



IPC/C 373/96 Rev.6
ORIGINAL: English/French
DATE: November 10, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	EP	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 01 N
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 373/96	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		EP	11.01.96
2	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.1	GB	02.10.96
3	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.1	CA	18.10.96
4	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.1	FR	-11.96
5	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.2	DE	18.02.97
6	Rapporteur report / Rapport du rapporteur	Rev.2	EP	27.03.97
7	Modified proposal / Proposition modifiée	Rev.3	EP	22.05.97
8	Decision of the Working Group / Décision du groupe de travail	Rev.4	WG	07.99
9	Comments / Observations	Rev.4	DE	07.99
10	Comments / Observations	Rev.4	CA	10.99
11	Comments / Observations	Rev.4	EP	10.99
12	Comments / Observations	Rev.4	RO	10.99
13	Comments / Observations	Rev.4	GB	11.99
14	Comments / Observations	Rev.4	SE	11.99

RAPPORTEUR : EP **TECHNICAL FIELD/DOMAINE TECHNIQUE :** E

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15	French version of approved amendments / Version française des modifications approuvées	Rev.4	EP	11.99
16	Rapporteur report / Rapport du rapporteur	Rev.4	EP	11.99
17	Rapporteur proposal / Proposition du rapporteur	Rev.4	EP	11.99
18	Decision of the Working Group / Décision du groupe de travail	Rev.5	WG	12.99
19	Comments / Observations	Rev.5	EP	03.00
20	Comments / Observations	Rev.5	JP	03.00
21	Comments / Observations	Rev.5	CA	03.00
22	Comments / Observations	Rev.5	SE	03.00
23	Comments / Observations	Rev.5	RO	03.00
24	Comments / Observations	Rev.5	DE	04.00
25	Rapporteur report / Rapport du rapporteur	Rev.5	EP	04.00
26	Rapporteur proposal / Proposition du rapporteur	Rev.5	EP	04.00
27	French version of approved amendments / Version française des modifications approuvées	Rev.5	EP	04.00
28	Decision of the Working Group / Décision du groupe de travail	Rev.6	WG	06.00
29	French version of approved amendments / Version française des modifications approuvées	Rev.6	EP	11/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

ANNEX	39E	G 01 N	[Project-Rapporteur : 373/EP]	<SC03056E>
C	29/06	• •	<i>Visualisation of the interior, e.g. acoustic microscopy</i>	
N	29/34	•	<i>Generating the ultrasonic, sonic or infrasonic waves</i>	R
N	29/36	•	<i>Detecting the response signal</i>	R
N	29/38	• •	<i>by time filtering, e.g. using time gates</i>	R
N	29/40	• •	<i>by amplitude filtering, e.g. by applying a threshold</i>	R
N	29/42	• •	<i>by frequency filtering</i>	R
N	29/44	•	<i>Processing the detected response signal</i>	R
N	29/46	• •	<i>by spectral analysis, e.g. Fourier analysis</i>	
N	29/48	• •	<i>by amplitude comparison</i>	
N	29/50	• •	<i>using auto-correlation techniques or cross-correlation techniques</i>	
N	29/52	• •	<i>using inversion methods other than spectral analysis, e.g. conjugated gradient inversion</i>	
ANNEXE	39F	G 01 N	[Projet-Rapporteur : 373/EP] (T:EP) - SC/02/2	<SC03057F> <SC02034E>
C	29/02	•	<i>Analyse de fluides (utilisant des techniques d'émission acoustique 29/14)</i>	
N	29/024	• •	<i>en mesurant la vitesse de propagation ou le temps de propagation des ondes acoustiques</i>	
N	29/028	• •	<i>en mesurant l'impédance mécanique ou acoustique</i>	
N	29/032	• •	<i>en mesurant l'atténuation des ondes acoustiques</i>	
N	29/036	• •	<i>en mesurant la fréquence ou la résonance des ondes acoustiques</i>	
C	29/04	•	<i>Analyse de solides (utilisant des techniques d'émission acoustique 29/14)</i>	
N	29/07	• •	<i>en mesurant la vitesse de propagation ou le temps de propagation des ondes acoustiques</i>	
D	29/08		<i>(transféré en 29/07, 29/09, 29/11, 29/12)</i>	
N	29/09	• •	<i>en mesurant l'impédance mécanique ou acoustique</i>	
D	29/10		<i>(transféré en 29/07, 29/09, 29/11, 29/12)</i>	
N	29/11	• •	<i>en mesurant l'atténuation des ondes acoustiques</i>	
C	29/12	• •	<i>en mesurant la fréquence ou la résonance des ondes acoustiques</i>	

- | | | |
|----------|---------------|--|
| <i>C</i> | <i>29/14</i> | <i>• --- d'émission acoustique</i> |
| <i>D</i> | <i>29/16</i> | <i>(transféré en 29/028, 29/09)</i> |
| <i>D</i> | <i>29/18</i> | <i>(transféré en 29/024, 29/07)</i> |
| <i>D</i> | <i>29/20</i> | <i>(transféré en 29/032, 29/11)</i> |
| <i>N</i> | <i>29/265</i> | <i>• • • en déplaçant le capteur par rapport à un matériau fixe</i> |
| <i>N</i> | <i>29/27</i> | <i>• • • en déplaçant le matériau par rapport à un capteur fixe</i> |
| <i>N</i> | <i>29/275</i> | <i>• • • en déplaçant à la fois le capteur et le matériau</i> |
| <i>N</i> | <i>29/30</i> | <i>• • Dispositions pour l'étalonnage ou la comparaison, p.ex. avec des objets standard</i> |
| <i>N</i> | <i>29/32</i> | <i>• • Dispositions pour supprimer des influences indésirables, p.ex. des variations de température ou de pression</i> |



Projet: C373
Sous-classe: G01N
Réf.: Annexe 28 du dossier du projet ou annexe 39E du document
IPC/WG/3/3

En tenant compte des remarques de CH et FR, nous proposons une version mise à jour de la traduction de l'annexe mentionnée ci-dessus.

- C 29/06 - - Visualisation de l'intérieur, p.ex. microscopie acoustique
- N 29/34 - Génération des ondes ultrasonores, sonores ou infrasonores
- N 29/36 - Détection du signal de réponse
- N 29/38 - - par filtrage temporel, p.ex. en utilisant des fenêtres temporelles
- N 29/40 - - par filtrage en amplitude, p.ex. par application d'un seuil
- N 29/42 - - par filtrage en fréquence
- N 29/44 - Traitement du signal de réponse détecté
- N 29/46 - - par analyse spectrale, p. ex. par analyse de Fourier
- N 29/48 - - par comparaison d'amplitude
- N 29/50 - - en utilisant des techniques d'autocorrélation ou des techniques d'intercorrélacion
- N 29/52 - - en utilisant des procédés d'inversion autres que l'analyse spectrale, p.ex. inversion conjuguée de gradient

Roberto Iasevoli



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3	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.1	CA	13.09.96
4	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.1	EP	29.10.96
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7	Rapporteur report / Rapport du rapporteur	Rev.2	GB	30.05.97
8	Comments (re Annex 1) / Observations (réf. annexe 1)	Rev.2	JP	30.05.97
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10	Proposal / Proposition	Rev.3	EP	02.99
11	Comments / Observations	Rev.3	EP	02.99
12	Comments / Observations	Rev.3	FR	02.99
13	Comments / Observations	Rev.3	RO	05.99

RAPPORTEUR : GB **TECHNICAL FIELD/DOMAINE TECHNIQUE :** E

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32	Proposal / Proposition	Rev.6	EP	07.00
33	Comments / Observations	Rev.6	JP	09.00
34	Comments / Observations	Rev.6	FR	09.00
35	Comments / Observations	Rev.6	RO	09.00
36	Comments / Observations	Rev.6	GB	09.00
37	Comments / Observations	Rev.6	SE	10/00
38	Rapporteur report / Rapport du rapporteur	Rev.6	GB	10/00
39	Rapporteur proposal / Proposition du rapporteur	Rev.6	GB	10/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 379 (electrical) – It was agreed that, in view of the very large file size of group H 01 H 13/70, its further subdivision was necessary.

The EPO was invited to submit a detailed proposal regarding subdivision of the said group, taking into account the new subgroups proposed by the United Kingdom (see Annex 25 to the project file) and the subgroups introduced in the seventh edition of the IPC.

Comments were invited on the proposal to be submitted.

Projet C 379 (électricité) – Il a été convenu, compte tenu de la grande taille du dossier de recherche du groupe H 01 H 13/70, de la nécessité de subdiviser ce groupe.

L'OEB a été invité à présenter une proposition détaillée sur la subdivision de ce groupe en tenant compte des nouveaux sous-groupes proposés par le Royaume-Uni (voir l'annexe 25 du dossier de projet) et des sous-groupes introduits dans la septième édition de la CIB.

Des observations ont été demandées sur la proposition devant être présentée.

Project: C 379 Subclass: H01H

Re: IPC/WG/3/3, paragraph 13

EP has been invited to submit a detailed proposal regarding subdivisions of group H01H13/70, also taking into account the new subgroups proposed by GB (see Annex 25 to the project file) and the subgroups introduced in the seventh edition of the IPC.

- 13/770 . . characterised by the material or manner of cooperation of the contacts
- 13/772 . . characterised by the form of the contacts
- 13/774 . . characterised by details peculiar to the movable contacts
- 13/776 . . characterised by the electrical connections to external devices
- 13/778 . . characterised by details of the layers e.g. material, structure
- 13/780 . . characterised by details peculiar to the spacer
- 13/782 . . characterised by contact space venting means
- 13/784 . . characterised by tactile feedback features, e.g. snap dome
- 13/786 . . characterised by means to facilitate operation
- 13/788 . . characterised by legends, e.g. LCD, light emitting or optical elements
- 13/790 . . characterised by the actuating elements
- 13/792 . . characterised by details of the casing, e.g. sealed, reducible in size
- 13/794 . . characterised by a special location of the switch sites, e.g. superimposed
- 13/796 . . characterised by the manufacturing process
- 13/798 . . characterised by the application
- 13/800 . . characterised by details of the key modules, e.g. assembling separate key modules
- 13/802 . . characterised by details peculiar to springs e.g. Euler spring
- 13/804 . . characterised by details of the mechanism between key and layered keyboard

Japanese Patent Office

21 September 2000

Project:C-379

Subclass:H01H

We agree with the EP proposal in Annex 32.

Projet IPC / C 379/96
Sous-classe H 01 H

Observations sur la proposition de l'OEB.

Dans la proposition détaillée de l'OEB sur la subdivision du H01H13/70, les nouveaux sous-groupes , tous situés au même niveau hiérarchique, sont nombreux. Nous pensons qu'il serait nécessaire de faire des regroupements sur des points particuliers comme par exemple les caractéristiques des contacts et des touches.

Pour cela, il faudrait créer :

- un sous-groupe à deux points relatif aux contacts suivi des sous-groupes hiérarchiquement inférieurs : 13/770, 13/772, 13/774 ;
- un sous-groupe à deux points relatif aux touches suivi des sous-groupes hiérarchiquement inférieurs : 13/800, 13/802, 13/804 .

Le libellé du sous-groupe 13/782 serait à préciser :

- le dernier libellé mentionné à l'annexe 25 (proposition UK) " characterised by venting or pressure equalisation means " reprend une partie des éléments du libellé proposé et semble plus clair.

Le libellé du sous-groupe 13/784 serait également à préciser et l'exemple donné " snap dome " est déjà cité (cf.13/715 -7^è édition)

Le libellé du sous-groupe 13/786 nous semble superflu (trop imprécis), ainsi que celui du sous-groupe 13/790 (cf. 13/14 -7^è édition)

L'exemple donné pour le sous-groupe 13/788 devrait se lire : " crystal liquid or light emitting or optical elements ".

Des précisions sont demandées sur le deuxième exemple du sous-groupe 13/792 " reducible in size ", pour le premier exemple, il faudrait lire " sealed casing "

Pour l'exemple donné dans le sous-groupe 13/794, il faudrait spécifier le nom auquel " superimposed" se rapporte (sites?)

Risque de chevauchement entre le sous-groupe proposé 13/796 et le groupe principal 11/00 qui concerne la fabrication des interrupteurs électriques ".

Il semble inutile de créer le sous-groupe 13/798 car l'invention dans ce cas, est directement classée à l'application.

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RO COMMENTS Date:September2000

Page: of

PROJECT **C379**

CLASS/SUBCLASS **H01H**

-on the EP proposal to be submitted:

We approve the EP proposal.

L. Cojocaru

UK Patent Office
Date: 25 September 2000

Comments on Project C379, Subclass H01H

We would like to thank EP for producing their new proposal in annex 32 which we think can take this project forward to a useful conclusion.

In some subgroups we think that “details of” could be misinterpreted so use of these words should be carefully considered.. Also we think references to details “peculiar to” something should be avoided.

Our comments on the individual subgroups proposed are as follows:-

Subgroup	Opinion	Comments
13/770	–	
13/772	–	We are not sure about the word “form”. Perhaps physical form might be better?
13/774	–	Why not just say “characterised by the physical form of movable contacts”
13/776	–	But omit “the”
13/778	–	Again omit “the”, “characterised by the material or structure of contact layers”?
13/780	–	“characterised by spacers”?
13/782	–	
13/784	–	
13/786	–	Is likely to overlap with other subgroups though?
13/788	–	
13/790	–	
13/792	–	characterised by the casing
13/794	–	
13/796	–	

13/798	—	
13/800	—	
13/802	—	
13/804	—	

Jim Calvert
UK Patent Office

Swedish Patent and Registration Office

IPC Revision Project C 379, subclass H01H

October 9th, 2000

COMMENTS relating to Annex 32

Comments were invited on the EPO proposal:

We thank the EPO for submitting the proposal – it appears to be a constructive step forward, but there is still a lot of work to do. We especially note that the hierarchy and order of the groups and the integration of the groups into the existing scheme need to be developed.

Many of the groups conflict with groups in the general "details" area of the main group, for example 13/04 and 13/792, 13/14 and 13/790; and 13/36 and 13/802. The relationship should be clarified – perhaps details specially adapted to keyboards etc. should be referred out of 13/02.

We agree with the FR comments that a hierarchically higher group could be introduced for contacts (13/770, 13/772 and 13/774). It appears that several of the groups (13/784, 13/790, 13/800, 13/802 and 13/804) conflict with the existing 13/705 and that the relationship needs to be solved by references. Perhaps there should also be a hierarchically higher group for "push-buttons or other operative parts" (the wording of the existing 13/705) covering the five groups.

It should be considered whether it is desirable to change the format of other groups in the area to "characterised by..." as well.

We are of course aware that the proposal is based on the ICO indexing scheme T01H 201:00 – 237:00. The main groups of that scheme are presumably not intended to be used, so they do not need to serve any other purpose than being rough navigation aids for the scheme. The groups of a classification scheme need to be more specific than so.

We have the following detailed comments on the groups:

13/770	x	We think the "materials" part is unnecessary – we do not think there are any contact materials that can be considered special to this area as opposed to others. There is considerable overlap between this group and the following two – this must be taken care of.
13/772	?	The word "form" is unclear – is "form" the same as "shape" in this context? Perhaps the word "structure" is better?
13/774	x	We would prefer "- - - details specially adapted for movable contacts". This group could be a subgroup to 13/772.
13/776	x	Remove the "the".

13/778	x	Should be a subgroup to the existing 13/702. Could the title be limited to the examples, saying "characterised by the material or the structure of the layers"?
13/780	x	The word "spacer" must be specified – spacer between what and what? The word "details" seems unnecessary – would it be enough to say "characterised by the spacer"? Shouldn't this group too be a subgroup to 13/702?
13/782	?	We are not sure about the exact meaning of the title.
13/784	x	The example has already been used, in 13/715.
13/786	-	The title is very unclear and does not seem to cover any coherent technology.
13/788	x	We would prefer something else than "legends" – perhaps "visual indicating means, e.g. - - -"?
13/790	?	The expression "actuating elements" is very similar to "operating members" (13/70, 13/72, 13/76) and "push-buttons or operating parts" (13/705). The wording should be harmonised – are we talking about push-buttons or keys here, or something else?
13/792	x	"characterised by the casing, e.g. by sealings or by means for reducing the size of the casings"?
13/794	?	The word "special" is unnecessary. The meaning of "switch site" is unclear.
13/796	x	We would prefer a group at the end of the scheme with the title "Manufacture". Conflicts with 11/00 need to be taken care of.
13/798	-	This group is too wide to be of any use for search purposes. If necessary, it would be better to have one or more groups directed to more specific applications.
13/800	?	The word "details" is unnecessary. The word "modules" is unclear – is it a set of several keys or is it one key with its mechanisms and contacts?
13/802	x	Should be a three-dot group under something else. "details" is unnecessary.
13/804	x	Should be a subgroup to 13/702, but appears to conflict with 13/705. "details" is unnecessary.

Anders Bruun

UK Patent Office**Date: 20 October 2000**

Rapporteur Report on Project C379, Subclass H01H

Background

Various groups from the original proposal were included in IPC7 but others were left over for the following revision period. A multiple classification approach was attempted but this was considered too unwieldy being inside a narrow area of the main group 13/00. The remaining groups of the original project were then proposed again but concerns were expressed over overlaps. When this was discussed at the third meeting of the revision working group, it was put forward the overlap may be manageable if limited by making sure that all groups were prefixed by “characterised by” to ensure that the inventive advance was emphasised.

EP kindly volunteered to submit a revised proposal to this effect (Annex 32). The revision working group invited comments on that proposal.

Comments

The proposal of Annex 32 was supported in principle by JP, RO, SE and GB, GB and SE proposing some detail changes of wording. FR and SE also had reservations about the hierarchy and proposed several detail changes.

Rapporteur’s opinion

FR and SE note that the hierarchy is very flat, i.e. all proposed groups have two dots. While it is undoubtedly possible to have a hierarchy using at least the nature of the contacts and the keys as common features, Rapporteur notes that existing groups in IPC7 relate to contacts and keys so they would also have to figure in any hierarchy, so maybe it is too difficult to group them as proposed by FR.

For the remaining detailed comments of FR and GB, the Rapporteur proposal takes account of those comments and includes notes in square brackets where necessary. The proposal does not attempt to change the hierarchy as for the reasons given in the above paragraph.

Jim Calvert

UK Patent Office**Date: 20 October 2000**

Rapporteur Proposal for Project C379, Subclass H01H

- N 13/770 . . characterised by the material or manner of cooperation of the contacts
[SE do not think “materials” is necessary here, possible overlap with 772, 774]
- N 13/772 . . characterised by the physical form of the contacts
[GB, SE comments]
- N 13/774 . . characterised by details of movable contacts
[SE prefers “details specially adapted for movable contacts” - Rapporteur thinks the meaning of that would be different]
- N 13/776 . . characterised by electrical connections to external devices
[“the” removed - SE, GB comments]
- N 13/778 . . characterised by details of the layers e.g. material, structure
[Layers in effect refers back to those of 13/702 but this is not a subgroup thereof. Should it be? - GB, SE comments, could the wording be clarified?]
- N 13/780 . . characterised by spacers
[GB comment, Is spacer clear? - SE comment]
- N 13/782 . . characterised by contact space venting means
[the FR proposal seems less precise to the Rapporteur as it does not say what space is vented or has its pressure equalised]
- N 13/784 . . characterised by tactile feedback features
[As pointed out by FR, SE, the example “snap dome” is already in IPC7 at 13/715]

- N 13/786 . . characterised by means to facilitate operation
[Is there a danger of overlap as pointed out by GB? Perhaps examples or a definition could clarify here. FR, SE think the wording is too vague anyway.]
- N 13/788 . . characterised by legends, e.g. liquid crystal, light emitting or optical elements
[Example expanded as proposed by FR, SE thinks “legends” is not clear]
- N 13/790 . . characterised by the actuating elements
[Could “actuating elements” be amended to something more consistent? - SE comments]
- N 13/792 . . characterised by the casing, e.g. sealed casing, casing reducible in size
[FR, GB, SE comments]
- N 13/794 . . characterised by the location of the switch sites, e.g. superimposed
[“special” omitted - SE comments]
- N 13/796 . . characterised by the manufacturing process
[There is undoubtedly overlap with FR as pointed out by FR, SE. Should this therefore really be a subgroup of 11/00?]
- N 13/798 . . characterised by the application
[This is indeed very vague and needs clarification if it is to remain - GB, FR, SE comments]
- N 13/800 . . characterised by details of the key modules, e.g. assembling separate key modules
[Is “details” unnecessary - SE comments]
- N 13/802 . . characterised by details peculiar to springs e.g. Euler spring
[Is “details” unnecessary, is this group hierarchically incorrect? - SE comments]
- N 13/804 . . characterised by details of the mechanism between key and layered keyboard
[Is “details” unnecessary and should this be a subgroup of /702? - SE comments]

Jim Calvert



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3	Comments	/ Observations		CA	07.98
4	Comments	/ Observations		EP	07.98
5	Comments	/ Observations		FR	07.98
6	Comments	/ Observations		DE	07.98
7	Comments	/ Observations		JP	07.98
8	Rapporteur report	/ Rapport du rapporteur		GB	02.99
9	Comments	/ Observations	Rev.1	JP	05.99
10	Decision of the Working Group	/ Décision du groupe de travail	Rev.1	WG	07.99
11	Comments	/ Observations	Rev.1	CA	10.99
12	Comments	/ Observations	Rev.1	RO	10.99
13	Comments	/ Observations	Rev.1	FR	10.99
14	Comments	/ Observations	Rev.1	GB	11.99

RAPPORTEUR : GB

TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 397/97	ORIGIN/ ORIGINE	DATE
15	Rapporteur report / Rapport du rapporteur	Rev.1	GB	11.99
16	Comments / Observations	Rev.2	JP	12.99
17	Comments / Observations	Rev.2	EP	12.99
18	Decision of the Working Group / Décision du groupe de travail	Rev.2	WG	12.99
19	Comments / Observations	Rev.2	GB	03.00
20	Comments / Observations	Rev.2	RU	03.00
21	Comments / Observations	Rev.2	EP	03.00
22	Comments / Observations	Rev.2	JP	03.00
23	Comments / Observations	Rev.2	CA	03.00
24	Comments / Observations	Rev.2	SE	03.00
25	Comments / Observations	Rev.2	RO	03.00
26	French version of approved amendments / Version française des modifications approuvées	Rev.2	CH	04.00
27	Rapporteur report / Rapport du rapporteur	Rev.2	GB	04.00
28	Rapporteur proposal / Proposition du rapporteur	Rev.2	GB	04.00
29	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

ANNEX	46	G 01 C	[Project-Rapporteur : 397/GB]	<SC03059E>
C	3/10		• --- the instrument (active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves, G 01 S 17/48)	
C	3/22		• --- the object (active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves, G 01 S 17/48)	
C	3/24		• --- the instrument (active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves, G 01 S 17/48)	
C	3/26		• --- the object (active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves, G 01 S 17/48)	
ANNEX	47	G 01 S	[Project-Rapporteur : 397/GB]	<SC03058E>
C	17/08		• • • --- measurement 17/46 ; active triangulation systems 17/48 ; passive systems using a ---	
N	17/48		• • • • Active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves (passive systems using a parallactic triangle G 01 C 3/10, 3/22, 3/24, 3/26 ; active systems for automatic generation of focusing signals G 02 B 7/32)	R



IPC/C 402/97 Rev.3
ORIGINAL: English/French
DATE: November 13, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	EP	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 06 F
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU		SEE/VOIR C 402/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée		EP	17.01.97
2	Comments	/ Observations		EP	08.98
3	Comments	/ Observations		JP	08.98
4	Comments	/ Observations		DE	08.98
5	Comments	/ Observations		JP	08.98
6	Rapporteur report	/ Rapport du rapporteur		EP	02.99
7	Rapporteur proposal	/ Proposition du rapporteur		EP	02.99
8	Decision of the Working Group	/ Décision du groupe de travail	Rev.1	WG	07.99
9	Comments	/ Observations	Rev.1	EP	10.99
10	Comments	/ Observations	Rev.1	CA	10.99
11	Comments	/ Observations	Rev.1	RO	10.99
12	Comments	/ Observations	Rev.1	FR	10.99
13	Comments	/ Observations	Rev.1	DE	10.99
14	Rapporteur report	/ Rapport du rapporteur	Rev.1	EP	11.99

RAPPORTEUR : EP

TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 402/97	ORIGIN/ ORIGINE	DATE
15	French version of approved amendments / Version française des modifications approuvées	Rev.1	EP	11.99
16	Comments / Observations	Rev.2	JP	12.99
17	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00
18	French version of approved amendments / Version française des modifications approuvées	Rev.3	EP	11.00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

ANNEX	49	G 06 F	[Project-Rapporteur : 402/EP]	<SC03060E>
N	7/501	• • • •	<i>Half or full adders, i.e. basic adder cells for one denomination (EXCLUSIVE-OR circuits H 03 K 19/21)</i>	R
N	7/533	• • • • •	<i>Reduction of the number of iteration steps or stages, e.g. using the Booth algorithm, log-sum, odd-even</i>	R



Re: annex 26 du document IPC/WG/1/2, annex 15 du dossier de projet, projet C 402, G06F

Version Française

Ce document a été établi sur la base de notre proposition, après consultation de l'Office Français et du Bureau international.

