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Title	**Replacement TSS&TP Section 6.2.2**	
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Re:	1802.16.2-03/01 Call for comments and contributions regarding C1802.16.2-03/01r1.	
Abstract	Edited Structure Section to be more in line with rest of document.	
Purpose	Replace current section 6.2.2	
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Replacement TSS&TP Section 6.2.2

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0.0.1 Radio Link Control- SS

0.0.1.1 Initial Ranging

0.0.1.1.1 Capabilities

Table 1 Initial Ranging- Capabilities

TP/SS/RLC/IRNG/CA-000	Reference: IEEE 1802.16.1, Table A23/1-3 Initial condition. SS synchronized with UL and DL parameters established Stimulus. BS sends UL-MAP message containing 2^Ranging Backoff Start Initial Maintenance IEs. Expected behavior. SS sends properly formatted RNG-REQ within one of the indicated intervals.
TP/SS/RLC/IRNG/CA-001	Reference: IEEE 1802.16.1, Table A23/4,5,6,9 Initial condition. SS waiting for RNG-RSP Stimulus. BS sends RNG-RSP with status /= Abort Expected behavior. SS establishes Basic and Primary Management CID. SS applies timing and power corrections and sends RNG-REQ with corrected timing and power on the Basic connection in invited station maintenance slot.

0.0.1.1.2 Valid Behavior

Table 2 Initial Ranging- Valid Behavior

TP/SS/RLC/IRNG/BV-000	Reference: IEEE 1802.16.1, Table A23/8 Initial condition. SS waiting for RNG-RSP Stimulus. BS sends RNG-RSP with status = Abort containing DL-Frequency Override Parameter. Expected Behavior. SS moves to frequency designated in RNG-RSP and starts Initial Ranging on said channel.
TP/SS/RLC/IRNG/BV-001	Reference Initial condition. SS waiting for RNG-RSP Stimulus. BS sends RNG-RSP with status = Abort not containing a DL-Frequency Override. Expected behavior. SS resets MAC and start scanning for DL-Channel

Table 2 Initial Ranging- Valid Behavior

TP/SS/RLC/IRNG/BV-002	Reference: IEEE 1802.16.1, Table A23/2 Initial condition. SS waiting for RNG-RSP Stimulus. BS sends RNG-RSP with status /= Abort and asks for unreasonable power and timing adjustments. BS sends UL-MAP(s) message containing 2^Ranging Backoff End Initial Maintenance IEs Expected behavior. SS sends properly formatted RNG-REQ within one of the indicated intervals with Ranging Anomalies correctly indicated.

0.0.1.1.3 Invalid Behavior

Table 3 Initial Ranging- Invalid Behavior

TP/SS/RLC/IRNG/BI-000	Reference. Initial condition. SS waits for RNG-RSP on CID 0x0000. Stimulus. SS receives invalid RNG-RSP with correct CID and MAC address Expected behavior. Check that IUT restarts Initial Ranging .
TP/SS/RLC/IRNG/BI-001	Reference. Initial condition. SS waits for RNG-RSP on Basic CID. Stimulus. SS receives invalid RNG-RSP with correct CID and MAC address Expected behavior. Check that IUT awaits another Station Maintenance Interval.

0.0.1.1.4 Inopportune Behavior

Table 4 Initial Ranging- Inopportune Behavior

TP/SS/RLC/IRNG/BO-000	Reference. Initial condition. SS waits for RNG-RSP on Basic CID. Stimulus. SS receives a valid RNG-RSP with correct MAC address but on CID 0x0000. Expected behavior. Check that IUT ignores the RNG-RSP and awaits a Station Maintenance Interval.

