

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 951

JANUARY 1, 2021

PROJECT RP0704

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:	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, 12/0401, 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
Symbols New:	H04W	12/03, 12/033, 12/037, 12/041, 12/043, 12/0431, 12/0433, 12/047, 12/0471, 12/062, 12/065, 12/068, 12/069, 12/082, 12/084, 12/086, 12/088, 12/102, 12/104, 12/106, 12/108, 12/121, 12/122, 12/125, 12/126, 12/128, 12/30, 12/33, 12/35, 12/37, 12/40, 12/42, 12/43, 12/45, 12/47, 12/48, 12/50, 12/55, 12/60, 12/61, 12/63, 12/64, 12/65, 12/66, 12/67, 12/68, 12/69, 12/71, 12/72, 12/73, 12/75, 12/76, 12/77, 12/79, 12/80
Titles Changed:	H04W	12/00, 12/02, 12/04, 12/12
Warnings New:	H04W	12/30, 12/33, 12/63, 12/64
DEFINITIONS:		
Definitions Deleted:	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, 12/0401, 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
Definitions New:	H04W	12/03, 12/033, 12/037, 12/041, 12/043, 12/0431, 12/047, 12/062, 12/065, 12/068, 12/082, 12/084, 12/086, 12/088, 12/102, 12/104, 12/106, 12/108, 12/121, 12/122, 12/126, 12/128, 12/30, 12/33, 12/35, 12/37, 12/40, 12/42, 12/43, 12/45, 12/47, 12/48, 12/50, 12/55, 12/61, 12/63, 12/64, 12/65, 12/67, 12/68, 12/71, 12/72, 12/73, 12/75, 12/76, 12/77, 12/79, 12/80
Definitions Modified:	H04W	12/00, 12/02, 12/04, 12/06, 12/08, 12/10, 12/12

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

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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)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS H04W - WIRELESS COMMUNICATION NETWORKS (broadcast communication H04H; communication systems using wireless links for non-selective communication, e.g. wireless extensions H04M 1/72)

<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	H04W12/00	0	Security arrangements; Authentication; Protecting privacy or anonymity	
D	H04W12/001	1	{Protecting confidentiality, e.g. by encryption or ciphering}	< administrative transfer to H04W12/03>
D	H04W12/0013	2	{of user plane, e.g. user traffic}	< administrative transfer to H04W12/033>
D	H04W12/0017	2	{of control plane, e.g. signalling traffic}	< administrative transfer to H04W12/037>
D	H04W12/002	1	{Mobile device security; Mobile application security}	< administrative transfer to H04W12/30>
D	H04W12/0023	2	{Protecting application or service provisioning, e.g. securing SIM application provisioning}	< administrative transfer to H04W12/35>
D	H04W12/0027	2	{Managing security policies for mobile device or applications control, e.g. mobile application permission management or mobile device security settings}	< administrative transfer to H04W12/37>
D	H04W12/003	1	{Secure pairing of devices, e.g. bootstrapping a secure communication link between pairing terminals; Secure socializing}	< administrative transfer to H04W12/50>
D	H04W12/00305	2	{involving three or more devices, e.g. group pairing}	< administrative transfer to H04W12/55>
D	H04W12/004	1	{using identity modules}	< administrative transfer to H04W12/40>
D	H04W12/00401	2	{using virtual identity modules}	< administrative transfer to H04W12/42>
D	H04W12/00403	2	{using shared identity modules, e.g. SIM sharing}	< administrative transfer to H04W12/43>
D	H04W12/00405	2	{using multiple identity modules}	< administrative transfer to H04W12/45>
D	H04W12/00407	2	{using near field communication [NFC], e.g. NFC tag, smart tag or radio frequency identification [RFID] module}	< administrative transfer to H04W12/47>