G 06 F

- | | | |
|---------|---------------|--|
| C 7/42 | § § § | Addition; Soustraction |
| C 7/44 | § § § | Multiplication; Division |
| N 7/483 | § § § | Calculs avec des nombres représentés par une combinaison non linéaire de nombres codés, p.ex. nombres rationnels, système de numération logarithmique, nombres à virgule flottante (conversion en, ou à partir de codes à virgule flottante H 03 M 7/24) |
| N 7/485 | § § § § | Addition; Soustraction |
| N 7/487 | § § § § | Multiplication; Division |
| N 7/491 | § § § | Calculs avec des nombres décimaux |
| N 7/492 | § § § § | utilisant une représentation à pondération binaire à l'intérieur de chaque position |
| N 7/493 | § § § § § | la représentation étant la représentation codée binaire naturelle, c. à d. le code 8421 |
| N 7/494 | § § § § § § | Addition; Soustraction |
| N 7/495 | § § § § § § § | en mode série numérique, c. à d. ayant un seul circuit de traitement de chiffre traitant toutes les positions l'une après l'autre |
| N 7/496 | § § § § § § | Multiplication; Division |
| N 7/498 | § § § § | utilisant des accumulateurs de type compteur |
| N 7/499 | § § § | Traitement de valeur ou d'exception, p.ex. arrondi, dépassement |
| C 7/50 | § § § | Addition; Soustraction (7/483 à 7/491, 7/544 à B B B) |

- N 7/501 § § § § Semi-additionneurs ou additionneurs complets, c. à d. cellules élémentaires d'addition pour une position (circuits OU EXCLUSIF H 03 K 19/21)
- N 7/502 § § § § § Semi-additionneurs; Additionneurs complets composés de deux semi-additionneurs en cascade
- N 7/503 § § § § § utilisant la commutation de retenue, c. à d. la retenue entrante étant connectée directement, ou seulement par un inverseur, à la sortie de retenue, sous commande d'un signal de propagation de retenue
- N 7/504 § § § § en mode série binaire, c. à d. ayant un seul circuit de traitement de chiffre, traitant toutes les positions l'une après l'autre
- N 7/505 § § § § en mode parallèle binaire, c. à d. ayant un circuit de traitement de chiffre différent pour chaque position (semi-additionneurs ou additionneurs complets 7/501)
- N 7/506 § § § § § avec génération simultanée de retenue pour, ou propagation simultanée de retenue sur, plusieurs étages
- N 7/507 § § § § § § utilisant la sélection entre deux valeurs de retenue ou de somme calculées de façon conditionnelle
- N 7/508 § § § § § § utilisant des circuits à retenue anticipée
- N 7/509 § § § § § pour opérandes multiples, p.ex. intégrateurs numériques
- C 7/52 § § § Multiplication; Division (7/483 à 7/491, 7/544 à B B B
- N 7/523 § § § § Multiplication uniquement
- N 7/525 § § § § § en mode série-série, c. à d. les deux opérandes étant introduits en série (7/533 a priorité)
- N 7/527 § § § § § en mode série-parallèle, c. à d. l'une des opérandes étant introduit en série et l'autre en parallèle (7/533 a priorité)
- N 7/53 § § § § § en mode parallèle-parallèle, c. à d. les deux opérandes étant introduits en parallèle (7/533 a priorité)
- N 7/533 § § § § § Réduction du nombre d' étapes ou d'étages d'itération, p.ex. utilisant l'algorithme de Booth, sommation logarithmique, parité-imparité
- N 7/535 § § § § Division uniquement
- N 7/537 § § § § § Réduction du nombre d'étapes ou d'étages d'itération, p.ex. utilisant l'algorithme de Sweeney-Robertson-Tocher (SRT)
- D 7/54 (transféré en 7/52 à 7/537)

- N 7/57 § § § Unités arithmétiques et logiques (UAL), c. à d. dispositions ou dispositifs pour accomplir plusieurs des opérations couvertes par les groupes 7/483 à 7/556 ou pour accomplir des opérations logiques (exécution des instructions 9/30)
- N 7/575 § § § § Unités arithmétiques et logiques de base, c. à d. dispositifs pouvant être sélectionnés pour accomplir soit l'addition, soit la soustraction, soit une parmi plusieurs opérations logiques, utilisant, au moins partiellement, les mêmes circuits

P. Foglia



IPC/C 404/97 Rev.3
ORIGINAL: English/French
DATE: November 10, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
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GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	GB	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 11 B
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU		SEE/VOIR C 404/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée		GB	30.01.97
2	Comments (re Annex 1)	/ Observations (réf. annexe 1)		DE	27.08.97
3	Comments	/ Observations		EP	08.98
4	Counter- proposal	/ Contre-proposition		EP	08.98
5	Comments	/ Observations		SE	08.98
6	Comments	/ Observations		CA	08.98
7	Comments	/ Observations		JP	08.98
8	Rapporteur report	/ Rapport du rapporteur		GB	02.99
9	Decision of the Working Group	/ Décision du groupe de travail	Rev.1	WG	07.99
10	Comments	/ Observations	Rev.1	EP	10.99
11	Comments	/ Observations	Rev.1	CA	10.99
12	Comments	/ Observations	Rev.1	RO	10.99
13	Comments	/ Observations	Rev.1	FR	10.99
14	Comments	/ Observations	Rev.1	DE	10.99

RAPPORTEUR : GB

TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 404/97	ORIGIN/ ORIGINE	DATE
15	French version of approved amendments / Version française des modifications approuvées	Rev.1	FR	11.99
16	Rapporteur report / Rapport du rapporteur	Rev.2	GB	12.99
17	Decision of the Working Group / Décision du groupe de travail	Rev.2	WG	12.99
18	Comments / Observations	Rev.2	GB	03.00
19	Comments / Observations	Rev.2	EP	03.00
20	Comments / Observations	Rev.2	RO	03.00
21	Rapporteur report / Rapport du rapporteur	Rev.2	GB	05.00
22	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00
23	Comments / Observations	Rev.3	DE	09.00
24	Comments / Observations	Rev.3	GB	09.00
25	Comments / Observations	Rev.3	JP	09.00
26	Comments / Observations	Rev.3	EP	09.00
27	Comments / Observations	Rev.3	FR	09.00
28	Comments / Observations	Rev.3	RO	09.00
29	Rapporteur report / Rapport du rapporteur	Rev.3	GB	10/00
30	French version of approved amendments / Version française des modifications approuvées	Rev.3	FR	10/00
31	Comments / Observations	Rev.3	CA	11/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 404 (electrical) – The Working Group decided that application of the rule disclosed in paragraph 70 of the Guide to the IPC was not desirable with regard to classifying of combinations of different layers of “record carriers”, namely, with regard to combinations of subject matter covered by the new groups G 11 B 7/242 and 7/252 (see Annex 28 to document IPC/WG/1/2), as this would result in such combinations being classified in the hierarchically superior group 7/241.

Comments were invited on:

- whether the Note following group G 11 B 7/252 (see Annex 50 to this report) correctly defined rules for multi-aspect classification in subgroups of that group;
- whether the said Note should be extended in order to reflect the relationship of group 7/252 with group 7/242, in the light of the above-mentioned decision of the Working Group.

The Working Group finally agreed to draw attention of the IPC Reform Working Group to this Project as having particular bearing on the interpretation and possible future modification of paragraph 70 of the Guide to the IPC.

Projet C 404 (électricité) – Le groupe de travail a décidé que l’application de la règle indiquée dans le paragraphe 70 du Guide d’utilisation de la CIB n’est pas souhaitable en ce qui concerne le classement des combinaisons de différentes couches de “supports d’enregistrement”, en d’autres termes, en ce qui concerne les combinaisons de matières couvertes par les nouveaux groupes G 11 B 7/242 et 7/252 (voir l’annexe 28 du document IPC/WG/1/2), étant donné que l’application de cette règle aurait pour effet de classer ces combinaisons dans le groupe hiérarchiquement supérieur 7/241.

Des observations ont été demandées :

- sur le point de savoir si la note suivant le groupe G 11 B 7/252 (voir l’annexe 50 du présent rapport) définit correctement les règles de classement selon des aspects multiples dans les sous-groupes de ce groupe;
- sur le point de savoir si ladite note doit être élargie pour prendre en considération le lien entre le groupe 7/252 et le groupe 7/242, compte tenu de la décision susmentionnée du groupe de travail.

Le groupe de travail a finalement convenu d’appeler l’attention du Groupe de travail sur la réforme de la CIB sur ce projet, considérant qu’il a une incidence particulière sur l’interprétation et la modification éventuelle du paragraphe 70 du Guide d’utilisation de la CIB.

ANNEX	50	G 11 B	[Project-Rapporteur : 404/GB]	<SC03061E>
N	7/247	• • • • •	<i>Methine or polymethine dyes</i>	R
N	7/248	• • • • •	<i>Porphines; Azaporphines, e.g. phthalocyanines</i>	R
N	7/25	• • • • •	<i>containing liquid crystals</i>	R
N	Note(s) after 7/252		<i>In group 7/252, multi-aspect classification is applied, so that if subject matter is characterised by aspects covered by more than one of its subgroups, the subject matter should be classified in each of those subgroups.</i>	
N	7/253	• • • •	<i>Base layers</i>	
N	7/254	• • • •	<i>Protective topcoat layers</i>	
N	7/256	• • • •	<i>Layers improving adhesion between layers</i>	
N	7/257	• • • •	<i>Layers having properties involved in recording or reproduction, e.g. optical interference layers or sensitising layers</i>	
N	7/258	• • • •	<i>Reflective layers</i>	

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: G11B
	Date : 18.08.2000
DE - Comments — C 404	

Re: IPC/WG/3/3

We agree with the proposed wording of the note following group G11B 7/252. It seems not to be necessary to extend the note.

Böhm-Wirt

UK Patent Office Comments	IPC Revision Project C404
Subclass G11B	Date 15 September 2000

General Comments

Although we think the note after 7/252 is indeed accurate if multi-aspect classification within the subgroups of 7/252 is desired. We think, however, that that is less likely than classification of a material and also its function, e.g. as base, topcoat layer etc. is more likely and is therefore more important.

We therefore think there should be a note after 7/241 regarding multi-aspect classification in 7/241 on the one hand, and 7/252 on the other. The wording of such a note is difficult, however, and is to some extent covered by the existing para. 70, but will be covered more so, hopefully, by the successor of para. 70. We wonder, therefore, if it is wise to try to derive such a note ourselves in isolation from the reform group.

We therefore certainly approve of the necessity to refer this aspect of this project to the reform group as it will illustrate both the advantages and potential pitfalls of multi-aspect classification.

Jim Calvert

Japanese Patent Office

21 September 2000

Project:C-404

Subclass:G11B

- *whether the Note after G11B 7/252 correctly defined rules for multi-aspect classification in subgroups of that group*
 - * We think it defines almost correctly.
However, we find some problem with the following case. If the subject matter is characterized by the layer not covered in G11B 7/253 – 7/258, but should be covered in 7/252 (e.g. label layers or forgery protective layers), and also characterized by reflective layer, the subject matter should be classified also in 7/258. Is this allowed?

- *whether the Note should be extended to 7/242*
 - * We think it should be extended.

Project: C 404 Subclass: G11B

Re: IPC/WG/3/3

We agree with the proposed Note following group G 11 B 7/252.

Concerning the possibility to extend said Note in order to reflect the relationship of groups 7/252 and 7/242, we do not think this to be the best approach to solve this issue.

We deem it desirable to refer this matter to the IPC Reform Working Group in order to come to a solution in complete harmony with the future version of paragraph 70 of the Guide to the IPC.

P. Foglia

Projet IPC / C 404/97
Sous-classe **G 11 B**

Des observations ont été demandées :

- sur le point de savoir si la note suivant le groupe G11B7/252 définit correctement les règles du classement multiple ;

Nous sommes d'accord avec la note suivant le groupe G11B7/252, il nous semble que les règles du classement multiple y sont bien définies.

- sur le point de savoir si la note doit être élargie pour prendre en considération le lien entre le groupe 7/252 et le groupe 7/242.

Nous considérons que la note ne devrait pas être élargie.

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RO COMMENTS Date:September2000

Page: of

PROJECT C404

CLASS/SUBCLASS G11B

-on whether the Note following group G11B 7/252 correctly defined rules for multi-aspect classification in subgroups of that group:

We think that it defines correctly.

- whether the Note should be extended in order to reflect the relationship of group 7/252 with group 7/242:

We think that the Note should be extended to group 7/242.

L. Cojocaru

UK Patent Office

Date: 20 October 2000

Rapporteur Report on Project C404, Subclass G11B

Background

This project was submitted in 1997 to subdivide G11B 7/24 relating to the structure, form or material of record carriers. Parallel subgroups relating to material, on the one hand, and form or function on the other, have already been adopted with a note allowing multiple classification for the functional aspects.

The third meeting of the revision working group asked the following questions relating to that note:-

_ whether the Note following group G 11 B 7/252 (see Annex 50 to this report) correctly defined rules for multi-aspect classification in subgroups of that group;

_ whether the said Note should be extended in order to reflect the relationship of group 7/252 with group 7/242, in the light of the above-mentioned decision of the Working Group.

Comments

Comments were received from EP, DE, JP, FR, RO and GB.

All agreed that the note following group G 11 B 7/252 correctly defined rules for multi-aspect classification in subgroups of that group. **Rapporteur** therefore recommends that the wording of the note should stay as it is, except if the Reform Group agrees different wording for this sort of situation.

Opinion was divided as regards extension of the note to cover 7/242. DE, FR, EP think the note should not be extended in this way. GB, RO and JP think it should be extended.

Rapporteur notes the referral of this project to the Reform Group and recommends that the question should therefore be deferred in view of the lack of clear support for extension of the note.

Jim Calvert

Projet IPC / C 404
Sous-classe G 11 B

VERSION FRANÇAISE

Ce document a été établi sur la base de notre proposition, après consultation des autres offices et du Bureau international.

(ref : annexe 28 du document IPC/WG/3/3)

G 11 B

- N 7/241 . . caractérisés par le choix des matériaux
- N 7/242 . . . des couches d'enregistrement
- N 7/243 comprenant uniquement des matériaux inorganiques, p.ex. des couches ablatives
- N 7/244 comprenant uniquement des matériaux organiques
- N 7/245 contenant un composé polymère
- N 7/246 contenant des colorants
- N 7/247 Colorants de méthine ou de polyméthine
- N 7/248 Porphines ; Azaporphines, p.ex. phtalocyanines
- N 7/249 contenant des composés organo-métalliques (7/246 a priorité)
- N 7/25 contenant des cristaux liquides
- N 7/251 comprenant des matériaux inorganiques dispersés dans une matrice organique
- N 7/252 . . . des couches autres que les couches d'enregistrement
- N Note(s)
après
7/252
- Dans le groupe 7/252, le classement selon plusieurs aspects est appliqué de sorte que, si la matière est caractérisée par des aspects couverts par plus d'un des sous-groupes, elle doit être classée dans chacun de ces sous-groupes.*
- N 7/253 Couches de base

- N 7/254 Couches supérieures de protection*
- N 7/256 Couches améliorant l'adhérence entre couches*
- N 7/257 Couches avec des propriétés intervenant lors de l'enregistrement ou de la reproduction, p.ex. couches d'interférence optique ou couches de sensibilisation*
- N 7/258 Couches réfléchissantes*

Pour une plus grande commodité de lecture, l'annexe 15 du dossier de projet a été intégrée à cette proposition.

The Canadian Intellectual
Property Office



L'Office de la propriété
intellectuelle du Canada

Project Number: C404

Date: November 10, 2000

Class/Subclass: G11B

Page 1 of 1

CA accepts the wording of the Note following group G11B 7/252 as correct and for the sake of consistency, we would also find it desirable to have such a Note covering the relationship between 7/242 and 7/252 .

John Dowding



IPC/C 406/97 Rev.3
ORIGINAL: English/French
DATE: November 10, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
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GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	EP	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 11 C
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU		SEE/VOIR C 406/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée		EP	06.01.97
2	Comments	/ Observations		DE	08.98
3	Comments	/ Observations		EP	08.98
4	Comments	/ Observations		JP	08.98
5	Rapporteur report	/ Rapport du rapporteur		EP	02.99
6	Rapporteur proposal	/ Proposition du rapporteur		EP	02.99
7	Comments	/ Observations	Rev.1	JP	07.99
8	Decision of the Working Group	/ Décision du groupe de travail	Rev.2	WG	12.99
9	Comments	/ Observations	Rev.2	EP	03.00
10	Comments	/ Observations	Rev.2	CA	03.00
11	Comments	/ Observations	Rev.2	SE	03.00
12	Comments	/ Observations	Rev.2	RO	03.00
13	Comments	/ Observations	Rev.2	DE	04.00
14	Rapporteur report	/ Rapport du rapporteur	Rev.2	EP	04.00

RAPPORTEUR : EP

TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 406/97	ORIGIN/ ORIGINE	DATE
15	Rapporteur proposal / Proposition du rapporteur	Rev.2	EP	04.00
16	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00
17	Proposal / Proposition	Rev.3	EP	07.00
18	Comments / Observations	Rev.3	DE	09.00
19	Comments / Observations	Rev.3	GB	09.00
20	Comments / Observations	Rev.3	JP	09.00
21	Comments / Observations	Rev.3	EP	09.00
22	Comments / Observations	Rev.3	GB	09.00
23	Comments / Observations	Rev.3	FR	09.00
24	Comments / Observations	Rev.3	RO	09.00
25	French version of approved amendments / Version française des modifications approuvées	Rev.3	EP	10/00
26	Rapporteur report / Rapport du rapporteur	Rev.3	EP	10/00
27	Comments / Observations	Rev.3	CA	11/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 406 (electrical) – The EPO was invited to propose definitions of the terms “memory” and “store” for subclass G 11 C.

Comments were invited on the definitions of the terms to be proposed.

Comments were also invited on (see Annex 52, relating to subclass G 11 C, to this report):

- the correctness of the wording of group 29/48;
- the correctness of the wording of group 29/56;
- whether there was any overlap between group 29/56 and groups 29/02 and 29/04 and, if that were the case, how it could be eliminated.

Projet C 406 (électricité) – L’OEB a été invité à proposer une définition des termes “memory” et “store” pour la sous-classe G 11 C.

Des observations ont été demandées sur la définition des termes qui doit être proposée.

Des observations ont aussi été demandées (voir l’annexe 52 du présent rapport relative à la sous-classe G 11 C)

- sur l’exactitude du libellé du groupe 29/48;
- sur l’exactitude du libellé du groupe 29/56;
- sur la question de savoir s’il y a chevauchement entre le groupe 29/56 et les groupes 29/02 et 29/04 et, dans l’affirmative, sur la façon d’éliminer ce chevauchement.

ANNEX	51	G 06 F	[Project-Rapporteur : 406/EP]	<SC03069E>
	11/00	— — — static stores G 11 C 29/00; coding, decoding — — —		
C	17/50	• <i>Computer-aided design (for the design of test circuits for static stores G 11 C 29/54)</i>		

ANNEX	52	G 11 C	[Project-Rapporteur : 406/EP]	<SC03070E>
C	29/00	Checking stores for correct operation; Testing stores during standby or offline operation		
N	29/02	• Detection or location of defective auxiliary circuits, e.g. defective refresh counters		
N	29/04	• Detection or location of defective memory elements		
N	29/06	• • Acceleration testing		
N	29/08	• • Functional testing, e.g. testing during refresh, power-on self testing (POST) or distributed testing		
N	29/10	• • • Test algorithms, e.g. memory scan (MScan) algorithms; Test patterns, e.g. checkerboard patterns		
N	29/12	• • • Built-in arrangements for testing, e.g. built-in self testing (BIST)		
N	29/14	• • • • Implementation of control logic, e.g. test mode decoders		
N	29/16	• • • • • using microprogrammed units, e.g. state machines		
N	29/18	• • • • Address generation devices; Devices for accessing memories, e.g. details of addressing circuits		
N	29/20	• • • • • using counters or linear-feedback shift registers (LFSR)		
N	29/22	• • • • • Accessing serial memories		
N	29/24	• • • • • Accessing extra cells, e.g. dummy cells or redundant cells		
N	29/26	• • • • • Accessing multiple arrays (29/24 takes precedence)		
N	29/28	• • • • • • Dependent multiple arrays, e.g. multi-bit arrays		
N	29/30	• • • • • Accessing single arrays		
N	29/32	• • • • • • Serial access; Scan testing		
N	29/34	• • • • • • Accessing multiple bits simultaneously		
N	29/36	• • • • • Data generation devices, e.g. data inverters		
N	29/38	• • • • • Response verification devices		
N	29/40	• • • • • using compression techniques		
N	29/42	• • • • • using error correcting codes (ECC) or parity check		
N	29/44	• • • • • Indication or identification of errors, e.g. for repair		
N	29/46	• • • • • Test trigger logic		
N	29/48	• • • Arrangements in static stores specially adapted for testing by means external to the store, e.g. using direct memory access (DMA) or using auxiliary access paths (external testing equipment 29/56)		
N	29/50	• • Marginal testing, e.g. race, voltage or current testing		
N	29/52	• Protection of memory contents; Detection of errors in memory contents		

- N* 29/54 • *Arrangements for designing test circuits, e.g. design for test (DFT) tools*
- N* 29/56 • *External testing equipment for static stores, e.g. automatic test equipment (ATE); Interfaces therefor*

Project: C 406 Subclass: G11C

Re: IPC/WG/3/3

The EPO has been invited to propose definitions of the terms "memory" and "store".

We propose that, in this subclass, the following expressions be used with the meaning indicated:

- "memory" means a circuit which can hold information to be extracted when desired
- "store" means a set of elements comprising a memory and other supporting circuits therefor

P. Foglia

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: G11C
	Date : 18.08.2000
DE - Comments — C 406	

Re: IPC/WG/3/3

We agree with the wording of groups 29/48 and 29/56 and see no overlap problems between group 29/56 and groups 29/02, 29/04.

