IEEE P802.11  
Wireless LANs

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| Resolution for CIDs 59 and 62 “Remove DLS and STSL” | | | | |
| Date: 2017-09 | | | | |
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Abstract

This submission proposes resolutions for CID 59 and 62

Green indicates material agreed to in the group,

yellow material to be discussed, red material rejected by the group and

cyan material not to be overlooked.

The “Final” view should be selected in Word.

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| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause | Page | Line | Comment | Proposed |
| 59 | Graham Smith | 11.7 | 1806 | 5 | Time to remove DLS? | Remove |
| 62 | Graham Smith | 12.2.5 | 2060 | 4 | Time to remove STSL support? | Remove |

CID 59 and CID 62 DLS and STSL

1806.10

*The STSL mechanism is obsolete. Consequently, the DLS protocol might be removed in a later revision of the standard.*

STSL = station to station link.There are 60 instances of STSL in the text mostly on key management.

2060.4

*The STSL mechanism is obsolete. Consequently, the PeerKey protocol components that do not support the AP PeerKey protocol might be removed in a later revision of the standard.*

Need to check Peer Key components.

At 1806.20 *A DMG STA shall not use the DLS protocol.*

I think that DLS could safely be removed.

A question is whether TDLS is reliant upon anything in DLS.

Have reached out to Menzo. Menzo thinks no, Mark wants to check that a generic DLS may be used and needs to be checked.

Discussed in Berlin

Consensus to remove.

RESOLUTION

REVISED

Note to Editor: References are to D0.1

146.11 delete lines 11 and 2 (STSL STK SMK)

161.48 delete lines 48 – 50 (STSL, SMK, STK, SMKSA STKSA)

166.58 delete lines 58 – 64 (two entries) (STSL SMKSA)

167.1 delete lines 1 – 16 (four entries) (STSL SMK STKSA)

175.64 delete line “DLS direct-link setup

183.21 delete SKCK and SKEK entries

183.32 delete SMK and SMKSA entries

184.1 delete STK, STKSA STSL entries

195.33 delete “direct-link setup (DLS),”

195.36 delete “DLS,”

203.47 delete “, unlike with DLS”

209.30 delete “- Direct-link setup (DLS)”

215.11 delete “DLS,”

226.54 delete “and for DLS”

227.50 delete “station-to-station link (STSL) master key security association (SMKSA), STSL transient key security association (STKSA),”

370.1 to 375.28 delete 6.3.27.2 MLME-DLS.request, 6.3.27.3 MLME-DLS.confirm,6.3.27.4 MLME-DLS.indication, 6.3.27.5 MLME-DLS.response, 6.3.27.6 MLME-DLS-TEARDOWN.request, 6.3.27.7 MLME-DLS-TEARDOWN.indication

770.51 delete “A STA within an infrastructure BSS sets the Privacy subfield to 1 in DLS Request and DLS Response

frames if encryption is required for all Data frames exchanged. If encryption is not required, the Privacy

subfield is set to 0.”

771.19 delete “A STA sets the Short Preamble subfield to 1 in transmitted Association Request and Reassociation Request

frames and in DLS Request and DLS Response frames when dot11ShortPreambleOptionImplemented is

true. Otherwise, a STA sets the Short Preamble subfield to 0.”

771.32 edit as shown “A STA sets the Short Slot Time subfield to 1 in transmitted Association Request, and Reassociation RequestResponse frames when…”

772.38 delete “DLS Teardown,”

774.34 delete “END\_DLS”

774.41 Delete “In a DLS Teardown frame: The teardown was initiated by the DLS peer”

774.47 Delete “In a DLS Teardown frame: The teardown was initiated by the AP”

778.41 Change “48” to “Reserved”

781.51 Change Code 2 to “Reserved”

783.53 to 64 Delete 9.4.1.13 DLS Timeout Value field entirely

944.20 delete “and for DLS”

1145.49 Figure 9-529—Multi-band Connection Capability field format, Replace “DLS” in B2 with “Reserved”

1145.63 delete “The DLS subfield is set to 1 to indicate that the STA can perform a DLS on the channel and band indicated in the element. Otherwise, it is set to 0.”

1151.10 Table 9-244—Session Type subfield values, replace “DLS with “Reserved”

1255.10 to 1258.11 delete clause 9.6.4 DLS Action frame details, entirely

1479.56 and 1479.58 delete “DLS or”

1480.12 edit as follows: “A STA that transmits a VHT PPDU to a TDLS peer STA obtains the AID for the peer STA from the TDLS Setup Request or TDLS Setup Response frame.”

