of resonant circuits. **[6]**

ANNEX 48E   G08B   [Project-Rapporteur : D297/CA] <CE45>

adopt M **Title** **SIGNALLING OR CALLING SYSTEMS; ORDER TELEGRAPHS; ALARM SYSTEMS**

adopt M **3/00** **Audible signalling systems; Audible personal calling systems**

adopt M **5/00** **Visible signalling systems, e.g. personal calling systems, remote indication of seats occupied**

adopt M 5/14 · ·   with indicator element moving about a pivot, e.g. hinged flap or rotating vane

adopt M 5/24 · ·   with indicator element moving about a pivot, e.g. hinged flap or rotating vane

adopt M 5/40 ·   using smoke, fire or coloured gases

adopt M **6/00** **Tactile signalling systems, e.g. personal calling systems**

adopt M **7/00** **Signalling systems according to more than one of groups G08B 3/00-G08B 6/00; Personal calling systems according to more than one of groups G08B 3/00-G08B 6/00**

adopt M **9/00** **Order telegraph apparatus, i.e. means for transmitting one of a finite number of different orders at the discretion of the user, e.g. bridge to engine room orders in ships**

adopt M **13/00** **Burglar, theft or intruder alarms**

adopt M 13/06 ˙ ˙   by tampering with fastening

adopt M 13/183 ˙ ˙ ˙   by interruption of a radiation beam or barrier

adopt M **15/00 Identifying, scaring or incapacitating burglars, thieves or intruders, e.g. by explosives**

adopt M **17/00 Fire alarms; Alarms responsive to explosion**

adopt M 17/06 ˙   Electric actuation of the alarm, e.g. using a thermally-operated switch

adopt M 17/11 ˙ ˙   using an ionisation chamber for detecting smoke or gas

adopt M 17/113 ˙ ˙ ˙   Constructional details

adopt M 17/117 ˙ ˙   by using a detection device for specific gases, e.g. combustion products, produced by the fire (**G08B 17/103**, **G08B 17/11** take precedence)

adopt M 17/12 ˙   Actuation by presence of radiation or particles, e.g. of infra-red radiation or of ions

adopt M 19/02 ˙   Alarm responsive to formation or anticipated formation of ice

adopt M 21/06 ··   indicating a condition of sleep, e.g. anti-dozing alarms

adopt M 21/10 ··   responsive to calamitous events, e.g. tornados or earthquakes

adopt M 21/12 ··   responsive to undesired emission of substances, e.g. pollution alarms

adopt M 21/24 ··   Reminder alarms, e.g. anti-loss alarms

adopt M 25/06 ··   using power transmission lines

adopt M 25/08 ··   using communication transmission lines

adopt M 29/06 ··   Monitoring of the line circuits, e.g. signalling of line faults

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ANNEX 49E   G10B   [Project-Rapporteur : M736/GB] <CE45>

adopt M **Title ORGANS, HARMONIUMS OR LIKE MUSICAL INSTRUMENTS WITH ASSOCIATED BLOWING APPARATUS** (non-musical aspects of musical toy instruments **A63H 5/00**; accordions, concertinas or the like or keyboards therefor **G10D 11/00**; automatic wind instruments **G10F 1/12**)

adopt M 3/10 ·   Actions, e.g. couplers

ANNEX 50E G10C [Project-Rapporteur : M736/GB] <CE45>

adopt M 3/26 · Pedals or pedal mechanisms for half-blow or similar means for modifying the sound

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ANNEX 51E G10D [Project-Rapporteur : M736/GB] <CE45>

adopt M **Title STRINGED MUSICAL INSTRUMENTS; WIND MUSICAL INSTRUMENTS; ACCORDIONS OR CONCERTINAS; PERCUSSION MUSICAL INSTRUMENTS; MUSICAL INSTRUMENTS NOT OTHERWISE PROVIDED FOR** (non-musical aspects of musical toy instruments **A63H 5/00**; organs, harmoniums or like musical instruments with associated blowing apparatus **G10B**; pianos, harpsichords, spinets or similar stringed musical instruments with one or more keyboards **G10C**; automatic musical instruments **G10F**; electrophonic musical instruments **G10H**; instruments in which the tones are generated by electromechanical means or electronic generators, or in which the tones are synthesised from a data store **G10H**)

adopt M **7/00 General design of wind musical instruments** (accordions or concertinas **G10D 11/00**; whistles **G10K 5/00**)

adopt M 7/06 · of the type with a beating reed or reeds, e.g. oboes, clarinets, bassoons or bagpipes

adopt M 7/12 · of the type with free reeds, e.g. mouth-organs or trumpets for children

adopt M **9/00 Details of, or accessories for, wind musical instruments**

ANNEX 52E G10F [Project-Rapporteur : M736/GB] <CE45>

adopt M 1/08 ˙   Percussion instruments

adopt M 1/12 ˙   Wind instruments

adopt M 1/16 ˙   Stringed instruments other than pianofortes

ANNEX 53E   G10L   [Project-Rapporteur : M743/EP]   <CE45>

adopt M 19/008 ˙   Multichannel audio signal coding or decoding, i.e. using interchannel correlation to reduce redundancies, e.g. joint-stereo, intensity-coding or matrixing

adopt M **25/00** **Speech or voice analysis techniques not restricted to a single one of groups G10L 15/00-G10L 21/00** (muting semiconductor-based amplifier for gain or frequency control, e.g. muting when some special characteristics of a signal are sensed by using a speech detector **H03G 3/34**)

ANNEX 54E   H01G   [Project-Rapporteur : M013/IB]   <CE45>

adopt U 11/10 < unchanged >

ANNEX 55E   H01L   [Project-Rapporteur : F007/EP]   <CE45>

adopt M **25/00** **Assemblies consisting of a plurality of individual semiconductor or other solid state devices** (devices consisting of a plurality of solid state components formed in or on a common substrate **H01L 27/00**; photovoltaic modules or arrays of photovoltaic cells **H01L 31/042**)

adopt C *25/04* · ·   *the devices not having separate containers*

adopt C *31/0203* · ·   *Containers; Encapsulations (for photovoltaic devices **H01L 31/048**; for organic photosensitive devices **H01L 51/44**)*

adopt C *31/0216* · ·   *Coatings (**H01L 31/041** takes precedence)*

adopt C *31/0232* · ·   *Optical elements or arrangements associated with the device (**H01L 31/0236** takes precedence; for photovoltaic cells **H01L 31/054**; for photovoltaic modules **H02S 40/20**)*

adopt C *31/024* · ·   *Arrangements for cooling, heating, ventilating or temperature compensation (for photovoltaic devices **H01L 31/052**)*

adopt C *31/04* ·   *adapted as photovoltaic [PV] conversion devices, e.g. PV modules or single PV cells (testing thereof during manufacture **H01L 21/66**; testing thereof after manufacture **H02S 50/10**)*

adopt N *31/041* · ·   *Provisions for preventing damage caused by corpuscular radiation, e.g. for space applications*

adopt C *31/042* · ·   *PV modules or arrays of single PV cells (plurality of thin film solar cells on a common substrate **H01L 27/142**; supporting structures for PV modules **H02S 20/00**)*

