EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 266

DATE: AUGUST 1, 2016

PROJECT RP0311

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

Action	**Subclass**	**Group(s)**
Title wording change:	G06F	12/00
	G06F	12/0802
	G06F	12/0804
	G06F	12/0806
	G06F	12/0808
	G06F	12/0811
	G06F	12/0813
	G06F	12/0815
	G06F	12/0817
	G06F	12/0831
	G06F	12/0837
	G06F	12/084
	G06F	12/0842
	G06F	12/0844
	G06F	12/0846
	G06F	12/0853
	G06F	12/0855
	G06F	12/0862
	G06F	12/0864
	G06F	12/0866
	G06F	12/0868
	G06F	12/0871
	G06F	12/0873
	G06F	12/0875
	G06F	12/0877
	G06F	12/0879
	G06F	12/0882
	G06F	12/0884
	G06F	12/0886
	G06F	12/0888
	G06F	12/0891
	G06F	12/0893
	G06F	12/0895
	G06F	12/0897
	G06F	12/1009
	G06F	12/1018
	G06F	12/1027
	G06F	12/1036
	G06F	12/1045
	G06F	12/1072
	G06F	12/1081
	G06F	12/109
	G06F	12/121

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Action	Subclass	Group(s)
	G06F	12/122
	G06F	12/123
	G06F	12/126
	G06F	12/127
	G06F	12/128
Modified Definitions:	G06F	12/00
	G06F	12/08
	G06F	12/0802
	G06F	12/0804
	G06F	12/0815
	G06F	12/0866
	G06F	12/0868
	G06F	12/0871
	G06F	12/0875
	G06F	12/0891
	G06F	12/10
	G06F	12/12
Scheme Warning Notices to be added:	G06F	12/0851
	G06F	12/0886
	G06F	12/1036
	G06F	12/109

This Notice of Changes includes the following:

1. CLASSIFICATION SCHEME CHANGES
    ☒ A. New, Modified or Deleted Group(s)

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

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

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

2. DEFINITIONS (New or Modified)
    ☒ A.   DEFINITIONS (Full definition template)

    ☒ B.   DEFINITIONS (Definitions Quick Fix)

3. ☒ REVISION CONCORDANCE LIST (RCL)

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

5. ☐ CROSS-REFERENCE LIST (CRL)

CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS G06F - ELECTRICAL DIGITAL DATA PROCESSING

Type *	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to[#]
M	G06F 12/00	0	Accessing, addressing or allocating within memory systems or architectures (digital input from, or digital output to record carriers, e.g. to disk storage units, G06F3/06)	
U	G06F 12/08	2	in hierarchically structured memory systems, e.g. virtual memory systems	
M	G06F 12/0802	3	Addressing of a memory level in which the access to the desired data or data block requires associative addressing means, e.g. caches	
M	G06F 12/0804	4	with main memory updating (G06F12/0806 takes precedence)	
M	G06F 12/0806	4	Multiuser, multiprocessor or multiprocessing cache systems	
M	G06F 12/0808	5	with cache invalidating means (G06F12/0815 takes precedence)	
M	G06F 12/0811	5	with multilevel cache hierarchies	
M	G06F 12/0813	5	with a network or matrix configuration	
M	G06F 12/0815	5	Cache consistency protocols	
M	G06F 12/0817	6	using directory methods	
M	G06F 12/0831	6	using a bus scheme, e.g. with bus monitoring or watching means	
M	G06F 12/0837	6	with software control, e.g. non-cacheable data	
M	G06F 12/084	5	with a shared cache	
M	G06F 12/0842	5	for multiprocessing or multitasking	
M	G06F 12/0844	4	Multiple simultaneous or quasi-simultaneous cache accessing	
M	G06F 12/0846	5	Cache with multiple tag or data arrays being simultaneously accessible	
C	G06F 12/0851	6	{Cache with interleaved addressing}	G06F12/0851 G06F12/0886
M	G06F 12/0853	5	Cache with multiport tag or data arrays	
M	G06F 12/0855	5	Overlapped cache accessing, e.g. pipeline (G06F12/0846 takes precedence)	