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title “CPC only” text should normally be enclosed in {curly brackets}**	Transferred to#
D	H04W12/00409	2	{using secure binding, e.g. securely binding identity modules to devices, services or applications}	< administrative transfer to H04W12/48>
D	H04W12/005	1	{Context aware security}	< administrative transfer to H04W12/60>
D	H04W12/00502	2	{Time aware}	< administrative transfer to H04W12/61>
D	H04W12/00503	2	{Location or proximity aware, e.g. using proximity to other devices}	< administrative transfer to H04W12/63>
D	H04W12/00504	2	{Ambient aware, e.g. using captured environmental data}	< administrative transfer to H04W12/65>
D	H04W12/00505	2	{Risk aware, e.g. selecting security levels depending on risk profiles}	< administrative transfer to H04W12/67>
D	H04W12/00506	2	{Trust aware, e.g. using trust scores or trust relationships}	< administrative transfer to H04W12/66>
D	H04W12/00508	2	{Gesture or behaviour aware, e.g. device movements or biometrics}	< administrative transfer to H04W12/68>
D	H04W12/0051	2	{Identity aware}	< administrative transfer to H04W12/69>
D	H04W12/00512	3	{Hardware identity}	< administrative transfer to H04W12/71>
D	H04W12/00514	3	{Subscriber identity}	< administrative transfer to H04W12/72>
D	H04W12/00516	3	{Access point logical identity}	< administrative transfer to H04W12/73>
D	H04W12/00518	3	{Temporary identity}	< administrative transfer to H04W12/75>
D	H04W12/0052	3	{Group identity}	< administrative transfer to H04W12/76>
D	H04W12/00522	3	{Graphical identity}	< administrative transfer to H04W12/77>
D	H04W12/00524	3	{Radio fingerprint}	< administrative transfer to H04W12/79>
D	H04W12/007	1	{Lawful interception}	< administrative transfer to H04W12/80>
U	H04W12/009	1	{specially adapted for networks, e.g. wireless sensor networks, ad-hoc networks, RFID networks or cloud networks}	
M	H04W12/02	1	Protecting privacy or anonymity, e.g. protecting personally identifiable information [PII]	
N	H04W12/03	1	Protecting confidentiality, e.g. by encryption	
N	H04W12/033	2	of the user plane, e.g. user’s traffic	
N	H04W12/037	2	of the control plane, e.g. signalling traffic	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title “CPC only” text should normally be enclosed in {curly brackets}**	Transferred to#
M	H04W12/04	1	Key management, e.g. using generic bootstrapping architecture [GBA]	
D	H04W12/0401	2	{Key generation or derivation}	< administrative transfer to H04W12/041>
D	H04W12/0403	2	{using a trusted network node as anchor}	< administrative transfer to H04W12/043>
D	H04W12/04031	3	{Key distribution, e.g. key pre-distribution or key agreement}	< administrative transfer to H04W12/0431>
D	H04W12/04033	3	{Key management protocols, e.g. managing shared keys, group keys, multicast keys or rekeying}	< administrative transfer to H04W12/0433>
D	H04W12/0407	2	{without using a trusted network node as anchor}	< administrative transfer to H04W12/047>
D	H04W12/04071	3	{Key exchange, e.g. between nodes}	< administrative transfer to H04W12/0471>
N	H04W 12/041	2	Key generation or derivation	
N	H04W 12/043	2	using a trusted network node as an anchor	
N	H04W 12/0431	3	Key distribution or pre-distribution; Key agreement	
N	H04W 12/0433	3	Key management protocols	
N	H04W 12/047	2	without using a trusted network node as an anchor	
N	H04W 12/0471	3	Key exchange	
U	H04W12/06	1	Authentication	
D	H04W12/0602	2	{Pre-authentication}	< administrative transfer to H04W12/062>
D	H04W12/0605	2	{Continuous authentication}	< administrative transfer to H04W12/065>
D	H04W12/0608	2	{using credential vaults, e.g. password manager applications or one time password [OTP] applications}	< administrative transfer to H04W12/068>
D	H04W12/0609	2	{using certificates or pre-shared keys}	< administrative transfer to H04W12/069>
N	H04W 12/062	2	Pre-authentication	
N	H04W 12/065	2	Continuous authentication	
N	H04W 12/068	2	{using credential vaults, e.g. password manager applications or one time password [OTP] applications}	
N	H04W 12/069	2	using certificates or pre-shared keys	
U	H04W12/08	1	Access security	
D	H04W12/0802	2	{using revocation of authorisation}	< administrative transfer to H04W12/082>
D	H04W12/0804	2	{using delegated authorisation, e.g. Open Authorisation [OAuth] protocol, user centric management of access rights or user consent}	< administrative transfer to H04W12/084>

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title “CPC only” text should normally be enclosed in {curly brackets}**	Transferred to#
D	H04W12/0806	2	{using security domains, e.g. separating enterprise and private data domains, building machine-to-machine [M2M] domains or global platform domains}	< administrative transfer to H04W12/086>
D	H04W12/0808	2	{using packet filters or firewalls}	< administrative transfer to H04W12/088>
N	H04W 12/082	2	using revocation of authorisation	
N	H04W 12/084	2	using delegated authorisation, e.g. open authorisation [OAuth] protocol	
N	H04W 12/086	2	using security domains	
N	H04W 12/088	2	using filters or firewalls	
U	H04W12/10	1	Integrity	
D	H04W12/1002	2	{Route integrity, e.g. using trusted paths}	< administrative transfer to H04W12/102>
D	H04W12/1004	2	{Location integrity, e.g. secure geo-tagging or trusted cell tagging}	< administrative transfer to H04W12/104>
D	H04W12/1006	2	{Packet or message integrity}	< administrative transfer to H04W12/106>
D	H04W12/1008	2	{Source integrity}	< administrative transfer to H04W12/108>
N	H04W 12/102	2	Route integrity, e.g. using trusted paths	
N	H04W 12/104	2	Location integrity, e.g. secure geotagging	
N	H04W 12/106	2	Packet or message integrity	
N	H04W 12/108	2	Source integrity	
M	H04W12/12	1	Detection or prevention of fraud	
D	H04W12/1201	2	{Wireless intrusion detection system [WIDS]; Wireless intrusion prevention system [WIPS]}	< administrative transfer to H04W12/121>
D	H04W12/1202	3	{Protecting against rogue devices}	< administrative transfer to H04W12/122>
D	H04W12/1204	3	{Countermeasures against attacks}	< administrative transfer to H04W12/122>
D	H04W12/1205	2	{Protecting against power exhaustion attacks, e.g. power depletion, starvation attack or sleep deprivation attack}	< administrative transfer to H04W12/125>
D	H04W12/1206	2	{Anti-theft arrangements, e.g. protecting against device theft, subscriber identity module [SIM] cloning or machine-to-machine [M2M] displacement}	< administrative transfer to H04W12/126>
D	H04W12/1208	2	{Anti-malware arrangements, e.g. protecting against SMS fraud or mobile malware}	< administrative transfer to H04W12/128>
N	H04W 12/121	2	Wireless intrusion detection systems [WIDS]; Wireless intrusion prevention systems [WIPS]	

