EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 599

DATE: JANUARY 1, 2019

PROJECT RP0361

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

Action	Subclass	Group(s)
SCHEME:		
Symbols New:	H04W	12/001, 12/0013, 12/0017, 12/002, 12/0023, 12/0027, 12/003, 12/00305, 12/004, 12/00401, 12/00403, 12/00405, 12/00407, 12/00409, 12/005, 12/00502, 12/00503, 12/00504, 12/00505, 12/00506, 12/00508, 12/0051, 12/00512, 12/00514, 12/00516, 12/00518, 12/0052, 12/00522, 12/00524, 12/007, 12/009, 12/0401, 12/0403, 12/04031, 12/04033, 12/0407, 12/04071, 12/0602, 12/0605, 12/0608, 12/0609, 12/0802, 12/0804, 12/0806, 12/0808, 12/1002, 12/1004, 12/1006, 12/1008, 12/1201, 12/1202, 12/1204, 12/1205, 12/1206, 12/1208
Titles Changed:	H04W	12/00, 12/02, 12/04, 12/12
Warnings New:	H04W	12/00, 12/001, 12/0013, 12/0017, 12/002, 12/0023, 12/0027, 12/003, 12/00305, 12/004, 12/00401, 12/00403, 12/00405, 12/00407, 12/00409, 12/005, 12/00502, 12/00503, 12/00504, 12/00505, 12/00506, 12/00508, 12/0051, 12/00512, 12/00514, 12/00516, 12/00518, 12/0052, 12/00522, 12/00524, 12/007, 12/009, 12/02, 12/04, 12/0401, 12/0403, 12/04031, 12/04033, 12/0407, 12/04071, 12/06, 12/0602, 12/0605, 12/0608, 12/0609, 12/08, 12/0802, 12/0804, 12/0806, 12/0808, 12/10, 12/1002, 12/1004, 12/1006, 12/1008, 12/12, 12/1201, 12/1202, 12/1204, 12/1205, 12/1206, 12/1208
DEFINITIONS:		
Definitions New:	H04W	12/001, 12/0013, 12/0017, 12/002, 12/0023, 12/0027, 12/003, 12/00305, 12/004, 12/00401, 12/00403, 12/00405, 12/00407, 12/00409, 12/005, 12/00502, 12/00503, 12/00504, 12/00505, 12/00506, 12/00508, 12/0051, 12/00512, 12/00514, 12/00516, 12/00518, 12/0052, 12/00522, 12/00524, 12/007, 12/009, 12/02, 12/04, 12/0401, 12/0403, 12/04031, 12/04033,

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Action	Subclass	Group(s)
		12/0407, 12/04071, 12/06, 12/0602, 12/0605, 12/0608, 12/0609, 12/08, 12/0802, 12/0804, 12/0806, 12/0808, 12/10, 12/1002, 12/1004, 12/1006, 12/1008, 12/12, 12/1201, 12/1202, 12/1204, 12/1205, 12/1206, 12/1208
Definitions Modified:	H04W	12/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following

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)

1. CLASSIFICATION SCHEME CHANGES

    A. New, Modified or Deleted Group(s)

SUBCLASS H04W WIRELESS COMMUNICATION NETWORKS

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[#]
C	H04W 12/00	0	Security arrangements, e.g. access security or fraud detection; Authentication, e.g. verifying user identity or authorisation; Protecting privacy or anonymity {; Protecting confidentiality; Key management; Integrity; Mobile application security; Using identity modules; Secure pairing of devices; Context aware security; Lawful interception}	H04W 12/00 H04W 12/001 H04W 12/0013 H04W 12/0017 H04W 12/002 H04W 12/0023 H04W 12/0027 H04W 12/003 H04W 12/00305 H04W 12/004 H04W 12/00401 H04W 12/00403 H04W 12/00405 H04W 12/00407 H04W 12/00409 H04W 12/005 H04W 12/00502 H04W 12/00503 H04W 12/00504 H04W 12/00505 H04W 12/00506 H04W 12/00508 H04W 12/0051 H04W 12/00512 H04W 12/00514 H04W 12/00516 H04W 12/00518 H04W 12/0052 H04W 12/00522 H04W 12/00524 H04W 12/007 H04W 12/009 H04W 12/0401 H04W 12/0403 H04W 12/04031 H04W 12/04033 H04W 12/0407 H04W 12/04071

CPC Form – v.5

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#
				H04W 12/0602
				H04W 12/0605
				H04W 12/0608
				H04W 12/0609
				H04W 12/0802
				H04W 12/0804
				H04W 12/0806
				H04W 12/0808
				H04W 12/1002
				H04W 12/1004
				H04W 12/1006
				H04W 12/1008
				H04W 12/12
				H04W 12/1201
				H04W 12/1202
				H04W 12/1204
				H04W 12/1205
				H04W 12/1206
				H04W 12/1208
N	H04W 12/001	1	{Protecting confidentiality, e.g. by encryption or ciphering}	
N	H04W 12/0013	2	{of user plane, e.g. user traffic}	
N	H04W 12/0017	2	{of control plane, e.g. signalling traffic}	
N	H04W 12/002	1	{Mobile device security; Mobile application security}	
N	H04W 12/0023	2	{Protecting application or service provisioning, e.g. securing SIM application provisioning}	
N	H04W 12/0027	2	{Managing security policies for mobile device or applications control, e.g. mobile application permission management or mobile device security settings}	
N	H04W 12/003	1	{Secure pairing of devices, e.g. bootstrapping a secure communication link between pairing terminals; Secure socializing}	
N	H04W 12/00305	2	{involving three or more devices, e.g. group pairing}	
N	H04W 12/004	1	{using identity modules}	
N	H04W 12/00401	2	{using virtual identity modules}	
N	H04W 12/00403	2	{using shared identity modules, e.g. SIM sharing}	
N	H04W 12/00405	2	{using multiple identity modules}	
N	H04W 12/00407	2	{using near field communication [NFC], e.g. NFC tag, smart tag or radio frequency identification [RFID] module}	
N	H04W 12/00409	2	{using secure binding, e.g. securely binding identity modules to devices, services or applications}	