adopt N *31/043* · · ·   *Mechanically stacked PV cells*

adopt D 31/045 (transferred to **H02S 30/20**)

adopt C *31/048* · · · *Encapsulation of modules*

adopt N *31/049* · · · · *Protective back sheets*

adopt C *31/05* · · · *Electrical interconnection means between PV cells inside the PV module, e.g. series connection of PV cells (electrodes H01L 31/0224; electrical interconnection of thin film solar cells formed on a common substrate H01L 27/142; electrical interconnection means specially adapted for electrically connecting two or more PV modules H02S 40/36)*

adopt C *31/052* · · *Cooling means directly associated or integrated with the PV cell, e.g. integrated Peltier elements for active cooling or heat sinks directly associated with the PV cells (cooling means in combination with the PV module H02S 40/42)*

adopt N *31/0525* · · · *including means to utilise heat energy directly associated with the PV cell, e.g. integrated Seebeck elements*

adopt N *31/053* · · *Energy storage means directly associated or integrated with the PV cell, e.g. a capacitor integrated with a PV cell (energy storage means associated with the PV module H02S 40/38)*

adopt N *31/054* · · *Optical elements directly associated or integrated with the PV cell, e.g. light-reflecting means or light-concentrating means*

adopt C *31/055* · · · *where light is absorbed and re-emitted at a different wavelength by the optical element directly associated or integrated with the PV cell, e.g. by using luminescent material, fluorescent concentrators or up-conversion arrangements*

adopt N *31/056* · · · *the light-reflecting means being of the back surface reflector [BSR] type*

adopt D 31/058 (transferred to **H01L 31/0525**,**H02S 40/44**)

ANNEX 56E   H01L   [Project-Rapporteur : M013/IB]   <CE45>

adopt M 41/318 < Add 1 dot(s) >

ANNEX 57E   H01M   [Project-Rapporteur : F017/EP]   <CE45>

adopt M 10/42 · Methods or arrangements for servicing or maintenance of secondary cells or secondary half-cells (**H01M 10/60** takes precedence)

adopt D 10/50 (transferred to **H01M 10/60**)

adopt N *10/60* · *Heating or cooling; Temperature control*

adopt N *10/61* · · *Types of temperature control*

adopt N *10/613* · · · *Cooling or keeping cold*

adopt N *10/615* · · · *Heating or keeping warm*

adopt N *10/617* · · · *for achieving uniformity or desired distribution of temperature*

adopt N *10/62* · · *specially adapted for specific applications*

adopt N *10/623* · · · *Portable devices, e.g. mobile telephones, cameras or pacemakers*

adopt N *10/6235* · · · · *Power tools*

adopt N *10/625* · · · *Vehicles*

adopt N *10/627* · · · *Stationary installations, e.g. power plant buffering or backup power supplies*

adopt N *10/63* · · *Control systems (measurement of temperature **H01M 10/48**; charging or discharging in response to temperature **H01M 10/44**)*

adopt N *10/633* · · · *characterised by algorithms, flow charts, software details or the like*

adopt N *10/635* · · · *based on ambient temperature*

adopt N *10/637* · · · *characterised by the use of reversible temperature-sensitive devices, e.g. NTC, PTC or bimetal devices; characterised by control of the internal current flowing through the cells, e.g. by switching (**H01M 2/34** takes precedence)*

adopt N *10/64* · ·   *characterised by the shape of the cells*

adopt N *10/643* · · ·   *Cylindrical cells*

adopt N *10/647* · · ·   *Prismatic or flat cells, e.g. pouch cells*

adopt N *10/65* · ·   *Means for temperature control structurally associated with the cells*

adopt N *10/651* · · ·   *characterised by parameters specified by a numeric value or mathematical formula, e.g. ratios, sizes or concentrations*

adopt N *10/652* · · · ·   *characterised by gradients (for achieving a desired temperature gradient* **H01M 10/617***)*

adopt N *10/653* · · ·   *characterised by electrically insulating or thermally conductive materials*

adopt N *10/654* · · ·   *located inside the innermost case of the cells, e.g. mandrels, electrodes or electrolytes*

adopt N *10/655* · · ·   *Solid structures for heat exchange or heat conduction*

adopt N *10/6551* · · · ·   *Surfaces specially adapted for heat dissipation or radiation, e.g. fins or coatings*

adopt N *10/6552* · · · ·   *Closed pipes transferring heat by thermal conductivity or phase transition, e.g. heat pipes*

adopt N *10/6553* · · ·   *Terminals or leads*

adopt N *10/6554* · · ·   *Rods or plates*

adopt N *10/6555* · · · ·   *arranged between the cells*

adopt N *10/6556* · · ·   *Solid parts with flow channel passages or pipes for heat exchange (closed pipes **H01M 10/6552**)*

adopt N *10/6557* · · · ·   *arranged between the cells*

adopt N *10/656* · ·   *characterised by the type of heat-exchange fluid*

adopt N *10/6561* · · ·   *Gases*

adopt N *10/6562* · · · ·   *with free flow by convection only*

adopt N *10/6563* · · · ·   *with forced flow, e.g. by blowers*

adopt N *10/6564* · · · · ·   *using compressed gas*

adopt N *10/6565* · · · · · *with recirculation or U-turn in the flow path, i.e. back and forth*

adopt N *10/6566* · · · · *Means within the gas flow to guide the flow around one or more cells, e.g. manifolds, baffles or other barriers (**H01M 10/6565** takes precedence)*

adopt N *10/6567* · · · *Liquids*

adopt N *10/6568* · · · · *characterised by flow circuits, e.g. loops, located externally to the cells or cell casings*

adopt N *10/6569* · · · *Fluids undergoing a liquid-gas phase change or transition, e.g. evaporation or condensation (heat pipes **H01M 10/6552**)*

adopt N *10/657* · · *by electric or electromagnetic means*

adopt N *10/6571* · · · *Resistive heaters (arrangements for heating the battery by its resistance to the internal current **H01M 10/637**)*

adopt N *10/6572* · · · *Peltier elements or thermoelectric devices*

adopt N *10/658* · · *by thermal insulation or shielding*

adopt N *10/659* · · *by heat storage or buffering, e.g. heat capacity or liquid-solid phase changes or transition*

adopt N *10/6595* · · · *by chemical reactions other than electrochemical reactions of the cells, e.g. catalytic heaters or burners*

adopt N *10/66* · · *Heat-exchange relationships between the cells and other systems, e.g. central heating systems or fuel cells*

adopt N *10/663* · · · *the system being an air-conditioner or an engine*

adopt N *10/667* · · · *the system being an electronic component, e.g. a CPU, an inverter or a capacitor*

ANNEX 58E   H02K   [Project-Rapporteur : M741/SE] <CE45>

adopt M **Title DYNAMO-ELECTRIC MACHINES** (dynamo-electric relays **H01H 53/00**; conversion of DC or AC input power into surge output power **H02M 9/00**)

adopt M Note
H02K

1. This subclass <u>covers</u> the structural adaptation of dynamo-electric machines for the purpose of their control.

2. This subclass <u>does not cover</u> starting, regulating, electronically commutating, braking, or otherwise controlling motors, generators or dynamo-electric converters, in general, which is covered by subclass **H02P**.