Böhm-Wirt

UK Patent Office Comments	IPC Revision Project C406
Subclass G11C	Date 15 September 2000

Subgroup	Opinion	Comments
29/48	–	We think the wording of 29/48 and 29/56 is clear enough given the hierarchy clearly separating internal and external testing. Again, we think the hierarchy means there is little chance of overlap except when memory elements may be part of auxiliary circuits, although we think this unlikely.
29/56	–	

Jim Calvert

Japanese Patent Office

21 September 2000

Project:C-406

Subclass:G11C

Overlapping problem:

The subjects to be tested covered in groups 29/02 and 29/04 are restricted to auxiliary circuits and memory elements respectively. Also, the subject matter of 29/56 is limited to "external testing equipment". Thus, "external equipment testing memory elements" (e.g. JP 9-54144A, JP 9-147596A) would belong to both 29/04 and 29/56.

To avoid the overlap, we propose to add one dot to each group of 29/02 – 29/50, and to create a one-dot subgroup 29/01 as follows before 29/02.

29/01 · static stores having circuits for testing

Project: C 406 Subclass: G11C

Re: IPC/WG/3/3

We agree with the wording of groups 29/48 and 29/56.

Also, we believe that there is no overlap between group 29/56 and, respectively, groups 29/02 and 29/04. Hence we do not see the need for any further modification of these titles.

Concerning the definitions of the terms "memory" and "store" proposed by us in July (Annex 17 to the project file), we think that they are appropriate and helpful in order to clarify the terminology used throughout the scheme and consequently the scope of the various groups.

P. Foglia

UK Patent Office

Date: 20 September 2000

Comments on Project C406, Subclass G11C

We have additional comments relating to the definitions proposed by EPO in Annex 18:-

- "memory" means a circuit which can hold information to be extracted when desired
- "store" means a set of elements comprising a memory and other supporting circuits therefor

We appreciate the difficulty EP must have had in defining these terms. Our experts think that the terms "store" and "memory" are almost interchangeable in this art, which makes the task of providing meaningful definitions doubly difficult. For example, specifications often refer to a memory circuit together with other elements as a "memory".

We are concerned that the definitions are a little too prescriptive particularly as regards their reference to "circuits" as the stores with which 29/00 is concerned are not necessarily electronic (see G11C 13/00) so perhaps it should be a little broader.

We also note that earlier main groups of G11C refer to "storage elements", so perhaps the definitions should refer to this also.

We would therefore like to propose the following:-

- "memory" means a device, including storage elements, which can hold information to be extracted when desired
- "store" means a set of elements comprising at least one memory and other supporting circuits or arrangements therefor

In looking through G11C regarding definitions, we noticed 11/4078 and wonder whether there is risk of overlap with the newly adopted 29/52.

Jim Calvert
U.K. Patent Office

Projet IPC / C 406
Sous-classe G 11 C

Des observations ont été demandées :

- sur la définition des termes ‘memory’ et ‘store’.

Nous sommes d’accord avec les propositions de l’OEB relatives à la définition de ces termes.

On doit souligner que la version française de la CIB traduit en général :

“ memory cell ” par *cellule de mémoire* (cf G 11C 7/20)

“ storage elements ” par *élément d’emmagasinement* (cf G 11 C 11/04)

“ store ” par *mémoire* (cf titre du G11C) , qui comporte des cellules mémoire et des circuits de support.

Il faut noter cependant que si le terme ‘store’ est toujours employé comme générique, désignant un ensemble d’éléments comprenant une mémoire et d’autres circuits auxiliaires, le terme ‘memory’ est employé dans le même sens quand il désigne des types de mémoires particuliers, *par ex. G11C 16/00 : Erasable programmable read-only memories (EPROM) ; G11C 17/00 : Read-only memories programmable only once*. En fait le terme ‘memory’ se retrouve dans tous les acronymes ROM, RAM, etc...

Des observations ont aussi été demandées :

- sur l’exactitude du libellé du groupe 29/48

Nous sommes d’accord avec le libellé de ce groupe

- sur l’exactitude du libellé du groupe 29/56

Nous sommes d’accord avec le libellé de ce groupe

- sur la question de savoir s’il y a chevauchement entre le groupe 29/56 et les groupes 29/02 et 29/04

Nous pensons qu’il n’y a pas chevauchement entre ces groupes car il est clairement spécifié :

- que le 29/ 04 concerne la détection des éléments mémoire défectueux donc **à l’intérieur** de la mémoire.

- que le 29/02 concerne la détection des circuits auxiliaires défectueux qui peuvent également être **à l’intérieur** de la mémoire.

- que le 29/56 désigne l’équipement en lui-même à l’extérieur de la mémoire pour le test des mémoires statiques, le test pouvant porter sur les cellules mémoire et/ou les circuits de support.

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RO COMMENTS Date:September2000

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PROJECT **C406**

CLASS/SUBCLASS **G11C**

- on the correctness of the wording of group 29/48:
 - on the correctness of the wording of group 29/56:
 - whether there was any overlap between group 29/56 and groups 29/02 and 29/04 and, if that were the case, how it could be eliminated:
- We believe that the wording of groups 29/48 and 29/56 is correct and we see no overlap problems between group 29/56 and groups 29/02, 29/04.

L. Cojocaru

 Projet: C 406 Sous-classe: G 11 C
G06F

- 11/00 ---mémoires statiques G11C29/00; codage, décodage---
- C 17/50 . Conception assistée par ordinateur (pour la conception de circuits de test pour les mémoires statiques G11C29/54)

G11C

- C 29/00 **Vérification du fonctionnement correct des mémoires; Test de mémoires lors d'opération en mode de veille ou hors-ligne**
- N 29/02 . Détection ou localisation de circuits auxiliaires défectueux, e.g. compteurs de rafraichissement défectueux
- N 29/04 . Détection ou localisation d'éléments mémoires défectueux
- N 29/06 . . Test de prévieillissement
- N 29/08 . . Test fonctionnel, e.g. test lors d'un rafraichissement, auto-test lors d'une mise sous tension (POST) ou test distribué
- N 29/10 . . . Algorithmes de test, e.g. algorithmes par balayage de mémoire (MScan); Configurations de test, e.g. configurations en damier
- N 29/12 . . . Dispositifs de test intégré, e.g. auto-test intégré (BIST)
- N 29/14 Implantation d'une logique de commande, e.g. decodeurs de mode de test
- N 29/16 utilisant des unités microprogrammées, e.g. machines à états
- N 29/18 Dispositifs pour la génération d'adresses; Dispositifs pour l'accès aux mémoires, e.g. détails de circuits d'adressage
- N 29/20 utilisant des compteurs ou des registres à décalage à rebouclage linéaire (LSFR)
- N 29/22 Accès à des mémoires sérielles
- N 29/24 Accès à des cellules additionnelles, e.g. cellules factices ou cellules redondantes
- N 29/26 Accès à des réseaux multiples (29/24 a priorité)
- N 29/28 Réseaux multiples dépendants, e.g. réseaux à bits multiples
- N 29/30 Accès à des réseaux uniques
- N 29/32 Accès séquentiel; Test par balayage
- N 29/34 Accès simultané à des bits multiples

- N 29/36 Dispositifs de génération de données, e.g. inverseurs de données
- N 29/38 Dispositifs de vérification de réponse
- N 29/40 utilisant des techniques de compression
- N 29/42 utilisant des codes correcteur d'erreurs (ECC) ou contrôle de parité
- N 29/44 Indication ou identification d'erreurs, e.g. pour réparation
- N 29/46 logique de déclenchement de test
- N 29/48 . . . Dispositifs dans les mémoires statiques spécialement adaptées au test par des moyens externes à la mémoire, e.g. utilisant un accès direct à la mémoire (DMA) ou utilisant des chemins d'accès auxiliaires (équipement externe pour tests 29/56)
- N 29/50 . . Test aux marges, e.g. test de vitesse, voltage ou courant
- N 29/52 . Protection du contenu des mémoires; Détection d'erreurs dans le contenu des mémoires
- N 29/54 . Dispositifs pour concevoir les circuits de test, e.g. outils de conception pour le test (DFT)
- N 29/56 . Equipements externe pour test de mémoires statiques, e.g. équipement de test automatique (ATE); Interfaces correspondantes

P. Foglia

Project: C 406 Subclass: G 11 C

This project concerns an EP proposal for introducing subdivisions under main group G11C29/00 because of considerable file size and growth.

At the last meeting in June, the IPC Revision Working Group (IPC/WG/3) adopted most of the proposed groups (see Annex 16 to the project file). Furthermore:

- the EPO was invited to propose definitions of the terms "memory" and "store" (see Annex 17 to the project file)
- comments were invited on the correctness of the wording of groups 29/48 and 29/56, on the possible overlap between group 29/56 and groups 20/02 and 29/04 and on the definitions proposed by EP.

Comments

Comments were received from DE, GB, JP, EP, FR, RO.

DE, GB, EP, FR and RO favour the wording of groups 29/48 and 29/56 and see no overlap problems.

JP see an overlap between groups 29/04 and 29/56, and propose to eliminate it by creating a one-dot subgroup 29/01 referring to "static stores having circuits for testing".

GB also expressed some perplexities about the definitions proposed by EP and, among other, suggest to eliminate the word "circuits" from the definition of "memory".

FR agree with the definitions proposed by EP, and points to the fact that, whereas the term "store" is always used as a generic identification for a group of elements comprising a memory and auxiliary circuits, the term "memory" is also used with a generic meaning when designating particular types of memories like ROM, RAM, EPROM (see for instance the titles of 16/00 and 17/00), etc.

GB additionally raise some doubts about possible risks of overlap between groups G11C 11/4078 and the newly adopted 29/52.

Rapporteur's opinion

1) Given the favourable opinions of all commenting Offices, Rapporteur suggests to **maintain the titles** of groups 29/48 and 29/56 as adopted.

2) Also, considering that all but one commenting Offices do not see any overlap problems between group 29/56 and groups 29/02 and 29/04, Rapporteur proposes to **maintain the titles** of those groups as adopted.

3) On the issue of the **definitions proposed by EP**, although FR and EP expressed their support for the EP draft, Rapporteur takes note of FR and GB comments and favours GB proposal (see Annex 22 to the project file).

More explicitly, Rapporteur proposes to adopt the modifications as submitted by GB, i.e.:

- "memory" means a device, including storage elements, which can hold information to be extracted when desired
- "store" means a set of elements comprising at least one memory and other supporting circuits or arrangements therefor.

4) On the doubts about possible **risks of overlap** between groups G11C 11/4078 and the newly adopted 29/52.

Rapporteur agrees with GB that a clarification on this point is desirable.

Being this issue hereby raised for the first time, it was not possible to find in the project file information that explicitly addressed this point.

Hence, for reasons of expediency, Rapporteur investigated this matter by contacting the experts who proposed the scheme in the first place.

Speaking temporarily as EP delegate, we deem that the risk for such overlap is rather small for the following reasons.

The group 29/52 concerns arrangements that allow the protection of the memory content during the testing operations of the store to which such memory belongs.

In other words, when testing a store in which useful data has already been written, it is necessary to preserve such data from possibly being corrupted by the testing process itself.

In the art, such a feature is referred to as *transparent testing*, i.e. a testing operation that leaves unaltered the memory content.

Group 11/4078 concerns protection circuits for preventing inadvertent/unauthorised reading or writing, Status or Test cells. By looking at its hierarchical structure:

G11C 11/00	Digital stores characterised by the use of particular electric or magnetic storage elements;
Storage	elements therefor
G11C 11/21	. using electric elements
G11C 11/34	. . using semiconductor devices
G11C 11/40	. . . using transistors
G11C 11/401 forming cells needing refreshing or charge regeneration, i.e. dynamic cells
G11C 11/4063 Auxiliary circuits, e.g. for addressing, decoding, driving, writing, sensing or timing
G11C 11/407 for memory cells of the field-effect type
G11C 11/4078 Safety or protection circuits, e.g. for preventing inadvertent or unauthorised reading or writing; Status cells; Test cells [7]

it is noticeable that the scope of said group is generally limited only to stores comprising cells needing regular refreshing (11/401), like Dynamic RAMs (DRAMs) and, within the realm of the auxiliary circuits therefor (11/4063), is limited to memory cells of the field-effect type (11/407). That's why we believe that the risk for said overlap is rather limited.

Speaking again as Rapporteur, we take notice of the EP argumentation, but envisage the possibility of tackling the even limited overlap problem by means of a possible appropriate reference, and suggest to use these considerations as a basis for discussion at the next meeting.

P. Foglia

The Canadian Intellectual
Property Office



L'Office de la propriété
intellectuelle du Canada

Project Number: C406

Date: November 10, 2000

Class/Subclass: G11C

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Referring to the definitions proposed by the EPO, it is CA's opinion that these definitions are clear and concise. It may be a good idea to include them as informative notes after the main group title.

We think the wording of 29/48 and 29/56 are acceptable and a way to avoid any possible overlap between 29/56 with 29/02 and 29/04 would be to amend 29/02 and 29/04 as follows:

- 29/02 . On-chip circuits or arrangements for the detection . . .
- 29/04 . On-chip circuits or arrangements for the detection . . .

Another option would be:

- 29/02 . Internal arrangements for the detection . . .
- 29/04 . Internal arrangements for the detection . . .

Either of these changes would remove any possible overlap with 29/56.

John Dowding



IPC/C 407/97 Rev.2
ORIGINAL: English/French
DATE: November 10, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	RU	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	H 01 B
KIND OF REVISION: TYPE DE RÉVISION :	Creation of an indexing scheme Création d'un schéma d'indexation		

ANNEX/ ANNEXE	CONTENT/CONTENU		SEE/VOIR C 407/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée		RU	--.01.97
2	Comments	/ Observations		SE	08.98
3	Comments	/ Observations		EP	08.98
4	Comments	/ Observations		FR	08.98
5	Comments	/ Observations		GB	08.98
6	Rapporteur report	/ Rapport du rapporteur		RU	02.99
7	Rapporteur proposal	/ Proposition du rapporteur		RU	02.99
8	Comments	/ Observations		DE	05.99
9	Rapporteur report	/ Rapport du rapporteur	Rev.1	RU	11.99
10	Rapporteur proposal	/ Proposition du rapporteur	Rev.1	RU	11.99
11	Decision of the Working Group	/ Décision du groupe de travail	Rev.2	WG	06.00
12	Comments	/ Observations	Rev.2	DE	09.00
13	Comments	/ Observations	Rev.2	GB	09.00
14	Comments	/ Observations	Rev.2	EP	09.00
15	Comments	/ Observations	Rev.2	JP	09.00

RAPPORTEUR : RU

TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 407/97	ORIGIN/ ORIGINE	DATE
16	Comments / Observations	Rev.2	FR	09/00
17	Comments / Observations	Rev.2	RO	09/00
18	Rapporteur report / Rapport du rapporteur	Rev.2	RU	10/00
19	French version of approved amendments / Version française des modifications approuvées	Rev.2	FR	10/00
20	Comments / Observations	Rev.2	CA	11/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 407 (electrical) – Comments were invited on the correctness of Alternative 1 of Note (3) after the title of subclass H 01 B, proposed by the Rapporteur (see Annex 10 to the project file), in the light of the desirability of multiple classification in that subclass.

Projet C 407 (électricité) – Des observations ont été demandées sur l'exactitude de la variante 1 de la note 3) suivant le titre de la sous-classe H 01 B proposée par le rapporteur (voir l'annexe 10 du dossier de projet), compte tenu de la volonté d'introduire un classement multiple dans cette sous-classe.

ANNEX	53	H 01 B	[Project-Rapporteur : 407/RU]	<SC03062E>
	3/30	• •	plastics; resins; waxes	
N	<i>Note(s) after 3/30</i>			
			<i>Group 3/47 takes precedence over groups 3/32 to 3/46</i>	
N	3/47	• • •	<i>fibre-reinforced plastics, e.g. glass-reinforced plastics</i>	
C	3/48	• •	<i>fibrous materials (fibre-reinforced plastics 3/47)</i>	

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01B
	Date : 09.08.2000
DE - Comment — C 407	

Re: IPC/WG/3/3

on the correctness of note (3), see alternative 1 in annex 10 to the project file, in the light of the desirability of multiple classification in this subclass:

DE is in favour to create note(3), alternative 1. This note is absolutely necessary for introducing multiple classification in this technical field, unless the Guide to the IPC is not altered in a way that group titles starting with "characterised by" automatically invite for multiple classification.

Rainer Anders

UK Patent Office Comments	IPC Revision Project C407
Subclass H01B	Date 15 September 2000

Subgroup	Opinion	Comments
Note (3)	-	<p>We think this note as worded in annex 10 is too vague particularly “whenever both of these are described sufficiently to be of interest”. We think the classifier should be encouraged strongly to apply both when they are inventive and then encouraged also when they are of interest.</p> <p>Again, we think this should be referred to the reform group for consideration of both para. 70 of the Guide and multi-aspect classification in general.</p>

Jim Calvert

Project: C407
Subclass: H01B
Ref.: Annexes 10 and 11 of the project file

- On the correctness of the Note (3) -- see Alternative 1 in Annex 10 of the project file -- after the title of H01B in the light of the desirability of multiple classification in this subclass**

We support the introduction of the note.

Roberto Iasevoli

Japanese Patent Office

21 September 2000

Project:C-407

Subclass:H01B

We do not find any special problem with Note 3 after the title of subclass H01B as proposed in Annex 10.

Projet IPC / C **407**
Sous-classe **H 01 B**

Des observations ont été demandées :

- sur l'exactitude de la variante 1 de la note 3 suivant le titre de la sous-classe H01B

Le libellé de cette note devrait être clarifié, compte tenu de la volonté d'introduire un classement selon plusieurs aspects dans la sous-classe H01B.

Libellé proposé :

Dans la présente sous-classe, le classement selon plusieurs aspects s'applique aux conducteurs ou aux corps conducteurs et aux isolateurs ou aux corps isolants *caractérisés respectivement* par leur forme et leur composition, si ces deux aspects présentent un intérêt.

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RO COMMENTS Date:September2000

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PROJECT **C407**

CLASS/SUBCLASS **H01B**

-on the correctness of Alternative 1 of Note (3) after the title of subclass H01Bsee Annex 10 to the project file, in the light of the desirability of multiple classification in that subclass:

We support to create note (3), alternative 1. We consider that the note is necessary for introducing multiple classification.

L. Cojocaru

FEDERAL INSTITUTE OF INDUSTRIAL PROPERTY

RU rapporteur report	
Project: C 407	Date: 30/10/00 11:35 AM
Class/subclass: H01B	Page 1 of 1

IPC WG 3/3 invited comments on the correctness of Alternative 1 of Note (3) after the title of subclass H 01B, proposed by the Rapporteur (Annex 10 to the project file), in the light of the desirability of multiple classification in that subclass.

Comments were received from DE, GB, EP, JP, FR and RO. All offices except GB support the proposed Note (3) after the title of subclass H 01B. DE think that this note is necessary unless the Guide to the IPC is altered in a way that the group titles starting with "characterised by. . ." automatically invite for multiple classification.

GB think that the wording of Note (3) is too vague and that this should be referred to the reform group for consideration of both para. 70 of the Guide and multi-aspect classification in general.

FR suggest the modified wording of Note (3) (Annex 10 to the project file).

As the majority of offices support Alternative 1 of Note (3) after the title of subclass H 01B, R proposes to consider also the modified wording of this note proposed by FR in Annex 16 and to select more appropriate one.

E. Brill

Projet IPC / C 407
Sous-classe **H 01 B**

VERSION FRANÇAISE

Ce document a été établi sur la base de notre proposition, après consultation des autres offices et du Bureau international.

(ref : annexe 53 du document IPC/WG/3/3)

H 01 B

3/30 . . matières plastiques; résines; cires

N Note après
3/30

Le groupe 3/47 a priorité sur les groupes 3/32 à 3/46

N 3/47 . . . matières plastiques renforcées de fibres, p.ex. matières plastiques renforcées de verre

C 3/48 . . matériaux fibreux (matières plastiques renforcées de fibres 3/47)

The Canadian Intellectual
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intellectuelle du Canada

Project Number: C407

Date: November 10, 2000

Class/Subclass: H01B

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With regard to the Rapporteur proposal in Annex 10, **CA** prefers Alternative 1, since it gives us the option, as **DE** suggests, of choosing either form or material as the more important aspect. Since **CA** does not make use of indexing codes, this also allows us still to take advantage of the improvement in the schedule.

John Dowding



IPC/C 408/97 Rev.3
ORIGINAL: English/French
DATE: October 30, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	DE	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	H 01 L
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 408/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		DE	04.02.97
2	Comments / Observations		SE	08.98
3	Comments / Observations		JP	08.98
4	Comments / Observations		CA	08.98
5	Comments / Observations		EP	08.98
6	Comments / Observations		US	08.98
7	Comments / Observations		FR	08.98
8	Comments / Observations		GB	08.98
9	Comments / Observations		JP	08.98
10	Rapporteur report / Rapport du rapporteur	Rev.1	NO	05.99
11	Comments / Observations	Rev.2	JP	03.00
12	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00
13	Proposal / Proposition	Rev.3	EP	07.00
14	Comments / Observations	Rev.3	DE	09.00

RAPPORTEUR : NO TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 408/97	ORIGIN/ ORIGINE	DATE
15	Comments / Observations	Rev.3	GB	09.00
16	Comments / Observations	Rev.3	JP	09.00
17	Comments / Observations	Rev.3	RO	09.00
18	Comments / Observations	Rev.3	FR	09.00
19	Comments / Observations	Rev.3	SE	10/00
20	Rapporteur report / Rapport du rapporteur	Rev.3	NO	10/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 408 (electrical) – The Working Group discussed in detail classification of subject matter relating to “handling of semiconductor devices or wafers during manufacture”. It was noted that, in view of the broad definition of the term “handling”, given in paragraph 99 of the Guide to the IPC, it covers such technological operations as “conveying”, “supporting”, “storage”, and others. On the basis of the available submissions from its members, the Working Group identified the following places of the IPC where particular types of handling of semiconductor devices or wafers could currently be classified: B 25 J, B 65 D 85/90, B 65 G 49/07, H 01 L 21/68.

The Working Group agreed that, in order to provide a basis for the successful elaboration of the Project, it should be investigated whether any further places in the IPC could cover handling of semiconductor devices or wafers. In the opinion of the Working Group, this would facilitate solution of the central problem highlighted by the Project, namely, whether all types of handling of semiconductor devices or wafers should be collected in subclass H 01 L or some particular types of handling should be classified in relevant function-oriented places. The Working Group also indicated that a borderline, in respect of the given technology, between the area of semiconductor devices or wafers and the area of micro-structural devices (subclass B 81 C), where similar methods of handling may be applied, should be studied.

Comments were invited on:

- which places in the IPC, except above-indicated, could cover particular types of handling of semiconductor devices or wafers, supporting possible findings by citations of relevant patent documents;
- which type of the relationship between subclasses H 01 L and B 81 C existed in respect of handling of semiconductor devices or wafers;
- whether it was convenient to collect in one place of the IPC all the subject matter relating to handling semiconductor devices or wafers during manufacture.

The Working Group noted the intention of the EPO to submit, at an early date, a counter-proposal on this Project.