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#
N	H04W 12/005	1	{Context aware security}	
N	H04W 12/00502	2	{Time aware}	
N	H04W 12/00503	2	{Location or proximity aware, e.g. using proximity to other devices}	
N	H04W 12/00504	2	{Ambient aware, e.g. using captured environmental data}	
N	H04W 12/00505	2	{Risk aware, e.g. selecting security levels depending on risk profiles}	
N	H04W 12/00506	2	{Trust aware, e.g. using trust scores or trust relationships}	
N	H04W 12/00508	2	{Gesture or behaviour aware, e.g. device movements or behaviometrics}	
N	H04W 12/0051	2	{Identity aware}	
N	H04W 12/00512	3	{Hardware identity}	
N	H04W 12/00514	3	{Subscriber identity}	
N	H04W 12/00516	3	{Access point logical identity}	
N	H04W 12/00518	3	{Temporary identity}	
N	H04W 12/0052	3	{Group identity}	
N	H04W 12/00522	3	{Graphical identity}	
N	H04W 12/00524	3	{Radio fingerprint}	
N	H04W 12/007	1	{Lawful interception }	
N	H04W 12/009	1	{specially adapted for networks, e.g. wireless sensor networks, ad-hoc networks, RFID networks or cloud networks}	
C	H04W 12/02	1	Protecting privacy or anonymity {, e.g. protecting personally identifiable information [PII]}	H04W 12/001 H04W 12/007 H04W 12/02
C	H04W 12/04	1	Key management {, e.g. by generic bootstrapping architecture [GBA]}	H04W 12/04 H04W 12/0401 H04W 12/0403 H04W 12/04031 H04W 12/04033 H04W 12/0407 H04W 12/04071
N	H04W 12/0401	2	{Key generation or derivation}	
N	H04W 12/0403	2	{using a trusted network node as anchor}	
N	H04W 12/04031	3	{Key distribution, e.g. key pre-distribution or key agreement}	
N	H04W 12/04033	3	{Key management protocols, e.g. managing shared keys, group keys, multicast keys or rekeying}	
N	H04W 12/0407	2	{without using a trusted network node as anchor}	
N	H04W 12/04071	3	{Key exchange, e.g. between nodes}	

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#
C	H04W 12/06	1	Authentication	H04W 12/06 H04W 12/0602 H04W 12/0605 H04W 12/0608 H04W 12/0609
N	H04W 12/0602	2	{Pre-authentication}	
N	H04W 12/0605	2	{Continuous authentication}	
N	H04W 12/0608	2	{using credential vaults, e.g. password manager applications or one time password [OTP] applications}	
N	H04W 12/0609	2	{using certificates or pre-shared keys}	
C	H04W 12/08	1	Access security	H04W 12/08 H04W 12/0802 H04W 12/0804 H04W 12/0806 H04W 12/0808
N	H04W 12/0802	2	{using revocation of authorisation}	
N	H04W 12/0804	2	{using delegated authorisation, e.g. Open Authorisation [OAuth] protocol, user centric management of access rights or user consent}	
N	H04W 12/0806	2	{using security domains, e.g. separating enterprise and private data domains, building machine-to-machine [M2M] domains or global platform domains}	
N	H04W 12/0808	2	{using packet filters or firewalls}	
C	H04W 12/10	1	Integrity	H04W 12/10 H04W 12/1002 H04W 12/1004 H04W 12/1006 H04W 12/1008
N	H04W 12/1002	2	{Route integrity, e.g. using trusted paths}	
N	H04W 12/1004	2	{Location integrity, e.g. secure geo-tagging or trusted cell tagging}	
N	H04W 12/1006	2	{Packet or message integrity}	
N	H04W 12/1008	2	{Source integrity}	
C	H04W 12/12	1	Fraud detection {or prevention}	H04W 12/12 H04W 12/1201 H04W 12/1202 H04W 12/1204 H04W 12/1205 H04W 12/1206 H04W 12/1208
N	H04W 12/1201	2	{Wireless intrusion detection system [WIDS];Wireless intrusion prevention system [WIPS]}	
N	H04W 12/1202	3	{Protecting against rogue devices}	
N	H04W 12/1204	3	{Countermeasures against attacks }	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
N	H04W 12/1205	2	{Protecting against power exhaustion attacks, e.g. power depletion, starvation attack or sleep deprivation attack}	
N	H04W 12/1206	2	{Anti-theft arrangements, e.g. protecting against device theft, subscriber identity module [SIM] cloning or machine-to-machine [M2M] displacement}	
N	H04W 12/1208	2	{Anti-malware arrangements, e.g. protecting against SMS fraud or mobile malware}	

*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 H04W WIRELESS COMMUNICATION NETWORKS

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/00		Group H04W 12/00 is impacted by reclassification into groups H04W 12/00, H04W 12/001, H04W 12/0013, H04W 12/0017, H04W 12/002, H04W 12/0023, H04W 12/0027, H04W 12/003, H04W 12/00305, H04W 12/004, H04W 12/00401, H04W 12/00403, H04W 12/00405, H04W 12/00407, H04W 12/00409, H04W 12/005 H04W 12/0051, H04W 12/00502, H04W 12/00503, H04W 12/00504, H04W 12/00505, H04W 12/00506, H04W 12/00508, H04W 12/0051, H04W 12/00512, H04W 12/00514, H04W 12/00516, H04W 12/00518, H04W 12/0052, H04W 12/00522, H04W 12/00524, H04W 12/007, H04W 12/009, H04W 12/0401, H04W 12/0403, H04W 12/04031, H04W 12/04033, H04W 12/0407, H04W 12/04071, H04W 12/0602, H04W 12/0605, H04W 12/0608, H04W 12/0609, H04W 12/0802, H04W 12/0804, H04W 12/0806, H04W 12/0808, H04W 12/1002, H04W 12/1004, H04W 12/1006, H04W 12/1008, H04W 12/12, H04W 12/1201, H04W 12/1202, H04W 12/1204, H04W 12/1205, H04W 12/1206, H04W 12/1208. All groups listed in this warning should be considered in order to perform a complete search.
N	H04W 12/001		Group H04W 12/001 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/02. Groups H04W 12/00, H04W 12/02, and H04W 12/001 should be considered in order to perform a complete search.