3. Attention is drawn to the Notes following the titles of class **B81** and subclass **B81B** relating to "micro-structural devices" and "micro-structural systems".   **[7]**

adopt M Subclass
index

GENERATORS OR MOTORS
Continuously rotating
AC machines: asynchronous; synchronous;

	with mechanical commutators	**17/00**; **19/00**, **21/00**; **27/00**
	DC machines or universal AC/DC motors:	
	with mechanical commutators; with interrupters	**23/00**; **25/00**
	with non-mechanical commutating devices	**29/00**
	Acyclic machines; oscillating machines; motors rotating step by step	**31/00**; **33/00**, **35/00**; **37/00**
	Generators producing a non-sinusoidal waveform	**39/00**
	Machines with more than one rotor or stator	**16/00**
SPECIAL DYNAMO-ELECTRIC APPARATUS		
	Machines for transmitting angular displacements; torque motors	**24/00**; **26/00**
	Machines involving dynamo-electric interaction with a plasma or a flow of conductive liquid or of fluid-borne conductive or magnetic particles	**44/00**
	Systems for propulsing a rigid body along a path	**41/00**
	Converters	**47/00**
	Dynamo-electric clutches or brakes; dynamo-electric gears	**49/00**; **51/00**
	Alleged perpetua mobilia	**53/00**
	Machines operating at cryogenic temperatures	**55/00**
	Other machines	**99/00**
DETAILS		
	Magnetic circuits; windings; casings	**1/00**; **3/00**; **5/00**
	Arrangements structurally associated with the machine for handling mechanical energy; cooling; measuring or protective devices; current collection or commutation	**7/00**; **9/00**; **11/00**; **13/00**
	MANUFACTURE	**15/00**

adopt M 1/06 ·   characterised by the shape, form or construction

adopt U 1/20 < unchanged >

adopt M 1/22 · ·   Rotating parts of the magnetic circuit

adopt M 1/30 · · · ·   using intermediate parts, e.g. spiders

adopt U 1/32 < unchanged >

adopt M 1/34 · ·   Reciprocating, oscillating or vibrating parts of the magnetic circuit

adopt M 3/04 ·   Windings characterised by the conductor shape, form or construction, e.g. with bar conductors

adopt M 3/14 · · ·   with transposed conductors, e.g. twisted conductors

adopt M 3/16 · · ·   for auxiliary purposes, e.g. damping or commutating

adopt M 3/20 · · ·   for auxiliary purposes, e.g. damping or commutating

adopt M 3/24 · ·   with channels or ducts for cooling medium between the conductors

adopt M 3/32 ·   Windings characterised by the shape, form or construction of the insulation

adopt M 3/40 · ·   for high voltage, e.g. affording protection against corona discharges

adopt M 3/46 ·   Fastening of windings on the stator or rotor structure

adopt M 3/493 · · · ·   magnetic

adopt M 5/04 ⋅ Casings or enclosures characterised by the shape, form or construction thereof

adopt M 5/10 ⋅ ⋅ with arrangements for protection from ingress, e.g. of water or fingers

adopt M 5/124 ⋅ ⋅ ⋅ Sealing of shafts

adopt M 5/128 ⋅ ⋅ ⋅ using air-gap sleeves or air-gap discs

adopt M 5/132 ⋅ ⋅ ⋅ Submersible electric motors (**H02K 5/128** takes precedence)

adopt M 5/16 ⋅ ⋅ Means for supporting bearings, e.g. insulating supports or means for fitting bearings in the bearing-shields (magnetic bearings **H02K 7/09**)

adopt M 5/173 ⋅ ⋅ ⋅ using bearings with rolling contact, e.g. ball bearings

adopt U 5/18 < unchanged >

adopt U 5/20 < unchanged >

adopt M 5/22 ⋅ ⋅ Auxiliary parts of casings not covered by groups **H02K 5/06**-**H02K 5/20**, e.g. shaped to form connection boxes or terminal boxes

adopt M 5/24 ⋅ specially adapted for suppression or reduction of noise or vibrations

adopt M 5/26 · Means for adjusting casings relative to their supports

adopt M **7/00** **Arrangements for handling mechanical energy structurally associated with dynamo-electric machines, e.g. structural association with mechanical driving motors or auxiliary dynamo-electric machines**

adopt M 7/02 · Additional mass for increasing inertia, e.g. flywheels

adopt M 7/06 · Means for converting reciprocating motion into rotary motion or <u>vice versa</u>

adopt M 7/07 · · using pawls and ratchet wheels

adopt M 7/075 · · using crankshafts or eccentrics

adopt M 7/10 · Structural association with clutches, brakes, gears, pulleys or mechanical starters

adopt M 7/112 · · with friction clutches in combination with brakes

adopt M 7/114 · · with dynamo-electric clutches in combination with brakes

adopt M 7/118 · · with starting devices

adopt M 7/12 · · with auxiliary limited movement of stators, rotors or core parts, e.g. rotors axially movable for the purpose of clutching or braking

adopt M 7/14 · Structural association with mechanical loads, e.g. with hand-held machine tools or fans (with fan or impeller for cooling the machine **H02K 9/06**)

adopt M 7/16 · · for operation above the critical speed of vibration of the rotating parts

adopt M **9/00** **Arrangements for cooling or ventilating** (channels or ducts in parts of the magnetic circuit **H02K 1/20**, **H02K 1/32**; channels or ducts in or between conductors **H02K 3/22**, **H02K 3/24**)

adopt M 9/04 · · having means for generating a flow of cooling medium

adopt M 9/06 · · · with fans or impellers driven by the machine shaft

adopt M 9/19 · for machines with closed casing and closed-circuit cooling using a liquid cooling medium, e.g. oil

adopt M 9/22 · by solid heat conducting material embedded in, or arranged in contact with, the stator or rotor, e.g. heat bridges

adopt M 9/26 · Structural association of machines with devices for cleaning or drying cooling medium, e.g. with filters

adopt M **11/00** **Structural association of dynamo-electric machines with measuring or protective devices or electric components, e.g. with resistors or switches**

adopt M **13/00** **Structural associations of current collectors with motors or generators, e.g. brush mounting plates or connections to windings** (supporting or protecting brushes or brush holders in motor casings or enclosures **H02K 5/14**) **; Disposition of current collectors in motors or generators; Arrangements for improving commutation**

adopt M 13/02 · Connections between slip-rings and windings

adopt M 13/04 · Connections between commutator segments and windings

adopt M 13/06 · · Resistive connections, e.g. by high-resistance chokes or by transistors

adopt M 13/08 · · Segments formed by extensions of the winding

adopt M 13/10 · Arrangements of brushes or commutators specially adapted for improving commutation

adopt M 13/12 · Arrangements for producing an axial reciprocation of the rotor and its associated current collector part, e.g. for polishing commutator surfaces

adopt M 13/14 · Circuit arrangements for improvement of commutation, e.g. by use of unidirectionally conductive elements

adopt M **15/00** **Methods or apparatus specially adapted for manufacturing, assembling, maintaining or repairing of dynamo-electric machines**

adopt M 15/04 ·   of windings, prior to mounting into machines (insulating windings **H02K 15/10**, **H02K 15/12**)

