*START OF CHANGE*

### 6.3.5 Sidelink information elements

#### – *SL-BWP-Config*

The IE *SL-BWP-Config* is used to configure the UE specific NR sidelink communication/discovery/positioning on one particular sidelink bandwidth part.

*SL-BWP-Config* information element

-- ASN1START

-- TAG-SL-BWP-CONFIG-START

SL-BWP-Config-r16 ::= SEQUENCE {

sl-BWP-Id BWP-Id,

sl-BWP-Generic-r16 SL-BWP-Generic-r16 OPTIONAL, -- Need M

sl-BWP-PoolConfig-r16 SL-BWP-PoolConfig-r16 OPTIONAL, -- Need M

...,

[[

sl-BWP-PoolConfigPS-r17 SetupRelease {SL-BWP-PoolConfig-r16} OPTIONAL, -- Need M

sl-BWP-DiscPoolConfig-r17 SetupRelease {SL-BWP-DiscPoolConfig-r17} OPTIONAL -- Need M

]],

[[

sl-BWP-PoolConfigA2X-r18 SetupRelease {SL-BWP-PoolConfig-r16} OPTIONAL, -- Need M

sl-BWP-PRS-PoolConfig-r18 SetupRelease {SL-BWP-PRS-PoolConfig-r18} OPTIONAL -- Need M

]],

[[

sl-BWP-PRS-PoolConfig-v18xy SetupRelease {SL-BWP-PRS-PoolConfig-v18xy} OPTIONAL -- Need M

]]

}

SL-BWP-Generic-r16 ::= SEQUENCE {

sl-BWP-r16 BWP OPTIONAL, -- Need M

sl-LengthSymbols-r16 ENUMERATED {sym7, sym8, sym9, sym10, sym11, sym12, sym13, sym14} OPTIONAL, -- Need M

sl-StartSymbol-r16 ENUMERATED {sym0, sym1, sym2, sym3, sym4, sym5, sym6, sym7} OPTIONAL, -- Need M

sl-PSBCH-Config-r16 SetupRelease {SL-PSBCH-Config-r16} OPTIONAL, -- Need M

sl-TxDirectCurrentLocation-r16 INTEGER (0..3301) OPTIONAL, -- Need M

...,

[[

sl-Unlicensed-r18 SetupRelease { SL-Unlicensed-r18 } OPTIONAL -- Need M

]]

}

SL-Unlicensed-r18 ::= SEQUENCE {

sl-LBT-FailureRecoveryConfig-r18 SetupRelease { SL-LBT-FailureRecoveryConfig-r18 } OPTIONAL, -- Need M

sl-StartingSymbolFirst-r18 ENUMERATED {sym0, sym1, sym2, sym3, sym4, sym5, sym6} OPTIONAL, -- Need M

sl-StartingSymbolSecond-r18 ENUMERATED {sym3, sym4, sym5, sym6, sym7} OPTIONAL, -- Need M

sl-TransmissionStructureForPSCCHandPSSCH-r18 ENUMERATED {contiguousRB, interlaceRB} OPTIONAL, -- Need M

sl-GapOfAdditionalSSSB-Occasion-r18 INTEGER (0..639) OPTIONAL, -- Need M

sl-AbsoluteFrequencySSB-NonAnchorList-r18 SEQUENCE (SIZE (1.. maxSL-NonAnchorRBsets)) OF ARFCN-ValueNR OPTIONAL, -- Need M

sl-CPE-StartingPositionS-SSB-r18 INTEGER (1..9) OPTIONAL, -- Need M

sl-CWS-ForPsschWithoutHarqAck-r18 ENUMERATED {t1, t8, t16, t32, infinity} OPTIONAL, -- Need M

sl-NumOfAdditionalSSSBOccasion-r18 INTEGER (0..4) OPTIONAL, -- Need M

sl-SSSBPowerOffsetOfAnchorRBSet-r18 ENUMERATED {value1, value2} OPTIONAL, -- Need M

sl-RBSetConfigList-r18 SEQUENCE (SIZE (1..5)) OF SL-RBSetConfig-r18 OPTIONAL, -- Need M

sl-IntraCellGuardBandsSL-List-r18 SEQUENCE (SIZE (1..maxSCSs)) OF IntraCellGuardBandsPerSCS-r16 OPTIONAL -- Need M