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Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/0013		Group H04W 12/0013 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0013 should be considered in order to perform a complete search.
N	H04W 12/0017		Group H04W 12/0017 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0017 should be considered in order to perform a complete search.
N	H04W 12/002		Group H04W 12/002 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/002 should be considered in order to perform a complete search.
N	H04W 12/0023		Group H04W 12/0023 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0023 should be considered in order to perform a complete search.
N	H04W 12/0027		Group H04W 12/0027 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0027 should be considered in order to perform a complete search.
N	H04W 12/003		Group H04W 12/003 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/003 should be considered in order to perform a complete search.
N	H04W 12/00305		Group H04W 12/00305 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00305 should be considered in order to perform a complete search.

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Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/004		Group H04W 12/004 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/004 should be considered in order to perform a complete search.
N	H04W 12/00401		Group H04W 12/00401 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00401 should be considered in order to perform a complete search.
N	H04W 12/00403		Group H04W 12/00403 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00403 should be considered in order to perform a complete search.
N	H04W 12/00405		Group H04W 12/00405 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00405 should be considered in order to perform a complete search.
N	H04W 12/00407		Group H04W 12/00407 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00407 should be considered in order to perform a complete search.
N	H04W 12/00409		Group H04W 12/00409 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00409 should be considered in order to perform a complete search.
N	H04W 12/005		Group H04W 12/005 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/005 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/00502		Group H04W 12/00502 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00502 should be considered in order to perform a complete search.
N	H04W 12/00503		Group H04W 12/00503 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00503 should be considered in order to perform a complete search.
N	H04W 12/00504		Group H04W 12/00504 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00504 should be considered in order to perform a complete search.
N	H04W 12/00505		Group H04W 12/00505 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00505 should be considered in order to perform a complete search.
N	H04W 12/00506		Group H04W 12/00506 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00506 should be considered in order to perform a complete search.
N	H04W 12/00508		Group H04W 12/00508 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00508 should be considered in order to perform a complete search.
N	H04W 12/0051		Group H04W 12/0051 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0051 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/00512		Group H04W 12/00512 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00512 should be considered in order to perform a complete search.
N	H04W 12/00514		Group H04W 12/00514 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00514 should be considered in order to perform a complete search.
N	H04W 12/00516		Group H04W 12/00516 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00516 should be considered in order to perform a complete search.
N	H04W 12/00518		Group H04W 12/00518 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00518 should be considered in order to perform a complete search.
N	H04W 12/0052		Group H04W 12/0052 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/0052 should be considered in order to perform a complete search.
N	H04W 12/00522		Group H04W 12/00522 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00522 should be considered in order to perform a complete search.
N	H04W 12/00524		Group H04W 12/00524 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/00524 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/007		Group H04W 12/007 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00, H04W 12/02, and H04W 12/007 should be considered in order to perform a complete search.
N	H04W 12/009		Group H04W 12/009 is incomplete pending reclassification of documents from group H04W 12/00. Groups H04W 12/00 and H04W 12/009 should be considered in order to perform a complete search.
N	H04W 12/02		Group H04W 12/02 is impacted by reclassification into groups H04W 12/02, H04W 12/001, H04W 12/007. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/04		Group H04W 12/04 is impacted by reclassification into groups H04W 12/04, H04W 12/0401, H04W 12/0403, H04W 12/04031, H04W 12/04033, H04W 12/0407, H04W 12/04071. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/0401		Group H04W 12/0401 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/0401 should be considered in order to perform a complete search.
N	H04W 12/0403		Group H04W 12/0403 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/0403 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/04031		Group H04W 12/04031 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/04031 should be considered in order to perform a complete search.
N	H04W 12/04033		Group H04W 12/04033 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/04033 should be considered in order to perform a complete search.
N	H04W 12/0407		Group H04W 12/0407 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/0407 should be considered in order to perform a complete search.
N	H04W 12/04071		Group H04W 12/04071 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/04. Groups H04W 12/00, H04W 12/04, and H04W 12/04071 should be considered in order to perform a complete search.
N	H04W 12/06		Group H04W 12/06 is impacted by reclassification into groups H04W 12/06, H04W 12/0602, H04W 12/0605, H04W 12/0608, H04W 12/0609. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/0602		Group H04W 12/0602 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/06. Groups H04W 12/00, H04W 12/06, and H04W 12/0602 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/0605		Group H04W 12/0605 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/06. Groups H04W 12/00, H04W 12/06, and H04W 12/0605 should be considered in order to perform a complete search.
N	H04W 12/0608		Group H04W 12/0608 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/06. Groups H04W 12/00, H04W 12/06, and H04W 12/0608 should be considered in order to perform a complete search.
N	H04W 12/0609		Group H04W 12/0609 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/06. Groups H04W 12/00, H04W 12/06, and H04W 12/0609 should be considered in order to perform a complete search.
N	H04W 12/08		Group H04W 12/08 is impacted by reclassification into groups H04W 12/08, H04W 12/0802, H04W 12/0804, H04W 12/0806, H04W 12/0808. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/0802		Group H04W 12/0802 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/08. Groups H04W 12/00, H04W 12/08, and H04W 12/0802 should be considered in order to perform a complete search.
N	H04W 12/0804		Group H04W 12/0804 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/08. Groups H04W 12/00, H04W 12/08, and H04W 12/0804 should be considered in order to perform a complete search.