adopt M 15/06 ·   Embedding prefabricated windings in machines

adopt M 15/08 ·   Forming windings by laying conductors into or around core parts

adopt M 15/10 ·   Applying solid insulation to windings, stators or rotors

adopt M 15/12 ·   Impregnating, heating or drying of windings, stators, rotors or machines

adopt M 15/16 ·   Centering rotors within the stator; Balancing rotors

adopt U 17/06 < unchanged >

adopt M 17/08 · · · Motors with auxiliary phase obtained by externally fed auxiliary windings, e.g. capacitor motors

adopt M 17/10 · · · Motors with auxiliary phase obtained by split-pole carrying short-circuited windings

adopt U 17/14 < unchanged >

adopt M 17/16 · · having rotors with internally short-circuited windings, e.g. cage rotors

adopt M 17/18 · · · having double-cage or multiple-cage rotors

adopt M 17/20 · · · having deep-bar rotors

adopt M 17/22 · · having rotors with windings connected to slip-rings

adopt M 17/24 · · · in which both stator and rotor are fed with AC

adopt M 17/26 · · having rotors or stators designed to permit synchronous operation

adopt U 17/28 < unchanged >

adopt M 17/30 · · Structural association of asynchronous induction motors with auxiliary electric devices influencing the characteristics of the motor or controlling the motor, e.g. with impedances or switches

adopt M 17/32 · · Structural association of asynchronous induction motors with auxiliary mechanical devices, e.g. with clutches or brakes

adopt M 17/40 · · · with a rotary AC/DC converter

adopt M 17/44 · · Structural association with exciting machines

adopt M **19/00** **Synchronous motors or generators** (having permanent magnets **H02K 21/00**)

adopt M 19/06 · · · Motors having windings on the stator and a variable-reluctance soft-iron rotor without windings, e.g. inductor motors

adopt M 19/08 · · · Motors having windings on the stator and a smooth rotor without windings of material with large hysteresis, e.g. hysteresis motors

adopt M 19/12 · · · characterised by the arrangement of exciting windings, e.g. for self-excitation, compounding or pole-changing

adopt M 19/14 · · having additional short-circuited windings for starting as asynchronous motors

adopt M 19/18 · · having windings each turn of which co-operates only with poles of one polarity, e.g. homopolar generators

adopt M 19/20 · · · with variable-reluctance soft-iron rotors without winding

adopt M 19/22 · · having windings each turn of which co-operates alternately with poles of opposite polarity, e.g. heteropolar generators

adopt M 19/24 · · · with variable-reluctance soft-iron rotors without winding

adopt M 19/26 · · characterised by the arrangement of exciting windings

adopt M 19/36 · · Structural association of synchronous generators with auxiliary electric devices influencing the characteristic of the generator or controlling the generator, e.g. with impedances or switches

adopt M 19/38 · · Structural association of synchronous generators with exciting machines

adopt M **21/00 Synchronous motors having permanent magnets; Synchronous generators having permanent magnets**

adopt M 21/04 · · Windings on magnets for additional excitation

adopt M 21/12 · with stationary armatures and rotating magnets

adopt M 21/14 · · with magnets rotating within the armatures

adopt M 21/16 · · · having annular armature cores with salient poles (with homopolar co-operation **H02K 21/20**)

adopt M 21/18 · · · having horse-shoe armature cores (with homopolar co-operation **H02K 21/20**)

adopt M 21/22 · · with magnets rotating around the armatures, e.g. flywheel magnetos

adopt M 21/24 · · with magnets axially facing the armatures, e.g. hub-type cycle dynamos

adopt M 21/26 ·   with rotating armatures and stationary magnets

adopt M 21/28 · ·   with armatures rotating within the magnets

adopt M 21/30 · · ·   having annular armature cores with salient poles (with homopolar co-operation **H02K 21/36**)

adopt M 21/32 · · ·   having a horse-shoe magnets (with homopolar co-operation **H02K 21/36**)

adopt M 21/34 · · ·   having bell-shaped or bar-shaped magnets, e.g. for cycle lighting (with homopolar co-operation **H02K 21/36**)

adopt M 21/38 ·   with rotating flux distributors, and armatures and magnets both stationary

adopt M 21/40 · ·   with flux distributors rotating around the magnets and within the armatures

adopt M 21/42 · ·   with flux distributors rotating around the armatures and within the magnets

adopt M 21/44 · ·   with armature windings wound upon the magnets

adopt M **23/00**   **DC commutator motors or generators having mechanical commutator; Universal AC/DC commutator motors**

adopt M 23/02 ·   characterised by arrangement for exciting

adopt U 23/04 < unchanged >

adopt U 23/06 < unchanged >

adopt U 23/08 < unchanged >

adopt U 23/10 < unchanged >

adopt M 23/12 · ·   having excitation produced by current sources independent of the armature
circuit

adopt M 23/16 · ·   having angularly adjustable excitation field, e.g. by pole reversing or pole
switching

adopt U 23/18 < unchanged >

adopt M 23/20 · ·   having additional brushes spaced intermediately of the main brushes on the
commutator, e.g. cross-field machines, metadynes, amplidynes or other armature-
reaction excited machines

adopt M 23/22 · ·   having compensating or damping windings

adopt M 23/24 · ·   having commutating-pole windings

adopt M 23/26 ·   characterised by the armature windings

adopt M 23/28 · ·   having open windings, i.e. not closed within the armatures

adopt M 23/30 · ·   having lap windings; having loop windings

adopt U 23/32 < unchanged >

adopt U 23/34 < unchanged >

adopt M 23/36 · ·   having two or more windings; having two or more commutators; having two or more stators

adopt M 23/40 ·   characterised by the arrangement of the magnet circuits

adopt U 23/42 < unchanged >

adopt M 23/44 · ·   having movable, e.g. turnable, iron parts

adopt M 23/48 · ·   having adjustable armatures

adopt M 23/52 ·   Motors acting also as generators, e.g. starting motors used as generators for ignition or lighting

adopt M 23/56 · Motors or generators having iron cores separated from armature winding

adopt M 23/58 · Motors or generators without iron cores

adopt M 23/60 · Motors or generators having rotating armatures and rotating excitation field

adopt M 23/62 · Motors or generators with stationary armatures and rotating excitation field

adopt M 23/64 · Motors specially adapted for running on DC or AC by choice

adopt M **25/00** **DC interrupter motors or generators**

adopt U 27/06 < unchanged >

adopt U 27/08 < unchanged >

adopt U 27/26 < unchanged >

adopt M 27/28 · Structural association with auxiliary electric devices influencing the characteristic of the machine or controlling the machine

adopt M **29/00** **Motors or generators having non-mechanical commutating devices, e.g. discharge tubes or semiconductor devices**

adopt M 29/08 · ·   using magnetic effect devices, e.g. Hall-plates or magneto-resistors (**H02K 29/12** takes precedence)

adopt M **31/00** **Acyclic motors or generators, i.e. DC machines having drum or disc armatures with continuous current collectors**

adopt U 31/02 < unchanged >

adopt M **33/00** **Motors with reciprocating, oscillating or vibrating magnet, armature or coil system** (arrangements for handling mechanical energy structurally associated with motors **H02K 7/00**, e.g. **H02K 7/06**)

