

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1682

DATE: JANUARY 1, 2025

PROJECT RP12336

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

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Symbols Deleted:	G06F	11/3664
Symbols New:	G06F	11/3698
Titles Changed:	G06F	11/36, 11/3604, 11/362, 11/3668
DEFINITIONS:		
Definitions Deleted: (no frozen (F) symbol definitions should be deleted)	G06F	11/3664
Definitions New:	G06F	11/3698
Definitions Modified:	G06F	11/36, 11/3604, 11/362, 11/3668

The following subclasses/groups are also impacted by this Notice of Changes (indicate subclasses/groups outside of the project scope, such as those listed in the CRL): G06F9/3863, G06F9/44589, G06F11/22, G06F21/577

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

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

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

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

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

G06F ELECTRIC DIGITAL DATA PROCESSING

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> “CPC only” text should normally be enclosed in {curly brackets}**	<u>Transferred to#</u>
M	G06F 11/36	1	Prevention of errors by analysis, debugging or testing of software	
M	G06F 11/3604	2	Analysis of software for verifying properties of programs (testing of software G06F 11/3668)	
M	G06F 11/362	2	Debugging of software	
D	G06F 11/3664	2	{Environments for testing or debugging software}	<administrative transfer to G06F 11/3698>
M	G06F 11/3668	2	Testing of software	
U	G06F 11/3696	3	{Methods or tools to render software testable}	
N	G06F 11/3698	2	Environments for analysis, debugging or testing of software	

*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; T = 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).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). 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.
- “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>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.

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- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

2. A. DEFINITIONS (new)

Insert: The following new Definition.

G06F 11/3698

Definition statement

This place covers:

Environment, frameworks, graphical user interfaces or simulators that aim at supporting or facilitating the task of a user during the various phases of software testing or software debugging (e.g. to navigate into the code, to insert or remove breakpoints, to visualize execution traces or to edit/maintain/archive test suites).

The environment may be comparable to a software development environment, but it contains features that are specific to the phases of software testing or debugging.

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2. A. DEFINITIONS (modified)

G06F 11/36

Replace: The existing Definition statement with the following updated text.

Definition statement

The methods used during software development in order to prevent errors:

- analysis of software ([G06F 11/3604](#)), which refers to verifying properties of a program (statically or dynamically)
- testing of software ([G06F 11/3668](#)), which refers to the activity of detecting errors (using test inputs)
- debugging of software([G06F 11/362](#)), which refers to the activity of locating an error.

Environments (e.g. GUI or simulators) helping a user to perform analysis, debugging or testing of software ([G06F 11/3698](#)).

References

Delete: The entire Limiting references section.

Insert: The following new Informative references table.

Informative references

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

Program code verification	G06F 9/44589
Fault-tolerant software	G06F 11/1479
Testing of computer hardware	G06F 11/22
Checking correct execution order of instructions	G06F 11/28
Recording or statistical evaluation of computer activity	G06F 11/34
Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity	G06F 21/00
Computer aided design	G06F 30/00

Replace: The existing Glossary of terms table with the following updated table.

Glossary of terms

bug	a bug in a program produces an incorrect or unexpected result, or causes the program to behave in unintended ways.
software analysis	software analysis aims at verifying that a program or its specification satisfies certain properties without involving testing (no test inputs are provided to the program under analysis). It can involve for example scanning the source code and analysing the dependencies between the various components, or the use of certain variables, etc. It can consist in the use of formal methods, like model checking or theorem proving which aim at formally guaranteeing certain properties, for example that the program is well-typed, or deadlock free etc. In principle software analysis does not require the program to execute (static analysis), but in some cases it does, for example to verify runtime properties.
software testing	software testing is the process of executing a program, or a discrete program unit, with the intent of finding errors. Tests can only reveal the presence of errors, but cannot ensure the absence of errors. When errors are detected in a program, one might want to start debugging it, i.e. locating precisely the error and correcting it. In both cases (testing and debugging), the program is executed.
software debugging	software debugging refers to the activity of locating an error.