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/0806		Group H04W 12/0806 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/08. Groups H04W 12/00, H04W 12/08, and H04W 12/0806 should be considered in order to perform a complete search.
N	H04W 12/0808		Group H04W 12/0808 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/08. Groups H04W 12/00, H04W 12/08, and H04W 12/0808 should be considered in order to perform a complete search.
N	H04W 12/10		Group H04W 12/10 is impacted by reclassification into groups H04W 12/10, H04W 12/1002, H04W 12/1004, H04W 12/1006, H04W 12/1008. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/1002		Group H04W 12/1002 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/10. Groups H04W 12/00, H04W 12/10, and H04W 12/1002 should be considered in order to perform a complete search.
N	H04W 12/1004		Group H04W 12/1004 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/10. Groups H04W 12/00, H04W 12/10, and H04W 12/1004 should be considered in order to perform a complete search.
N	H04W 12/1006		Group H04W 12/1006 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/10. Groups H04W 12/00, H04W 12/10, and H04W 12/1006 should be considered in order to perform a complete search.

CPC NOTICE OF CHANGES 599

DATE: JANUARY 1, 2019

PROJECT RP0361

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/1008		Group H04W 12/1008 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/10. Groups H04W 12/00, H04W 12/10, and H04W 12/1008 should be considered in order to perform a complete search.
N	H04W 12/12		Group H04W 12/12 is incomplete pending reclassification of documents from group H04W 12/00. Group H04W 12/12 is also impacted by reclassification into groups H04W 12/12, H04W 12/1201, H04W 12/1202, H04W 12/1204, H04W 12/1205, H04W 12/1206, H04W 12/1208. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04W 12/1201		Group H04W 12/1201 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1201 should be considered in order to perform a complete search.
N	H04W 12/1202		Group H04W 12/1202 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1202 should be considered in order to perform a complete search.
N	H04W 12/1204		Group H04W 12/1204 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1204 should be considered in order to perform a complete search.
N	H04W 12/1205		Group H04W 12/1205 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1205 should be considered in order to perform a complete search.

CPC Form – v.5

CPC NOTICE OF CHANGES 599

DATE: JANUARY 1, 2019

PROJECT RP0361

Type*	Location	Old Warning notice	New/Modified Warning notice
N	H04W 12/1206		Group H04W 12/1206 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1206 should be considered in order to perform a complete search.
N	H04W 12/1208		Group H04W 12/1208 is incomplete pending reclassification of documents from groups H04W 12/00 and H04W 12/12. Groups H04W 12/00, H04W 12/12, and H04W 12/1208 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 (New)

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

H04W 12/001

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for protecting confidentiality of information, e.g. by encryption or ciphering.

Informative references

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

Protecting data	G06F 21/60
Cryptographic mechanisms or arrangements for symmetric encryption	H04L 9/06
Cryptographic mechanism or arrangements for public key encryption	H04L 9/30
Network security architectures or protocols for data content protection	H04L 63/0428

H04W 12/0013

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for protecting confidentiality of user plane, e.g. encrypting user traffic such as SMS, voice, web or application traffic.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SMS	Short Message Service

H04W 12/0017

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for confidentiality of control plane, i.e. signalling traffic such as NAS, RRC, Over-The-Air Rekey [OTAR] traffic or M2M trigger traffic.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

NAS	Non-Access Stratum
RRC	Radio Resource Control
OTAR	Over-the-Air Rekey
M2M	Machine-to-Machine

H04W 12/002

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communications networks for mobile device security or mobile application security, e.g.

- securing mobile application or mobile service provisioning, securing SIM application provisioning
- securing mobile application download, protecting update thereof
- managing security policies for mobile applications or mobile devices

Informative references

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

Protecting executable software	G06F 21/12
Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

Synonyms and Keywords

In patent documents,, the following abbreviations are often used:

AP	Access Point
NFC	Near Field Communications
DoS	Denial of Service
DDoS	Distributed Denial of Service
SMS	Short Message Service
botnet	Robot Network
SIM	Subscriber Identity Module
M2M	Machine-to-Machine

H04W 12/0023

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks for protecting application or service provisioning, e.g.:
- securing SIM application provisioning
- securing mobile application download, protecting update thereof

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module

H04W 12/0027

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks for managing security policies for mobile applications or mobile devices, e.g.:
- managing security policies for mobile applications or devices, using remote mobile device management tools
- parents managing child security policies for wireless devices or mobile applications
- employers managing employees security policies for wireless devices or for mobile applications

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

H04W 12/003

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for securing pairing of wireless devices, e.g.:
- bootstrapping a secure communication link between pairing terminals
- Secure socializing by establishing a secure wireless link between terminals

H04W 12/00305

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks for securing pairing of wireless devices involving three or more devices, e.g. group pairing, securely joining wireless ad-hoc networks.

H04W 12/004

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks using identity modules for protecting wireless traffic, comprising
- using subscriber identity modules SIM, USIM, RUIM, MCIM, ISIM, Secure Element [SE], NFC module, Mobile Trusted Module [MTM]

- virtual identity modules, e.g. virtual SIMs or downloadable SIMs for running on an embedded Secure Element [eSE] or embedded Universal Integrated Circuit UICC or embedded SIM eSIM
- shared identity modules, e.g. shared SIMs
- multiple identity modules, e.g. multi-SIM, dual-SIM
- near field communication [NFC] enabled identity modules for protecting wireless traffic, e.g. NFC tags, smart tag or radio frequency identification [RFID] module
- secure binding of identity modules, e.g. securely binding identity modules to a device or a service or an application like Simlock or subsidy lock, binding a SIM to a Relay Node, binding an App to UICC

Informative references

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

| Payment architecture making use of a SIM as secure element | G06Q 20/3229 |
| Network data management for processing of user or subscriber data | H04W 8/18 |

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module
USIM	Universal Subscriber Identity Module
RUIM	Removable Universal Identity Module
MCIM	Machine-to-Machine Communication Identity Module
ISIM	IMS (IP Multimedia Subsystem) Subscriber Identity Module
UICC	Embedded Universal Integrated Communication Card
SE	Secure Element
eSIM	Embedded Subscriber Identity Module
eUICC	Embedded Universal Integrated Communication Card
eSE	Embedded Secure Element
MTM	Mobile Trusted Module
NFC	Near Field Communication
RFID	Radio Frequency Identification

H04W 12/00401

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using virtual identity modules for protecting wireless traffic, comprising

- virtual SIMs or downloadable SIMs for running on an embedded Secure Element [eSE] or embedded Universal Integrated Circuit [eUICC] or embedded SIM [eSIM]