}

-- TAG-SL-BWP-CONFIG-STOP

-- ASN1STOP

|  |
| --- |
| *SL-BWP-Config* field descriptions |
| ***sl-BWP-DiscPoolConfig***  This field indicates the NR sidelink discovery dedicated resource pool configurations on the configured sidelink BWP. The total number of Rx/Tx resource pools configured for communication and discovery does not exceed the maximum number of Rx/Tx resource pool for NR sidelink communication (i.e. *maxNrofRXPool-r16/maxNrofTXPool-r16*). |
| ***sl-BWP-Generic***  This field indicates the generic parameters on the configured sidelink BWP. |
| ***sl-BWP-Id***  An identifier for this sidelink bandwidth part. |
| ***sl-BWP-PoolConfig***  This field indicates the resource pool configurations on the configured sidelink BWP. |
| ***sl-BWP-PoolConfigA2X***  This field indicates the resource pool configurations for A2X services on the configured sidelink BWP. This field does not include *sl-TxPoolScheduling*. This field does not include *sl-TxPoolExceptional*. |
| ***sl-BWP-PoolConfigPS***  This field indicates the resource pool configurations for power saving on the configured sidelink BWP. This field does not include *sl-TxPoolExceptional*. |
| ***sl-BWP-PRS-PoolConfig***  This field indicates the sidelink PRS dedicated resource pool configurations for SL-PRS on the configured sidelink BWP. This field does not include *sl-PRS-TxPoolExceptional*. |

|  |
| --- |
| *SL-BWP-Generic* field descriptions |
| ***sl-LengthSymbols***  This field indicates the number of symbols used for sidelink in a slot without S-SSB. A single value can be (pre)configured per sidelink bandwidth part. |
| ***sl-StartSymbol***  This field indicates the starting symbol used for sidelink in a slot without S-SSB. A single value can be (pre)configured per sidelink bandwidth part. |
| ***sl-Unlicensed***  This field indicates the configurations for sidelink carrier of shared spectrum channel access. This field is not expected to be provided when *sl-FreqInfoListSizeExt* or *sl-PreconfigFreqInfoListSizeExt* is present. |
| ***sl-TxDirectCurrentLocation***  The sidelink Tx/Rx Direct Current location for the carrier. Only values in the value range of this field between 0 and 3299, which indicate the subcarrier index within the carrier corresponding to the numerology of the corresponding sidelink BWP and value 3300, which indicates "Outside the carrier" and value 3301, which indicates "Undetermined position within the carrier" are used in this version of the specification. |