adopt M 33/02 ·   with armatures moved one way by energisation of a single coil system and returned by mechanical force, e.g. by springs

adopt M 33/04 · ·   wherein the frequency of operation is determined by the frequency of uninterrupted AC energisation

adopt M 33/06 · · ·   with polarised armatures

adopt M 33/08 · · ·   with DC energisation superimposed on AC energisation

adopt M 33/10 · ·   wherein the alternate energisation and de-energisation of the single coil system is effected or controlled by movement of the armatures

adopt M 33/12 ·   with armatures moving in alternate directions by alternate energisation of two coil systems

adopt M 33/14 · ·   wherein the alternate energisation and de-energisation of the two coil systems are effected or controlled by movement of the armatures

adopt M 33/16 ·   with polarised armatures moving in alternate directions by reversal or energisation of a single coil system

adopt M 33/18 ·   with coil systems moving upon intermittent or reversed energisation thereof by interaction with a fixed field system, e.g. permanent magnets

adopt M **35/00** **Generators with reciprocating, oscillating or vibrating coil system, magnet, armature or other part of the magnetic circuit** (arrangements for handling mechanical energy structurally associated with generators **H02K 7/00**, e.g. **H02K 7/06**)

adopt M 35/02 ·   with moving magnets and stationary coil systems

adopt M 35/04 ·   with moving coil systems and stationary magnets

adopt M 35/06 ·   with moving flux distributors, and both coil systems and magnets stationary

adopt M 37/02 ·   of variable reluctance type

adopt M 37/04 · ·   with rotors situated within the stators

adopt M 37/06 · ·   with rotors situated around the stators

adopt M 37/08 · ·   with rotors axially facing the stators

adopt M 37/10 ·   of permanent magnet type (**H02K 37/02** takes precedence)

adopt M 37/12 · ·   with stationary armatures and rotating magnets

adopt M 37/14 · · ·   with magnets rotating within the armatures

adopt M 37/16 · · · ·   having horseshoe armature cores

adopt M 37/18 · · · ·   of homopolar type

adopt M 37/20 · ·   with rotating flux distributors, the armatures and magnets both being stationary

adopt M 41/035 · ·   DC motors; Unipolar motors

adopt M 41/06 ·   Rolling motors, i.e. motors having the rotor axis parallel to the stator axis and following a circular path as the rotor rolls around the inside or outside of the stator

adopt M 44/08 ·   Magnetohydrodynamic [MHD] generators

adopt M 44/12 ᐧ ᐧ   Constructional details of fluid channels

adopt M 44/14 ᐧ ᐧ ᐧ   Circular or screw-shaped channels

adopt M 44/16 ᐧ ᐧ   Constructional details of the magnetic circuits

adopt M 44/18 ᐧ ᐧ   for generating AC power

adopt M 47/02 ᐧ   AC/DC converters or <u>vice versa</u>

adopt M 47/10 ᐧ ᐧ ᐧ   with booster machines on the AC side

adopt M 47/12 ᐧ   DC/DC converters

adopt M 47/18 ᐧ   AC/AC converters

adopt D 57/00 (transferred to **H02K 99/00**)

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

ANNEX 59EF   H02N   **[Project-Rapporteur : F007/EP]   <CE45>**

adopt D 6/00 (transferred to **H02S 10/00**-**H02S 99/00**)

ANNEX 60E   H02S   [Project-Rapporteur : F007/EP]   <CE45>

adopt N *Title* **Generation of electric power by conversion of infra-red radiation, visible light or ultraviolet light, e.g. using photovoltaic [PV] modules** *(solar heat collectors **F24J 2/00**; obtaining electrical energy from radioactive sources **G21H 1/12**; light sensitive inorganic semiconductor devices **H01L 31/00**; thermoelectric devices **H01L 35/00**; pyroelectric devices **H01L 37/00**; light sensitive organic semiconductor devices **H01L 51/42**)*

adopt N *10/00* **PV power plants; Combinations of PV energy systems with other systems for the generation of electric power**

adopt N *10/10* ·   *including a supplementary source of electric power, e.g. hybrid diesel-PV energy systems (combinations with gas-turbine plants **F02C 6/00**)*

adopt N *10/12* · ·   *Hybrid wind-PV energy systems*

adopt N *10/20* ·   *Systems characterised by their energy storage means (**H02S 40/38** takes precedence)*

adopt N *10/30* ·   *Thermophotovoltaic systems (photovoltaic cells specially adapted for conversion or sensing of infra-red [IR] radiation **H01L 31/00**; thermoelectric devices **H01L 35/00**)*

adopt N *10/40* ·   *Mobile PV generator systems*

adopt N **20/00** **Supporting structures for PV modules**

adopt N *Note 20/00* *Supporting structures also intended for use with solar heat collectors should also be classified in groups **F24J 2/38** or **F24J 2/52**.   [new]*

adopt N *20/10* · *Supporting structures directly fixed to the ground (**H02S 20/30** takes precedence)*

adopt N *20/20* · *Supporting structures directly fixed to an immovable object (**H02S 20/30** takes precedence)*

adopt N *20/21* · · *specially adapted for motorways, e.g. integrated with sound barriers*

adopt N *20/22* · · *specially adapted for buildings*

adopt N *20/23* · · · *specially adapted for roof structures (roof covering aspects of energy collecting devices **E04D 13/18**)*

adopt N *20/24* · · · · *specially adapted for flat roofs*

adopt N *20/25* · · · · *Roof tile elements*

adopt N *20/26* · · · *Building materials integrated with PV modules, e.g. façade elements (**H02S 20/25** takes precedence)*

adopt N *20/30* ˙   *Supporting structures being movable or adjustable, e.g. for angle adjustment*

adopt N *20/32* ˙ ˙   *specially adapted for solar tracking*

adopt N **30/00** **Structural details of PV modules other than those related to light conversion**
*(semiconductor device aspects of modules of electrolytic light sensitive devices **H01G 9/20**, of inorganic PV modules **H01L 31/00**, of organic PV modules **H01L 51/42**)*

adopt N *30/10* ˙   *Frame structures*

adopt N *30/20* ˙   *Collapsible or foldable PV modules*

adopt N **40/00** **Components or accessories in combination with PV modules, not provided for in groups H02S 10/00-H02S 30/00**

adopt N *40/10* ˙   *Cleaning arrangements*

adopt N *40/12* ˙ ˙   *Means for removing snow*

adopt N *40/20* ˙   *Optical components*

adopt N *40/22* ˙ ˙   *Light-reflecting or light-concentrating means (directly associated with the PV cell or integrated with the PV cell **H01L 31/054**)*

adopt N *40/30* ˙   *Electrical components*

adopt N *40/32* ˙ ˙   *comprising DC/AC inverter means associated with the PV module itself, e.g. AC modules*

adopt N *40/34* ˙ ˙   *comprising specially adapted electrical connection means to be structurally associated with the PV module, e.g. junction boxes*

adopt N *40/36* ˙ ˙   *characterised by special electrical interconnection means between two or more PV modules, e.g. electrical module-to-module connection*