G06F11/3604

Definition statement

Replace: The existing Definition statement with the following updated text.

Software analysis aims at verifying that a program or its specification satisfies certain properties without involving testing (no test inputs are provided to the program under analysis). It can involve for example scanning the source code and analysing the dependencies between the various components, or the use of certain variables, etc. It can consist in the use of formal methods, like model

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checking or theorem proving which aim at formally guaranteeing certain properties, for example that the program is well-typed, or deadlock free etc. In principle software analysis does not require the program to execute (static analysis), but in some cases it does, for example to verify runtime properties.

Insert: The following new Limiting references section.

References

Limiting references

This place does not cover:

Testing of software	G06F 11/3668
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G06F11/362

References

Delete: The entire Limiting references section.

Insert: The following new Informative references table.

Informative references

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

Address formation of the next instruction for runtime instruction patching	G06F 9/328
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G06F11/3668

References

Delete: The entire Limiting references section.

Replace: The existing Informative references table with the following updated table.

Informative references

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

Testing of computer hardware	G06F 11/22
Software testing in telephone exchanges	H04M 3/242

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2. B. DEFINITIONS QUICK FIX

Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
G06F 11/3664	Entire definition		<u>Delete</u> entire definition.

Notes:

Use this Definitions Quick Fix (DQF) table to:

- Delete an entire definition
- Delete an entire section
- Change a reference symbol
- Delete a reference symbol
- Delete text in a References section
- Correct one error in spelling, article use, or verb tense

Otherwise, use the standard template.

Reminder: Never delete F symbol definitions.

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3. REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
D	G06F 11/3664	<administrative transfer to G06F 11/3698>

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

NOTES:

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

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

<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
G06F 11/3604	G06F 11/3604	UPDATE
G06F 11/3608	G06F 11/3604	UPDATE
G06F 11/3612	G06F 11/3604	UPDATE
G06F 11/3616	G06F 11/3604	UPDATE
G06F 11/362	G06F 11/362	UPDATE
G06F 11/3624	G06F 11/362	UPDATE
G06F 11/3628	G06F 11/362	UPDATE
G06F 11/3632	G06F 11/362	UPDATE
G06F 11/3636	G06F 11/362	UPDATE
G06F 11/364	G06F 11/362	UPDATE
G06F 11/3644	G06F 11/362	UPDATE
G06F 11/3648	G06F 11/362	UPDATE
G06F 11/3652	G06F 11/362	UPDATE
G06F 11/3656	G06F 11/362	UPDATE
G06F 11/366	G06F 11/362	UPDATE
G06F 11/3664		DELETE
G06F 11/3668	G06F 11/3668	UPDATE
G06F 11/3672	G06F 11/3668	UPDATE
G06F 11/3676	G06F 11/3668	UPDATE
G06F 11/368	G06F 11/3668	UPDATE
G06F 11/3684	G06F 11/3668	UPDATE
G06F 11/3688	G06F 11/3668	UPDATE
G06F 11/3692	G06F 11/3668	UPDATE
G06F 11/3696	G06F 11/3668	UPDATE
G06F 11/3698	G06F 11/3698	NEW

*Action column:

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

NOTES:

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

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5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Action; New reference symbol; New text</u>
G06F9/44589	G06F11/36	New text: prevention of errors by analysis, debugging or testing of software

Definitions references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Section of definition</u>	<u>Action; New reference symbol; New text</u>
G06F9/3863	G06F11/36	Relationships with other classification places	G06F11/362
G06F9/44589	G06F11/36	Limiting references	New text: Prevention of errors by analysis, debugging or testing of software
G06F11/22	G06F11/36	Informative references	G06F11/3668
G06F11/22	G06F11/36	Special rules of classification	G06F11/3668
G06F21/577	G06F11/36	Informative references	G06F11/3668

NOTES:

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