Projet C 408 (électricité) – Le groupe de travail a examiné de façon approfondie le classement de la matière relative à “la manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices pendant la fabrication”. Il a été noté que, compte tenu du sens large donné au terme “manipulation”, tel qu’il est défini au paragraphe 99 du guide de la CIB, ce terme recouvre des opérations techniques telles que “transport”, “maintien”, “entreposage”, etc. À partir des éléments fournis par ses membres, le groupe de travail a établi la liste des endroits de la CIB où des types déterminés de manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices pourraient actuellement être classés : B 25 J, B 65 D 85/90, B 65 G 49/07, H 01 L 21/68.

Le groupe de travail a convenu que, en vue de mener à bien l’élaboration du projet, il conviendrait de rechercher s’il existe dans la CIB d’autres endroits pouvant couvrir la manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices. De l’avis du groupe de travail, cela contribuerait à résoudre le problème central mis en lumière par le projet, à savoir convient-il de rassembler tous les types de manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices dans la sous-classe H 01 L ou des types particuliers de manipulation doivent-ils être classés dans des endroits pertinents axés sur la fonction? Le groupe de travail a aussi indiqué qu’il conviendrait d’étudier l’établissement d’une démarcation, en ce qui concerne la technique en question, entre le secteur des dispositifs à semi-conducteurs ou des plaquettes semi-conductrices et le secteur des dispositifs à microstructure (sous-classe B 81 C), lorsque des méthodes analogues de manipulation peuvent être utilisées.

Des observations ont été demandées :

- sur le point de savoir quels endroits de la CIB, à l’exception des endroits susmentionnés, pourraient couvrir des types déterminés de manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices, avec, à l’appui, indication des documents de brevet pertinents;
- sur le point de savoir quel type de liens il existe entre les sous-classes H 01 L et B 81 C en ce qui concerne la manipulation de mécanismes à semi-conducteurs ou de plaquettes semi-conductrices;
- sur le point de savoir s’il est approprié de placer dans un seul endroit de la CIB toute la matière relative à la manipulation de dispositifs à semi-conducteurs ou de plaquettes semi-conductrices pendant la fabrication.

Le groupe de travail a pris note de l’intention de l’OEB de présenter à brève échéance une contre-proposition sur ce projet.

Project: **C408**
Subclass: **H01L**

" **Background**

This project originally dealt with the subject-matter of handling of semiconductor (e.g. silicon) wafers during manufacture.

It was noted that, in view of the broad definition of the term "handling", given in paragraph 99 of the Guide of the IPC, it covers such technological operations as "conveying", "supporting", "storage" and others.

Several places of the IPC where particular types of "handling" of semiconductor wafers or devices could be currently identified, were identified in B25J, B65D 85/90, B65G 49/07, H01L 21/68, not to forget the subclass B81C for the area of micro-structural devices.

The aim of this study is to clarify the relationship between the cited subclasses or groups in respect to "handling" of semiconductor wafers or devices during manufacture and to verify whether and how would be convenient to collect in one place of the IPC all subject-matter related thereto.

" **As to the subclass B25J**

B25J **MANIPULATORS; CHAMBERS PROVIDED WITH MANIPULATION DEVICES**

Statistics: There are 160 patent documents carrying both the IPC symbol B25J and one of the ECLA symbols under H01L 21/00S4, which in EPO cover the subject-matter of handling semiconductor wafers.

Examples: EP0858866, EP0600851, EP0304370, US5851041, US5700046

Comments: This sub-class deals with manipulators, ultimately meant as programme-controlled industrial robots.

We can hardly see any overlapping or potential interference with the subject-matter of handling semiconductor wafers through a wafer processing system, e.g. for the manufacture or treatment of semiconductor devices or components.

A manipulator, e.g. a programme-controlled industrial robot, particularly meant for handling semiconductor wafers should anyhow receive a classification in this subclass as to the "function", plus any "application"-related symbol in the relevant field for handling semiconductor wafers.

" **As to the group B65D 85/86**

B65D	CONTAINERS FOR STORAGE OR TRANSPORT OF ARTICLES OR MATERIALS

85/00	Containers, packaging elements or packages, specially adapted for particular articles or materials ---
85/86	. for electrical components ---
85/90	.. Integrated circuits

Statistics: Only 58 patent documents carry the IPC symbol B65D 85/90, with the following distribution: US(25), FR(10), CA(5), CN(3), SG(3), OTHERS (10)

Examples: US5803269, US5944194, US5706951

Comments: This group deals with *containers*, meant here as shipping boxes or packages, for transporting integrated circuits, and sometimes by extension also semiconductor wafers, e.g. "to or out of" a wafer processing system.

Without ambiguity, this group does not deal with *conveying the wafers* "through" a wafer processing system, e.g. for the manufacture of semiconductor or solid-state devices or components.

Furthermore, a semiconductor wafer is not an electrical component, and therefore "*transport containers for semiconductor wafers*" do not fit in the group B65D 85/86.

This IPC group is not used at EPO and the ECLA symbol H01L 21/00S4K4 is used instead.

" **As to the group B65G 49/07**

B65G	TRANSPORT OR STORAGE DEVICES, e.g. CONVEYERS FOR LOADING OR TIPPING --- (transport or storage devices used in a particular handling or treatment of articles or materials, <u>see</u> the relevant subclass, e.g. ---
49/00	Conveying systems characterised by their application for specific purposes not otherwise provided for ---
49/05	. for fragile or damageable materials or articles ---
49/07	.. for semiconductor wafers ---

Statistics: 2040 patent documents carry the IPC symbol B65G 49/07.

Examples: US5810538, US5788458, WO9920552, FR2680503, EP0544995, US5740052

Comments: This group deals with methods and apparatus for *handling semiconductor wafers* through a wafer processing system, e.g. for the manufacture or treatment of semiconductor devices or components.

"*Handling*" means here, as the examples show, any of carrying, conveying, gripping, moving, positioning etc.

This IPC group is not used at EPO and the ECLA symbols of H01L 21/00S6 and sub-groups are used instead.

" **As to devices, components, containers and wafers under H01L**

Attention is drawn to the Note (2) after the H01L title, defining the terms *device*, *components*, and *containers* in the context.

- "*device*" means an electric circuit element;
- "*component*" means an electric circuit element out of a plurality of elements formed in or on a common substrate;
- "*container*" means an enclosure forming part of the complete semiconductor or solid-state devices and is essentially a solid construction in which the body of the device is placed.

Please note that "*containers*" as defined above are classified in the group H01L 23/02 and sub-groups.

The term "*wafer*" is not defined in the context, though one realizes that, in the field of semiconductor or solid-state devices or components, the wafers are certainly one essential "ingredient".

" **As to the group H01L 21/68**

H01L	SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR (conveying systems for semiconductor wafers B65G 49/07 ---
21/00	Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof
21/68	. Apparatus for supporting or positioning components during manufacture, e.g. jigs

Statistics: 20540 patent documents carry the IPC symbol H01L 21/68.

Examples: DE19510276, EP0704891, EP0706210, US5567199=DE4335980

Comments: The group deals with all aspects of positioning or supporting of semiconductor or solid-state devices or components during their manufacture or treatment.

As a matter of fact the title is limited to "components" only, whereas the broader "devices and components" would have been more accurate.

Yet the current group title would not cover the subject-matter of supporting or positioning semiconductor wafers, despite the fact that wafers are an ultimate "ingredient" for the manufacture of semiconductor devices or components.

In view of its large size the group should certainly remain, perhaps with a redefinition of its title though.

" **The JP proposal (annex 11) as to new groups H01L 21/67 to 21/684**

We reproduce here, for the reader's convenience, the proposal originally filed from JP (annex 11 of the project file) with some minor amendments:

H01L		
21/00		Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof
N 21/67	.	Apparatus for handling devices or components during manufacture
C 21/68	..	especially for supporting or positioning (21/682 takes precedence)
N 21/682	..	using chucks
N 21/684	..	using carriers or transport containers

Comments: In view of the definitions of "*components*" and "*containers*" within H01L, the use of these terms has to be judicious.

We believe it would be better to speak of "*devices or components*" and of "*transport containers*" to avoid any misunderstandings.

Yet, even with these amendments, the group 21/67 as suggested would not cover yet the *handling* of semiconductor wafers through a wafer processing system, e.g. for the manufacture or treatment of semiconductor devices or components.

" **As to the subclass B81C**

B81C **PROCESSES OR APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OR TREATMENT OF MICRO-STRUCTURAL DEVICES OR SYSTEMS** (making ---

Note

This subclass does not cover:

- processes or apparatus for the manufacture or treatment of purely electrical or electronic devices, which are covered by section H, e.g. group H01L21/00 ---

Comments: In view of the note after the title of B81C, any process or apparatus for the manufacture or treatment of purely electrical or electronic devices covered by section H, e.g. group H01L21/00, is to classify in H01L.

However processes or apparatus for a combined electrical / mechanical device or a purely mechanical device (which also can be made of silicon, but not using its semiconducting properties) should still be classified in B81C.

" **EPO general view**

In view of the study above, it seems that IPC provides only partially with the entries for the subject-matter of *handling* semiconductor wafers through a wafer processing system, e.g. for the manufacture or treatment of semiconductor devices or components.

Transport containers for semiconductor wafers should not be classified under B65D 85/90, since a semiconductor wafer is not an electrical component.

A manipulator, e.g. a programm-controlled industrial robot, for handling semiconductor wafers should receive a function-symbol in B25J, plus all application-related symbols, e.g. in B65G 49/07.

When the meaning of *handling* is restricted to conveying, then the right IPC place seems to be B65G 49/07.

However, *handling* can involve also gripping, moving, positioning etc.

Moreover, semiconductor wafers are an ultimate "ingredient" in the manufacture of semiconductor devices or components.

Therefore, in our experts' opinion, H01L 21/00 would be a more appropriate place for this subject matter, because the relevant features are quite specific to semiconductor manufacture.

Placing the subject-matter of handling semiconductor wafers under H01L would not conflict with the existing subclass B81C.

It is true though that multiple-classification involving the B81C subclass too should be used if the process or apparatus is not meant for purely electric or electronic devices only.

For all the reasons above, it seems appealing the idea of collecting all of *handling* semiconductor wafers under H01L.

In this regard, JP's proposal of annex 11 points in the right direction, but some changes would be involved.

Since *handling* includes conveying, the group B65G 49/07 should disappear.

Next, the right place under H01L should be defined, bearing in mind that group H01L 21/68 exists and due to its size it should remain and that the term "semiconductor wafer" has no precedent.

Moreover, the term "*supporting*" used in the original JP proposal in the title of the group 21/68 could be eliminated so to avoid the precedence rule to the group 21/682: a "*chuck*" is indeed a wafer support. The title of 21/68 could rather point to positioning, orientation or alignment. In that case the precedence rule becomes maybe superfluous.

Furthermore, EPO experts in the field would like to have a specific sub-entry for "*conveyance*", e.g. using air tracks.

A tentative proposal which is a development of the original JP proposal follows.

" **Proposal**

B65G

D 49/07 (transferred to H01L 21/67)

H01L SEMICONDUCTOR DEVICES --- (use of semiconductor devices ---

21/00 Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof

Note(s)
after
21/00 --- over groups 21/02 to 21/67

N 21/67 . Apparatus for handling, e.g. positioning or conveying, semiconductor or solid-state wafers through a wafer processing system for manufacturing semiconductor or solid-state devices or components; Apparatus for handling semiconductor or solid-state devices or components during manufacture or treatment

C 21/68 . . for positioning, orientation or alignment

N 21/682 . . using chucks, clamps or pinches

N 21/684 . . using carriers or transport containers (transport containers for finished electrical devices B65D 85/86)

N 21/686 . . for conveyance, e.g. using air tracks

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01L
	Date : 09.08.2000
DE - Comment — C 408	

Re: IPC/WG/3/3

which places in the IPC could cover particular types of handling of semiconductor wafers:

Beside the already mentioned places B25J, B65D 85/90, B65G 49/07, H01L 21/68 our document collection holds some documents on wafer-containers in group B65D 85/30.

which type of the relationship between subclasses H01L and B81C existed in respect of handling of semiconductor wafers:

Until now we had no problems with classifying documents in this field. Documents concerned with the handling of semiconductor wafers usually do not specify the type of the finished device which is finally produced on the semiconductor wafer.

whether it was convenient to collect in one place of the IPC all the subject matter relating to handling semiconductor wafers during manufacture:

DE suggest to collect all documents related to handling of semiconductor wafers during manufacture in maingroup H01L.

on the counterproposal of the EPO dated 07.07.2000:

DE agree with the results from the study on the present classification prepared by the EPO. DE fully support the EP counterproposal.

As a supplement to the EP counterproposal we propose to clarify the utilisation of the word "container" in maingroup H01L. Misinterpretations with the word "container" as it is used in subclass B65D can be avoided by replacing "container" by "housing" in H01L. The word "housing" in the same meaning is already used in other places of the IPC, eg H01S 5/022.

The replacement of "container" by "housing" is proposed in note (2) indent 5 and 7, following the title of H01L, H01L 21/48, 21/52, 21/54, 23/02, 23/043, 23/053, 23/06, 23/10, 25/04, 25/10, 31/0203 and 39/00.

UK Patent Office Comments	IPC Revision Project C408
Subclass H01L	Date 15 September 2000

General Comments

We agree with much of the analysis kindly provided by EP in Annex 13.

We think, however, that there is much clarification needed to the borderlines between the subclasses involved in this project.

Subclass	Opinion	Comments
B25J	–	We think the chance of significant overlap with H01L is small but we think for ease of use of IPC an informative reference both ways would be necessary
B65D 85/86		We think that such containers used in manufacture should be classified in H01L and those used for general transport, e.g. posting, should be classified in B65D. We suspect that posting wafers won't arise very often but we would like to avoid the possibility of confusion if possible. Although EP is strictly right that the wafers are not electrical components, they are a stage in the manufacture of electrical components. Therefore the distinctions between B65D and H01L in this respect definitely need clarifying in our view.
B65G 49/07	-	As conveying of wafers is almost always going to be during, or associated with, manufacture, we think now that this subgroup is misplaced and should be deleted.
H01L 21/67	–	
21/68	–	
21/682	–	
21/684	-	Given our comments re overlap with B65D above, we think the term “transport” should be avoided. If the containers referred to in 21/684 are different from those as defined in note (2) following the title of H01L then different terminology altogether should be used.
B81C		We think that any difficulties with B81C are largely theoretical and in most cases there will be either no overlap or there may be a case for classifying in both B81C and H01L.

Japanese Patent Office

21 September 2000

Project:C-408

Subclass:H01L

1. Comments

- (1) We think such note should be added after the title of H01L 21/67 that “handling” to be covered in group 21/67 should be for general purposes, applicable to various processes of semiconductor device manufacturing, and that “handling” specific to a certain device should be excluded.

(Example)

H01L 21/67 and its hierarchically lower subgroups should cover:

- * Conveying device for semiconductor wafers in a cluster tool

H01L 21/67 and its hierarchically lower subgroups should not cover:

- * Chucking systems specially adapted for treating problems specific to dry etching devices
- * Tables requiring precise positioning peculiar to photolithography system

- (2) Where new subgroups would be created to cover “supporting” and “positioning” separately, “chuck”, a narrower concept, should be covered in a hierarchically lower group under “supporting”.

2. Counterproposal

- | | |
|------------|--|
| H01L 21/67 | · Apparatus---(<u>not peculiar to a single process for the manufacture or treatment</u>) |
| 21/68 | · · for positioning----- |
| 21/682 | · · <u>for supporting</u> |
| 21/684 | · · · <u>using chucks, clamps or pinches</u> |
| 21/686 | · · using carriers or transport containers (----) |
| 21/688 | · · for conveyance--- |

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PROJECT **C408**

CLASS/SUBCLASS **H01L**

-which places in the IPC could cover particular types of handling of semiconductor wafers:

-which type of the relationship between subclasses H01L and B81C existed in respect of handling of semiconductor devices or wafers:

- whether it was convenient to collect in one place of the IPC all the subject matter relating to handling semiconductor devices or wafers during manufacture:

We fully support the EP counterproposal dated 07.07.2000.

We think that the particular types of handling of semiconductor devices components could currently be classified :B25J, B65 D 85/30, B65D85/90, H01L 21/68.

We believe that is convenient to collect in one place of IPC all the subject matter relating to handling semiconductor devices or wafers during manufacture.

L. Cojocaru

Projet IPC / C **408/97**
Sous-classe **H 01 L**

Nous ne sommes pas opposés à la proposition de l'OEB.

Étant donné la définition de la note (2) après le titre de la classe H01L, relative aux “ dispositifs ” et “ composants ”, éléments de circuit électriques, il est nécessaire d'élargir le libellé du groupe H01L 21/67 aux tranches semi-conductrices, éléments non électriques.

Cependant, il faut se demander si les règles du classement à la fonction doivent être abandonnées ici. En effet, dans le cas où le transport des tranches semi-conductrices pendant ou en dehors de la fabrication n'est pas spécialisé, c'est à dire non spécifique à leur nature, et ne diffère pas du transport des objets fragiles ou dommageables en général, la création d'une entrée en H01L pour un tel transport signifie le classement à l'application, ce qui peut conduire à classer des appareils semblables dans des endroits différents de la CIB.

Le groupe B65G 49/07 concerne le transport des plaquettes semi-conductrices (la notion d'emménagement étant en outre incluse dans le titre du B65G) et le groupe B65D 85/30 les réceptacles pour des objets sensibles aux dommages.

En créant une entrée sous le B65D 85/30 “ pour les plaquettes semi-conductrices ”, les schémas de classement seraient plus homogènes ;

Le transport et les conteneurs ne dépendent pas de la nature intrinsèque des plaquettes ou tranches semi-conductrices, mais plutôt de leurs caractéristiques externes.

Nous sommes d'accord avec les observations relatives aux sous-classes B25J et B81C.

Swedish Patent and Registration Office

IPC Revision Project C 408, subclass H01L

October 5th, 2000

COMMENTS relating to Annexes 12 and 13

Comments were invited on:

– which places in the IPC, except B25J, B65D 85/90, B65G 49/07 and H01L 21/68, could cover particular types of handling of semiconductor devices or wafers, supporting possible findings by citations of relevant patent documents:

We agree with DE, FR and RO that B65D 85/30 also covers some aspects of handling of semiconductor wafers.

– which type of the relationship between subclasses H01L and B81C existed in respect of handling of semiconductor devices or wafers:

H01L covers apparatus specially adapted for production of electrical semiconductor devices. B81C covers apparatus specially adapted for production of micro-structural devices. It is not clear where to classify apparatus that is not specially adapted for either of these uses.

The question to answer is whether the inventions we want to classify in the proposed new groups are really related to manufacture of semiconductor devices or whether they are related to micro-manufacturing in general. Any micro-manufacturing uses clean rooms and requires very accurate positioning – is the apparatus we want to classify in the proposed groups really specially adapted to manufacture of electrical semiconductor devices? We can of course decide that H01L is where we want to have all micro-manufacturing, but we should then remember that B81 was created because H01L could not be made a general place for micro-manufacturing.

We would prefer to have general micro-manufacturing apparatus in a general place. B81C is not the correct place either

– whether it was convenient to collect in one place of the IPC all the subject matter relating to handling semiconductor devices or wafers during manufacture:

We are not in favour of collecting all handling of semiconductor wafers under H01L. H01L 21/00 only covers apparatus "adapted for manufacture or treatment of ... devices". All handling of wafers is not part of this manufacture or treatment. Manufacture of wafers is not covered by H01L, but by C30B.

We are not opposed to the creation of new groups in H01L as long as they are of narrow and well-defined scope. We think the word "handling" should either be avoided or limited to specific circumstances, since it is defined in the Guide and has such wide and unclear scope.

Comments on the EPO counterproposal:

We agree with much of the analysis, but we have the following comments.

The coverage of **B25J** is not as narrow as the EP paper states – it is not limited to programme-controlled industrial robots. However, B25J is a general place and H01L is an application place, so there is no real conflict. A reference should be added after the B25J title, reflecting the eventual title of the new place.

Again, the coverage of **B65D** is not as narrow as EP state. Since "transporting" and "storage" are mentioned as examples of "handling" in the Guide, it is clear that B65D contains many "containers for handling". A couple of the example documents given at the beginning of this project are clearly such "containers for handling", for example EP 0692817 and EP 0678902. We think such documents should be classified in B65D, and we support the FR proposal of creating a specific group under B65D 85/30 if the number of documents justifies it. Such containers are not "apparatus adapted for manufacture or treatment of semiconductor devices" as required in H01L 21/00.

The meaning of the expression "electrical components" in the title of 85/86 is not clear (it is definitely not the same "components" as those mentioned in Note (2) to H01L!), but one has to assume it relates to finished components, not to components undergoing manufacture or treatment. One notes that containers etc. for articles sensible to damage by shock or pressure are referred out of 85/86, so 85/86 is intended to provide for solutions to other problems, for example electricity-related problems, such as sensitivity to electrical discharge, or mere packaging problems.

The EP paper misses an important part of **B65G 49/07** – the reference saying "apparatus for supporting or positioning semiconductor wafers during manufacture H01L 21/68". This is a confusing and surprising reference, since not only does it explicitly mention wafers rather than devices or components, it also seems to relate to manufacture of semiconductor wafers, not to manufacture of semiconductor devices or components. Manufacture of semiconductor wafers per se is not covered by H01L, so the reference is inaccurate as it stands – one has to assume that it after all relates to manufacture of devices or components. We can agree that apparatus that is specially adapted for production of semiconductor devices etc should be classified in H01L, but quite a number of the documents classified in B65G 49/07 relate to other conveying of wafers, so the group can hardly be deleted.

We agree that the **H01L 21/68** title is inaccurate – it should relate to "devices" or "components".

As stated above, we would prefer a different solution, but we have the following comments on the EP counterproposal:

B65G 49/07	EP	-	The situation needs to be clarified by correcting the reference, but the group can not be transferred to H01L in its entirety.
H01L 21/67	EP	X	. Apparatus for handling wafers in wafer processing systems, or conveying wafers through wafer processing systems, during manufacture or treatment of semiconductor or solid state devices; Apparatus for positioning, supporting or conveying devices or components during manufacture or treatment thereof
H01L 21/675	EP	X	. . Arrangements for conveying wafers, devices or components between treatment stations, e.g. using air tracks
H01L 21/68	EP	X	. . Arrangements for positioning or supporting wafers, devices or components
H01L 21/682	EP	+	. . . using chucks, clamps or pinches
H01L 21/681	EP	X	. . . using specially adapted carriers; using transport containers specially adapted for use during manufacture or treatment of devices or components (transport or storage containers for wafers or finished devices B65D)

We support the DE suggestion to replace the word "container" with "housing" in H01L. Groups 23/16 and 23/42 should be added to the list of places where changes need to be made.

Anders Bruun

The Norwegian Patent Office The Patent Department	Project: C 408
	Subclass: H01L
	Date: 2000.10.23
Rapporteur Report	

Introduction

This project concerns a DE proposal for introducing a one-dot subgroup in subclass H01L under main group 21/00, the new subgroup (21/69) relating to apparatus for handling or transporting semiconductor wafers during manufacture.

The previous session of the Working Group (IPC/WG/3/3) identified a number of places of the IPC where particular types of handling of semiconductor devices or wafers could currently be classified.

The Working Group (WG) concluded by inviting further comments on the following:

1. Which places in the IPC, except the already identified B 25 J, B 65 D 85/90, B 65 G 49/07, H 01 L 21/68, could cover particular types of handling of semiconductor devices or wafers, supporting possible findings by citations of relevant patent documents;
2. Which type of relationship existed between subclasses H 01 L and B 81 C with respect to handling of semiconductor devices or wafers;
3. Whether it was convenient to collect in one place of the IPC all the subject matter relating to handling semiconductor devices or wafers during manufacture.