0.0.1.1.5 Timer

Table 5 Initial Ranging- Timer

TP/SS/RLC/IRNG/TI-000	Reference. Initial condition. SS waiting for RNG-RSP. Retry counter set to Contention Ranging Retries. Stimulus. T3 Expires. Expected behavior. SS resets MAC and start scanning for DL-Channel.
TP/SS/RLC/IRNG/TI-001	Reference: IEEE 1802.16.1, Table A23/2 Initial condition. SS waiting for RNG-RSP. Retry counter set to < Contention Ranging Retries. Ranging Backoff Start< Ranging Backoff End Stimulus. T3 timed out. BS sends UL-MAP(s) message containing 2^Ranging Backoff End Initial Maintenance IEs. Expected behavior. SS sends properly formatted RNG-REQ within one of the indicated intervals with increased power. SS increases back-off window.
TP/SS/RLC/IRNG/TI-002	Reference: IEEE 1802.16.1, Table A23/2 Initial condition. SS waiting for RNG-RSP. Retry counter set to < Contention Ranging Retries. SS at maximum power. Stimulus. T3 timed out. BS sends UL-MAP(s) message containing 2^Ranging Backoff End Initial Maintenance IEs. Expected behavior. SS sends properly formatted RNG-REQ within one of the indicated intervals with minimum power

0.0.1.1.6 Message Formats

For all TP/SS/RLC/IRNG tests ensure that messages transmitted by the SS contain the correct parameters in the correct order.

0.0.1.2 Periodic Ranging

0.0.1.2.1 Capabilities

Table 6 Periodic Ranging- Capabilities

TP/SS/RLC/PRNG/CA-000	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power not at max or min limit. RNG-RSP power change request does not exceed limits. Stimulus. SS receives RNG-RSP message to change power level, status = success. Expected behavior. SS raises or lowers power as requested.

Table 6 Periodic Ranging- Capabilities

TP/SS/RLC/PRNG/CA-001	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power not at max or min limit. RNG-RSP power change request does not exceed limits. Stimulus. SS receives RNG-RSP message to change timing advance, status = success. Expected behavior. SS changes timing as requested. Subsequent transmissions with corrected timing.

0.0.1.2.2 Valid Behavior

Table 7 Periodic Ranging - Valid Behavior

TP/SS/RLC/PRNG/BV-000	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power not at max or min limit. RNG-RSP power change request does not exceed limits. Stimulus. SS receives RNG-RSP message to change power level, status = continue. Expected behavior. SS raises or lowers power as requested and sends REG-REQ.
TP/SS/RLC/PRNG/BV-001	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power not at max or min limit. RNG-RSP power change request does not exceed limits. Stimulus. SS receives RNG-RSP message to change timing advance, status = continue. Expected behavior. SS changes timing as requested. Subsequent transmissions with corrected timing and sends REG-REQ.
TP/SS/RLC/PRNG/BV-002	Reference. Initial condition. SS has completed Initial Ranging successfully. Stimulus. SS receives RNG-RSP message to change timing advance, status = abort. Expected behavior. SS reinitializes and looks for another channel.
TP/SS/RLC/PRNG/BV-003	Reference. Initial condition. SS has completed Initial Ranging successfully. Stimulus. SS receives RNG-RSP message to change timing advance, status = re-range. Expected behavior. SS reverts to initial ranging using Initial Maintenance IEs
TP/SS/RLC/PRNG/BV-004	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power at or near max limit. Stimulus. SS receives RNG-RSP message to change power level higher than limit, status = success. Expected behavior. SS raises power to its max limit and sends REG-REQ stating anomolies.

Table 7 Periodic Ranging - Valid Behavior

TP/SS/RLC/PRNG/BV-005	Reference. Initial condition. SS has completed Initial Ranging successfully. SS Tx power at or near min limit.. Stimulus. SS receives RNG-RSP message to change power level below limit, status = continue. Expected behavior. SS lowers power to limit and sends REG-REQ stating anomolies.

0.0.1.2.3 Invalid Behavior

Table 8 Periodic Ranging- Invalid Behavior

TP/SS/RLC/PRNG/BI-000	Reference. Initial condition. SS has completed Initial Ranging successfully. Stimulus. SS receives an invalid RNG-RSP. Expected behavior. SS ignores the message.