Informative references

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

| Payment architecture making use of a SIM as secure element | G06Q 20/3229 |
| Network data management for processing of user or subscriber data | H04W 8/18 |

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module
USIM	Universal Subscriber Identity Module
RUIM	Removable Universal Identity Module
MCIM	Machine-to-Machine Communication Identity Module
ISIM	IMS (IP Multimedia Subsystem) Subscriber Identity Module
UICC	Embedded Universal Integrated Communication Card
SE	Secure Element
eSIM	Embedded subscriber Identity Module
eUICC	Embedded Universal Integrated Communication Card
eSE	Embedded Secure Element
MTM	Mobile Trusted Module
NFC	Near Field Communication

H04W 12/00403

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using shared identity modules, e.g. SIM sharing.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module

H04W 12/00405

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using multiple identity modules for protecting wireless traffic, e.g. multi-sim, dual-sim.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module

H04W 12/00407

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using near field communication [NFC] enabled identity modules for protecting wireless traffic, e.g. NFC tags, smart tag or radio frequency identification [RFID] module.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

NFC	Near Field Communication
RFID	Radio Frequency Identification

H04W 12/00409

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for the secure binding of identity modules, e.g. securely binding identity modules to a device or a service or an application like Simlock or subsidy lock, binding a SIM to a Relay Node, binding an App to UICC.

Informative references

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

Network data management for processing of user or subscriber data	H04W 8/18

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module
UICC	Embedded Universal Integrated Communication Card

H04W 12/005

Definition statement

This place covers:

Context aware security arrangements specially adapted for wireless communication networks.

H04W 12/00502

Definition statement

This place covers:

Time aware security arrangements specially adapted for wireless communication networks, e.g. using timestamp, time delays like Round Trip Time RTT or time windows.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

RTT	Round Trip Time

H04W 12/00503

Definition statement

This place covers:

Location or proximity aware security arrangements specially adapted for wireless communication networks, e.g. using proximity to other devices measured using received signal strength RSS, absolute location.

H04W 12/00504

Definition statement

This place covers:

Ambient aware security arrangements specially adapted for wireless communication networks, e.g. using captured environmental data like audio, image, media or temperature.

H04W 12/00505

Definition statement

This place covers:

Risk aware security arrangements specially adapted for wireless communication networks, e.g. selecting security levels for authentication, encryption depending on risk profiles of devices, traffic or wireless networks.

H04W 12/00506

Definition statement

This place covers:

Trust aware security arrangements specially adapted for wireless communication networks, e.g. using trust scores or trust relationships.

H04W 12/00508

Definition statement

This place covers:

Gesture or behaviour aware security arrangements specially adapted for wireless communication networks, e.g. using gestures or device movement; for example, generating credentials via device movements or gestures, behaviormetrics (for example, authentication using a learned user behaviour, such as typing or touching of gripping characteristics).

H04W12/0051

Definition statement

This place covers:

Identity aware security arrangements specially adapted for wireless communication networks.

H04W 12/00512

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using wireless hardware identities, e.g. IMEI, MEID, ICC-ID.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

IMEI	International Mobile Equipment Identifier
MEID	Mobile Equipment Identifier
ICC-ID	Integrated Circuit Card Identifier

H04W 12/00514

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks using wireless subscriber identities, e.g. MSISDN, IMSI or MSIN.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

MSISDN	Mobile Station International Subscriber Directory Number
IMSI	International Mobile Subscriber Identity
MSIN	Mobile Station Identity Number

H04W 12/00516

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using wireless access point logical identities, e.g. AP SSID, ESSID or Base station Cell ID.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

AP	Access Point
SSID	Service Set Identifier
ESSID	Extended Service Set Identifier
Cell ID	Cell Identity

H04W 12/00518

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using temporary identities, e.g. TMSI, PCID, pseudonym or alias, random or one time ID, rolling ID, session ID or anonymous ID.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

TMSI	Temporary Mobile Station Identity
PCID	Provisional Connectivity Identity
ID	IDentity or IDentifier

H04W 12/0052

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks using group identities, e.g. group ID, group IMSI, shared identity, pool of identities.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

IMSI	International Mobile Station Identity
ID	IDentity or IDentifier

H04W 12/00522

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using graphical identities, e.g. graphical codes, barcodes or QR codes.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

QR	Quick Response

H04W 12/00524

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using radio fingerprints, e.g. electromagnetic signature or RF fingerprint.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

RF	Radio Frequency

H04W 12/007

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks for lawful interception.

Informative references

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

Network security architectures or protocols for supporting lawful interception	H04L 63/30

H04W 12/009

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks specially adapted for networks such as wireless sensor networks, ad-hoc networks, RFID networks or cloud networks.

Informative references

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

Self-organising networks	H04W 84/18

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

RFID	Radio Frequency IDentification

H04W 12/02

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for protecting privacy and anonymity comprising for example:

- identity privacy, e.g. aliases, pseudonyms or temporary identities
- data privacy, e.g. by defining which of the owner's data are visible to other parties
- protecting personally identifiable information [PII], e.g. by using privacy policies or levels, by anonymising or obfuscating or blurring user data like location, by hiding browsing or movement history.

Informative references

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

Network security architectures or protocols for anonymous communication in a packet data network	H04L 63/0421
Selectively restricting mobility data tracking	H04W 8/16
Call monitoring; Call tracing; Detection or prevention of malicious calls	H04M 3/2281

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

PII	Personally Identifiable Information

H04W 12/04

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for key management comprising negotiating, distributing, exchanging, transmitting and validating security keys or credentials.