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
N	H04W 12/122	3	Counter-measures against attacks; Protection against rogue devices	
N	H04W 12/125	2	Protection against power exhaustion attacks	
N	H04W 12/126	2	Anti-theft arrangements, e.g. protection against subscriber identity module [SIM] cloning	
N	H04W 12/128	2	Anti-malware arrangements, e.g. protection against SMS fraud or mobile malware	
Q	H04W 12/30	1	Security of mobile devices; Security of mobile applications	H04W 12/30, H04W 12/33
N	H04W 12/33	2	using wearable devices, e.g. using a smartwatch or smart-glasses	
N	H04W12/35	2	{Protecting application or service provisioning, e.g. securing SIM application provisioning}	
N	H04W 12/37	2	Managing security policies for mobile devices or for controlling mobile applications	
N	H04W 12/40	1	Security arrangements using identity modules	
N	H04W 12/42	2	using virtual identity modules	
N	H04W 12/43	2	using shared identity modules, e.g. SIM sharing	
N	H04W 12/45	2	using multiple identity modules	
N	H04W 12/47	2	using near field communication [NFC] or radio frequency identification [RFID] modules	
N	H04W 12/48	2	using secure binding, e.g. securely binding identity modules to devices, services or applications	
N	H04W 12/50	1	Secure pairing of devices	
N	H04W 12/55	2	involving three or more devices, e.g. group pairing	
N	H04W 12/60	1	Context-dependent security	
N	H04W 12/61	2	Time-dependent	
Q	H04W 12/63	2	Location-dependent; Proximity-dependent	H04W 12/63, H04W 12/64
N	H04W 12/64	3	using geofenced areas	
N	H04W 12/65	2	Environment-dependent, e.g. using captured environmental data	
N	H04W12/66	2	{Trust-dependent, e.g. using trust scores or trust relationships}	
N	H04W 12/67	2	Risk-dependent, e.g. selecting a security level depending on risk profiles	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title “CPC only” text should normally be enclosed in {curly brackets}**	Transferred to#
N	H04W 12/68	2	Gesture-dependent or behaviour-dependent	
N	H04W 12/69	2	Identity-dependent	
N	H04W 12/71	3	Hardware identity	
N	H04W 12/72	3	Subscriber identity	
N	H04W 12/73	3	Access point logical identity	
N	H04W 12/75	3	Temporary identity	
N	H04W 12/76	3	Group identity	
N	H04W 12/77	3	Graphical identity	
N	H04W 12/79	3	Radio fingerprint	
N	H04W 12/80	1	Arrangements enabling lawful interception [LI]	

*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”.
- 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.

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B. New, Modified or Deleted Warning(s)

SUBCLASS H04W - WIRELESS COMMUNICATION NETWORKS (broadcast communication H04H; communication systems using wireless links for non-selective communication, e.g. wireless extensions H04M 1/72)

<u>Type*</u>	<u>Location</u>	<u>Old Warning</u>	<u>New/Modified Warning</u>
N	H04W 12/30		Group H04W 12/30 is impacted by reclassification into group H04W 12/33. Groups H04W 12/30 and H04W 12/33 should be considered in order to perform a complete search.
N	H04W 12/33		Group H04W 12/33 is incomplete pending reclassification of documents from group H04W 12/30. Groups H04W 12/30 and H04W 12/33 should be considered in order to perform a complete search.
N	H04W 12/63		Group H04W 12/63 is impacted by reclassification into group H04W 12/64. Groups H04W 12/63 and H04W 12/64 should be considered in order to perform a complete search.
N	H04W 12/64		Group H04W 12/64 is incomplete pending reclassification of documents from group H04W 12/63. Groups H04W 12/63 and H04W 12/64 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.

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2. A. DEFINITIONS (new)

Insert the following new definitions.

H04W12/03

Definition statement

This place covers:

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

References

Informative references

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

Arrangements for secret or secure communication, the encryption apparatus using shift registers or memories for blockwise coding	H04L 9/06
Arrangements for secret or secure communication; Public key	H04L 9/30
Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity; Protecting Data	G06F 21/60

H04W12/033

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
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H04W12/037

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

H04W12/041

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for key generation or derivation, for example:

- Key derivation for forward and /or backward security for example for securing vertical or horizontal handovers,
- Horizontal key derivation, or
- Vertical key derivations.

References

Informative references

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

Handoff or reselection arrangements	H04W 36/00
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H04W12/043**Definition statement***This place covers:*

Key management using a trusted network node as anchor, for example:

- 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	Extensible Authentication Protocol
EAP-AKA	Extensible Authentication Protocol-Authentication and Key Agreement
EAP-SIM	Extensible Authentication 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

H04W12/0431**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.

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References

Informative references

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

Arrangements for secret or secure communication, Key distribution	H04L 9/08
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H04W12/047

Definition statement

This place covers:

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

- 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.
or
- 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

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H04W12/062**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.

Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

IEEE 802.1x	Institute of Electrical and Electronics Engineers standard 802.1x.
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H04W12/065**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.

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

Context-dependent security, gesture-dependent or behaviour-dependent	H04W 12/68
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H04W12/068**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.

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References**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	H04L63/08
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Synonyms and Keywords

In patent documents, the following abbreviations are often used:

OTP	One Time Password
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H04W12/082**Definition statement**

This place covers:

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources using revocation of authorisation, for example:

- Secure disconnect,
- Remote kill command, or
- Remote lock or remote wipe command.

H04W12/084**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, for example:

- Delegating access or authorisation token, e.g. using OAuth protocol, or
- Distributing authorisation tokens after user's consent or approval.

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Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

OAuth	Open Authorisation
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H04W12/086**Definition statement***This place covers:*

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources based on security domains, for example:

- Controlling access to enterprise security domain or private security domain,
- Access control based on machine to machine [M2M] security domains, or
- Authorisation based on application security domains (e.g. Global Platform domains).

Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

M2M	Machine-to-Machine
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H04W12/088**Definition statement***This place covers:*

Security arrangements specially adapted for wireless communications network comprising access authorisation to wireless network resources using filters or firewalls, for example:

- Wireless packet firewalls,
- SMS firewall,
- NFC packets filters, or
- SIM packets filters.

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References**Informative references**

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

Arrangements for monitoring and testing packet switching networks	H04L 43/00
Network architectures or network communication protocols for separating internal from external traffic, e.g. firewalls	H04L 63/02

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

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

H04W12/102**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.

H04W12/104**Definition statement**

This place covers:

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

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H04W12/106

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.

References

Informative references

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

Coding, decoding or code conversion, for error detection or error correction; Coding theory basic assumptions; Coding bounds; Error probability evaluation methods; Channel models; Simulation or testing of codes	H03M 13/00
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H04W12/108

Definition statement

This place covers:

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

H04W12/121

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks for wireless intrusion detection and protection, comprising:

- Detecting or preventing intrusions using identifiers in general for example a MAC address, or a Bluetooth address, or
- Detecting or preventing intrusions using radio fingerprints identifiers.

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References**Informative references**

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

Context-dependent security, identity-dependent	H04W 12/69
Context-dependent security, radio fingerprint	H04W 12/79

H04W12/122**Definition statement**

This place covers:

Security arrangements specially adapted for wireless communication networks for countermeasures against attacks, e.g. to protect 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,
- Isolating malicious wireless devices or malicious wireless traffic or
- Quarantining malicious wireless devices or dropping malicious wireless traffic.

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

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H04W12/126**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, or
- Vulnerability assessment of wireless networks or entities.

Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

M2M	Machine-to-Machine
SIM	Subscriber Identity Module

H04W12/128**Definition statement***This place covers:*

Security arrangements specially adapted for wireless communication networks comprising anti-malware arrangements, for example:

- Protection against SMS fraud, such as premium SMS malware or
- Protection against mobile malware, e.g. viruses or worms propagating via wireless networks or attacking wireless networks or wireless services.

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

Computer malware detection or handling, e.g. Anti-Virus arrangements	G06F 21/56
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Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SMS	Short Message Service
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H04W12/30

Definition statement

This place covers:

Security arrangements specifically adapted for wireless communications networks for mobile device security or mobile application security, for example:

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

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module
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H04W12/33

Definition statement

This place covers:

Security arrangements specially adapted for wireless communications networks for protecting application or service provisioning using wearables, for example:

- Automatic access to entities such as mobile devices, e.g. unlocking mobile devices using wirelessly enabled wearable devices or
- Securing mobile applications or services executable or connectable to using wirelessly enabled wearable devices, such as wireless smartwatches, headphones, bracelets, rings, necklaces, smart-glasses, wristbands.

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

Wireless network protocols or protocol adaptations to wireless operations	H04W 80/00
Identity modules using near field communication	H04W 12/47

H04W12/35**Definition statement***This place covers:*

Security arrangements specially adapted for wireless communications networks for protecting application or service provisioning, for example:

- Securing SIM application provisioning.
- Securing mobile application download, protecting update thereof.

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

Power saving arrangements	H04W 52/02
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:*

SIM	Subscriber Identity Module
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H04W12/37**Definition statement***This place covers:*

Security arrangements specially adapted for wireless communications networks for managing security policies for mobile applications or mobile devices, for example:

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- 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, or
- Employers managing employees' security policies for wireless devices or for mobile applications.

H04W12/40

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 [eUICC] 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, or
- 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 an SIM to a Relay Node, binding an App to UICC.

References

Informative references

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

Payment schemes or models using cards	G06Q 20/34
Network data management, processing of user or subscriber data	H04W 8/18
Context-dependent security, identity-dependent	H04W 12/69

Special rules of classification

When allocating subgroup H04W12/40, attention should be made to check whether other subgroups, e.g. H04W12/06 (using SIM for authentication) or H04W12/08 (using SIM for access security) need to be allocated too for a complete classification.

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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	Universal Integrated Circuit Card
SE	Secure Element
eSIM	Embedded Subscriber Identity Module
eUICC	Embedded Universal Integrated Circuit Card
eSE	Embedded Secure Element
MTM	Mobile Trusted Module
NFC	Near Field Communication
RFID	Radio Frequency IDentification

H04W12/42**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].

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

Payment schemes or models using cards	G06Q 20/34
Network data management, 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
eSIM	Embedded Subscriber Identity Module
eUICC	Embedded Universal Integrated Circuit Card
eSE	Embedded Secure Element

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H04W12/43

Definition statement

This place covers:

Security arrangements specially adapted for wireless communication networks using shared identity modules, e.g. SIM sharing between tethered devices and between a SIMless devices and device equipment with a SIM or UICC.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

SIM	Subscriber Identity Module
UICC	Universal Integrated Circuit Card

H04W12/45

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
Multi-SIM	Multiple SIMs

H04W12/47

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, or NFC enabled SIM or UICC cards.

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Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

NFC	Near Field Communication
RFID	Radio Frequency IDentification
SIM	Subscriber Identity Module

H04W12/48**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 an SIM to a Relay Node, and binding an App to UICC.

References**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
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Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

SIM	Subscriber Identity Module
UICC	Universal Integrated Circuit Card

H04W12/50**Definition statement***This place covers:*

Security arrangements specifically adapted for wireless communication networks for securing pairing of wireless devices, for example:

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- Bootstrapping a secure communication link between pairing terminals or
- Secure socializing by establishing a secure wireless link between terminals and their respective mobile social network applications, for examples between mobile terminals of friends, family members, guests.