Counter-proposal and comments:

Following the last session EP submitted an early tentative counter-proposal together with a study (Annex 13), developed from an earlier JP proposal (Annex 11) to clarify the relationship between the cited subclasses or groups and to verify whether it would be convenient and how to collect in one place of the IPC all subject matter related thereto.

Comments have been received from DE, JP, RO, FR and SE.

Regarding the three above questions 1-3 the following is an attempt to summarize the comments of the offices:

1. DE, RO and FR agree that the group B 65 D 85/30 could be an additional place which could cover particular types of handling of semiconductor devices or wafers.

2. EP states that multiple classification involving B 81 C should be used if the process or apparatus is not meant for purely electric or electronic devices only.
DE has until now had no problems with classifying in this field.
FR agrees with EP.
SE states that H 01 L covers apparatus adapted for the production of semiconductor devices and that B 81 C covers apparatus adapted for the production of micro-structural devices, but that it is unclear where to classify apparatus not specially adapted for either of these uses.
3. DE, EP and RO support the idea.
FR: will require a widening of the scope of subclass H 01 L to cover semiconductor wafers, non-electric elements
SE: not in favor of collecting all handling of semiconductor wafers under H 01 L.

General comments:

DE supports the EP counter-proposal and in addition proposes to clarify the word “container” in subclass H 01 L by replacing it with the word “housing”. This suggestion is supported by SE.

JP presents a revised counter-proposal, suggesting that the H 01 L 21/67 subgroup **be limited to general purpose** “handling” and that “handling” specific to a certain device should be excluded. A revised set of subgroups is suggested.

RO supports the EP counter-proposal.

FR does not oppose the EP counter-proposal, but suggests a new entry under subgroup B 65 D 85/30 “for semiconductor wafers”. The suggestion is conditionally supported by SE.

SE is not in favor of collecting all handling of semiconductor wafers under H 01 L, and would prefer to classify general micro-manufacturing in a general place of the IPC. Although preferring a different solution, SE has submitted detailed comments on the EP counterproposal.

Rapporteurs proposal:

Rapporteur proposes the following items to be dealt with at the next session of the Working Group.

- i) Confirm that the Working Group now has identified the places of the IPC required for the further work of this project.
- ii) Attempt to clarify if the submitted proposals and comments contain sufficient discussion of the subject matter to enable the agreement in the Working Group on a detailed classification, or whether a new revised proposal may be elaborated.
- iii) Define activities for further action.

Jan Ove Askautrud



IPC/C 410/97 Rev.3
ORIGINAL: English/French
DATE: November 10, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	DE	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	H 02 P
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU		SEE/VOIR C 410/97	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal	/ Demande de révision avec proposition détaillée		DE	10.02.97
2	Comments	/ Observations		EP	08.98
3	Counter-proposal	/ Contre-proposition		EP	08.98
4	Comments	/ Observations		SE	08.98
5	Comments	/ Observations		JP	08.98
6	Comments	/ Observations		CA	08.98
7	Comments	/ Observations		FR	08.98
8	Comments	/ Observations		GB	08.98
9	Comments	/ Observations		DE	05.99
10	Proposal	/ Proposition		DE	05.99
11	Rapporteur report	/ Rapport du rapporteur		DE	05.99
12	Comments	/ Observations	Rev.1	JP	07.99
13	Decision of the Working Group	/ Décision du groupe de travail	Rev.1	WG	07.99
14	Rapporteur report	/ Rapport du rapporteur	Rev.1	DE	10.99

RAPPORTEUR : DE TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 410/97	ORIGIN/ ORIGINE	DATE
15	Rapporteur report / Rapport du rapporteur	Rev.1	DE	10.99
16	Rapporteur proposal / Proposition du rapporteur	Rev.1	DE	10.99
17	Comments / Observations	Rev.1	RO	10.99
18	Comments / Observations	Rev.1	EP	11.99
19	Decision of the Working Group / Décision du groupe de travail	Rev.2	WG	12.99
20	Comments / Observations	Rev.2	GB	03.00
21	Comments / Observations	Rev.2	EP	03.00
22	Comments / Observations	Rev.2	JP	03.00
23	Comments / Observations	Rev.2	CA	03.00
24	Comments / Observations	Rev.2	SE	03.00
25	Comments / Observations	Rev.2	RO	03.00
26	Comments / Observations	Rev.2	DE	04.00
27	Rapporteur report / Rapport du rapporteur	Rev.2	DE	04.00
28	Rapporteur proposal / Proposition du rapporteur	Rev.2	DE	04.00
29	Rapporteur proposal / Proposition du rapporteur	Rev.2	DE	04.00
30	Decision of the Working Group / Décision du groupe de travail	Rev.3	WG	06.00
31	Comments / Observations	Rev.3	DE	09.00
32	Comments / Observations	Rev.3	JP	09.00
33	Comments / Observations	Rev.3	EP	09.00
34	Comments / Observations	Rev.3	FR	09.00
35	Comments / Observations	Rev.3	RO	09.00
36	Comments / Observations	Rev.3	SE	10/00
37	Comments / Observations	Rev.3	CA	11/00
38	Rapporteur report / Rapport du rapporteur	Rev.3	DE	11/00
39	Rapporteur proposal / Proposition du rapporteur	Rev.3	DE	11/00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 410 (electrical) – It was agreed that the Project should be continued on the basis of Alternative B proposed by the Rapporteur (see Annex 29 to the project file).

Comments were invited on:

- the wordings of groups proposed in the said Annex 29;
- the desirability of extending the scope of group H 02 P 21/00 to apply to electric machines, other than electric motors;
- how to provide an optimum basis for multiple classification in the field in question, and whether the proposed Note (2) following group H 02 P 23/00 (see the said Annex 29) could represent a desirable solution in this respect.

Projet C 410 (électricité) – Il a été décidé de poursuivre le projet sur la base de la variante B proposée par le rapporteur (voir l'annexe 29 du dossier de projet).

Des observations ont été demandées :

- sur le libellé des groupes proposés dans l'annexe 29;
- sur l'opportunité d'élargir la portée du groupe H 02 P 21/00 aux machines électriques autres que les moteurs électriques;
- sur les meilleurs moyens de favoriser le classement multiple dans le domaine en question et sur le bien-fondé, à cet égard, d'introduire la note 2 proposée après le groupe H 02 P 23/00 (voir l'annexe 29 du dossier de projet).

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: H 02 P
	Date: 09. August 2000
DE - Comment -- C 410	

Re.: IPC/WG/3/3**# on the wordings of groups proposed in the said annex 29:**

DE fully support the proposal of annex 29 with the one improvement given below.

on the desirability of extending the scope of group 21/00 to apply to electric machines, other than electric motors:

DE support the extent of the scope of main group 21/00 to other electric machines within the frame of subclass H02P. Then the new wording of 21/00 is

21/00 Arrangements and methods for the control of electric machines by field orientation, ie vector control.

how to provide an optimum basis for multiple classification in the field in question, and whether the proposed note (2) following group H02P 23/00 could represent a desirable solution in this respect:

for complete understanding of a typical document in this field, information on

- i) the kind of the motor (23/02 to 23/12)
- ii) the kind of wiring and circuit arrangement (23/14 to 23/30)
- iii) the kind of supply voltage (23/31 to 23/52)
- iv) the method of motor control (23/54 to 23/88 and 21/00 to 21/14, respectively)

is obligatory to know. In the frame of IPC this complete information is accessible by using multiple classification for technical aspects i) to iv). In annex 29 the multiple classification is managed by the note following group 21/00 in combination with note (2) following group 23/00.

Furthermore note (3) following group 23/00 in annex 29 stresses the fact that the technical aspect iv) is the central point of the whole.

Rainer Anders

Japanese Patent Office

21 September 2000

Project:C-410

Subclass:H02P

- the desirability of extending the scope of group H02P 21/00 to apply to electric machines, other than electric motors;

(1) We do not expect much effect even if extending the scope of group H02P 21/00 to apply to electric machines, other than electric motors. Because we believe that there are few such electric machines, other than electric motors, as controlled by field orientation.

- whether the proposed Note (2) following group H02P 23/00 (Annex 29) could represent a desirable solution in this respect.

(2) We believe the said Note (2) could be a desirable solution for multiple classification in this area.

Project: C 410 Subclass: H02P

Re: IPC/WG/3/3

Comments have been invited on the following items.

1) The wording of groups proposed in Annex 20 to the project file (Version B).

We support the wording proposed, but suggest some slight amendments:

- I) 21/02 . . Indirect field-rotated control, e.g. field phase angle calculation
- II) 23/00 --- "take precedence" instead of "takes precedence"

2) The desirability of extending the scope of group H 02 P 21/00 [...].

We support this extension by simply substituting in the title the word "motors" with "machines".

3) How to provide an optimum basis for multiple classification in the field in question [...]

We believe that the note following group 21/00 and respectively the second note following group 23/00 constitute an optimum basis for addressing the issue of multiple classification in this field. We'd just like to add that, due to the (under discussion) extension of the scope of group 21/00, the example contained in the note following such a group may be extended itself in order to take into account also other groups within this subclass other than groups 23/02 to 23/52.

P. Foglia

Projet IPC / C 410
Sous-classe H 02 P

Des observations ont été demandées :

- sur les libellés des groupes proposés dans l'annexe 29

Les libellés des groupes proposés sont acceptables.

Remarque : La formulation "caractérisé par le type" semble délicate pour le classement en fonction du type d'alimentation (à partir du point 23/31) pour lequel on classera généralement en priorité en H02M si l'invention porte véritablement sur l'alimentation.

- sur l'opportunité d'élargir la portée du groupe H02P 21/00 aux machines électriques autres que les moteurs électriques

Le libellé proposé pour ce groupe - *dispositif pour la commande et la régulation de moteurs électriques par commande de l'orientation du champ, c'est à dire commande par vecteur* -, semble limiter ce groupe à la commande par vecteur et ne pas permettre d'y classer des machines autres que des moteurs.

Certains documents témoignent de la pertinence d'avoir un groupe élargi : par exemple, les documents WO98/09370 ou EP770282 qui concernent des convertisseurs de tension à commande vectorielle.

Le libellé actuel en deux parties séparées par un point-virgule permettait ce classement - *dispositif pour la commande et la régulation de moteurs électriques par commande de l'orientation du champ ; commande par vecteur* -

- sur le classement multiple (note 2 après le H02P 21/00)

Pas de remarques particulières.

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RO COMMENTS Date:September2000

Page: of

PROJECT **C410**

CLASS/SUBCLASS **H02P**

- the wording of group proposed in Annex 29:

We support the proposal of Annex 29.

-on the desirability of extending the scope of group 21/00 to apply to electric machines, other than electric motors:

We support the extend of scope of group 21/00 to apply to electric machines, other than electric motors.

- how to provide an optimum basis for multiple classification in the field in question, and whether the proposed Note (2) following group H02P 23/00 could represent a desirable solution in this respect:

We think that the Note (2) could be a desirable solution for multiple classification in this area.

L. Cojocaru

Swedish Patent and Registration Office

IPC Revision Project C 410, subclass H02P

October 9th, 2000

COMMENTS relating to Annex 30

Comments were invited on:

– **the wordings of groups proposed in Annex 29;**

SE supports the proposed group 21/00 with the addition of a subgroup for “Air gap flux based control” on one-dot level.

"Control by field orientation" is a subset of “vector control”. We suggest that the title should be either a two-part title, as in the existing scheme, or (preferably) should read “Arrangements and methods for control of electric machines by vector control, e.g. by control of field orientation”.

Regarding the note under 21/00, this may never be applicable since 23/00 will refer to other control methods than vector control.

We note that 23/12 relates to a control method and not to a type of motor. That method is only applicable to this type of motor and it could therefore be argued that it is the right place, but placing the group there still leads one to wonder about the philosophy of the scheme.

23/14 – is the difference between "wiring" and "winding" clear to the classifier?

The 23/16 title does not read well on from 23/14 – some linking words are missing. Should it be "with arrangements for switching...".

The 23/18 title does not read well on from 23/16 – should it say "for pole-changing"

23/24 – should it say "Arrangements for controlling..."? “Secondary impedance” is not clear, what does it mean? – losses?

23/36 – should it say "...supply voltage"?

23/28 – is DC meant to be a subset of “variable-frequency”?

23/42 – should it say "using bang-bang controllers"?

We suggest moving 23/44 to be a subgroup of 23/54.

23/46 – three or more levels of voltage?

23/54 – "characterised by the control method"? We propose changing the order of the groups, placing this group and its subgroups first.

23/64 – "Controlling by adding a dc current"

23/68 – "Controlling by a given slip frequency..."

23/70 – " Controlling the motor..."

23/72 – "specially adapted for damping of..."

23/88 – "specially adapted for optimising..."

– the desirability of extending the scope of group H02P 21/00 to apply to electric machines, other than electric motors;

Yes, there will be no contradiction in extending to electric machines, rotating or linear.

– how to provide an optimum basis for multiple classification in the field in question, and whether the proposed Note (2) following group H02P 23/00 (see the said Annex 29) could represent a desirable solution in this respect.

References to 21/00 or 23/00 may be necessary from 6/00 and 7/00

The proposed notes are clearly not acceptable. They would be very confusing to the user. The expression "multi-aspect classification" should not be used, since nobody outside the IPC working groups understands what it means. The classification rules in this area should be more specific and state clearly what is desired. The way it is proposed, it seems the intention is that classification should be made in any group where the title fits, regardless of what any hierarchically superior groups or their references say. This is not a proper way of developing the IPC. Before deciding on how to implement "multi-aspect classification" in this field we would like to see some examples of real documents and how they would be classified according to the new ideas.

We do not understand the intention behind the Note after 21/00, but we presume it is in order to give additional information about the type of apparatus on which the vector control is applied. If this is indeed the intention we would prefer a set of subgroups to 21/00 to cover that aspect. If this is not acceptable, the wording could be changed to "***When classifying in this group, it is desirable to also classify in groups xxx to xxx if the type of apparatus where vector control is applied is of interest***" – however, that would in effect be indexing by classification, and we are not in favour of that.

Note (1) after 23/00 looks very unusual. When we mean what this note says, we use a reference. We propose: "***When classifying in this group, it is desirable to also classify in group 21/00 if the use of vector control is of interest***". However, as stated above, we would prefer if subgroups similar to 23/02 – 23/52 could be introduced in 21/00 – then this note would be superfluous.

Notes (2) and (3) after 23/00 should be merged, since Note (3) makes no sense on its own. The implication of the proposed Note (3) is that 23/02, 23/14 and 23/31 are secondary classifications and that "primary" classification should be made in 23/54. In view of this it makes more sense to have 23/54 and its subgroups placed first. We propose "***Classification should primarily be made in groups 23/00 or 23/54 to 23/88. If the kind of motor, the kind of wiring or circuit arrangement, or the kind of supply voltage is of interest, classification should also be made in groups 23/02 to 23/52***".

Sture Elnäs

The Canadian Intellectual
Property Office



L'Office de la propriété
intellectuelle du Canada

Project Number: C410

Date: November 10, 2000

Class/Subclass: H02P

Page 1 of 1

The wording of the proposed groups appears to be acceptable. In particular, the wording of 23/00 in Annex 29 is more inclusive than that in the original proposal (Annex 1) with regard to 23/14 and 23/31.

CA is in favour of extending the scope of H02P 21/00 to include other electric machines, since it was the intent of isolating vector control of motors from other forms of control. To be consistent, all applications related to vector control would be better if classified here. Since this would overlap with H02P 9/00, 11/00, 13/00, 15/00 and 17/00, the note after 21/00 regarding multiple-aspect classifications would also apply to these groups and notes to this effect may be required in each of them.

Note 2 after 23/00 is an acceptable solution for multiple-aspect classifications.

John Dowding

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: H 02 P
	Date: 30. October 2000
DE – Rapporteur-Report - C 410	

Comments were received by DE (annex 31), JP (annex 32), EP (annex 33), FR (annex 34), RO (annex 35) and SE (annex 36).

Comments were invited by IPC/WG/3/3

- on the wordings of groups proposed in Annex 29

DE, JP and RO have no objections. EP and FR agree with few remarks. SE has a list of improvements and objections.

EP propose to shorten the example in group 21/02 and remark a clerical error in 23/00. Rapporteur prefers to keep the example as it is because of the fact that 'adding slip frequency' and 'adding proportional frequency' are the typical keywords for the classifier to recognize indirect field-orientated control in a document.

FR suspect a possible overlap between one-dot-group 23/31 and subclass H02M. Rapporteur proposes to clarify the problem by introducing a reference from 23/31 to H02M, keeping in mind this being a reference from a specific to a general place.

SE propose improvements on the titles of groups 21/00, 23/16, 23/18, 23/24, 23/36, 23/42, 23/46, 23/54, 23/64, 23/68, 23/70, 23/72 and 23/88. SE propose to change the order of one-dot-groups in maingroup 23/00 starting with 23/54. Rapporteur has included these improvements into the actual Rapporteur proposal.

SE propose to add a further one-dot-group 'Air gap flux based control' to 21/00. Rapporteur suspects overlap problems between this proposed group and the actual groups 'Rotor flux based control' and 'Stator flux based control', because the air gap affects the rotor as well as the stator flux based control.

SE note that 23/12 relates to a motor control method and not to a type of motor. That method is only applicable to this type of motor and it could therefore be argued that it is the right place. Rapporteur agrees with SE. Furthermore R. remarks that it is a very ancient and no longer used technique. R. thinks that 23/12 is good place for the documents from IPC 7 group 7/50 with a minimum of reclassification effort. The title is slightly modified in the actual Rapp. proposal.

SE ask whether the difference between 'wiring' and 'windings' is clear to the classifier. Rapporteur does not see any problems with the clear understanding of groups 23/14 to 23/20.

SE ask for the meaning of 'secondary impedance' in 23/24. Rapporteur thinks that the expression is clear for the man skilled in the art. The title of 23/24 is already used in the present IPC 7 group 7/625.

SE ask whether in 23/38 DC is meant to be a subset of 'variable-frequency'.
Rapporteur points out that the variable frequency in 23/38 is the AC voltage.

- on the desirability of extending the scope of group H02P 21/00 to apply to electric machines, other than electric motors

DE, EP, FR, RO and SE support the extent of scope of group 21/00 to electric *machines*. FR cite two documents with relevant examples.

JP does not expect much effect because they believe there are few such machines, other than electric motors, controlled by field effect.

Rapporteur does not see any reason for restricting vector control to electric motors. In the actual Rapp. proposal the words 'electric motors' are changed by 'electric machines'.

- how to provide an optimum basis for multiple classification in the field in question, and whether the proposed Note (2) following group 23/00 (see Annex 29) could represent a desirable solution in this respect

DE, JP, EP, FR and RO confirm the concept of multiple classification in this technical field which was already adopted in IPC/WG3/3.

SE has objections against the titles of the Notes in question and especially against the expression 'multi-aspect classification'. SE demand that the classification rules in this area should be more specific and state clearly what is desired. Furthermore SE ask for some examples of real documents.

On the other hand SE propose improved wordings for the Notes behind 21/00 and 23/00.

Rapporteur states that a clear majority confirm the concept of multiple classification in this field. Rapporteur took up improvements of the titles of the Notes, proposed by SE, and included them into the Rapporteur proposal.

Examples for multiple classification:

EP 942 522 A2	H02P 21/02	H02P 23/20
EP 615 336 A1	H02P 23/88	H02P 23/40
US 4 843 292	H02P 23/68	H02P 23/08

- Further remarks by the Rapporteur

Remaining tasks of the project will include

- adapting the rest of IPC 7 maingroups 5/00 and 7/00 to the new scheme and
- reconsidering the relations in between the different maingroups in H02P.

Rainer Anders

DEUTSCHES PATENT- UND MARKENAMT German Patent and Trademark Office	Class/Subclass: H 02 P
	Date: 30. October 2000
Rapporteur Proposal -- C 410	

H02P

Remark of the Rapporteur: Wordings changed compared to Annex 29 are underlined.

C 21/00 Arrangements and methods for the control of electric machines by vector control, e.g. by control of field orientation

Note: In this group usage of multiple classification is desirable.

When classifying in this group, it is desirable to also classify in other relevant groups of this subclass if the type of apparatus where vector control is applied is of interest, e.g. the kind of ac-motor (23/02), the kind of wiring or circuit arrangement of ac-motors (23/14), the kind of supply voltage of ac-motors (23/31)

- N 21/01 . Rotor flux based control
- N 21/02 . . Indirect field-orientated control, e.g. field phase angle calculation based on rotor voltage equation by adding slip frequency and speed proportional frequency [US 4 818 927, US 4 677 361]
- N 21/03 . . Direct field-oriented control
- N 21/04 . Stator flux based control
- N 21/06 . Estimation or adaptation of motor parameters, e.g. rotor time constant, flux, speed, current or voltage [EP 330 188, EP 436 138]
[DE 42 35 607, US 5 498 945, EP 47 900]
- N 21/12 . specially adapted for very low speeds
- N 21/14 . specially adapted for optimising the efficiency at low load
- N 23/00 **Arrangements and methods for the control of ac-motors (6/00 and 8/00 take precedence)**

N **Note:** In this group usage of multiple classification is desirable.

Classification should be made in groups 21/00 to 21/14 for vector control or in groups 23/54 to 23/88 for other than vector control. If the kind of motor, the kind of wiring or circuit arrangement, or the kind of supply voltage is of interest, classification should also be made in groups 23/02, 23/14 and 23/31, respectively.

Remark of the Rapporteur: The order of the one-dot-groups 23/02, 23/14, 23/31 and 23/54 is changed, but for the sake of clearness the old group-numbers of annex 29 are kept unchanged for the moment.