adopt N *40/38* ˙ ˙   *Energy storage means, e.g. batteries, structurally associated with PV modules*

adopt N *40/40* ˙   *Thermal components (**H02S 10/30** takes precedence)*

adopt N *40/42* ˙ ˙   *Cooling means (cooling means directly associated or integrated with the PV cell **H01L 31/052**)*

adopt N *40/44* ˙ ˙   *Means to utilise heat energy, e.g. hybrid systems producing warm water and electricity at the same time (directly associated with the PV cell or integrated with the PV cell **H01L 31/0525**)*

adopt N **50/00**   ***Monitoring or testing of PV systems, e.g. load balancing or fault identification***

adopt N *50/10* ˙   *Testing of PV devices, e.g. of PV modules or single PV cells (testing of semiconductor devices during manufacturing **H01L 21/66**)*

adopt N *50/15* · · *using optical means, e.g. using electroluminescence*

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

ANNEX 61E   H03B   [Project-Rapporteur : D274/EP] <CE45>

adopt M **Title** **GENERATION OF OSCILLATIONS, DIRECTLY OR BY FREQUENCY-CHANGING, BY CIRCUITS EMPLOYING ACTIVE ELEMENTS WHICH OPERATE IN A NON-SWITCHING MANNER; GENERATION OF NOISE BY SUCH CIRCUITS** (generators specially adapted for electrophonic musical instruments **G10H**; masers or lasers **H01S**; generation of oscillations in plasma **H05H**)

adopt U Subclass < unchanged >
         index

adopt M 1/02 · Structural details of power oscillators, e.g. for heating (generators for heating by electromagnetic fields **H05B 6/00**)

adopt M 5/06 · · Modifications of generator to ensure starting of oscillations (starting of generators **H03L 3/00**)

adopt M 5/12 · · active element in amplifier being semiconductor device (**H03B 5/14**, **H03B 7/06** take precedence)

adopt M 5/14 · · the frequency-determining element being connected <u>via</u> a bridge circuit to a closed loop in which the signal is transmitted

adopt M 5/26 · · the frequency-determining element being part of a bridge circuit in a closed loop in which the signal is transmitted; the frequency-determining element being connected <u>via</u> a bridge circuit to such a closed loop, e.g. Wien-Bridge oscillator, parallel-T oscillator

adopt M 5/32 · · being a piezo-electric resonator

adopt M 5/38 · · · the frequency-determining element being connected <u>via</u> a bridge circuit to a closed loop in which the signal is transmitted

adopt M 5/40 · · being a magnetostrictive resonator (**H03B 5/42** takes precedence)

adopt M 5/42 · · the frequency-determining element being connected <u>via</u> a bridge circuit to a closed loop in which the signal is transmitted

adopt M 11/02 · excited by spark

adopt M **15/00** **Generation of oscillations using galvano-magnetic devices, e.g. Hall-effect devices, devices using spin transfer effects, devices using giant magnetoresistance, or using super-conductivity effects**

adopt M **17/00** **Generation of oscillations using a radiation source and a detector**

adopt M **19/00** **Generation of oscillations by non-regenerative frequency multiplication or division of a signal from a separate source**

adopt M **21/00** **Generation of oscillations by combining unmodulated signals of different frequencies** (**H03B 19/00** takes precedence)

adopt M **23/00** **Generation of oscillations periodically swept over a predetermined frequency range**

adopt M **28/00** **Generation of oscillations by methods not covered by groups H03B 5/00-H03B 27/00, including modification of the waveform to produce sinusoidal oscillations** (analogue function generators for performing computing operations **G06G 7/26**)

adopt M **29/00** **Generation of noise currents and voltages** (gas-filled discharge tubes with solid cathode specially adapted as noise generators **H01J 17/00**)

ANNEX 62E **H03C** **[Project-Rapporteur : D275/EP] <CE45>**

adopt M **Title** **MODULATION** (masers or lasers **H01S**; coding, decoding or code conversion **H03M**)

adopt M **1/46** · Modulators with mechanically-driven or acoustically-driven parts

adopt M **1/54** · · Balanced modulators, e.g. bridge type, ring type or double balanced type

adopt M **7/00** **Modulating electromagnetic waves** (devices or arrangements for the modulation of light **G02F 1/00**)

ANNEX 63E **H03K** **[Project-Rapporteur : F018/EP] <CE45>**

adopt M **5/00** **Manipulation of pulses not covered by one of the other main groups of this subclass** (circuits with regenerative action **H03K 3/00**, **H03K 4/00**; by the use of non-linear magnetic or dielectric devices **H03K 3/45**)

adopt C *5/13* · *Arrangements having a single output and transforming input signals into pulses delivered at desired time intervals*

adopt N *5/131* · · *Digitally controlled*

adopt N *5/133* · · *using a chain of active-delay devices*

adopt N *5/134* · · · *with field-effect transistors*

adopt C *5/14* · · *by the use of delay lines (**H03K 5/133** takes precedence)*

ANNEX 64E   H04L   [Project-Rapporteur : M013/IB]   <CE45>

adopt U 12/753 < unchanged >

ANNEX 65E   H04N   [Project-Rapporteur : A052/EP]   <CE45>

adopt M **7/00** **Television systems** (details **H04N 3/00**, **H04N 5/00**; methods or arrangements, for coding, decoding, compressing or decompressing digital video signals **H04N 19/00**; selective content distribution **H04N 21/00**)

adopt D 7/26 (transferred to **H04N 19/00**)

adopt D 7/28 (transferred to **H04N 19/94**)

adopt D 7/30 (transferred to **H04N 19/60**)

adopt D 7/32 (transferred to **H04N 19/50**)

adopt D 7/34 (transferred to **H04N 19/593**)

adopt D 7/36 (transferred to **H04N 19/503**)

adopt D 7/38 (transferred to **H04N 19/00**)

adopt D 7/40 (transferred to **H04N 19/00**)

adopt D 7/42 (transferred to **H04N 19/00**)

adopt D 7/44 (transferred to **H04N 19/00**)

adopt D 7/46 (transferred to **H04N 19/587**,**H04N 19/59**)

adopt D 7/48 (transferred to **H04N 19/00**)

adopt D 7/50 (transferred to **H04N 19/61**)

adopt N **19/00 Methods or arrangements for coding, decoding, compressing or decompressing digital video signals**

adopt N *19/10* ·   *using adaptive coding*

adopt N *Note 19/10* *When classifying in this group, each aspect relating to adaptive coding should, insomuch as possible, be classified in each one of subgroups **H04N 19/102**, **H04N 19/134**, **H04N 19/169** and **H04N 19/189**.   [new]*

adopt N *19/102* · ·   *characterised by the element, parameter or selection affected or controlled by the adaptive coding*

adopt N *19/103* · · ·   *Selection of coding mode or of prediction mode*

adopt N *19/105* · · · ·   *Selection of the reference unit for prediction within a chosen coding or prediction mode, e.g. adaptive choice of position and number of pixels used for prediction*

adopt N *19/107* · · · ·   *between spatial and temporal predictive coding, e.g. picture refresh*

adopt N *19/109* · · · ·   *among a plurality of temporal predictive coding modes*