References

Informative references

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

Affiliation to network using triggered events	H04W 60/04
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H04W12/55

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.

H04W12/61

Definition statement

This place covers:

Time-dependent security arrangements specially adapted for wireless communication networks, e.g. using timestamps, 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
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H04W12/63

Definition statement

This place covers:

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

References

Informative references

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

Services making use of location information	H04W 4/02
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H04W12/64

Definition statement

This place covers:

Geofenced location aware security arrangements specially adapted for wireless communication networks, e.g. using fenced areas.

References

Informative references

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

Services making use of location information, services related to particular areas	H04W 4/02
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H04W12/65

Definition statement

This place covers:

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

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H04W12/67

Definition statement

This place covers:

Risk-dependent security arrangements specially adapted for wireless communication networks, e.g. arrangements based on risk profiles, risk scores or trust scores derived from social networks (e.g. from mobile friends or buddy lists), or arrangements based on trust scores determined by trusted third party servers.

H04W12/68

Definition statement

This place covers:

Gesture-dependent or behaviour-dependent security arrangements specially adapted for wireless communication networks, e.g. using gestures or device movement.

Examples are: generating credentials via device movements or gestures, behaviormetrics for authentication using a learned user behaviour, such as typing or touching or gripping characteristics.

H04W12/71

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

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H04W12/72**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

H04W12/73**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

H04W12/75**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.

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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

H04W12/76**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.

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

Network data management, mobility data transfer	H04W 8/08
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Synonyms and Keywords*In patent documents, the following abbreviations are often used:*

IMSI	International Mobile Station Identity
ID	IDentity or IDentifier

H04W12/77**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
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H04W12/79

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
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H04W12/80

Definition statement

This place covers:

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

Note: This group should only be allocated when the technical aspects relate to security arrangements for wireless networks for managing “lawful interception”

Special rules of classification

When allocating subgroup H04W12/80 to documents, attention should be made to check whether other subgroups from H04W12/02 - H04W12/128 need to be allocated too for a complete classification.

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2. A. DEFINITIONS (modified)

Modify the following definitions.

H04W12/00

Definition statement

Replace: The entire first paragraph in the existing “Definition statement” section with the following updated text.

Security arrangements for wireless communications networks, e.g. wireless sensor networks, self-organizing wireless networks, wireless local loop, and for near field communication [NFC] networks.

Replace: In the “Definition statement” section, the following bulleted text: “. secure pairing of devices- context aware security” with the following two updated bulleted text entries.

- secure pairing of devices
- context-dependent security

Delete: The following two references from the existing “Informative references” table.

Cryptographic mechanisms or cryptotgraphic arrangements for secret or secure communication	H04L 9/00
Network architectures or network communications protocols for network security	H04L 63/00

Insert: The following new reference in the existing “Informative references” table.

Arrangements for secret or secure communication	H04L 9/00
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Glossary of terms

Delete: The entire existing “Glossary of Terms” section.

Insert: The following new “Special rules of classification” section.

Special rules of classification

When allocating subgroups H04W12/30 - H04W12/80 to documents, attention should be made to check whether other subgroups from H04W12/02 - H04W12/12 need to be allocated too for a complete classification.

Insert: The following new “Synonyms and Keywords” section.

Synonyms and Keywords

In patent documents, the following abbreviations are often used:

2G	Second Generation
3G	Third Generation
3GPP	Third Generation Partnership Project
4G	Fourth Generation
5G	Fifth Generation
ACL	Access Control List
AP	Access Point
API	Application Programming Interface
botnet	Robot Network
Cell ID	Cell IDentity
DoS	Denial Of Service
DDoS	Distributed Denial Of Service
EAP	Extensible Authentication Protocol
EAP-AKA	Extensible Authentication Protocol-Authentication and Key Agreement
EAP-SIM	Extensible Authentication Protocol-Subscriber Identity Module
EAP-TLS	Extensible Authentication Protocol-Transport Layer Security
eSIM	Embedded Subscriber Identity Module
eSE	Embedded Secure Element
eSSID	Extended Service Set IDentifier
eUICC	Embedded Universal Integrated Circuit Card

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GBA	Generic Bootstrapping Architecture
GSM-AKA	Global System for Mobile Communications- Authentication and Key Agreement
ID	IDentity or IDentifier
IEEE	Institute of Electrical and Electronics Engineers
IEEE 802.1x	Institute of Electrical and Electronics Engineers standard 802.1x.
ICC-ID	Integrated Circuit Card IDentifier
IMEI	International Mobile Equipment Identifier
IMSI	International Mobile Subscriber IDentity
ISIM	IMS (IP Multimedia Subsystem) Subscriber Identity Module
LI	Lawful or Legal Interception
M2M	Machine to Machine
MCIM	Machine-to-machine Communication Identity Module
MEID	Mobile Equipment IDentifier
MITM	Man-In-The-Middle
MSIN	Mobile Station Identity Number
MSISDN	Mobile Station International Subscriber Directory Number
Multi-SIM	Multiple SIMs
MTM	Mobile Trusted Module
NAS	Non-Access Stratum
NFC	Near Field Communication
OAuth	Open Authorisation
OpenID	Open Identity
OOB	out of band
OTAR	Over-The-Air Rekey
P2P	peer-to-peer
PCID	Provisional Connectivity IDdentity
PII	Personally Identifiable Information
QR	Quick Response
RBAC	Role Based Access Control
RF	Radio Frequency
RFID	Radio Frequency IDentifier
RRC	Radio Resource Control
RTT	Round Trip Time
RUIM	Removable Universal Identity Module
SE	Secure Element

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SIM	Subscriber Identity Module
SMS	Short Message Service
SSID	Service Set Identifier
TMSI	Temporary Mobile Station Identity
UICC	Universal Integrated Circuit Card
UMTS-AKA	Universal Mobile Telecommunications System-Authentication and Key Agreement
USB	Universal Serial Bus
USIM	Universal Subscriber Identity Module
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WLAN	Wireless Local Area Network
WPA	Wi-Fi Protected Access
WPS	Wi-Fi Protected Setup

H04W12/02

Definition statement

Replace: The existing text in the “Definition statement” section with the following updated text.