Typical examples are:

- Key management by Generic Bootstrapping Architecture (GBA)
- EAP-AKA for cellular network
- EAP-SIM or EAP-TLS for 3GPP-WLAN interworking
- OpenID or Liberty Alliance and GBA interworking
- Key agreement via IEEE 802.11x WEP or WPA or WPS push button, e.g. for secure pairing between wireless devices
- Key agreement using reduced power transmission like NFC, graphical codes, infra-red or audio channels, e.g. for the secure pairing between wireless devices

Informative references

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

Network security architectures or protocols for supporting key management in a packet data network	H04L 63/06
Cryptographic mechanisms or arrangements for key distribution or management	H04L 9/08
Secure pairing between wireless devices	H04W 12/003
Hand-off or reselection arrangements	H04W 36/00

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

GBA	Generic Bootstrapping Architecture
EAP	Extended Authenticated Protocol
EAP-AKA	Extended Authenticated Protocol-Authentication and Key Agreement
EAP-SIM	Extended Authenticated Protocol-Subscriber Identity Module
EAP-TLS	Extended Authenticated Protocol-Transport Layer Security
3GPP	Third Generation Partnership Project
WEP	Wired Equivalent Privacy
WPA	Wi-Fi Protected Access
WPS	Wi-Fi Protected Setup
NFC	Near Field Communication
IEEE	Institute of Electrical and Electronics Engineers

H04W 12/0401

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for key generation or derivation.

Informative references

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

Key management or distribution	H04L 9/08
Key management or distribution in packet data network	H04L 63/06

H04W 12/0403

Definition statement

This place covers:

Key management using a trusted network node as anchor, e.g. key agreement for handover via EAP-SIM or EAP-AKA or EAP-TLS for 3GPP-WLAN interworking, OpenID and generic bootstrapping architecture [GBA interworking], liberty alliance and GBA interworking.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

GBA	Generic Bootstrapping Architecture
EAP	Extended Authenticated Protocol
EAP-AKA	Extended Authenticated Protocol-Authentication and Key Agreement
EAP-SIM	Extended Authenticated Protocol-Subscriber Identity Module
EAP-TLS	Extended Authenticated Protocol-Transport Layer Security
3GPP	Third Generation Partnership Project
WLAN	Wireless Local Area Network
OpenID	Open Identity

H04W 12/04031

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for key distribution using a trusted network node as anchor, e.g. key pre-distribution or key agreement.

H04W 12/04033

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks comprising key management protocols using a trusted network node as anchor, e.g. managing shared keys, group keys, multicast keys or rekeying.

H04W 12/0407

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for key management without using a trusted network node as anchor.

H04W 12/04071

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for key exchange between nodes without using a trusted network node as anchor, e.g.:

- key exchange or agreement via Wi-Fi protected setup [WPS]
- key exchange using short range communication, e.g. near field communication [NFC]
- key exchange out of band OOB methods such as graphical codes, barcodes or Quick Response QR codes, infrared, audio waves, light wave, USB dongle, etc.
- peer-to-peer P2P key exchange or agreement.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

Wi-Fi	Wireless Fidelity
WPS	Wi-Fi protected setup
OOB	out of band
QR	Quick Response
NFC	near field communication
USB	Universal Serial Bus
P2P	peer-to-peer

H04W 12/06

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for authentication, including authenticating entities such as, e.g. human user(s), device(s), service(s), after consulting network stored entity data or checking theirs credentials, e.g. GSM-AKA, UMTS-AKA, pre-authentication, continuous authentication, authentication using credential vaults or password managers.

Informative references

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

Authentication for protecting stand-alone computers and/or components thereof against unauthorised activity, i.e. establishing the identity or authorisation of security principals	G06F 21/30
Network security architectures or protocols for supporting authentication in a packet data network	H04L 63/08

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

GSM-AKA	Global System for Mobile communications-Authentication and Key Agreement
UMTS-AKA	Universal Mobile Telecommunications System-Authentication and Key Agreement

H04W 12/0602

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for performing pre-authentication, e.g. pre-caching and verification of credentials for faster login or IEEE 802.1x pre-authentication in advance to connection setup.

Informative references

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

Network security architectures or protocols for supporting authentication in a packet data network	H04L 63/08

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

IEEE 802.1x	Institute of Electrical and Electronics Engineers standard 802.1x.

H04W 12/0605

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for performing continuous authentication or implicit authentication, i.e. continuous identity recognition and authentication using, e.g. behavioural biometrics and without explicitly asking the user to provide credentials.

Informative references

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

Authentication using pattern of computer usage, e.g. typical user behaviour	G06F 21/316
Network security architectures or protocols for supporting authentication in a packet data network	H04L 63/08
Gesture or behaviour aware, e.g. device movements or behaviometrics	H04W 12/00508

H04W 12/0608

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for performing authentication, using credential vaults, or password management applications or OTP applications.

Informative references

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

Network security architectures or protocols for supporting authentication in a packet data network	H04L 63/08

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

OTP	One Time Password

H04W 12/0609

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for performing authentication using digital certificates or pre-shared keys.

Informative references

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

Authentication using certificates to protect stand-alone computers/components	G06F 21/33
Network security architectures or protocols for supporting authentication in a packet data network	H04L 63/08

H04W 12/08

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communications network for access security comprising access authorisation to wireless network resources for example using:

- authorisation based on an entity's identity (e.g. Access Control Lists ACL, whitelists, blacklists)
- authorisation based on profile or attributes assigned to an entity, e.g. verifying current profile against expected one, age attribute verification
- authorisation based on a group or role (e.g. Role Based Access Control [RBAC])
- authorisation based security level
- authorisation based on the trust score or the reputation of an entity
- authorisation based on location (e.g. proximity to other entities, allowed locations)
- authorisation based on time (e.g. limited time window, within a time range)
- revocation of authorisation (e.g. secure disconnect, remote kill or suspend or lock or wipe command)
- delegation of authorisation, e.g. OAuth, user centric management of access rights, user consent or approval
- authorisation based on security domains, e.g. controlling access to enterprise security domain or private data security domains, authorisation based on application security domains (e.g. Global Platform domains)
- authorisation using packet filters or packet firewalls, e.g. SMS Firewalls, NFC or SIM packet filtering

Informative references

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

| Protecting access to data via a platform, e.g. using keys or access control rules | G06F 21/62 |
| Network security architectures or protocols for supporting authorisation in a packet data network | H04L 63/10 |

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

ACL	Access Control List
RBAC	Role Based Access Control
SMS	Short Message Service
NFC	Near Field Communication
SIM	Subscriber Identity Module