- N 23/54 . characterised by the control method (vector control 21/00)
- N 23/64 . . Controlling by adding a dc current (dc current braking 3/24)
[GB 958 231, US 2 847 630, US 3 786 327]
- N 23/68 . . Controlling by a given slip frequency, e.g. adding slip frequency and speed proportional frequency
[US 4 825 131, US 4 723 201, EP 93 929]
- N 23/70 . . Controlling the motor in four quadrants
[WO 88/8221, US 4 787 021, GB 2 200 259]
- N 23/72 . . specially adapted for damping motor oscillations, e.g. reducing hunting
[EP 174 741, US 4 511 834]
- N 23/76 . . Estimation of motor parameters e.g. rotor time constant flux, speed, current or voltage
- N 23/78 . . Observer control, e.g. using Luenberger observer, Kalman filter
[US 4 442 393, EP 680 138]
- N 23/88 . . specially adapted for optimising the efficiency at low load
[US 4 590 413, EP 615 336, US 4 800 326]
- N 23/02 . characterised by the kind of the motor
- N 23/04 . . Single phase motors, e.g. capacitor motors
[US 3 504 255, US 4 117 383]
- N 23/06 . . Linear motors [US 3 549 966, GB 1 269 159, US 4 013 014]
- N 23/08 . . Reluctance motors
- N 23/10 . . Commutator motors, e.g. universal motors, repulsion motors
- N 23/12 . . . Shifting the brushes of a commutator motor
- N 23/14 . characterised by the kind of wiring or circuit arrangement
- N 23/16 . . with arrangements for switching the windings, e.g. with mechanical switches or relays [DE 43 35 917, US 5 341 080]

- N 23/18 . . . for pole-changing
- N 23/20 . . Multiple windings or windings for more than three phases
[US 4 814 964, US 4 743 828]
- N 23/22 . . Variable impedance in stator or rotor circuit
- N 23/24 . . . with arrangements for controlling secondary impedance
- N 23/26 . . using magnetic devices with controllable degree of saturation, e.g. transducers
- N 23/28 . . using an ac generator to supply the motor, the motor being controlled by a control effected upon the generator
- N 23/30 . . using discharge tubes
- N 23/31 . characterised by the kind of supply voltage (power supply systems H02M)
- N 23/32 . . using supply voltage with constant frequency and variable amplitude
- N 23/34 . . . of single phase motors, e.g. of capacitor motors (commutator motors 23/10)
[US 5 091 686, US 5 276 392]
- N 23/36 . . using variable-frequency supply voltage, e.g. inverter or converter supply voltage
- N 23/38 . . . using dc to ac converters or inverters
- N 23/40 with pulse width modulation *[EP358225, EP413966]*
- N 23/42 using bang-bang controllers *[EP 541 253, US 4 306 182]*
- N 23/44 pulsing by guiding the flux-, current-, or voltage-vector on a circle or a closed curve, e.g. direct torque control
[US 4 763 060]
- N 23/46 with three or more levels of voltage
[US 5 155 675, EP 571 755]
- N 23/48 . . . using ac to ac converters without intermediate conversion to dc
- N 23/50 varying the frequency by omitting half waves
[EP 250 008, EP 311 031, US 4 300 077]
- N 23/52 . . using ac supply for both rotor and stator circuits, the frequency of supply to a least one circuit being variable



IPC/C 418/98 Rev.1
ORIGINAL: English/French
DATE: November 13, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	GB	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 01 C
KIND OF REVISION: TYPE DE RÉVISION :	Clarification of wordings Clarification de libellés		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 418/98	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		GB	12.98
2	Comments / Observations		EP	05.99
3	Comments / Observations		CA	05.99
4	Comments / Observations		RO	05.99
5	Comments / Observations		DE	05.99
6	Rapporteur report / Rapport du rapporteur		GB	09.99
7	Rapporteur proposal / Proposition du rapporteur		GB	09.99
8	Decision of the Working Group / Décision du groupe de travail	Rev.1	WG	11.00
9	French version of approved amendments / Version française des modifications approuvées	Rev.1	CH	11.00

RAPPORTEUR : GB TECHNICAL FIELD/DOMAINE TECHNIQUE : E

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

ANNEX	55	G 01 B	[Project-Rapporteur : 418/GB]	<SC03075E>
	Title	---- G 01 C; photogrammetry or videogrammetry G 01 C 11/00; measuring ----		
ANNEX	56	G 01 C	[Project-Rapporteur : 418/GB]	<SC03071E>
	<i>C</i> 11/00	<i>Photogrammetry or videogrammetry, e.g. stereogrammetry; Photographic surveying</i> ---- e.g. with theodolites, 1/00, 3/00, ----		
	<i>N</i> 11/36	• <i>Videogrammetry, i.e. electronic processing of video signals from different sources to give parallax or range information</i>		
ANNEX	57	G 01 S	[Project-Rapporteur : 418/GB]	<SC03077E>
	17/00	---- radio waves (photogrammetry or videogrammetry G 01 C 11/00)		
ANNEX	58	G 01 V	[Project-Rapporteur : 418/GB]	<SC03076E>
	8/00	---- optical means (photogrammetry or videogrammetry G 01 C 11/00; measurement of characteristics ----		
ANNEX	59	G 06 T	[Project-Rapporteur : 418/GB]	<SC03074E>
	<i>C Title</i>	---- subclasses, e.g. G 01 C, G 06 K, G 09 G, H 04 N)		

ANNEX 9

Session:	IPC/WG
Subclass:	G 01 B
Project(s):	C 418
Language:	F
Translator office:	CH
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 55

Mod. IPC entry Text or Instruction
type (interval)

	Titre	--- G 01 C; photogrammétrie ou vidéogrammétrie G 01 C 11/00; mesure---
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Session:	IPC/WG
Subclass:	G 01 C
Project(s):	C 418
Language:	F
Translator office:	CH (Proposition de traduction 20.09.00)
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 56

Mod. IPC entry Text or Instruction
type (interval)

C	11/00	Photogrammétrie ou vidéogrammétrie, p. ex. stéréogrammétrie; Levers photographiques --- p.ex. avec des théodolites, 1/00, 3/00, ---
N	11/36	. <i>Vidéogrammétrie, c. à d. traitement électronique de signaux vidéo provenant de différentes sources pour obtenir des informations sur la parallaxe ou la distance</i>

Session:	IPC/WG
Subclass:	G 01 S
Project(s):	C 418
Language:	F
Translator office:	CH (Proposition de traduction 20.09.00)
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 57

Mod. IPC entry Text or Instruction
type (interval)

	17/00	--- ondes radio (photogrammétrie ou vidéogrammétrie G 01 C 11/00)
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Session:	IPC/WG
Subclass:	G 01 V
Project(s):	C 418
Language:	F
Translator office:	CH (Proposition de traduction 20.09.00)
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 58

Mod. IPC entry Text or Instruction
type (interval)

	8/00	--- moyens optiques (photogrammétrie ou vidéogrammétrie G 01 C 11/00; mesure des caractéristiques ---)
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Session:	IPC/WG
Subclass:	G 06 T
Project(s):	C 418
Language:	F
Translator office:	CH (Proposition de traduction 20.09.00)
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 59

Mod. IPC entry Text or Instruction
type (interval)

C	Titre	--- sous-classes appropriées, p.ex. G 01 C, G 06 K, G 09 G, H 04 N)
---	-------	---



IPC/C 419/98 Rev.1
ORIGINAL: English/French
DATE: November 13, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	RU	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 01 M
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 419/98	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		RU	12.98
2	Comments / Observations		EP	05.99
3	Comments / Observations		SE	05.99
4	Comments / Observations		CA	05.99
5	Comments / Observations		RO	05.99
6	Comments / Observations		JP	07.99
7	Comments / Observations		GB	07.99
8	Comments / Observations		DE	09.99
9	Rapporteur report / Rapport du rapporteur		RU	09.99
10	Rapporteur proposal / Proposition du rapporteur		RU	09.99
11	Decision of the Working Group / Décision du groupe de travail	Rev.1	WG	09.00
12	Comments / Observations	Rev.1	EP	09.00
13	Comments / Observations	Rev.1	JP	09.00
14	French version of approved amendments / Version française des modifications approuvées	Rev.1	FR	09.00

RAPPORTEUR : RU TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 419/98	ORIGIN/ ORIGINE	DATE
15	Comments / Observations	Rev.1	FR	09.00
16	Comments / Observations	Rev.1	CA	09.00
17	Comments / Observations	Rev.1	RO	09.00
18	Comments / Observations	Rev.1	SE	11.00
19	Rapporteur report / Rapport du rapporteur	Rev.1	RU	11.00
20	Rapporteur proposal / Proposition du rapporteur	Rev.1	RU	11.00
21	French version of approved amendments / Version française des modifications approuvées	Rev.1	FR	11.00

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 419 (electrical) – Comments were invited on:

- the correctness of the wording of group G 01 M 15/08 (see Annex 60 to this report), in the light of its intended scope, or whether this group should also cover “monitoring the pressure in other parts of internal combustion engines”;
- whether the proposed group G 01 M 15/041 (see Annex 10 to the project file) was needed, in view of the existence of the similar group G 01 L 23/22;
- whether the proposed references to other areas of the IPC (see the said Annex 10) were appropriate, in the light of the residual nature of subclass G 01 M.

Projet C 419 (électricité) – Des observations ont été demandées :

- sur l’exactitude du libellé du groupe G 01 M 15/08 (voir l’annexe 60 du présent rapport), compte tenu de la portée envisagée pour ce groupe, ou sur le point de savoir si ce dernier doit aussi couvrir le “contrôle de la pression dans d’autres parties des moteurs à combustion interne”;
- sur la nécessité d’introduire le groupe G 01 M 15/041 (voir l’annexe 10 du dossier de projet), compte tenu de l’existence du groupe similaire G 01 L 23/22;
- sur l’opportunité des renvois à d’autres domaines de la CIB (voir l’annexe 10), eu égard au caractère résiduel de la sous-classe G 01 M.

ANNEX	60	G 01 M	[Project-Rapporteur : 419/RU]	<SC03078E>
N	15/02	•	<i>Details or accessories of testing apparatus</i>	
N	15/04	•	<i>Testing of internal-combustion engines, e.g. diagnostic testing of piston engines</i>	
N	15/06	• •	<i>by monitoring positions of pistons or cranks</i>	
N	15/08	• •	<i>by monitoring the pressure in cylinders</i>	
N	15/10	• •	<i>by monitoring exhaust gases</i>	
N	15/12	• •	<i>by monitoring vibrations</i>	
N	15/14	•	<i>Testing of gas-turbine plants or jet-propulsion plants</i>	

Project: C419
Subclass: G01M
Ref.: Annexes 10 and 11 of the project file
Ref.: Annex 60 of the document IPC/WG/3/3

□ On the correctness of the wording of 15/08

We find that "*monitoring the pressure in cylinders*" is limitative and that the group should cover monitoring of pressure in general, namely not only in cylinders but also in air or fuel inlets or exhaust ducts, or in oil ducts of lubrication and cooling parts.

Therefore we suggest a different title, namely:

N 15/08 ~ ~ by monitoring pressure in cylinders or in fluid ducts, e.g. in oil lubrication or cooling parts

□ On the need of the group 15/041 for "by detecting misfire", especially in relation to the group G01L 23/22

We support the creation of this group which, as the title suggests, would cover the subject-matter of testing an engine by checking any lack of ignition in the same.

The group G01L 23/22 relates instead to devices for detecting or indicating knocks in the engine, what is quite different from checking any lack of ignition.

Therefore, we do not see any potential overlapping with the above-mentioned group of G01L (see also next paragraph).

□ On the need of the proposed references to other areas of the IPC

We find that groups G01L 23/22, 23/24 and 23/30 all are of interest when carrying out a search in respect of subject-matter of testing internal-combustion engines.

In annex 10, a reference was put under 15/00 to the general main group G01L 23/00.

This could be improved.

Since the above-mentioned G01L groups only relate to internal-combustion engines, we would prefer an informative note under 15/04 instead.

Likewise for the F01 and F02 groups already referred to.

Namely we propose the following amendment:

N 15/04 - Testing of internal-combustion engines, e.g. diagnostic testing of piston engines

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject-matter covered by the preceding group:

- Monitoring or diagnostic devices for exhaust-gas treatment apparatus F01N 11/00
- Indicating or supervising devices of internal-combustion engines F02B 77/08
- Running-in of internal-combustion engines F02B 79/00
- Testing internal-combustion engine ignition, e.g timing F02P 17/00
- Devices for detecting or indicating knocks in internal-combustion engines G01L 23/22
- Devices for measuring pressure in inlet or exhaust ducts of internal-combustion engines G01L 23/24
- Means for indicating positions of pistons or cranks of internal-combustion engines by measuring pressure G01L 23/30

Roberto Iasevoli

Japanese Patent Office

21 September 2000

Project:C-419

Subclass:G01M

** The correctness of the wording of G01M 15/08*

It is mainly cylinders and gas-exhausting part that would be the subject of monitoring the pressure in testing internal combustion engines.

Thus, we think group G01M 15/08 should cover only “monitoring the pressure in cylinders” and G01M 15/10 could properly cover “monitoring the pressure in other parts of internal combustion engines” (e.g. gas-exhausting part).

** Proposed group G01M 15/041*

We do not think there would be no overlapping problem between G01M 15/041 and existing group G01L 23/22. Because, the proposed group G01M 15/041 is for “misfire detection”, while group G01L 23/22 is for “devices for detecting knocks”.

** Whether the proposed references to other areas of the IPC were appropriate*

We think it would be better to insert a cross-reference between G01H 17/00 (Measuring mechanical vibrations...) and G01M 15/043 (monitoring vibrations). We find no other problem in the proposed references.

Projet IPC / C **419/98**
Sous-classe **G 01 M**

PROPOSITION DE VERSION FRANÇAISE

(ref : annexe 60 du document IPC/WG/3/3)

G 01 M

- N 15/02 . Détails ou accessoires pour appareils d'essai*
- N 15/04 . Essai des moteurs à combustion interne, p.ex. essai de diagnostic des moteurs à piston*
- N 15/06 . . par contrôle des positions des pistons ou des manivelles*
- N 15/08 . . par contrôle de la pression dans les cylindres*
- N 15/10 . . par contrôle des gaz d'échappement*
- N 15/12 . . par contrôle des vibrations*
- N 15/14 . Essai des ensembles fonctionnels de turbines à gaz ou de propulsion par réaction*

Projet IPC / C 419
Sous-classe G 01 M

Des observations ont été demandées :

- **sur l'exactitude du libellé du groupe G01M 15/037, compte tenu de la portée envisagée, ou sur le point de savoir si ce groupe doit aussi couvrir 'le contrôle de la pression dans d'autres parties des moteurs à combustion interne'.**

Nous sommes d'accord avec le libellé de ce groupe.

Nous ne voyons pas à priori quelles autres parties des moteurs peuvent être concernées par un tel contrôle de pression.

- **sur la nécessité d'introduire le groupe G01M 15/041, compte tenu de l'existence du groupe similaire G01L 23/22.**

Risque de chevauchement avec le G01L 23/22 qui concerne les dispositifs pour détecter les cognements dans les moteurs à combustion interne (bruits produits quand l'allumage est déréglé) ;

Risque de chevauchement avec le F02P 17/00 qui concerne les essais des systèmes d'allumage ;

Nous pensons donc que l'introduction d'un tel groupe n'est pas nécessaire.

- **sur l'opportunité des renvois à d'autres domaines de la CIB, eu égard au caractère résiduel de la sous-classe G01M**

Les renvois dans des sous-classes résiduelles le sont seulement à titre informatif.

Par conséquent, certains d'entre eux pourraient être introduits dans la note informative et d'autres supprimés.

The Canadian Intellectual
Property Office



L'Office de la propriété
intellectuelle du Canada

Project Number: C419

Date: October 5, 2000

Class/Subclass: G01M

Page 1 of 1

We agree that G01M 15/08 should cover "monitoring pressure in other parts of the engine". However, it should be noted that the subgroup now includes two distinct technologies since measurements in the cylinder are usually to determine the condition of the engine and other pressure measurements are generally for adjusting some control aspect of the engine. A two-part title would reflect this dual scope:

15/08 . . . by monitoring pressure in cylinders; by monitoring pressure
in other parts of the engine

With regard to G01M 15/041, it would seem that misfires and knock are two separate concepts. Engine knock is due to autoignition of the fuel-air mixture in the cylinder (McGraw-Hill Encyclopedia of Engineering). This is due to the flame front in the cylinder travelling slower than the pressure increase due to the fuel burnt so far. The increasing pressure then exceeds the ignition point of the remainder of the fuel-air mixture and it all ignites at once. Note that this topic is related to pressure and fits well in G01L. Misfire, on the other hand, is due to the spark plug firing at the wrong time. Since this is not related directly to pressure, it doesn't fit in G01L; so maybe it belongs here in G01M 15/00 or perhaps in F02P 17/00.

We are in favour of including the proposed references since they will help when searching.

John Dowding

**OFICIUL DE STAT PENTRU RO COMMENTS Date:September2000
INVEN_II _I M_RCI**

PROJECT C419

CLASS/SUBCLASS G01M

-on the correctness of the wording of group G01M 15/08, in the light of its intended scope, or whether this group should also cover "monitoring the pressure in other parts of internal combustion engines":

We think that the group should cover only " monitoring the pressure in cylinders".

-whether the proposed group G01M 15/041 was needed, in view of the existence of the similar group G01L 23/22:

We support the proposed group G01M 15/041 and we do not consider that it existing overlap problems between G01M 15/041 and existing group G01L 23/22.

- whether the proposed references to other areas of the IPC were appropriate, in the light of the residual nature of subclass G01M.

We think that it would better to insert a references to other area of the IPC, maybe G01H17/00.

L. Cojocaru

Swedish Patent and Registration Office

IPC Revision Project C 419, subclass G01M

October 3rd, 2000

COMMENTS relating to Annex 11

Comments were invited on:

– **the correctness of the wording of group G01M 15/08 (see Annex 60 to this report), in the light of its intended scope, or whether this group should also cover “monitoring the pressure in other parts of internal combustion engines”;**

We think that “pressure in cylinders” is the correct wording as this is a main issue in testing engines.

– **whether the proposed group G01M 15/041 (see Annex 10 to the project file) was needed, in view of the existence of the similar group G01L 23/22;**

Misfire detection is not a well-defined term as misfire may have many causes, knocks, mixture, or ignition. We think that 15/041 is not needed.

– **whether the proposed references to other areas of the IPC (see the said Annex 10) were appropriate, in the light of the residual nature of subclass G 01 M.**

We think the references should be added to the list of informative notes.

Additional comment: Usually documents to be classified in this main group focus on monitoring several different parameters. Should those documents be classified on 15/04, as is the consequence of paragraph 70 of the Guide, or should there be a specific entrance?

We suggest adding a group for such inventions:

15/05 . by combined monitoring of two or more different operating conditions

This would necessitate putting precedence references in groups 15/06 – 15/12.

Sture Elnäs

FEDERAL INSTITUTE OF INDUSTRIAL PROPERTY

RU rapporteur report	
Project: C 419	Date: 10.11.00 2:58 PM
Class/subclass: G 01M	Page 1 of 3

The third Working group invited comments on the following questions.

- **the correctness of the wording of group G01M15/08(see Annex 60 to the report) in the light of its intended scope, or whether this group should also cover "monitoring the pressure in other parts of internal combustion engines"**

SE,RO,JP and FR consider that the group G01M15/08 should cover "monitoring pressure in cylinders" only.

CA propose to broaden the scope of this group by adding to the title the second part: "by monitoring pressure in other parts of the engines".

JP think that "monitoring the pressure in other part of internal combustion engines (e.g. gas-exhausting part)" could be covered by G01M15/10.

In R`s opinion G01M15/10 does not cover monitoring pressure in exhaust gases, since this group is provided for monitoring nature and quantities (not pressure) of various components of exhaust gas (e.g. CO, CH).

EP think that the wording "monitoring the pressure in cylinders" is limitative and that this group should cover monitoring pressure not only in cylinders but also in air or fuel inlets or exhaust ducts, or in oil ducts of lubrication and cooling parts.

R agrees that that the scope of group 15/08 could be broaden and supports the EP wording.

- **whether the proposed group G01M15/041(see Annex 10 to the project file) was needed, in view of existence of a similar group G01L23/22.**

CA,RO,JP and EP do not see any overlapping with existing group G01L23/22.

FR oppose the creation of GO1M15/041, since overlapping with G01L23/22 and F02P17/00 exists.

SE think that "misfire detection" is not well-defined term and that 15/041 is not needed.

In R`s opinion "misfire detection" is prevail expression in patent literature (e.g. US 5492007, EP0744609).

R agrees with CA that "misfires" and "knock" are two separate concepts, so R supports this group and think that the reference to F02P17/00 should be included to the informative note.

- **whether the proposed references in other areas of the IPC(see the said Annex 10) were appropriate, in the light of the residual nature of subclass G01M.**

RO propose to include the reference to G01H17/00.

JP propose to insert a cross-reference between G01H17/00 and G01M15/043.

In the R`s opinion it seems useful to add to the list of informative notes a reference to G01H17/00.

CA are in favour of including the proposed references since they will help when searching.

FR and SE think the references should be added to the list of informative notes.

EP propose to add some references. Besides EP think that the informative note including references related to internal-combustion engines only should be placed under 15/04.

R finds EP proposal the most complete and agrees that the informative note should be placed under 15/04, since all references relate to internal-combustion engines only.

More over R suggests to include in the informative list the references to F02M65/00 and F02M19/01.

SE arise the question concerning patent document classification which focus the monitoring of several different operating conditions and suggest one-dot entry for such inventions.

In R`s opinion it seems useful to have a group covering a testing of engines by combined monitoring of two or more different operating conditions.

R`s proposal is enclosed.

V.Nyukhovsky

RU RAPPORTEUR PROPOSAL

Project: C 419 Class/Sub-class: G 01M Office: RU Date: 10.11.00 3:00 pm

Page 1 of 2

Type of amendment: C = Change of scope Translation of:

D = Deletion of the entry

N = Creation of the entry

Type	Place	Wording
C	15/00	Testing of engines
N	Note after the title of group 15/00	<p><u>Informative note</u> References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by preceding group:</p> <p>F02D Controlling combustion engines</p> <p>G01H17/00 Measurement of mechanical vibrations in general</p> <p>G01R31/00 Arrangements for electrical testing characterised by what is being tested not otherwise provided for</p> <p>G01N Analysing gases in general</p>
N	Note after the title of group 15/04	<p><u>Informative note</u> References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by preceding group:</p> <p>F 01N 11/00 Monitoring or diagnostic devices for exhaust-gas treatment</p> <p>F 02B 77/08 Indicating or supervising devices of internal-combustion engines</p> <p>F 02B 79/00 Running in of internal-combustion engines</p> <p>F 02M 19/01 Apparatus for testing, tuning or synchronising carburettors, e.g. carburettor flow stands.</p> <p>F 02M 65/00 Testing fuel-injection apparatus</p>

- F 02P 17/00 Testing internal-combustion engine ignition, e.g. timing
- G 01L 23/22 Devices for detecting or indicating knocks in internal-combustion engines
- G 01L 23/24 Devices for measuring pressure in inlet or exhaust ducts of internal combustion engines
- G 01L 23/30 Means for indicating positions of pistons or cranks of internal-combustion engines by measuring pressure
- N Note after 15/04 Group 15/05 takes precedence over groups 15/06-15/12
- N 15/05 . . by combined monitoring of two or more different operating conditions
- N 15/08 . . by monitoring pressure in cylinders or in fluid ducts e.g. in oil lubrication or cooling parts
- N 15/11 . . by misfire detection
- C 15/14 . Testing of gas-turbine plants or jet-propulsion plants
- N Note after the title of 15/14 Informative note
References listed below indicate IPS places which could also be of interest when carrying out a search in respect of the subject matter covered by preceding group:
F02K 9/96 Rocket-engine plants characterised by specially adopted arrangements for testing or measuring

V.Nyukhovsky

Projet IPC / C **419**
Sous-classe **G 01 M**

VERSION FRANÇAISE

Ce document a été établi sur la base de notre proposition, après consultation des autres offices et du Bureau international.

(ref : annexe 60 du document IPC/WG/3/3)

G 01 M

- N 15/02 . Détails ou accessoires pour appareils d'essai*
- N 15/04 . Essai des moteurs à combustion interne, p.ex. essai de diagnostic des moteurs à piston*
- N 15/06 . . par contrôle des positions des pistons ou des manivelles*
- N 15/08 . . par contrôle de la pression dans les cylindres*
- N 15/10 . . par contrôle des gaz d'échappement*
- N 15/12 . . par contrôle des vibrations*
- N 15/14 . Essai des ensembles fonctionnels de turbines à gaz ou de propulsion par réaction*



IPC/C 421/98 Rev.1
ORIGINAL: English/French
DATE: November 13, 2000

WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE
GENEVA/GENÈVE

COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	RU	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	G 21 B
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 421/98	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		RU	12.98
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7	Comments / Observations		GB	09.99
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10	Comments / Observations	Rev.1	JP	12.99
11	Decision of the Working Group / Décision du groupe de travail	Rev.1	WG	09.00
12	Comments / Observations	Rev.1	EP	09.00
13	Proposal / Proposition	Rev.1	EP	09.00
14	Comments / Observations	Rev.1	DE	09.00

RAPPORTEUR : RU TECHNICAL FIELD/DOMAINE TECHNIQUE : E

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 421/98	ORIGIN/ ORIGINE	DATE
15	Comments / Observations	Rev.1	JP	09.00
16	Comments / Observations	Rev.1	CA	09.00
17	Comments / Observations	Rev.1	RO	09.00
18	Comments / Observations	Rev.1	FR	09.00
19	Rapporteur report / Rapport du rapporteur	Rev.1	RU	11.00
20	Rapporteur proposal / Proposition du rapporteur	Rev.1	RU	11.00
21	French version of approved amendments / Version française des modifications approuvées	Rev.1	CH	11.00

J P COMMENTS

Date 14.11.99

**PCIPI/C-421 ; Subclass G21B
Re: Annex 8**

(1)We think that the wording should be modified as follows not to give an impression that cold nuclear fusion is a generally recognized natural phenomenon.