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, or
- 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

Delete: The following existing row from the “Informative references” table.

Network security architectures or protocols for anonymous communication in a packet data network	H04L 63/0421
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Insert: The following new row in the existing “Informative references” table.

Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity; Protecting Data	G06F 21/60
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H04W12/04

Definition statement

Replace: All of the text in the existing “Definition statement” section with the following updated text.

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, or
- 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

Delete: The following two references from the existing “Informative references” table.

Cryptographic mechanisms or arrangements for key distribution or management	H04L 9/08
Network security architectures or protocols for supporting key management in a packet data network	H04L 63/06

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H04W12/04

Replace: Only the invalid symbol “H04W12/003” in the existing first row in the “Informative references” table with the updated symbol shown below.

Secure pairing between wireless devices	H04W 12/50
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Insert: The following new row in the existing “Informative” references table.

Arrangements for secret or secure communication; Key distribution	H04L 9/08
--	---------------------------

Synonyms and Keywords

Replace: All of the entries in the existing “Synonyms and Keywords” table with the following entries.

GBA	Generic Bootstrapping Architecture
EAP	Extensible Authentication Protocol
EAP-AKA	Extensible Authentication Protocol-Authentication and Key Agreement
EAP-SIM	Extensible Authentication Protocol-Subscriber Identity Module
EAP-TLS	Extensible Authentication 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

H04W12/06**Definition statement**

Replace: The entire Definition statement paragraph with the following paragraph.

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 their credentials (e.g. GSM-AKA, UMTS-AKA, pre-authentication, continuous authentication, authentication using credential vaults or password managers).

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Informative references

Delete: The two existing rows shown below from the Informative references table.

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

Insert: The following three new rows in the existing Informative references table.

Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity, Authentication	G06F 21/30
Payment architectures, schemes or protocols, Authorisation	G06Q 20/40
Arrangements for secret or secure communication including means for verifying the identity or authority of a user of the system	H04L 9/32

H04W12/08

Definition statement

Replace: All of the text in the “Definition statement” section with the following updated text.

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,

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- 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 or authorisation using packet filters or packet firewalls, e.g. SMS Firewalls, NFC or SIM packet filtering.

Delete: The entire “References/Informative references” section.

H04W12/10

Definition statement

Replace: All of the existing text in the existing “Definition statement” section with the following updated text.

Verifying information received.

H04W12/12

Definition statement

Replace: All of the existing text in the “Definition statement” section with the following updated text.

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,

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- 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) or
- vulnerability assessment of wireless networks or entities.

Informative references

Replace: The existing two references in the “Informative references” table with the following two new references.

Detecting local intrusion or implementing counter-measures	G06F 21/55
Monitoring arrangements; testing arrangements	H04L 43/00

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2. B. DEFINITIONS QUICK FIX

<u>Symbol</u>	<u>Location of change</u> (e.g., section title)	<u>Existing reference</u> <u>symbol or text</u>	<u>Action; New symbol; New text</u>
H04W12/001	Entire definition		<u>Delete</u> the entire definition.
H04W12/0013	Entire definition		<u>Delete</u> the entire definition.
H04W12/0017	Entire definition		<u>Delete</u> the entire definition.
H04W12/002	Entire definition		<u>Delete</u> the entire definition.
H04W12/0023	Entire definition		<u>Delete</u> the entire definition.
H04W12/0027	Entire definition		<u>Delete</u> the entire definition.
H04W12/003	Entire definition		<u>Delete</u> the entire definition.
H04W12/00305	Entire definition		<u>Delete</u> the entire definition.
H04W12/004	Entire definition		<u>Delete</u> the entire definition.
H04W12/00401	Entire definition		<u>Delete</u> the entire definition.
H04W12/00403	Entire definition		<u>Delete</u> the entire definition.
H04W12/00405	Entire definition		<u>Delete</u> the entire definition.
H04W12/00407	Entire definition		<u>Delete</u> the entire definition.
H04W12/00409	Entire definition		<u>Delete</u> the entire definition.
H04W12/005	Entire definition		<u>Delete</u> the entire definition.
H04W12/00502	Entire definition		<u>Delete</u> the entire definition.
H04W12/00503	Entire definition		<u>Delete</u> the entire definition.
H04W12/00504	Entire definition		<u>Delete</u> the entire definition.
H04W12/00505	Entire definition		<u>Delete</u> the entire definition.
H04W12/00506	Entire definition		<u>Delete</u> the entire definition.