H04W 12/0802

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources using revocation of authorisation, e.g.:
- secure disconnect
- remote kill command
- remote lock or remote wipe command

Informative references

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

Protecting access to data via a platform, e.g. using keys or access control rules	G06F 21/62
Network security architectures or protocols for supporting authorisation in a packet data network	H04L 63/10

H04W 12/0804

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications network for access authorisation delegation comprising giving authorisation to wireless network resources without sharing credentials:
- delegating access or authorisation token, e.g. using OAuth protocol
- distributing authorisation tokens after user's consent or approval

Informative references

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

Network security architectures or protocols for supporting authorisation in a packet data network	H04L 63/10

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

OAuth	Open Authorisation

H04W 12/0806

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources based on security domains, e.g.:
- controlling access to enterprise security domain or private data security domains
- access control based on machine-to-machine [M2M] security domains
- authorisation based on application security domains (e.g. Global Platform domains)

Informative references

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

Network security architectures or protocols for supporting authorisation in a packet data network	H04L 63/10

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

M2M	Machine-to-Machine

H04W 12/0808

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources using packet filters or packet firewalls, e.g.:
- wireless packet firewalls
- SMS firewall
- NFC packets filters
- SIM packets filters

Informative references

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

Network security architectures or protocols for supporting authorisation in a packet data network	H04L 63/10

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SMS	Short Message Service
NFC	Near Field Communications
SIM	Subscriber Identity Module

H04W 12/10

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for protecting integrity and preventing spoofing.

Informative references

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

Protecting data integrity, e.g. using checksums, certificates or signatures	G06F 21/64
Network security architectures or protocols for verifying the received information	H04L 63/12

H04W12/1002

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for verifying or ensuring wireless paths or wireless routes' integrity, e.g. using signatures such as Message Authentication Codes or hash chains.

Informative references

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

Network security architectures or protocols for verifying the received information	H04L 63/12

H04W12/1004

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for verifying or ensuring location integrity, e.g. using secure geo-tagging, trusted wireless cell tagging, or wireless location signatures.

Informative references

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

Network security architectures or protocols for verifying the received information	H04L 63/12

H04W12/1006

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for verifying or ensuring packet integrity, e.g. using packet signatures such as Message Authentication Codes.

Informative references

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

Protecting data integrity, e.g. using checksums, certificates or signatures	G06F 21/64
Network security architectures or protocols for verifying the received information	H04L 63/12

H04W 12/1008

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for verifying or ensuring source integrity, e.g. using signatures such as Message Authentication Codes to verify the source.

Informative references

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

Network security architectures or protocols for verifying the received information	H04L 63/12

H04W 12/12

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communication networks for fraud detection or prevention, comprising:
- protecting against rogue devices, e.g. bidding down or downgrading attacks, rogue device or rogue AP or NFC device, selfish nodes,
- wireless intrusion detection and prevention
- protecting against power exhaustion attacks, e.g. power depletion, starvation attack or sleep deprivation attack
- anti-theft arrangements, e.g. protection against identity or service or device theft like SIM cloning or machine-to-machine M2M displacement
- anti-malware arrangements, e.g. protection against SMS fraud or mobile malware
- detecting or preventing attacks on wireless networks or entities (e.g. Denial of Service DoS, DDoS, botnet)
- vulnerability assessment of wireless networks or entities

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

AP	Access Point
NFC	Near Field Communications
DoS	Denial of Service

DDoS	Distributed Denial of Service
SMS	Short Message Service
botnet	Robot Network

H04W 12/1201

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for wireless intrusion detection and prevention, comprising:
- detection or prevention of attacks on wireless networks or entities using sniffers or WIDS or WIPS
- data loss protection [DLP] for example detecting and preventing data exfiltration of sensitive enterprise data using wireless malicious devices.

Informative references

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

Detecting local intrusion or implementing counter measures	G06F 21/55
Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

WIDS	Wireless Intrusion Detection System
WIPS	Wireless Intrusion Prevention System
DLP	Data Loss Protection

H04W 12/1202

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for protecting against rogue devices, comprising:
- protecting against bidding down or downgrading attacks
- protecting against rogue WLAN AP or cellular Base Station spoofing legitimate APs or base stations
- protecting against wireless short range (e.g. RFID, NFC, Bluetooth) man-in-the-middle [MITM] or wireless relay attacks
- protecting against selfish nodes dropping legitimate packets or impersonating other nodes

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

WLAN	Wireless Local Area Network
AP	Access Point
NFC	Near Field Communications
RFID	Radio Frequency IDentifier
MITM	Man-in-The-Middle

H04W 12/1204

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for countermeasures against attacks, comprising:
- isolating malicious wireless devices or malicious wireless traffic
- quarantining malicious wireless devices or dropping malicious wireless traffic

Informative references

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

Detecting local intrusion or implementing counter-measures to protect stand-alone computers/components against unauthorised activity	G06F 21/55
Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14

H04W 12/1205

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for protecting against power exhaustion attacks, e.g. power depletion, starvation attack or sleep deprivation attack

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14
Power saving arrangements	H04W 52/02

H04W 12/1206

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks comprising:
- anti-theft arrangements, e.g. protection against identity or service or device theft like SIM cloning or machine-to-machine [M2M] displacement
- anti-malware arrangements, e.g. protection against SMS fraud or mobile malware
- detecting or preventing of attacks on wireless networks or entities, e.g. denial of service [DoS], distributed denial of service [DDoS] or botnet
- vulnerability assessment of wireless networks or entities

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

M2M	Machine-to-Machine
SIM	Subscriber Identity Module

H04W12/1208

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks comprising anti-malware arrangements, e.g.
- protection against SMS fraud, such as premium SMS malware

- protection against mobile malware, e.g. viruses or worms propagating via wireless networks or attacking wireless networks or wireless services

Informative references

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

Network security architectures or protocols for detecting or protecting against malicious traffic	H04L 63/14

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SMS	Short Message Service

2. A. DEFINITIONS (Modified)

H04W 12/00

Insert: The following <u>new</u> Definition statement section.