adopt N *19/11* · · · ·   *among a plurality of spatial predictive coding modes*

adopt N *19/112* · · · ·   *according to a given display mode, e.g. for interlaced or progressive display mode*

adopt N *19/114* · · · · *Adapting the group of pictures [GOP] structure, e.g. number of B-frames between two anchor frames (**H04N 19/107** takes precedence)*

adopt N *19/115* · · *Selection of the code volume for a coding unit prior to coding*

adopt N *19/117* · · *Filters, e.g. for pre-processing or post-processing (sub-band filter banks **H04N 19/635**)*

adopt N *19/119* · · *Adaptive subdivision aspects e.g. subdivision of a picture into rectangular or non-rectangular coding blocks*

adopt N *19/12* · · · *Selection from among a plurality of transforms or standards, e.g. selection between discrete cosine transform [DCT] and sub-band transform or selection between H.263 and H.264*

adopt N *Note 19/12* *When classifying in this group, each compression algorithm is further classified in the relevant subgroups of groups **H04N 19/60** or **H04N 19/90**. **[new]***

adopt N *19/122* · · · · *Selection of transform size, e.g. 8x8 or 2x4x8 DCT; Selection of sub-band transforms of varying structure or type*

adopt N *19/124* · · *Quantisation*

adopt N *19/126* · · · *Details of normalisation or weighting functions, e.g. normalisation matrices or variable uniform quantisers*

adopt N *19/127* · · · *Prioritisation of hardware or computational resources*

adopt N *19/129* · · · *Scanning of coding units, e.g. zig-zag scan of transform coefficients or flexible macroblock ordering [FMO]*

adopt N *19/13* · · · *Adaptive entropy coding, e.g. adaptive variable length coding [AVLC] or context adaptive binary arithmetic coding [CABAC]*

adopt N *19/132* · · · *Sampling, masking or truncation of coding units, e.g. adaptive resampling, frame skipping, frame interpolation or high-frequency transform coefficient masking*

adopt N *19/134* · · *characterised by the element, parameter or criterion affecting or controlling the adaptive coding*

adopt N *19/136* · · · *Incoming video signal characteristics or properties*

adopt N *19/137* · · · · *Motion inside a coding unit, e.g. average field, frame or block difference*

adopt N *19/139* · · · · · *Analysis of motion vectors, e.g. their magnitude, direction, variance or reliability*

adopt N *19/14* · · · · *Coding unit complexity, e.g. amount of activity or edge presence estimation (**H04N 19/146** takes precedence)*

adopt N *19/142* · · · *Detection of scene cut or scene change*

adopt N *19/146* · · · *Data rate or code amount at the encoder output*

adopt N *19/147* · · · ·   *according to rate distortion criteria (rate-distortion as a criterion for motion estimation **H04N 19/567**)*

adopt N *19/149* · · · ·   *by estimating the code amount by means of a model, e.g. mathematical model or statistical model*

adopt N *19/15* · · · ·   *by monitoring actual compressed data size at the memory before deciding storage at the transmission buffer*

adopt N *19/152* · · · ·   *by measuring the fullness of the transmission buffer*

adopt N *19/154* · · · *Measured or subjectively estimated visual quality after decoding, e.g. measurement of distortion (use of rate-distortion criteria **H04N 19/147**)*

adopt N *19/156* · · · *Availability of hardware or computational resources, e.g. encoding based on power-saving criteria*

adopt N *19/157* · · · *Assigned coding mode, i.e. the coding mode being predefined or preselected to be further used for selection of another element or parameter*

adopt N *19/159* · · · ·   *Prediction type, e.g. intra-frame, inter-frame or bidirectional frame prediction*

adopt N *19/16* · · · ·   *for a given display mode, e.g. for interlaced or progressive display mode*

adopt N *19/162* · · ·   *User input*

adopt N *19/164* · · ·   *Feedback from the receiver or from the transmission channel*

adopt N *19/166* · · · ·   *concerning the amount of transmission errors, e.g. bit error rate [BER]*

adopt N *19/167* · · ·   *Position within a video image, e.g. region of interest [ROI]*

adopt N *19/169* · ·   *characterised by the coding unit, i.e. the structural portion or semantic portion of the video signal being the object or the subject of the adaptive coding*

adopt N *19/17* · · ·   *the unit being an image region, e.g. an object*

adopt N *19/172* · · · ·   *the region being a picture, frame or field*

adopt N *19/174* · · · ·   *the region being a slice, e.g. a line of blocks or a group of blocks*

adopt N *19/176* · · · ·   *the region being a block, e.g. a macroblock*

adopt N *19/177* · · ·   *the unit being a group of pictures [GOP]*

adopt N *19/179* · · · *the unit being a scene or a shot*

adopt N *19/18* · · · *the unit being a set of transform coefficients*

adopt N *19/182* · · · *the unit being a pixel*

adopt N *19/184* · · · *the unit being bits, e.g. of the compressed video stream*

adopt N *19/186* · · · *the unit being a colour or a chrominance component*

adopt N *19/187* · · · *the unit being a scalable video layer*

adopt N *19/189* · · *characterised by the adaptation method, adaptation tool or adaptation type used for the adaptive coding*

adopt N *19/19* · · · *using optimisation based on Lagrange multipliers*

adopt N *19/192* · · · *the adaptation method, adaptation tool or adaptation type being iterative or recursive*

adopt N *19/194* · · · · *involving only two passes*

adopt N *19/196* · · · *being specially adapted for the computation of encoding parameters, e.g. by*

*averaging previously computed encoding parameters (processing of motion vectors **H04N 19/513**)*

adopt N *19/20* · *using video object coding*

adopt N *19/21* · · *with binary alpha-plane coding for video objects, e.g. context-based arithmetic encoding [CAE]*

adopt N *19/23* · · *with coding of regions that are present throughout a whole video segment, e.g. sprites, background or mosaic*

adopt N *19/25* · · *with scene description coding, e.g. binary format for scenes [BIFS] compression*

adopt N *19/27* · · *involving both synthetic and natural picture components, e.g. synthetic natural hybrid coding [SNHC]*

adopt N *19/29* · · *involving scalability at the object level, e.g. video object layer [VOL]*

adopt N *19/30* · *using hierarchical techniques, e.g. scalability (**H04N 19/63** takes precedence)*

adopt N *19/31* · · *in the temporal domain*

adopt N *19/33* · · *in the spatial domain*

adopt N *19/34* · · *Scalability techniques involving progressive bit-plane based encoding of the enhancement layer, e.g. fine granular scalability [FGS]*

adopt N *19/36* · · *Scalability techniques involving formatting the layers as a function of picture distortion after decoding, e.g. signal-to-noise [SNR] scalability*

adopt N *19/37* · · *with arrangements for assigning different transmission priorities to video input data or to video coded data*

adopt N *19/39* · · *involving multiple description coding [MDC], i.e. with separate layers being structured as independently decodable descriptions of input picture data*

adopt N *19/40* · *using video transcoding, i.e. partial or full decoding of a coded input stream followed by re-encoding of the decoded output stream*

adopt N *19/42* · *characterised by implementation details or hardware specially adapted for video compression or decompression, e.g. dedicated software implementation (**H04N 19/635** takes precedence)*