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<u>Symbol</u>	<u>Location of change</u> (e.g., section title)	<u>Existing reference</u> <u>symbol or text</u>	<u>Action; New symbol; New text</u>
H04W12/00508	Entire definition		<u>Delete</u> the entire definition.
H04W12/0051	Entire definition		<u>Delete</u> the entire definition.
H04W12/00512	Entire definition		<u>Delete</u> the entire definition.
H04W12/00514	Entire definition		<u>Delete</u> the entire definition.
H04W12/00516	Entire definition		<u>Delete</u> the entire definition.
H04W12/00518	Entire definition		<u>Delete</u> the entire definition.
H04W12/0052	Entire definition		<u>Delete</u> the entire definition.
H04W12/00522	Entire definition		<u>Delete</u> the entire definition.
H04W12/00524	Entire definition		<u>Delete</u> the entire definition.
H04W12/007	Entire definition		<u>Delete</u> the entire definition.
H04W12/0401	Entire definition		<u>Delete</u> the entire definition.
H04W12/0403	Entire definition		<u>Delete</u> the entire definition.
H04W12/04031	Entire definition		<u>Delete</u> the entire definition.
H04W12/04033	Entire definition		<u>Delete</u> the entire definition.
H04W12/0407	Entire definition		<u>Delete</u> the entire definition.
H04W12/04071	Entire definition		<u>Delete</u> the entire definition.
H04W12/0602	Entire definition		<u>Delete</u> the entire definition.
H04W12/0605	Entire definition		<u>Delete</u> the entire definition.
H04W12/0608	Entire definition		<u>Delete</u> the entire definition.
H04W12/0609	Entire definition		<u>Delete</u> the entire definition.
H04W12/0802	Entire definition		<u>Delete</u> the entire definition.

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<u>Symbol</u>	<u>Location of change</u> (e.g., section title)	<u>Existing reference</u> <u>symbol or text</u>	<u>Action; New symbol; New text</u>
H04W12/0804	Entire definition		<u>Delete</u> the entire definition.
H04W12/0806	Entire definition		<u>Delete</u> the entire definition.
H04W12/0808	Entire definition		<u>Delete</u> the entire definition.
H04W12/1002	Entire definition		<u>Delete</u> the entire definition.
H04W12/1004	Entire definition		<u>Delete</u> the entire definition.
H04W12/1006	Entire definition		<u>Delete</u> the entire definition.
H04W12/1008	Entire definition		<u>Delete</u> the entire definition.
H04W12/1201	Entire definition		<u>Delete</u> the entire definition.
H04W12/1202	Entire definition		<u>Delete</u> the entire definition.
H04W12/1204	Entire definition		<u>Delete</u> the entire definition.
H04W12/1205	Entire definition		<u>Delete</u> the entire definition.
H04W12/1206	Entire definition		<u>Delete</u> the entire definition.
H04W12/1208	Entire definition		<u>Delete</u> the entire definition.

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.

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3. REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
D	H04W 12/001	< administrative transfer to H04W 12/03>
D	H04W 12/0013	< administrative transfer to H04W 12/033>
D	H04W 12/0017	< administrative transfer to H04W 12/037>
D	H04W 12/002	< administrative transfer to H04W 12/30>
D	H04W 12/0023	< administrative transfer to H04W 12/35>
D	H04W 12/0027	< administrative transfer to H04W 12/37>
D	H04W 12/003	< administrative transfer to H04W 12/50>
D	H04W 12/00305	< administrative transfer to H04W 12/55>
D	H04W 12/004	< administrative transfer to H04W 12/40>
D	H04W 12/00401	< administrative transfer to H04W 12/42>
D	H04W 12/00403	< administrative transfer to H04W 12/43>
D	H04W 12/00405	< administrative transfer to H04W 12/45>
D	H04W 12/00407	< administrative transfer to H04W 12/47>
D	H04W 12/00409	< administrative transfer to H04W 12/48>
D	H04W 12/005	< administrative transfer to H04W 12/60>
D	H04W 12/00502	< administrative transfer to H04W 12/61>
D	H04W 12/00503	< administrative transfer to H04W 12/63>
D	H04W 12/00504	< administrative transfer to H04W 12/65>
D	H04W 12/00505	< administrative transfer to H04W 12/67>
D	H04W 12/00506	< administrative transfer to H04W 12/66>
D	H04W 12/00508	< administrative transfer to H04W 12/68>
D	H04W 12/0051	< administrative transfer to H04W 12/69>
D	H04W 12/00512	< administrative transfer to H04W 12/71>
D	H04W 12/00514	< administrative transfer to H04W 12/72>
D	H04W 12/00516	< administrative transfer to H04W 12/73>
D	H04W 12/00518	< administrative transfer to H04W 12/75>
D	H04W 12/0052	< administrative transfer to H04W 12/76>
D	H04W 12/00522	< administrative transfer to H04W 12/77>
D	H04W 12/00524	< administrative transfer to H04W 12/79>
D	H04W 12/007	< administrative transfer to H04W 12/80>
D	H04W 12/0401	< administrative transfer to H04W 12/041>
D	H04W 12/0403	< administrative transfer to H04W 12/043>
D	H04W 12/04031	< administrative transfer to H04W 12/0431>
D	H04W 12/04033	< administrative transfer to H04W 12/0433>
D	H04W 12/0407	< administrative transfer to H04W 12/047>
D	H04W 12/04071	< administrative transfer to H04W 12/0471>
D	H04W 12/0602	< administrative transfer to H04W 12/062>
D	H04W 12/0605	< administrative transfer to H04W 12/065>
D	H04W 12/0608	< administrative transfer to H04W 12/068>
D	H04W 12/0609	< administrative transfer to H04W 12/069>
D	H04W 12/0802	< administrative transfer to H04W 12/082>
D	H04W 12/0804	< administrative transfer to H04W 12/084>
D	H04W 12/0806	< administrative transfer to H04W 12/086>
D	H04W 12/0808	< administrative transfer to H04W 12/088>
D	H04W 12/1002	< administrative transfer to H04W 12/102>
D	H04W 12/1004	< administrative transfer to H04W 12/104>