**(Present):G21B 3/00 Low temperature (cold) nuclear fusion reactors
(New) :G21B 3/00 Alleged low temperature (cold) nuclear fusion reactors**

(2)We feel that there is few necessity to create a new subgroup G21B 1/05 for the following reasons.

We understand that G21B 1/05 (Hybrid fission-fusion reactors), a subgroup under G21B 1/00 (Thermonuclear fusion reactors), does not include cold nuclear fusion reactors which would be covered by G21B 3/00. However, the initial RU proposal cited a reactor apparently using cold nuclear fusion as an example of Hybrid fission-fusion reactors (see WO94/29872).If reactors using cold nuclear fusion are included in hybrid fission-fusion reactors, it would be improper to create a subgroup of G21B 1/05 under G21B 1/00.

Besides, even if the meaning of “hybrid fission-fusion reactors” of G21B 1/05 would be limited to “thermonuclear fusion”, most documents related to hybrid reactors would be covered under G21B 1/09 (Regeneration systems of nuclear fuel) contained in the initial RU proposal (see US4663110). Thus, if 1/09 would be deleted and all these documents related to hybrid reactors should be covered under the proposed 1/05, it could contain such reactors placing fissionable materials as a target for laser fusion (see US4297165). The documents related to such technology are very few and can properly be covered by G21B 1/19 (Targets, e.g. for laser fusion) without creating a new subgroup of 1/05.

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 421 (electrical) – Comments were invited on (see Annex 62, relating to subclass G 21 B, to this report, unless otherwise indicated):

- the need for the example, proposed in group 1/01 (see Annex 9 to the project file), and, if it was needed, what wording it should have;
- desirable subdivisions of group 1/05 and wordings thereof;
- the correctness and clarity of the wording of group 1/13;
- the correctness of the second part of the title of group 1/17;
- the correctness of the title of group 3/00 and the need for its subdivisions;
- whether a reference from group 1/00 to group 3/00 was needed;
- whether the subdivision of subclass G 21 B was exhaustive and, if that were not the case, how an exhaustive classification scheme could be obtained, for example, by subordinating main groups 1/00 and 3/00 under a common main group;
 - whether any references were necessary between subclasses G 21 B and H 05 H, in particular in view of group H 05 H 1/02.

Projet C 421 (électricité) – Des observations ont été demandées (voir, sauf indication contraire, l'annexe 61 du présent rapport relative à la sous-classe G 21 B) sur :

- la nécessité de faire figurer l'exemple proposé dans le groupe 1/01 (voir l'annexe 9 du dossier de projet), et, si cet exemple est nécessaire, sur le libellé qui devrait être le sien;
- les subdivisions à opérer dans le groupe 1/05 et leur libellé;
- l'exactitude et la clarté du libellé du groupe 1/13;
- l'exactitude de la deuxième partie du titre du groupe 1/17;
- l'exactitude du titre du groupe 3/00 et la nécessité des subdivisions de ce groupe;
- la nécessité d'un renvoi du groupe 1/00 au groupe 3/00;
- la question de savoir si la subdivision de la sous-classe G 21 B est exhaustive et, si tel n'est pas le cas, sur la façon d'arriver à un schéma de classement exhaustif, par exemple, en plaçant les groupes principaux 1/00 et 3/00 sous un groupe principal commun;

– la question de savoir si des renvois sont nécessaire entre les sous-classes G 21 B et H 05 H, en particulier compte tenu du groupe H 05 H 1/02.

ANNEX	61	G 21 B	[Project-Rapporteur : 421/RU]	<SC03072E>
<i>C</i>	<i>1/00</i>	<i>Thermonuclear fusion reactors (low temperature nuclear fusion reactors 3/00)</i>		
<i>N</i>	<i>1/01</i>	• <i>with inertial plasma confinement</i>		
<i>D</i>	<i>1/02</i>	<i>(transferred to 1/00)</i>		
<i>N</i>	<i>1/03</i>	• <i>with magnetic or electric plasma confinement</i>		
<i>N</i>	<i>1/05</i>	• <i>Hybrid fission-fusion nuclear reactors</i>		
<i>N</i>	<i>1/11</i>	• <i>Details</i>		
<i>N</i>	<i>1/13</i>	• • <i>First wall; Blanket</i>		
<i>N</i>	<i>1/15</i>	• • <i>Particle injectors for producing thermonuclear fusion reactions, e.g. pellet injectors</i>		
<i>N</i>	<i>1/17</i>	• • <i>Vacuum chambers; Vacuum systems providing operation thereof</i>		
<i>N</i>	<i>1/19</i>	• • <i>Targets for producing thermonuclear fusion reactions</i>		
<i>N</i>	<i>1/21</i>	• • <i>Electric power supply systems, e.g. for magnet systems</i>		
<i>N</i>	<i>1/23</i>	• • <i>Optical systems, e.g. for irradiating targets, for heating plasma or for plasma diagnostics</i>		
<i>N</i>	<i>3/00</i>	<i>Low temperature nuclear fusion reactors, e.g. alleged cold fusion reactors</i>		
ANNEX	62	G 21 C	[Project-Rapporteur : 421/RU]	<SC03073E>
	Title	--- G 06 G 7/54; fusion reactors, hybrid fission-fusion reactors G 21 B; ---		

Project: C421
Subclass: G21B
Ref.: Annex 11 of the project file
Ref.: Annex 61 of the document IPC/WG/3/3

□ On whether any references were necessary between subclasses G21B and H05H, in particular in view of group H05H 1/02

In the opinion of our expert working in the field of "Plasma techniques" and "Fusion reactors" the problem under question is far to be resolved by simply adding references.

As a matter of fact we find that all subject-matter relating to "Handling plasma" and particularly to "confining plasma", which is today classified under the groups H05H 1/02 to 1/22, is nowadays very inherent to fusion reactors only.

Therefore we suggest that all groups H05H 1/02 to 1/22 should be transferred to G21B and that the G21B scheme under question should be further revised in order to accommodate the suppressed groups coming from H05H.

Particularly, we find that creation of groups G21B 1/01, 1/03, 1/15, 1/19 and 1/23 would be possible *if and only if* a joint transfer of the groups H05H 1/02 to 1/22 to this area of G21B was envisaged.

Should the WG approve this last point (transfer of groups H05H 1/02 to 1/22 toward G21B), EPO is ready to submit a detailed proposal pointing in that direction.

□ On the need for an example, for proposed group 1/01, and what wording it should have

We are not in favour of an example and --- with reference to the DE comments dated 09.08.2000 --- we think that the DE-suggested example "*e.g. by laser confinement*" would be misleading, since the use of laser is not a technique for inertial confinement, but for plasma ignition (laser trapping and confinement is classified under H05H 3/04).

□ The (deleted) group 1/02

We apologize for a later comment on this point, but our expert in the field found very regrettable that this group was deleted: the fusion reaction initiated by the collision of a beam of particles with other particles is a very peculiar technique that should remain as a sub-group of the group 1/00.

□ On desirable subdivisions of group 1/05 and wordings thereof

From the number of documents in our collection we see no need for subdividing group 1/05. Wording is clear enough for the man skilled in the art. □ **On the correctness and clarity of the wording of 1/13**

Wording is clear enough for the man skilled in the art (see next paragraph too).

□ **A new group 1/14 for "Divertors"**

Our expert in the field found that, while considering an entry for "First wall" and "Blanket", one should not forget the "Divertors", which are operatively connected to the above mentioned devices, with their own specific aspects.

Therefore we suggest the introduction of a new two-dot entry under 1/11:

N 1/13 ^ ^ First wall; Blanket (1/14 takes precedence)

N 1/14 ^ ^ Divertors

□ **On the correctness of the second part of the title of group 1/17**

The second part is not clear enough.

We think that the title "*Vacuum chambers; Vacuum systems*" would be clearer.

□ **On the group 1/23 for "Optical systems ..."**

We object the adoption of this group as our expert in the field cannot see either enough statistics or rate of applications such to justify a new group.

Besides, at present this subject-matter is included in the group H05H 1/22: the adoption of the group 1/23 is possible only after the joint transfer of several groups from H05H to this area (see our remarks in the first paragraph of this note).

□ **A new group 1/25 for "Maintenance"**

Our expert in the field found that, while considering an entry for "Details", one should not forget the "Maintenance" aspects.

These could be covered by a sub-group of the group "Details" or equally well by a new one-dot entry. The latter is our favourite option.

Therefore we suggest the introduction of a new one-dot entry under 1/00:

N 1/25 ^ Maintenance, e.g. remote inspection, repair

□ **On the correctness of the title of group 3/00 and the need for its subdivision**

The title of the group 3/00 reads very clear.

From the number of documents in our collection we see no need for subdividing group 3/00.

□ **On whether a reference from group 1/00 to 3/00 is necessary**

The groups are clearly separated by the words "thermonuclear" and "low temperature", respectively.

Therefore we find the reference redundant, yet not wrong.

□ **On whether the subdivision of subclass G21B was exhaustive; whether main groups 1/00 and 3/00 were better subordinated under a common main group**

In view of the present status of fusion reactors technology, we are in favour for retaining two separate main groups, as adopted in WG3.

□ **Conclusions**

To summarize, we support the general ideas behind the proposal (annex 11 of the project file), yet with the mandatory requirement of establishing the congruity and avoiding any overlapping between H05H and G21B.

For the sake of clarity, hereby we submit a modified proposal.

Roberto Iasevoli

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: G21B
	Date : 09.08.2000
DE - Comment — C 421	

Re: IPC/WG/3/3

on the need for the example, proposed in group 1/01, and the wording it should have:

DE is in favour for the example. We propose the wording "eg laser confinement".

on desirable subdivisions of group 1/05 and wordings thereof:

From the number of documents in our file, related to this technical field, we see no need for a subdivision of group 1/05.

on the correctness and clarity of the wording of 1/13:

In our opinion the word is clear for the man skilled in the art.

on the correctness of the second part of the title of group 1/17:

The second part of the title seems to be not clear enough. We do not see a considerable restriction in the scope of the proposed group when the second part is totally left away.

on the correctness of the title of group 3/00 and the need for its subdivision:

In our opinion the title of group 3/00 including its example is excellent. The number of documents in our file, related to this technical field, does not justify a subdivision of 3/00.

whether a reference from group 1/00 to 3/00 is necessary:

The groups are clearly separated by the words "thermonuclear" and "low temperature", respectively. Therefore the reference is redundant.

whether the subdivision of subclass G21B was exhaustive; whether main groups 1/00 and 3/00 were better subordinated under a common main group:

We are happy with the scheme as adopted in WG3. Maingroup 1/00 represents subject matter in industrial scale, whereas maingroup 3/00 represents subject matter in laboratory scale. There are no common details. Therefore DE is in favour for retaining two separate maingroups.

whether any references were necessary between subclasses G21B and H05H, in particular view of group H05H 1/02:

In our opinion a limiting reference is necessary from H05H to G21B. This one already exists in the present IPC. In the other direction from G21B to H05H an informative reference is sufficient.

Rainer Anders

Japanese Patent Office

21 September 2000

Project:C-421

Subclass:G21B

(1) *Creation of G21B 1/05 (Hybrid fission-fusion reactors)*

Considering a small number of documents to be covered by the proposed group 1/05, we do not think it necessary to create group 1/05, let alone its subdivision.

Even if we reach a consensus on creation of 1/05, we should keep in mind that a hybrid fission-fusion nuclear reactors using a low temperature nuclear fusion could not be covered in G21B 1/05. Because, a low temperature nuclear fusion reactor is classified in the proposed maingroup G21B 3/00. Would it be a desirable result?

(2) *Others*

We have no other objections. We do not think it necessary to have more subdivisions than proposed at present, in view of the file size. We generally agree with the creation of proposed subgroups in the IPC other than G21B 1/05.



Project Number: 421

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Class/Subclass: G21B

Page 1 of 1

Since our number of documents in this area is small, we have no further comments.

John Dowding

**OFICIUL DE STAT PENTRU RO COMMENTS Date:September2000
INVEN_II _I M_RCI**

PROJECT C421

CLASS/SUBCLASS G21B

-on the need for the example, proposed in group 1/01, and the wording it should have:

We are in favor for the example. The wording it should have: "e.g. laser confinement".

- on the desirable subdivisions of group 1/05 and the wordings thereof:

We do not consider that is desirable subdivisions of group 1/05.

- on the correctness and clarity of the wording of 1/13:

We think that the wording of group 1/13 is clear.

- on the correctness of second part of the title of group 1/17:

We think that the wording of second part of the title 1/17 is not clear enough.

- on the correctness of the title of group 3/00 and the need for its subdivisions:

We think that the title of group 3/00 is correct. It seems not to be necessary to subdivide the group 3/00.

- whether a reference from group 1/00 to group 3/00 was needed:

We think that wordings of groups 1/00 and 3/00 are clearly and the reference was no needed.

- whether the subdivision of subclass G21B was exhaustive; whether main groups 1/00 and 3/00 were better subordinated under a common main group:

We think that it is not necessary to subordinated the main groups 1/00 and 3/00 under a common main group.

- whether any references were necessary between subclasses G21B and H05H, in particular in view of group H05H 1/02:

We think that it is necessary a note between subclasses G21B and H05H.

L. Cojocaru

Projet IPC / C **421/98**

Sous-classe **G 21 B**

Réf.: Annexe 11 du dossier de projet

Réf.: Annexe 61 du document IPC/WG/3/3

Des observations ont été demandées :

- **sur la nécessité de faire figurer l'exemple proposé dans le groupe 1/01 :**
Nous pensons que cet exemple n'est pas nécessaire.

- **sur l'exactitude du libellé du groupe 1/13 :**
Ce libellé semble suffisamment clair.

- **sur l'exactitude de la deuxième partie du titre du groupe 1/17:**
La deuxième partie de ce titre n'est pas claire. Titre proposé: " Vacuum chambers; Vacuum systems ".

- **sur l'exactitude du titre du groupe 1/30 et la nécessité des subdivisions de ce groupe:**
Ce titre semble suffisamment clair et des subdivisions ne sont pas nécessaires.

- **sur la nécessité d'un renvoi du groupe 1/00 au groupe 3/00:**
Nous sommes d'accord avec les observations DE du 9/08/00 et celles de l'OEB du 4/09/00. Ces groupes sont clairement séparés et un renvoi est inutile.

- **sur la question de savoir si la subdivision de la sous-classe est exhaustive, et si les groupes principaux 1/00 et 3/00 doivent être placés sous un groupe commun.**

Nous sommes en faveur de retenir deux groupes principaux séparés comme adopté à l'annexe 61.

- **sur la question de savoir si les renvois sont nécessaires entre les sous-classes G21B et H05H, en particulier compte tenu du groupe H05H 1/02 :**
L'OEB propose dans ses observations du 4/09/00 de transférer tous les groupes de H05H 1/02 à H05H 1/22 en G21B.

Nous ne sommes pas favorables à un tel transfert pour les raisons suivantes :

- De nombreux documents sont classés en H05H 1/02 à 1/22 (statistiques : FPAT :78 - EPAT :10 - PCTPAT :11) et se rapportent à la technique du plasma.

- La plupart de ces documents n'ont aucune application dans le G21B.

Ex :EP1033068 Dispositif servant à traiter du plasma

WO8606922 Générateur de plasma

FR2365928 Procédé d'évacuation de plasma indésirables

FR2555362 Appareil de traitement par plasma de substrats en forme de plaquettes.

Le renvoi dans le titre de la sous-classe H05H (réacteurs de fusion G21B) semble suffisant.

- **sur les groupes à deux points 1/21 et 1/23:**

Doit-on considérer "les systèmes d'alimentation électriques" et "les systèmes optiques" comme des détails des réacteurs nucléaires ou plutôt comme des dispositifs annexes qui seraient alors placés dans des groupes à un point.

FEDERAL INSTITUTE OF INDUSTRIAL PROPERTY

RU rapporteur report	
Project: C 421	Date: 10.11.00 3:11 PM
Class/subclass: G 21B	Page 1 of 4

The third meeting of the Revision Working Group approved a number of groups for reconsidered subclass G 21B and invited comments on the following questions.

Comments were received from EP, DE, JP, CA, RO and FR.

■ **the need for the example, proposed in group 1/01 (see Annex 9 to the project file) and, if it was needed, what wording it should have**

DE and RO are in favour for the example and think the wording should be:

"e.g. laser confinement" (DE suggestion).

EP and FR are not in favour of any example.

EP do not agree with the DE suggested wording of the example, since the use of laser is not a technique for inertial confinement but for plasma ignition.

R also thinks that the DE proposed example is not appropriate as laser is mainly used for heating and compressing plasma.

R considers the example unneeded in the wording of group 1/01

■ **desirable subdivisions of group 1/05 and wordings thereof**

From the number of documents relating to these subject matters DE, EP and RO see no need in subdividing group 1/05. JP think there is no necessity to create group 1/05. In JP opinion a hybrid fission-fusion nuclear reactors using a low temperature nuclear fusion should be covered by group 3/00, not 1/05.

R fully agree with JP opinion that fission-fusion nuclear reactors using a low temperature nuclear fusion should be classified in group 3/00, but group 1/05 is provided for hybrid fission-fusion reactors using a thermonuclear fusion.

■ **the correctness and clarity of the wording of group 1/13**

All offices think that the wording is clear enough for those skilled in the art.

EP suggest the introduction of a new entry under 1/11 for the divertorts, which are operatively connected to the subjects covered by 1/13.

R supports the EP proposed group for divertors. But in R's opinion divertor and blanket are the constructive parts of the first wall, so group 1/14 should be three-dot entry. Strictly speaking separate three-dot group should be created for "blankets" as for "divertors" if a number of documents justifies a new group.

■ **the correctness of the second part of the title of group 1/17**

The offices think that the wording of the second part of the 1/17 title is not clear enough. DE propose to delete it at all. EP and FR think that the title "Vacuum chambers; Vacuum systems" would be clear.

R supports two-parts title of group 1/17.

■ **the correctness of the title of group 3/00 and the need for its subdivisions**

All commenting offices think that the title of the group 3/00 is clear. In general opinion there is no need to subdivide this group from a number of documents.

■ **whether a reference from group 1/00 to group 3/00 was needed**

All commenting offices consider the reference redundant.

■ **whether the subdivision of subclass G 21B was exhaustive and, if that were not the case, how an exhaustive classification scheme could be obtained, e.g. by subordinating main groups 1/00 and 3/00 under a common main group.**

All commenting offices are in favour for retaining two separate main groups.

■ **whether any references were necessary between subclasses G 21B and H 05H, in particular in view of group H 05H 1/02.**

DE and RO think an informative reference in G21B to H05H is sufficient.

In EP opinion the problem of overlapping between the field "plasma techniques" and "fusion reactors" can not be resolved by simply adding references. EP think that subject matter relating to handling plasma and particularly to confining plasma which is classified under the groups H05H 1/02-1/22, is nowadays very inherent to fusion reactors only EP suggest to transfer all groups H05H 1/02-1/22 to G21B, accommodating them to the G 21B scheme. EP find that the creation of groups G 21B 1/01, 1/03, 1/15, 1/19 and 1/23 would be possible if and only if a joint transfer of the groups H05H 1/02 to 1/22 to this area of G 21B was envisaged.

FR do not share the EP opinion in respect of groups H 05H 1/02 to 1/22, because think that a number of documents classified now in H05H 1/02-1/22 relate to plasma techniques but not only to the subject matter of G21B. FR think the reference in the title of H05H to G21B is sufficient.

R agrees that most of groups H05H 1/02 to 1/22 are used for classifying thermonuclear reactors. Nevertheless **R** supports FR opinion that developing plasma techniques are applied also in other technical fields and the existing subdivision of H05H 1/02 should be kept as functionally-oriented place for handling plasma. **R** considers that some groups relating to plasma confinement and heating plasma in thermonuclear fusion reactors could be added to adopted scheme of G21B1/00 without deletion of H05H 1/02. Probably documents classified in H05H 1/02-1/22 could be reclassified in view of future reclassification work in G21B 1/00.

In **R's** opinion overlapping between H05H 1/02 and G21B was caused by the absence of appropriate groups in subclass G 21B.

As before **R** thinks the previously proposed modified reference in the title of H05H "use of plasma technique in thermonuclear fusion reactors G21B 1/00; - - -" is sufficient.

Comments on the other groups .

G21B 1/21, 1/23

FR think that the subject matter covered by groups 1/21 and 1/23 can not be considered as details of reactors but as auxiliary arrangements, so FR propose to transfer them on one-dot level.

R does not agree with this viewpoint because in **R's** opinion all auxiliary arrangements for thermonuclear reactor are implements thereof though they are located out of reaction chamber.

EP object the creation of group 1/23 for "optical systems" as can not see either enough statistic or rate of applications such to justify a new group. Besides, in EP opinion this subject matter is included in group H05H 1/22, so 1/23 could be adopted by the EPO only after the joint transfer of H05H 1/02-1/22 to G21B.

R does not see one-to-one correspondence between G21B 1/23 and H05H 1/22 as in **R's** opinion "injection heating" denotes heating with using injection of beams of neutral or charged particles and does not fall in optical systems. Proposed group G21B 1/23 covers optical systems which can be used for different applications exemplified in the wording of this group, i.e. for irradiating target, for plasma diagnostic.

G21B 1/25

EP suggest to add a new one-dot group for "maintenance".

If a number of documents is enough, **R** supports the creation of this group.

G21B 1/02 (deleted)

EP think that fusion reaction initiated by collision of a beam of particles with other particles is a very peculiar technique that should remain as a subgroup of the group 1/00.

In **R's** opinion the wording of the existing group 1/02 is very general for new subdivision. This technique could be covered by new groups 1/01, 1/15, 3/00. For example originally proposed group 3/06 was provided for using particles for nuclear fusion, e.g. muon-catalized fusion.

So **R** considers that group 1/02 should be transferred to 1/00, 3/00.

R proposes for the discussion at the working group EP proposal on the joint transfer of several groups from H05H to G21B.