0.0.1.2.4 Inopportune Behavior

Since the RNG-RSP message may be sent unsolicited, there are no SS Periodic Ranging inopportune behavior tests.

0.0.1.2.5 Timer

Table 9 Periodic Ranging- Timer

TP/SS/RLC/PRNG/TI-000	Reference. Initial condition. SS has completed Initial Ranging successfully. SS waiting for RNG-RSP. Retry counter set to Contention Ranging Retries. Stimulus. T3 Expires. Expected behavior. SS resets MAC and start scanning for DL-Channel.
TP/SS/RLC/PRNG/TI-001	Reference: Initial condition. SS has completed Initial Ranging successfully. SS waiting for RNG-RSP. Retry counter < Contention Ranging Retries. Stimulus. T3 timed out. BS allocates bandwidth to the SS. Expected behavior. SS resends RNG-REQ message.
TP/SS/RLC/PRNG/TI-002	Reference: Initial condition. SS has completed Initial Ranging successfully. SS awaiting ranging opportunity (bandwidth allocation). Stimulus. T4 timed out. Expected behavior. SS resets MAC and start scanning for DL-Channel.

0.0.1.2.6 Message Formats

For all TP/SS/RLC/PRNG tests ensure that messages transmitted by the SS contain the correct parameters in the correct order.

0.0.1.3 Downlink Burst Profile Management

0.0.1.3.1 Capabilities

Table 10 Downlink Burst Profile Management **- Capabilities**

TP/SS/RLC/DBPC/CA-000	Reference: IEEE 1802.16.1, Table A29/4 Initial condition. SS operational at DIUC n. Stimulus. SS received signal S/N goes below threshold for change to more robust DIUC k Expected behavior. Upon receiving next grant the IUT sends a DBPC-REQ for DIUC k
TP/SS/RLC/DBPC/CA-001	Reference: IEEE 1802.16.1, Table A29/4 Initial condition. SS operational at DIUC n. Operation at less robust DIUC k is allowed. Stimulus. SS received signal S/N goes above threshold for change to less robust DIUC k Expected behavior. The IUT sends a DBPC-REQ for DIUC k

0.0.1.3.2 Valid Behavior

Table 11 Downlink Burst Profile Management **- Valid Behavior**

TP/SS/RLC/DBPC/BV-000	Reference: IEEE 1802.16.1, Table A29/6 Initial condition. SS operational at DIUC n, but has sent request to move to more robust DIUC k. Stimulus. BS sends data/management message to SS using DIUC n before sending the DBPC-RSP message Expected behavior. SS receives the data/message on DIUC n.
TP/SS/RLC/DBPC/BV-001	Reference: Initial condition. SS operational at DIUC n. Operation at less robust DIUC k is not allowed. Stimulus. SS received signal S/N goes above threshold for change to less robust DIUC k Expected behavior. IUT refrains from sending a DBPC-REQ for DIUC k
TP/SS/RLC/DBPC/BV-002	Reference. IEEE 1802.16.1, Table A29/6 Initial condition. SS has sent request to move to less robust DIUC k. Stimulus. BS sends data/ messages using DIUC k after sending DBPC-RSP using DIUC n in the same DL- frame. Expected behavior. SS receives the data/message sent at DIUC k correctly.

0.0.1.3.3 Invalid Behavior

Table 12 Downlink Burst Profile Management **- Invalid Behavior**

TP/SS/RLC/DBPC/BI-000	Reference: Initial Condition: BS has received DBPC-REQ from SS. Stimulus: BS transmits to the SS an erroneous DBPC-RSP message. Expected Behavior: The SS ignores the message.