1598.58 edit as follows: “NOTE - A STA that transmits a VHT PPDU to a TDLS peer STA obtains the AID for the peer STA from the TDLS Setup Request or TDLS Setup Response frame.”

1600.6 and 1600.42 delete “DLS or”

1720.5 edit as follows: “A non-AP QoS STA may be in PS mode before the setup of block ack. BUs for a TID without a schedule are sent using Normal Ack following a PS-Poll frame as described in rest of 11.2.3. Uplink block ack agreements, block ack agreements for any TID with a schedule, and any block ack agreements to APSD STAs continue to operate normally.”

1748.56 delete “DLS or”

1765.11 delete “ii) Data frames between peers using DLS”

1774.15 delete “STSL, DLS and”

1781.49 edit as follows: “In the TDLS direct-link case, it is the responsibility of the STA that is going to send the data to create the TS. In this case, the STA negotiates with the HC to gain TXOPs that it uses to send the data. There is no negotiation between the originator and recipient STAs concerning the TS: the originator can discover the capabilities of the recipient (rates, Block Ack) using the TDLS.”

1801.14 delete “If the STA is establishing a block ack agreement with another STA through DLS, then the DLS setup procedure includes the exchange of capability information that allows both STAs to determine whether the other STA is an HT STA.”

1806.5 to 1811.27 Delete Clause 11.7 entirely

1847.15 delete “This enables a QoS AP to query Transmit Stream/Category Measurement metrics for DLS links.”

1888.53 to 57 delete “A TDLS peer STA may be involved in direct links with multiple TDLS peer STAs at the same time.

Simultaneous operation of DLS and TDLS between the same pair of STAs is not allowed. A DLS Request frame shall not be transmitted to a STA with which a TDLS direct link is currently active. A DLS Request frame received from a STA with which a TDLS direct link is currently active shall be discarded.”

1972 .42 delete row “DLS 1101 2 0-2 AC\_BE”

2033.3 delete “- A DLS link”

2060.1 delete 12.2.5 RSNA PeerKey Support entirely

2124.24 delete 12.6.1.1.12 STKSA entirely

2130.15 delete “and for DLS”

2130.29 edit as follows “in any of its Beacon or Probe Response frames”

2138.21 delete “and for DLS”

2138.35 delete “and for DLS”

2138.44 delete “and for DLS”

2139.32 delete “and invoke an STSL application teardown procedure for any of its STKSAs. An example of an STSL application teardown procedure is described in 11.7.4 (DLS teardown).”

2140 .1 delete “If the SMK handshake fails between a pair of associated STAs and AP, then the STAs and the AP shall invoke an STSL application teardown procedure.”

2140.13 delete “When a STA’s SME receives an MLME-PN-EXHAUSTION.indication primitive and the PN is associated with a STKSA, the STA’s SME shall invoke a STSL application teardown procedure for the STKSA and delete the STKSA.”

2141.58 delete “When a STKSA is deleted, the STA\_I may establish a new STSL with the STA\_P. If the SMK between the STA pair has not expired, the STA\_I may initiate a 4-way handshake and create a new STKSA with STA\_P. If the SMK has expired, the STA\_I shall create both a new SMKSA and a new STKSA with the STA\_P.”

2141.64 delete “or STKSA”

2150.58 delete 12.7.1.6 PeerKey key hierarchy entirely

2159.36 delete “, and is set to 1 by the STSL peer STA to request initiator STA rekeying of the STK”

2163.37 delete “Table 12-7 (SMK error types) shows different values of SMK error types.”

2163.49 delete Table 12-7

2176.21 delete “, and for STK generation the STAs should delete the SMKSA and initiate an STSL application teardown procedure”

2176.25 delete “For STK generation, if the peer STA does not receive message 1 or message 3 within the expected time interval (prior to dot11RSNAConfigSATimeout as specified in 12.7.8 (PeerKey handshake)), it deletes the SMKSA and invokes an STSL application teardown procedure.”

2182.43 delete 12.7.8 in its entirety

2288.22 delete “direct-link setup (DLS),”

2878.38 delete “and for DLS”

2950.52 delete entry for QB6

3071.24 to 3071.56 delete dot11DLSAllowedInQBSS and dot11DLSAllowed

3117.42 to 3117.52 delete dot11RSNAConfigSTKCipher

3475.56 to 3476.7 delete dot11NonAPStationAuthDls

3772.40 replace “DLS traffic” with “TDLS traffic”

3791.53 change “attributes are” to attribute is”, then, at 3791.54 delete “— dot11NonAPStationAuthDls is to authorize a non-AP STA to use DLS”

Note to editor: After deleting as per above instructions, check that DLS, STSL STK SMK SMKSA STKSA SKCK SKEK do not appear.