Enclosed **R's** proposal is addition to the scheme approved at the third meeting of the Revision Working group (Annex 61 to IPC/WG/3/3)

G.Nenakhov

RU RAPPORTEUR PROPOSAL**Project: C 421 Class/Sub-class: G 21B****Office: RU****Date: 10.11.00 3:12 pm****Page 1 of 1**

Type of amendment: C = Change of scope

Translation of:

D = Deletion of the entry

N = Creation of the entry

Type	Place	Wording
C	1/00	(delete the reference to 3/00)
N	1/02	(transferred to 1/00, <u>3/00</u>)
N	1/14	. . . Divertors
N	1/17	. . Vacuum chambers; Vacuum systems
N	1/25 H05H	. Maintenance, e.g. remote inspection, repair
C	Title	- - - (use of plasma technique in thermonuclear fusion reactors G 21B 1/00; - - -

G.Nenakhov

ANNEX 21

Session:	IPC/WG
Subclass:	G 21 B
Project(s):	C 421
Language:	F
Translator office:	CH
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 61

Mod. IPC entry Text or Instruction
type (interval)

C	1/00	Réacteurs de fusion thermonucléaire (réacteurs de fusion à basse température 3/00)
N	1/01	. avec un plasma à confinement inertiel
D	1/02	(transféré en 1/00)
N	1/03	. avec un plasma à confinement magnétique ou électrique
N	1/05	. Réacteurs nucléaires hybrides fission-fusion
N	1/11	. Détails
N	1/13	.. Première enceinte; Zone de confinement
N	1/15	.. Injecteurs de particules pour la génération de réactions de fusion thermonucléaire, p.ex. injecteurs de pastilles
N	1/17	.. Chambres à vide; Installations de vide permettant le fonctionnement de ces chambres
N	1/19	.. Cibles pour la production de réactions de fusion thermonucléaire
N	1/21	.. Systèmes d'alimentation en courant électrique, p.ex. pour les systèmes magnétiques
N	1/23	.. Systèmes optiques, p.ex. pour l'irradiation de cibles, pour le chauffage du plasma ou pour le diagnostic du plasma
N	3/00	Réacteurs de fusion nucléaire à basse température, p.ex. réacteurs de fusion dite froide

Session:	IPC/WG
Subclass:	G 21 C
Project(s):	C 421
Language:	F
Translator office:	CH (Proposition de traduction 20.09.00)
Translation source session:	IPC/WG/3
Translation source annex filename:	Annex 62

Mod. IPC entry Text or Instruction
type (interval)

	Titre	--- G 06 G 7/54; réacteurs de fusion, réacteurs hybrides fission-fusion G 21 B; ---
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IPC/C 423/00

ORIGINAL: English/French

DATE: November 13, 2000

**WORLD INTELLECTUAL PROPERTY ORGANIZATION
ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE**

GENEVA/GENÈVE

**COMMITTEE OF EXPERTS OF THE IPC UNION
COMITÉ D'EXPERTS DE L'UNION DE L'IPC**

IPC REVISION PROJECT FILE/DOSSIER DE PROJET DE RÉVISION DE LA CIB

PROPOSAL BY: PROPOSITION DE :	DE	REVISION OF IPC AREA: RÉVISION DU DOMAINE DE LA CIB :	H 01 L
KIND OF REVISION: TYPE DE RÉVISION :	Creation of subgroups Création de sous-groupes		

ANNEX/ ANNEXE	CONTENT/CONTENU	SEE/VOIR C 423/00	ORIGIN/ ORIGINE	DATE
1	Revision request with detailed proposal / Demande de révision avec proposition détaillée		DE	12.98
2	Decision of the Working Group / Décision du groupe de travail		WG	09.00
3	Comments / Observations		EP	09.00
4	Proposal / Proposition		EP	09.00
5	Comments / Observations		DE	09.00
6	Comments / Observations		JP	09.00
7	Comments / Observations		CA	09.00
8	Comments / Observations		RO	09.00
9	Comments / Observations		RU	09.00
10	Comments / Observations		FR	09.00
11	Rapporteur report / Rapport du rapporteur		DE	11.00
12	Rapporteur proposal / Proposition du rapporteur		DE	11.00

RAPPORTEUR : DE

TECHNICAL FIELD/DOMAINE TECHNIQUE :

E

REQUEST FOR REVISION OF THE IPC

Class(es) or subclass(es): **H01L**

1. Demarcation of the area to be revised:

H01L 51/00 - 51/40

2. Reasons for the request (see document IPC/CE/28/5, paragraph 27):

Organic light emitting diodes or devices (OLED) are a new and heavily growing technical field. The present IPC gives no clear entry for this subject matter. The documents are now classified in H01L 33/00, H01L 51/00 or H05B 33/00.

3. Detailed proposal:

Submitted
herewith

We are prepared to
elaborate it

We are not in a position
to elaborate it

4. General outline, possible solutions, options, etc.:

DE propose to define H01L 51/00 as correct entry for organic light emitting diodes or devices (OLED). The improved wording of H01L 51/00 is an adaption to the new subject matter. For the technical background we refer to the enclosed copy of "IEEE Journal of Selected Topics in Quantum Electronics, Vol. 4 (1998), p.1 ff".

Proposing Office: German Patent and Trademark Office

Date: 03.11.1999

Signature: Anders

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01L
	Date : 03.11.1999
DE -Provisional Proposal— C	

Re: C. IPC 19/01

IPC revision program for the seventh revision period

H01L

- C 21/00 - - - groups 31/00 to 51/00 or of parts - - -
- C 21/02 - - - parts thereof
- C 23/00 Note - - - groups 31/00 to 51/00, which - - -
- C 27/00 - - - substrate (51/00 takes precedence; processes - - -
- C 33/00 - - - thereof (51/00 takes precedence; couplings - - -
- C 49/00 - - - to 47/00 and 51/00 and not provided - - -
- C 51/00 - - - oscillating, switching or light emitting, or capacitors or - - -potential-jump barrier, surface barrier or recombination area, using organic - - -
- N 51/12 . . . of light emitting devices, eg electrodes
- N 51/22 . . . adapted for light emission, eg organic light emitting diodes [OLED] or polymer light emitting devices [PLED] (materials with organic electroluminescence C09K 11/00; organic semiconductors lasers H01S 5/36
- N 51/24 . . . for displays; eg organic flat-panel displays

H01S

- N 5/36 . . . Organic semiconductor lasers (dye lasers 3/213)

H05B

- C 33/00 - - - H01L 33/00; organic light emitting devices H01L 51/22; lasers H01S 3/00 and 5/00; compositons - - -

Concerning our new revision request on "organic electroluminescence", dated Nov. 5th, 1999, we add the following example documents:

- H01L 51/12 EP 914 025;
- H01L 51/22 US 5 858 561, US 4 539 507;
- H01L 51/24 WO 99/12398;
- H01S 5/36 WO 99/35721.

EXCERPT FROM DOCUMENT IPC/WG/3/3/
EXTRAIT DU DOCUMENT IPC/WG/3/3

Project C 423 (electrical) – Comments were invited on the detailed proposal submitted by Germany (see Annex 1 to the project file, relating to subclass H 01 L), in particular on:

- the need for the proposed group 51/12;
- the desirability of including “organic light-sensitive devices” in the scope of main group 51/00;
- the relationship between main groups 27/00 and 51/00 in respect of the subject matter in question.

Projet C 423 (électricité) – Des observations ont été demandées au sujet de la proposition détaillée présentée par l’Allemagne (voir l’annexe 1 du dossier de projet relative à la sous-classe H 01 L), en particulier sur

- la nécessité du groupe proposé 51/12;
- l’opportunité d’inclure les “dispositifs organiques photosensibles” dans le groupe principal 51/00;
- les liens entre les groupes principaux 27/00 et 51/00 en ce qui concerne la matière en question.

Project: C423
Subclass: H01L
Ref: Annex 2 of the project file

□ As to organic light-emitting devices and light-sensitive devices

We agree with the German proposal which identifies H01L 51/00 as the correct entry for *organic light-emitting devices*.

We support also the creation of a new group H01S 5/36 for *organic semiconductor lasers*.

References to the group H05B 33/00, dealing with organic light emitting *electroluminescent devices*, and to the proposed group H01S 5/36, dealing with organic semiconductor *lasers*, should be introduced.

Besides, we believe that, at the stage of revising the content of the group 51/00, it is sensible to include there *organic light-sensitive devices* as well.

Furthermore, we would like the term *recombination zone* to be used instead of *recombination area*.

□ As to the proposed group 51/12 for "details of light emitting devices, e.g. electrodes"

We think that "details" are better classified together with the respective devices, rather than under a general group for "details".

We would therefore oppose the creation of the group 51/12.

As a matter of fact we would like even to suppress the existing group 51/10. There are to date only 51 documents which carry this IPC symbol, 41 of them being JP documents. However all of these 41 JP documents have also the symbol 31/08 (relating to photoresistors) and therefore it truly seems that the entry 51/10 is never used per se.

□ As to the integration of the devices in question: 27/00 vs 51/00

As to the integration of the above-considered devices, we think that 27/00 is the right place.

Integration of inorganic light-sensitive and light-emitting diodes is today classified under 27/00, in 27/14 and 27/15 respectively.

Integrated *hybrid* devices comprising organic and inorganic components together would not fit adequately under 51/00.

Therefore we would favour the introduction of an entry under 27/00 to cover integrated devices comprising organic components, with two subdivisions for light-emitting and light-sensitive devices respectively.

□ As to the group 51/24 for "displays, e.g. organic flat-panel displays"

We oppose the creation of this very "application-oriented" group.

Furthermore, organic flat-panel displays are examples of integrated devices and we have already given (see the previous paragraph) our reasons for we think that 27/00 is the right place for these devices.

□ Others

At the stage of reviewing the wording under 51/00, we have noticed that a reference to the group 27/00 for devices consisting of a plurality of solid state components formed in or on a common substrate is missing: similar references exist instead under 29/00, 31/00, (it does not for 33/00), 35/00, 37/00, 39/00, 41/00, 43/00, 45/00 and 49/00.

We think this could be the occasion to introduce the same reference under the group 33/00.

Moreover, we find that the existing reference under 51/00 to the groups 21/312, 21/47, i.e. to entries relating to organic photo-resist layers, is really superfluous and should be eliminated.

□ Conclusions

To summarize, we support the DE proposal (annex 1 of the project file) in its general lines, even though with some amendments.

For the sake of clarity, hereby we submit a modified proposal.

Roberto Iasevoli

Project: C423
Subclass: H01L

H01L

- C 21/00 --- groups 31/00 to 51/00 or of parts ---
- C 21/02 --- parts thereof
- C 23/00 **Note** --- groups 31/00 to 51/00, which ---
- C 33/00 --- **thereof** (51/00 takes precedence; devices consisting of a plurality of solid state components formed in or on a common substrate 27/00; couplings ---
- C 49/00 --- to 47/00 and 51/00 and not provided ---
- C 51/00 **Solid state devices adapted for rectifying --- active part; Solid state devices sensitive to infra-red radiation, light, electro-magnetic radiation of shorter wavelength or corpuscular radiation and adapted for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation using organic materials as the active part, or using a combination of organic materials with other material as the active part; Solid state devices adapted for light emission with at least one potential-jump barrier or surface barrier or recombination zone using organic materials as the active part, or using a combination of organic materials with other material as the active part; Processes --- thereof** (devices consisting of a plurality of solid state components formed in or on a common substrate 27/00)
- D 51/10 (*transferred to 51/20*)
- 51/20 . Devices
- N 51/21 . . Solid state devices sensitive to infra-red radiation, light, electro-magnetic radiation of shorter wavelength or corpuscular radiation and adapted for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation using organic materials as the active part, or using a combination of organic materials with other material as the active part
- N 51/22 . . Solid state devices adapted for light emission with at least one potential-jump barrier or surface barrier or recombination zone using organic materials as the active part, e.g. organic light emitting devices (OLED) or polymer light emitting devices (PLED) (organic electroluminescent materials C09K 11/00; organic electroluminescent light sources H05B 33/00; organic semiconductor lasers H01S 5/36)
- C 27/00 --- parts thereof 21/70, 31/00 to 51/00; details thereof 23/00, 29/00 to 51/00; assemblies ---

Notes

(1) In groups 27/01 to 27/787, in the absence ---

N 27/28 . including components using organic materials as the active part, or using a combination of organic materials with other material as the active part

N 27/283 . . components sensitive to infra-red radiation, light, electromagnetic radiation of a shorter wavelength, or corpuscular radiation of a shorter wavelength, or corpuscular radiation and adapted for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation

N 27/287 . . components adapted for light emission with at least one potential-jump barrier or surface barrier or recombination zone

H01S

N 5/36 . . Organic semiconductor lasers (dye lasers 3/213)

H05B

C 33/00 --- H01L 33/00, and using organic materials H01L 51/22; lasers H01S 3/00 and 5/00; compositions ---

Roberto Iasevoli

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01S
	Date : 09.08.2000
DE - Comment — C 423	

Re: IPC/WG/3/3

on the need of proposed group 51/12:

the details of organic light emitting -and sensitive- devices are quite different from these of the rest of organic semiconductor devices, eg electrodes. Therefore an own entry is highly desirable.

51/12 .. of light-emitting or light-sensitive devices

on the desirability of including "organic light-sensitive devices" in the scope of maingroup 51/00:

DE is in favour for including "organic light-sensitive devices" in maingroup 51/00, as it is indicated by the already existing precedence note in 31/00 in the present IPC. The proposed wording of 51/00 can be further amended:

51/00 - - - oscillating, switching, *light-sensing* or emitting, or capacitors or - - - potential-jump barrier, surface barrier or recombination area, using organic - - -

on the relationship between main groups 27/00 and 51/00 in respect of the subject matter in question:

We prefer a precedence note in 27/00, indicating that all "organic semiconductor" devices are classified in 51/00.

Rainer Anders

Japanese Patent Office

21 September 2000

Project:C-423

Subclass:H01L

1. JP counterproposal

- (1) As stated in the first DE revision request, organic light emitting diodes or devices (OLED) are a new and heavily growing technologies and should be classified as a whole in a single independent technical field for them.
- (2) We propose to create H01L 51/50 (one-dot) as an independent group for OLED, and it should be subdivided into various subgroups.
- (3) All the OLED-related technologies should be classified here in H01L 51/50 and not in H01L 27/00. (H01L 27/00 is not used for OLED at all).

(Our counterproposal)

- 51/50 · Light emitting devices
- 51/52 · · Details
- 51/54 · · Devices
- 51/545 · · · for displays
- 51/56 · · Selection of materials
- 51/58 · · Processes of apparatus specially adapted for the manufacture of treatment of devices or parts thereof

2. Reasons for our counterproposal

- (1) H01L 51/00 is for “solid state devices adapted for rectifying, amplifying, oscillating or switching, or capacitors or resistors” with a very wide range. If we create new subdivisions for OLED under each of existing 51/10 to 51/40, there would be much confusion between OLED and such devices as above.
- (2) Also, our counterproposal allows organic non-light-emitting “solid state devices adapted for rectifying, amplifying, oscillating or switching, or capacitors or resistors” to be classified under 51/10 to 51/40 until these technologies become mature. This would avoid the confusion between these technologies and OLED-related ones.

(Comment on DE proposal)

H01L 51/00 has these one-dot subgroups of 51/10, 20, 30, and 40 under itself.

We wonder why the proposal presents further subdivision only for 51/10 and 51/20.

What are the reasons for thinking it unnecessary to create further subdivisions for 51/30 (materials) and 51/40 (process or apparatus for manufacturing) ?

(What would it do with various materials, manufacturing processes or apparatus for OLED?)



Project Number: C423

Date: September 21, 2000

Class/Subclass: H01L

Page 1 of 1

If the field of organic light emitting diodes or devices is growing as fast as **DE** suggests, then details such as the proposed 51/12 would appear to be necessary and **CA** would agree to support it.

Also, since 51/00 is changing to include all technology relevant to individual organic devices, then light-sensitive devices should be classified here as well. Since there is already a note in the title of 31/00 indicating that 51/00 takes precedence, it would be appropriate to leave this technology in 51/00.

With regard to the relationship between 27/00 and 51/00, we should note that all other main groups refer to 27/00 for integration of the respective devices, no matter what type of substrate is started with. So, for consistency, **CA** prefers that organic devices formed of a plurality of components should also be classified in 27/00.

John Dowding

**OFICIUL DE STAT PENTRU RO COMMENTS Date:September2000
INVEN_II _I M_RCI**

PROJECT C423

CLASS/SUBCLASS H01L

- on the need for the proposed group 51/12:
- on the desirability of including "organic light-sensitive devices" in the scope of main group 51/00:
- on the relationship between main groups 27/00 and 51/00 in respect of the subject matter in question:

We are in favour for including "organic light-sensitive devices" in the scope of main group 51/00 and in this respect, we think that the group 51/12 could also include "light-sensitive devices", near "light emitting devices"

All organic semiconductor devices should be classified in the main group 51/00 and this aspect could be mentioned in the main group 27/00.

L. Cojocaru

FEDERAL INSTITUTE OF INDUSTRIAL PROPERTY

RU comments	
Project: C 423	Date: 05/10/00 11:32 AM
Class/subclass: H 01L	Page of

- As to desirability of including organic light-sensitive devices and organic light emission device in the scope of main group H 01L 51/00.

RU is in favour that organic light emission device should be classified in H 01L 51/00. We think the references in H 05B 33/00, H 01L 33/00, H 01L 27/15 to the proposed group H 01L 51/ 22 should be included.

If "organic light sensitive devices" have organic light emission device - related technologies, the most appropriate place for such devices is also H 01L 51/00.

We believe that the references in H 01L 31/00, H 01L 27/14 dealing with light sensitive devices to H 01L 51/00 should be included.

- As to necessity of the proposed group H 01L 51/12 we suggest to make the wording of H 01L 51/12 similar to the wording of H 05B 33/26.
- As to relationship between groups H 01L 51/00 and H 01L 27/00 in respect of the subject matter in question.

In our opinion organic light emission device and light sensitive devices should be classified in H 01L 51/00 and not in H 01L 27/00 as the title of H 01L 51/00 is more precise for such devices.

Besides, we propose to make more precise the reference in H 01L 51/22:
"materials with organic electroluminescence C 09 k 11/06" i.e. not 11/00.

V.Nyukhovsky

Projet IPC / C 423/00

Sous-classe **H 01 L**

Ref : Annexe 2 du dossier de projet

Des observations ont été demandées :

- sur la nécessité du groupe proposé 51/12 :

Nous pensons qu'il n'est pas nécessaire de créer un tel groupe, en effet il n'y a pas lieu de donner une place prépondérante à des détails spécifiques d'une application particulière.

- sur l'opportunité d'inclure les 'dispositifs organiques photosensibles' dans le groupe 51/00 :

Nous sommes d'accord pour inclure 'ces dispositifs' dans le libellé du 51/00 qui deviendrait :

51/00- ----oscillating, switching, light-sensing or light-emitting,---(cf. proposition DE du 09/08/2000)

- sur les liens entre les GP 27/00 et 51/00 en ce qui concerne la matière en question :

Il suffirait d'un renvoi dans le 27/00 indiquant le classement des 'dispositifs organiques' en 51/00.(cf. proposition DE du 09/08/2000)

Propositions de l'OEB :

Nous ne sommes pas d'accord avec certaines propositions de l'OEB.

Les trois premières parties du titre proposé pour le 51/00 concernent des dispositifs à l'état solide, et la répétition à chaque fois de l'intégralité des définitions alourdit considérablement ce titre.

Une remarque identique peut être faite pour les libellés proposés 51/21 et 51/22 qui reprennent textuellement les définitions ci-dessus relatives aux " light- sensing or light-emission devices ". Ces répétitions ne simplifient pas la sous-classe H01L qui est déjà très complexe.

La proposition DE pour le libellé du 51/22 semble satisfaisante.

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01L
	Date : 06.11.2000
DE Rapporteur Report — C 423	

Re: IPC/WG/3/3

Comments were received by EP (annex 3,4), DE (annex 5), JP (annex 6), CA (annex 7), RO (annex 8), RU (annex 9) and FR (annex 10).

In general all commenting offices are in favour of the proposal. EP and JP offer counterproposals for only some aspects of the project. DE, RU and FR have some amendments.

*IPC/WG/3/3/ raised questions**# on the need of proposed group 51/12:*

JP and EP are against creating group 51/12. As far as Rapporteur understood them, the underlying background of their comments and counterproposals is to avoid mixing of groups containing documents until now classified in 51/10 and documents on light-emitting devices. Rapporteur has taken up their objections and has changed the structure of 51/00 in the actual Rapp. proposal.

on the desirability of including "organic light-sensitive devices" in the scope of main group 51/00:

There are no objections against in the comments. Rapporteur includes groups 51/60 and 27/157, respectively, for light-sensitive devices into the actual Rapp. proposal. The title is copied from the title of group 31/00.

on the relationship between main groups 27/00 and 51/00 in respect of the subject matter in question:

EP, CA, RO comment that integrated organic semiconductor devices should be classified in main group 27/00. DE, JP, RU and FR vote for 51/00. Rapporteur and with him DE tends to follow the arguments given by EP and is in favour of 27/00. Because of the argument that *all* integrated devices in H01L are classified in 27/00 and the argument that hybrid devices comprising organic and inorganic components would not fit under 51/00. Rapp. finds that the best suited place in 27/00 is below 27/15.

Rainer Anders

Deutsches Patent- und Markenamt German Patent and Trademark Office	Class/Subcl.: H01L
	Date : 06.11.2000
DE Rapporteur Proposal — C 423	

RE: IPC/WG/3/3H01L 51/00

- C 51/00 Solid state devices using organic semiconductor material as the active part, or using a combination of organic semiconductor material with other materials as the active part; Processes or apparatus specially adapted for the manufacture or treatment of such devices, or of parts thereof (integrated devices in or on a common substrate 27/152)
- C 51/05 . adapted for rectifying, amplifying, oscillating or switching, or capacitors or resistors with at last one potential-jump barrier or surface barrier
- C 51/10 .. Details
- C 51/20 *transferred to 51/05*
- C 51/30 .. Selection of materials
- C 51/40 .. Processes ----- such devices -----
- N 51/50 . adapted for light emission, e.g. organic light emitting diodes [OLED] or polymer light emitting devices [PLED] (organic semiconductor lasers H01S 5/36)
- N 51/52 .. Details
- N 51/54 .. Selection of materials (organic electroluminescent materials C09K 11/06;
- N 51/56 .. Processes or apparatus specially adapted for the manufacture or treatment of such devices or of parts thereof
- N 51/60 . adapted for sensing infra-red radiation, light, electromagnetic radiation of shorter wavelength, or corpuscular radiation; adapted either for the conversion of the energy of such radiation into electrical energy or for the control of the electrical energy by such radiation
- N 51/62 .. Details
- N 51/64 .. Selection of materials
- N 51/66 .. Processes or apparatus specially adapted for the manufacture or treatment of such devices or of parts thereof

H01L 27/00

- C 27/00 ---- thereof 21/70, 31/00 to 51/00; details thereof 23/00, 29/00 to 51/00; assemblies -----
- N 27/152 . including components using organic semiconductor materials as the active part, or using a combination of organic semiconductor material with other materials as the active part
- N 27/154 .. with components being adapted for light emission, e.g. for flat-panel displays using organic light-emitting diodes
- N 27/157 .. with components being sensitive to infra-red radiation, light, electromagnetic radiation of shorter wavelength, or corpuscular radiation; with components being adapted to either the conversion of the energy of such radiation into electrical energy or for the control of the electrical energy by such radiation

other maingroups in H01L

- C 21/00 ---- groups 31/00 to 51/00 or of parts ----
- C 21/02 ---- parts thereof
- C 23/00 Note ----groups 31/00 to 51/00, which ----
- C 33/00 ----- thereof (51/00 takes precedence; couplings ----
- C 49/00 ----- to 47/00 and 51/00 and not provided ----

H01S

- N 5/36 .. Organic semiconductor lasers (dye lasers 3/213)

H05B

- C 33/00 ---- H01L33/00; organic light emitting devices H01L 51/50; lasers H01S 3/00 and 5/00; compositions ----