Definition statement

This place covers:

Security arrangements for wireless communications networks, e.g. Wireless Sensor Networks, Near Field Communication [NFC] networks, self-organizing wireless networks, wireless local loop. It also covers s arrangements for protecting mobile applications. Security arrangements for services specifically adapted for wireless communications.

It covers:
- protecting privacy or anonymity
- protecting confidentiality
- key management
- authentication
- access security
- integrity
- fraud detection and prevention
- mobile application security
- using identity modules
- secure pairing of devices- context aware security
- lawful interception

Insert: The following <u>new</u> section: Informative references.

Informative references

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

Network architectures or network communications protocols for network security	H04L 63/00
Security arrangements for protecting computers against unauthorised activity	G06F 21/00
Cryptographic mechanisms or crypotgraphic arrangements for secret or secure communication	H04L 9/00

Delete: The <u>entire</u> existing section: Limiting references.

Limiting references

This place does not cover:

Security arrangements for protecting computers against unauthorised activity	G06F 21/00
Arrangements for secret or secure communication	H04L 9/00

3.   REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
C	H04W 12/00	H04W 12/00, H04W 12/001, H04W 12/0013, H04W 12/0017, H04W 12/002, H04W 12/0023, H04W 12/0027, H04W 12/003, H04W 12/00305, H04W 12/004, H04W 12/00401, H04W 12/00403, H04W 12/00405, H04W 12/00407, H04W 12/00409, H04W 12/005, H04W 12/00502, H04W 12/00503, H04W 12/00504, H04W 12/00505, H04W 12/00506, H04W 12/00508, H04W 12/0051, H04W 12/00512, H04W 12/00514, H04W 12/00516, H04W 12/00518, H04W 12/0052, H04W 12/00522, H04W 12/00524, H04W 12/007, H04W 12/009, H04W 12/0401, H04W 12/0403, H04W 12/04031, H04W 12/04033, H04W 12/0407, H04W 12/04071, H04W 12/0602, H04W 12/0605, H04W 12/0608, H04W 12/0609, H04W 12/0802, H04W 12/0804, H04W 12/0806, H04W 12/0808, H04W 12/1002, H04W 12/1004, H04W 12/1006, H04W 12/1008, H04W 12/12, H04W 12/1201, H04W 12/1202, H04W 12/1204, H04W 12/1205, H04W 12/1206, H04W 12/1208
C	H04W 12/02	H04W 12/001, H04W 12/007, H04W 12/02
C	H04W 12/04	H04W 12/04, H04W 12/0401, H04W 12/0403, H04W 12/04031, H04W 12/04033, H04W 12/0407, H04W 12/04071
C	H04W 12/06	H04W 12/06, H04W 12/0602, H04W 12/0605, H04W 12/0608, H04W 12/0609
C	H04W 12/08	H04W 12/08, H04W 12/0802, H04W 12/0804, H04W 12/0806, H04W 12/0808
C	H04W 12/10	H04W 12/10, H04W 12/1002, H04W 12/1004, H04W 12/1006, H04W 12/1008

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
C	H04W 12/12	H04W 12/12, H04W 12/1201, H04W 12/1202, H04W 12/1204, H04W 12/1205, H04W 12/1206, H04W 12/1208

* 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, F 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".

DATE: JANUARY 1, 2019

PROJECT RP0361

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

CPC	IPC	Action*
H04W 12/001	H04W 12/00	new
H04W 12/0013	H04W 12/00	new
H04W 12/0017	H04W 12/00	new
H04W 12/002	H04W 12/00	new
H04W 12/0023	H04W 12/00	new
H04W 12/0027	H04W 12/00	new
H04W 12/003	H04W 12/00	new
H04W 12/00305	H04W 12/00	new
H04W 12/004	H04W 12/00	new
H04W 12/00401	H04W 12/00	new
H04W 12/00403	H04W 12/00	new
H04W 12/00405	H04W 12/00	new
H04W 12/00407	H04W 12/00	new
H04W 12/00409	H04W 12/00	new
H04W 12/005	H04W 12/00	new
H04W 12/00502	H04W 12/00	new
H04W 12/00503	H04W 12/00	new
H04W 12/00504	H04W 12/00	new
H04W 12/00505	H04W 12/00	new
H04W 12/00506	H04W 12/00	new
H04W 12/00508	H04W 12/00	new
H04W 12/0051	H04W 12/00	new
H04W 12/00512	H04W 12/00	new
H04W 12/00514	H04W 12/00	new
H04W 12/00516	H04W 12/00	new
H04W 12/00518	H04W 12/00	new
H04W 12/0052	H04W 12/00	new
H04W 12/00522	H04W 12/00	new
H04W 12/00524	H04W 12/00	new
H04W 12/007	H04W 12/00	new
H04W 12/009	H04W 12/00	new
H04W 12/0401	H04W 12/04	new
H04W 12/0403	H04W 12/04	new
H04W 12/04031	H04W 12/04	new
H04W 12/04033	H04W 12/04	new
H04W 12/0407	H04W 12/04	new
H04W 12/04071	H04W 12/04	new
H04W 12/0602	H04W 12/06	new
H04W 12/0605	H04W 12/06	new
H04W 12/0608	H04W 12/06	new
H04W 12/0609	H04W 12/06	new
H04W 12/0802	H04W 12/08	new
H04W 12/0804	H04W 12/08	new
H04W 12/0806	H04W 12/08	new

CPC Form – v.5

DATE: JANUARY 1, 2019

PROJECT RP0361

CPC	IPC	Action*
H04W 12/0808	H04W 12/08	new
H04W 12/1002	H04W 12/10	new
H04W 12/1004	H04W 12/10	new
H04W 12/1006	H04W 12/10	new
H04W 12/1008	H04W 12/10	new
H04W 12/1201	H04W 12/12	new
H04W 12/1202	H04W 12/12	new
H04W 12/1204	H04W 12/12	new
H04W 12/1205	H04W 12/12	new
H04W 12/1206	H04W 12/12	new
H04W 12/1208	H04W 12/12	New

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

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