Type *	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	G06F 12/0862	4	with prefetch	
M	G06F 12/0864	4	using pseudo-associative means, e.g. set-associative or hashing	
M	G06F 12/0866	4	for peripheral storage systems, e.g. disk cache	
M	G06F 12/0868	5	Data transfer between cache memory and other subsystems, e.g. storage devices or host systems	
M	G06F 12/0871	5	Allocation or management of cache space	
M	G06F 12/0873	5	Mapping of cache memory to specific storage devices or parts thereof	
M	G06F 12/0875	4	with dedicated cache, e.g. instruction or stack	
M	G06F 12/0877	4	Cache access modes	
M	G06F 12/0879	5	Burst mode	
M	G06F 12/0882	5	Page mode	
M	G06F 12/0884	5	Parallel mode, e.g. in parallel with main memory or CPU	
E	G06F 12/0886	5	Variable-length word access	
M	G06F 12/0888	4	using selective caching, e.g. bypass	
M	G06F 12/0891	4	using clearing, invalidating or resetting means	
M	G06F 12/0893	4	Caches characterised by their organisation or structure	
M	G06F 12/0895	5	of parts of caches, e.g. directory or tag array	
M	G06F 12/0897	5	with two or more cache hierarchy levels (with multilevel cache hierarchies G06F12/0811)	
U	G06F 12/10	3	Address translation	
M	G06F 12/1009	4	using page tables, e.g. page table structures	
M	G06F 12/1018	5	involving hashing techniques, e.g. inverted page tables	
M	G06F 12/1027	4	using associative or pseudo-associative address translation means, e.g. translation look-aside buffer [TLB]	
E	G06F 12/1036	5	for multiple virtual address spaces, e.g. segmentation (G06F12/1045 takes precedence)	
M	G06F 12/1045	5	associated with a data cache	
M	G06F 12/1072	4	Decentralised address translation, e.g. in distributed shared memory systems	
M	G06F 12/1081	4	for peripheral access to main memory, e.g. direct memory access [DMA]	
C	G06F 12/109	4	for multiple virtual address spaces, e.g. segmentation (G06F12/1036 takes precedence)	G06F12/109 G06F12/1036

Type *	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
U	G06F 12/12	3	Replacement control	
M	G06F 12/121	4	using replacement algorithms	
M	G06F 12/122	5	of the least frequently used [LFU] type, e.g. with individual count value	
M	G06F 12/123	5	with age lists, e.g. queue, most recently used [MRU] list or least recently used [LRU] list	
M	G06F 12/126	5	with special data handling, e.g. priority of data or instructions, handling errors or pinning	
M	G06F 12/127	6	using additional replacement algorithms	
M	G06F 12/128	5	adapted to multidimensional cache systems, e.g. set-associative, multicache, multiset or multilevel	

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

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

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

SUBCLASS G06F - ELECTRICAL DIGITAL DATA PROCESSING

Type*	Location	Old Warning notice	New/Modified Warning notice
N	G06F 12/0851	-	Group G06F12/0851 is impacted by reclassification into group G06F12/0886. Groups G06F12/0851 and G06F12/0886 should be considered in order to perform a complete search.
N	G06F12/0886	-	Group G06F12/0886 is incomplete pending reclassification of documents from group G06F12/0851. Groups G06F12/0851 and G06F12/0886 should be considered in order to perform a complete search.
N	G06F 12/1036	-	Group G06F12/1036 is incomplete pending reclassification of documents from group G06F12/109. Groups G06F12/109 and G06F12/1036 should be considered in order to perform a complete search.
N	G06F 12/109	-	Group G06F12/109 is impacted by reclassification into group G06F12/1036. Groups G06F12/109 and G06F12/1036 should be considered in order to perform a complete search.

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

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

2. A. DEFINITIONS (Modified)

G06F12/0802

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Caching of dynamically generated content, e.g. database query cache, web cache.	G06F17/30
Register cache (for register file).	G06F9/30
Branch history / target cache.	G06F9/38

G06F12/0815

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Memory consistency not specific to cache coherency	G06F9/46
Locking for the purpose of program synchronization	G06F9/52

G06F12/0868

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Replacement control	G06F12/12
Write back control	G06F12/0804

G06F12/0871

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Replacement control	G06F12/12

G06F12/0873

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Set-associative or similar mappings of individual cache entries to storage device locations	G06F12/0864

G06F12/0875

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Branch history cache, branch target cache	G06F9/38

G06F12/10

DELETE the entire Informative references section.

INSERT a revised Informative references section, as follows.

Virtual machines	G06F9/455
Logical partitioning	G06F9/50
Address mapping within flash memory	G06F12/0246
Multi-user or multiprocessor address space allocation	G06F12/0284
Address mapping or translation in general, not specific to virtual memory	G06F12/0292

G06F12/12

DELETE the entire References relevant to classification in this group section.

INSERT a new Informative references section, as follows.