adopt N *19/423* · · *characterised by memory arrangements (**H04N 19/433** takes precedence)*

adopt N *19/426* · · · *using memory downsizing methods*

adopt N *19/43* · · *Hardware specially adapted for motion estimation or compensation*

adopt N *19/433* · · · *characterised by techniques for memory access*

adopt N *19/436* · ·   *using parallelised computational arrangements*

adopt N *19/44* ·   *Decoders specially adapted therefor, e.g. video decoders which are asymmetric with respect to the encoder*

adopt N *19/46* ·   *Embedding additional information in the video signal during the compression process (**H04N 19/517**, **H04N 19/68**, **H04N 19/70** take precedence)*

adopt N *19/463* · ·   *by compressing encoding parameters before transmission*

adopt N *19/467* · ·   *characterised by the embedded information being invisible, e.g. watermarking*

adopt N *19/48* ·   *using compressed domain processing techniques other than decoding, e.g. modification of transform coefficients, variable length coding [VLC] data or run-length data (motion estimation in a transform domain **H04N 19/547**; processing of decoded motion vectors **H04N 19/513**)*

adopt N *19/50* ·   *using predictive coding (**H04N 19/61** takes precedence)*

adopt N *19/503* · ·   *involving temporal prediction (adaptive coding with adaptive selection between spatial and temporal predictive coding **H04N 19/107**; adaptive coding with adaptive selection among a plurality of temporal predictive coding modes **H04N 19/109**)*

adopt N *19/507* · · ·   *using conditional replenishment*

adopt N *19/51* · · ·   *Motion estimation or motion compensation*

adopt N *19/513* · · · ·   *Processing of motion vectors*

adopt N *19/517* · · · · ·   *by encoding*

adopt N *19/52* · · · · · ·   *by predictive encoding*

adopt N *19/523* · · · ·   *with sub-pixel accuracy*

adopt N *19/527* · · · ·   *Global motion vector estimation*

adopt N *19/53* · · · ·   *Multi-resolution motion estimation; Hierarchical motion estimation*

adopt N *19/533* · · · ·   *Motion estimation using multistep search, e.g. 2D-log search or one-at-a-time search [OTS]*

adopt N *19/537* · · · ·   *Motion estimation other than block-based*

adopt N *19/54* · · · · ·   *using feature points or meshes*

adopt N *19/543* · · · · ·   *using regions*

adopt N *19/547* · · · ·   *Motion estimation performed in a transform domain*

adopt N *19/55* · · · ·   *Motion estimation with spatial constraints, e.g. at image or region borders*

adopt N *19/553* · · · ·   *Motion estimation dealing with occlusions*

adopt N *19/557* · · · ·   *Motion estimation characterised by stopping computation or iteration based on certain criteria, e.g. error magnitude being too large or early exit*

adopt N *19/56* · · · ·   *Motion estimation with initialisation of the vector search, e.g. estimating a good candidate to initiate a search*

adopt N *19/563* · · · ·   *Motion estimation with padding, i.e. with filling of non-object values in an arbitrarily shaped picture block or region for estimation purposes*

adopt N *19/567* · · · ·   *Motion estimation based on rate distortion criteria*

adopt N *19/57* · · · ·   *Motion estimation characterised by a search window with variable size or shape*

adopt N *19/573* · · · ·   *Motion compensation with multiple frame prediction using two or more reference frames in a given prediction direction*

adopt N *19/577* · · · ·   *Motion compensation with bidirectional frame interpolation, i.e. using B-pictures*

adopt N *19/58* · · · · *Motion compensation with long-term prediction, i.e. the reference frame for a current frame not being the temporally closest one (**H04N 19/23** takes precedence)*

adopt N *19/583* · · · · *Motion compensation with overlapping blocks*

adopt N *19/587* · · *involving temporal sub-sampling or interpolation, e.g. decimation or subsequent interpolation of pictures in a video sequence*

adopt N *19/59* · · *involving spatial sub-sampling or interpolation, e.g. alteration of picture size or resolution*

adopt N *19/593* · · *involving spatial prediction techniques*

adopt N *19/597* · · *specially adapted for multi-view video sequence encoding*

adopt N *19/60* · *using transform coding*

adopt N *19/61* · · *in combination with predictive coding*

adopt N *19/615* · · · *using motion compensated temporal filtering [MCTF]*

adopt N *19/62* · · *by frequency transforming in three dimensions (**H04N 19/63** takes precedence)*

adopt N *19/625* · ·   *using discrete cosine transform [DCT]*

adopt N *19/63* · ·   *using sub-band based transform, e.g. wavelets*

adopt N *19/635* · · ·   *characterised by filter definition or implementation details*

adopt N *19/64* · · ·   *characterised by ordering of coefficients or of bits for transmission*

adopt N *19/645* · · · ·   *by grouping of coefficients into blocks after the transform*

adopt N *19/65* ·   *using error resilience*

adopt N *19/66* · ·   *involving data partitioning, i.e. separation of data into packets or partitions according to importance*

adopt N *19/67* · ·   *involving unequal error protection [UEP], i.e. providing protection according to the importance of the data*

adopt N *19/68* · ·   *involving the insertion of resynchronisation markers into the bitstream*

adopt N *19/69* · ·   *involving reversible variable length codes [RVLC]*

adopt N *19/70* · *characterised by syntax aspects related to video coding, e.g. related to compression standards*

adopt N *19/80* · *Details of filtering operations specially adapted for video compression, e.g. for pixel interpolation (**H04N 19/635**, **H04N 19/86** take precedence)*

adopt N *19/82* · · *involving filtering within a prediction loop*

adopt N *19/85* · *using pre-processing or post-processing specially adapted for video compression*

adopt N *19/86* · · *involving reduction of coding artifacts, e.g. of blockiness*

adopt N *19/87* · · *involving scene cut or scene change detection in combination with video compression*

adopt N *19/88* · · *involving rearrangement of data among different coding units, e.g. shuffling, interleaving, scrambling or permutation of pixel data or permutation of transform coefficient data among different blocks*

adopt N *19/89* · · *involving methods or arrangements for detection of transmission errors at the decoder*

adopt N *19/895* · · · *in combination with error concealment*

adopt N *19/90* · *using coding techniques not provided for in groups **H04N 19/10**-**H04N 19/85**, e.g. fractals*

adopt N *19/91* · ·   *Entropy coding, e.g. variable length coding [VLC] or arithmetic coding (entropy coding in adaptive coding **H04N 19/13**)*

adopt N *19/93* · ·   *Run-length coding*

adopt N *19/94* · ·   *Vector quantisation*

adopt N *19/96* · ·   *Tree coding, e.g. quad-tree coding*

adopt N *19/97* · ·   *Matching pursuit coding*

adopt N *19/98* · ·   *Adaptive-dynamic-range coding [ADRC]*

adopt M 21/234 · · ·   Processing of video elementary streams, e.g. splicing of video streams or manipulating MPEG-4 scene graphs

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ANNEX 66E   H04N   **[Project-Rapporteur : M013/IB]   <CE45>**

adopt M 21/4363 · · · ·   Adapting the video stream to a specific local network, e.g. a IEEE 1394 or Bluetooth® network

[End of Technical Annexes and of document]