0.0.1.3.4 Inopportune Behavior

Table 13 Downlink Burst Profile Management **- Inopportune Behavior**

TP/SS/RLC/DBPC/BO-000	Reference: Initial Condition: SS has completed initial ranging. Stimulus: SS receives an unsolicited DBPC-RSP. (RNG-RSP may come unsolicited, but DBPC-RSP may not) Expected Behavior: SS ignores the message. Reporting the error to the management plane is allowed.

0.0.1.3.5 Timer

Table 14 Downlink Burst Profile Management **- Timer**

TP/SS/RLC/DBPC/TI-000	Reference: Initial Condition: SS has transmitted a DBPC-REQ message to the BS. Stimulus: SS does not receive a DBPC-RSP message from the BS within timeout specified by the SS equipment manufacturer. Expected Behavior: SS resends the DBPC-REQ message.
TP/SS/RLC/DBPC/TI-001	Reference: Initial Condition: SS has re-transmitted a DBPC-REQ message to the BS. Stimulus: SS continues to not receive a DBPC-RSP message from the BS within timeout specified by the SS equipment manufacturer. Expected Behavior: SS resends the DBPC-REQ message indefinitely.

0.0.1.3.6 Message Formats

For all TP/SS/RLC/DBPC tests ensure that messages transmitted by the SS contain the correct parameters in the correct order.

0.0.1.4 Negotiate Basic Capabilities

0.0.1.4.1 Capabilities

Table 15 Negotiate Basic Capabilities **- Capabilities**

TP/SS/RLC/SBC/CA-000	Reference: IEEE 1802.16.1, Table A24/1 Initial condition. Initial ranging performed. Stimulus. SS granted bandwidth Expected behavior. SS sends SBC-REQ listing its capabilities
TP/BS/RLC/SBC/CA-001	Reference: IEEE 1802.16.1, Table A24/2 Initial condition. Waiting for SBC-RSP Stimulus. SS receives SBC-RSP with no parameter restrictions. Expected behavior. SS continues to Authentication.

0.0.1.4.2 Valid Behavior

Table 16 Negotiate Basic Capabilities **- Valid Behavior**

TP/BS/RLC/SBC/BV-000	Reference: IEEE 1802.16.1, Table A24/2 Initial condition. Waiting for SBC-RSP Stimulus. SS receives SBC-RSP with further parameter restrictions. Expected behavior. SS restricts capabilities as commanded in SBC-RSP

0.0.1.4.3 Invalid Behavior

Table 17 Negotiate Basic Capabilities **- Invalid Behavior**

TP/SS/RLC/SBC/BI-000	Reference. Initial condition. SS waiting for SBC-RSP retries not exhausted. Stimulus. SS receives invalid SBC-RSP Expected behavior. Check that SS retransmits SBC-REQ at earliest possible opportunity.
TP/SS/RLC/SBC/BI-001	Reference. Initial condition. SS waiting for SBC-RSP, retries exhausted. Stimulus. SS receives invalid SBC-RSP Expected behavior. Check that IUT resets and starts over.

0.0.1.4.4 Inopportune Behavior

Table 18 Negotiate Basic Capabilities **- Inopportune Behavior**

TP/SS/RLC/SBC/BO-000	Reference. Initial condition. SS has finished Basic Capability Negotiation. Stimulus. SS receives extra SBC-RSP Expected behavior. Check that IUT ignores the message.

0.0.1.4.5 Timer

Table 19 Negotiate Basic Capabilities **- Timer**

TP/SS/RLC/SBC/TI-000	Reference: IEEE 1802.16.1, Table A24/3 Initial condition. SS waiting for SBC-RSP retries not exhausted Stimulus. T18 expires Expected behavior. After timer expires SS retransmits SBC-REQ when receiving UL-grant.
TP/SS/RLC/SBC/TI-001	Reference. Initial condition. SS waiting for SBC-RSP, retries exhausted. Stimulus. T18 expires. Expected behavior. Check that IUT resets and starts over.

0.0.1.4.6 Message Formats

For all TP/SS/RLC/SBC tests ensure that messages transmitted by the SS contain the correct parameters in the correct order.