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Type*	From CPC Symbol (existing)	To CPC Symbol(s)
D	H04W 12/1006	< administrative transfer to H04W 12/106>
D	H04W 12/1008	< administrative transfer to H04W 12/108>
D	H04W 12/1201	< administrative transfer to H04W 12/121>
D	H04W 12/1202	< administrative transfer to H04W 12/122>
D	H04W 12/1204	< administrative transfer to H04W 12/122>
D	H04W 12/1205	< administrative transfer to H04W 12/125>
D	H04W 12/1206	< administrative transfer to H04W 12/126>
D	H04W 12/1208	< administrative transfer to H04W 12/128>
Q	H04W 12/30	H04W 12/30, H04W 12/33
Q	H04W 12/63	H04W 12/63, H04W 12/64

* 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>
H04W 12/001		DELETE
H04W 12/0013		DELETE
H04W 12/0017		DELETE
H04W 12/002		DELETE
H04W 12/0023		DELETE
H04W 12/0027		DELETE
H04W 12/003		DELETE
H04W 12/00305		DELETE
H04W 12/004		DELETE
H04W 12/00401		DELETE
H04W 12/00403		DELETE
H04W 12/00405		DELETE
H04W 12/00407		DELETE
H04W 12/00409		DELETE
H04W 12/005		DELETE
H04W 12/00502		DELETE
H04W 12/00503		DELETE
H04W 12/00504		DELETE
H04W 12/00505		DELETE
H04W 12/00506		DELETE
H04W 12/00508		DELETE
H04W 12/0051		DELETE
H04W 12/00512		DELETE
H04W 12/00514		DELETE
H04W 12/00516		DELETE
H04W 12/00518		DELETE
H04W 12/0052		DELETE
H04W 12/00522		DELETE
H04W 12/00524		DELETE
H04W 12/007		DELETE
H04W 12/03	H04W 12/03	NEW
H04W 12/033	H04W 12/033	NEW
H04W 12/037	H04W 12/037	NEW
H04W 12/0401		DELETE
H04W 12/0403		DELETE
H04W 12/04031		DELETE
H04W 12/04033		DELETE
H04W 12/0407		DELETE
H04W 12/04071		DELETE
H04W 12/041	H04W 12/041	NEW
H04W 12/043	H04W 12/043	NEW
H04W 12/0431	H04W 12/0431	NEW

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<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
H04W 12/0433	H04W 12/0433	NEW
H04W 12/047	H04W 12/047	NEW
H04W 12/0471	H04W 12/0471	NEW
H04W 12/0602		DELETE
H04W 12/0605		DELETE
H04W 12/0608		DELETE
H04W 12/0609		DELETE
H04W 12/062	H04W 12/062	NEW
H04W 12/065	H04W 12/065	NEW
H04W 12/068	H04W 12/06	NEW
H04W 12/069	H04W 12/069	NEW
H04W 12/0802		DELETE
H04W 12/0804		DELETE
H04W 12/0806		DELETE
H04W 12/0808		DELETE
H04W 12/082	H04W 12/082	NEW
H04W 12/084	H04W 12/084	NEW
H04W 12/086	H04W 12/086	NEW
H04W 12/088	H04W 12/088	NEW
H04W 12/1002		DELETE
H04W 12/1004		DELETE
H04W 12/1006		DELETE
H04W 12/1008		DELETE
H04W 12/102	H04W 12/102	NEW
H04W 12/104	H04W 12/104	NEW
H04W 12/106	H04W 12/106	NEW
H04W 12/108	H04W 12/108	NEW
H04W 12/1201		DELETE
H04W 12/1202		DELETE
H04W 12/1204		DELETE
H04W 12/1205		DELETE
H04W 12/1206		DELETE
H04W 12/1208		DELETE
H04W 12/121	H04W 12/121	NEW
H04W 12/122	H04W 12/122	NEW
H04W 12/125	H04W 12/125	NEW
H04W 12/126	H04W 12/126	NEW
H04W 12/128	H04W 12/128	NEW
H04W 12/30	H04W 12/30	NEW
H04W 12/33	H04W 12/33	NEW
H04W 12/35	H04W 12/30	NEW
H04W 12/37	H04W 12/37	NEW
H04W 12/40	H04W 12/40	NEW
H04W 12/42	H04W 12/42	NEW
H04W 12/43	H04W 12/43	NEW

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<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
H04W 12/45	H04W 12/45	NEW
H04W 12/47	H04W 12/47	NEW
H04W 12/48	H04W 12/48	NEW
H04W 12/50	H04W 12/50	NEW
H04W 12/55	H04W 12/55	NEW
H04W 12/60	H04W 12/60	NEW
H04W 12/61	H04W 12/61	NEW
H04W 12/63	H04W 12/63	NEW
H04W 12/64	H04W 12/64	NEW
H04W 12/65	H04W 12/65	NEW
H04W 12/66	H04W 12/60	NEW
H04W 12/67	H04W 12/67	NEW
H04W 12/68	H04W 12/68	NEW
H04W 12/69	H04W 12/69	NEW
H04W 12/71	H04W 12/71	NEW
H04W 12/72	H04W 12/72	NEW
H04W 12/73	H04W 12/73	NEW
H04W 12/75	H04W 12/75	NEW
H04W 12/76	H04W 12/76	NEW
H04W 12/77	H04W 12/77	NEW
H04W 12/79	H04W 12/79	NEW
H04W 12/80	H04W 12/80	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.