Informative references

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

Write back control in cache	G06F12/0804

Synonyms and Keywords

In the preamble:

                <u>DELETE</u>:   abreviations

                <u>INSERT</u>:   abbreviations

2. B. DEFINITIONS QUICK FIX

Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
G06F12/00	Special rules/ **5th paragraph**	ECLA classes	Delete: ECLA classes Insert the following: groups
G06F12/08	References relevant	(ALL of the text)	Delete the ENTIRE References relevant section.
G06F12/08	Informative references	-	Insert a new FIRST row with the following text: Hierarchically organised storage systems G06F3/06
G06F12/0804	References relevant/ **second row**	Replacement policies G06F12/12	Delete the ENTIRE SECOND row.
G06F12/0804	Informative references	-	Insert a new FIRST row with the following text: Replacement policies G06F12/12
G06F12/0866	References relevant	(ALL of the text)	Delete the ENTIRE References relevant section.
G06F12/0866	Informative references	-	Insert a new SECOND row with the following text: Caching of dynamically generated data content, e.g. web caching, database query results G06F17/30
G06F12/0891	References relevant	(ALL of the text)	Delete the ENTIRE References relevant section.
G06F12/0891	Informative references	-	Insert a new SECOND row with the following text: Invalidation forming part of a cache coherency protocol G06F12/0815
G06F12/10	References relevant	(ALL of the text)	Delete the ENTIRE References relevant section.

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

3.   REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
C	G06F12/0851	G06F12/0851, G06F12/0886
C	G06F12/109	G06F12/109, G06F12/1036

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

NOTES:
- Only C, D, and Q type entries are included in the table above.
- When multiple symbols are included in the "To" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>" or "<administrative transfer to XX and YY simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be "invention information", unless otherwise indicated, and to 2000 series groups is assumed to be "additional information".

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

CPC	IPC	Action*
G06F12/0802	G06F12/0802	UPDATE
G06F12/0804	G06F12/0804	UPDATE
G06F12/0806	G06F12/0806	UPDATE
G06F12/0808	G06F12/0808	UPDATE
G06F12/0811	G06F12/0811	UPDATE
G06F12/0813	G06F12/0813	UPDATE
G06F12/0815	G06F12/0815	UPDATE
G06F12/0817	G06F12/0817	UPDATE
G06F12/082	G06F12/0817	UPDATE
G06F12/0822	G06F12/0817	UPDATE
G06F12/0824	G06F12/0817	UPDATE
G06F12/0826	G06F12/0817	UPDATE
G06F12/0828	G06F12/0817	UPDATE
G06F12/0831	G06F12/0831	UPDATE
G06F12/0833	G06F12/0831	UPDATE
G06F12/0835	G06F12/0831	UPDATE
G06F12/0837	G06F12/0837	UPDATE
G06F12/084	G06F12/084	UPDATE
G06F12/0842	G06F12/0842	UPDATE
G06F12/0844	G06F12/0844	UPDATE
G06F12/0846	G06F12/0846	UPDATE
G06F12/0848	G06F12/0846	UPDATE
G06F12/0851	G06F12/0846	UPDATE
G06F12/0853	G06F12/0853	UPDATE
G06F12/0855	G06F12/0855	UPDATE
G06F12/0857	G06F12/0855	UPDATE
G06F12/0859	G06F12/0855	UPDATE
G06F12/0862	G06F12/0862	UPDATE
G06F12/0864	G06F12/0864	UPDATE
G06F12/0866	G06F12/0866	UPDATE
G06F12/0868	G06F12/0868	UPDATE
G06F12/0871	G06F12/0871	UPDATE
G06F12/0873	G06F12/0873	UPDATE
G06F12/0875	G06F12/0875	UPDATE
G06F12/0877	G06F12/0877	UPDATE
G06F12/0879	G06F12/0879	UPDATE
G06F12/0882	G06F12/0882	UPDATE
G06F12/0884	G06F12/0884	UPDATE
G06F12/0886	G06F12/0886	UPDATE
G06F12/0888	G06F12/0888	UPDATE
G06F12/0891	G06F12/0891	UPDATE

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CPC	**IPC**	**Action***
G06F12/0893	G06F12/0893	UPDATE
G06F12/0895	G06F12/0895	UPDATE
G06F12/0897	G06F12/0897	UPDATE
G06F12/1009	G06F12/1009	UPDATE
G06F12/1018	G06F12/1018	UPDATE
G06F12/1027	G06F12/1027	UPDATE
G06F12/1036	G06F12/1036	UPDATE
G06F12/1045	G06F12/1045	UPDATE
G06F12/1054	G06F12/1045	UPDATE
G06F12/1063	G06F12/1045	UPDATE
G06F12/1072	G06F12/1072	UPDATE
G06F12/1081	G06F12/1081	UPDATE
G06F12/109	G06F12/109	UPDATE
G06F12/121	G06F12/121	UPDATE
G06F12/122	G06F12/122	UPDATE
G06F12/123	G06F12/123	UPDATE
G06F12/124	G06F12/123	UPDATE
G06F12/125	G06F12/123	UPDATE
G06F12/126	G06F12/126	UPDATE
G06F12/127	G06F12/127	UPDATE
G06F12/128	G06F12/128	UPDATE

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

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