|  |
| --- |
| *SL-Unlicensed* field descriptions |
| ***sl-AbsoluteFrequencySSB-NonAnchorList***  Indicates the lowest S-SSB in a non-anchor RB set via each parameter in this list. Anchor RB set refers to the RB set where S-SSB indicated by *sl-AbsoluteFrequencySSB-r16* locates. |
| ***sl-CPE-StartingPositionS-SSB***  Indicates the CPE starting position within the last symbol before the start of S-SSB transmission. The value is an index of the set of all candidate CPE starting positions specified in Table 5.3.1-3 of [16, TS 38.211] for Ci=1 and the corresponding SCS of the SL BWP. |
| ***sl-CWS-ForPsschWithoutHarqAck***  The latest CW\_p is autonomously increased to the next higher allowed value for every priority class p of {1,2,3,4} if the same CW\_p which is different from CW\_(max,p) is consecutively used for general of N\_init in SL Type 1 LBT for a number of times indicated by this parameter. This operation is restricted only to PSCCH/PSSCH transmission(s) with "HARQ feedback enabled/disabled indicator" in the 2nd stage SCI set to disabled, regardless of whether PSFCH resources being configured in a resource pool. |
| ***sl-GapOfAdditionalSSSB-Occasion***  Indicate the gap between each R16/R17 NR SL S-SSB slot and its first corresponding additional candidate S-SSB occasion, and the gap between adjacent two additional candidate S-SSB occasions corresponding to a R16/R17 NR SL S-SSB slot. |
| ***sl-IntraCellGuardBandsSL-List***  List of intra-cell guard bands for operation with shared spectrum channel access. If not configured, the guard bands are defined according to 38.101-1 [15], see TS 38.214 [19], clause 7. For operation in licensed spectrum, this field is absent, and no UE action is required.  NOTE: Value '0' is not expected to be (pre-)configured for *nrofCRBs* when the SL BWP is larger than UE supported RF bandwidth for SL-U operation. |
| ***sl-LBT-FailureRecoveryConfig***  Configures parameters used for detection and cancellation of Sidelink consistent LBT failures for operation with shared spectrum channel access, as specified in TS 38.321 [3]. |
| ***sl-NumOfAdditionalSSSBOccasion***  Indicate the number of additional candidate S-SSB occasion(s) for each R16/R17 NR SL S-SSB slot. |
| ***sl-SSSBPowerOffsetOfAnchorRBSet***  Indicate the power offset for one S-SSB transmission on anchor RB set, where anchor RB set refers to the RB set where S-SSB indicated by *sl-AbsoluteFrequencySSB-r16* locates. Value *value1* corresponds to the power offset of 10lg(N), where N is the number of S-SSB repetitions within the anchor RB set, and *value2* corresponds to the power offset of 10lg(W), where W is the maximum total number of S-SSB repetitions on RB sets within the SL-BWP. |
| ***sl-StartingSymbolFirst***  Indicates the location of first starting symbol within a slot. Value *sym0* corresponds to first symbol, value *sym1* corresponds to the second symbol and so on. If the field is not configured, the UE shall use value *sym0*. |
| ***sl-StartingSymbolSecond***  Indicates the location of second starting symbol within a slot. Value *sym3* corresponds to fourth symbol, value *sym4* corresponds to the fifth symbol and so on.  The number of symbols used for PSCCH/PSSCH transmission from second starting symbol is not smaller than 6. Within a slot, the second starting symbol is later than the first starting symbol. PSCCH/PSSCH transmission starting from first or second starting symbol shall have the same ending symbol within a slot. |
| ***sl-TransmissionStructureForPSCCHandPSSCH***  Indicate a SL-BWP is (pre-)configured with contiguous RB-based or interlace RB-based PSCCH/PSSCH transmission. Contiguous RB-based PSCCH/PSSCH are applicable in region with no OCB requirement, or with OCB exemption. |

*NEXT CHANGE*

#### – *SL-BWP-PRS-PoolConfig*

The IE *SL-BWP-PRS-PoolConfig* is used to configure UE specific NR sidelink PRS dedicated resource pool.

*SL-BWP-PRSPoolConfig* information element

-- ASN1START

-- TAG-SL-BWP-PRS-POOLCONFIG-START

SL-BWP-PRS-PoolConfig-r18 ::= SEQUENCE {

sl-PRS-RxPool-r18 SEQUENCE (SIZE (1..maxNrofRXPool-r16)) OF SL-PRS-ResourcePool-r18 OPTIONAL, -- Cond HO

sl-PRS-TxPoolSelectedNormal-r18 SL-PRS-TxPoolDedicated-r18 OPTIONAL, -- Need M

sl-PRS-TxPoolScheduling-r18 SL-PRS-TxPoolDedicated-r18 OPTIONAL, -- Need M

sl-PRS-TxPoolExceptional-r18 SL-PRS-ResourcePoolConfig-r18 OPTIONAL -- Need R

}

SL-BWP-PRS-PoolConfig-v18xy ::= SEQUENCE {

sl-PRS-RxPool-v18xy SEQUENCE (SIZE (1..maxNrofRXPool-r16)) OF SL-PRS-ResourcePool-v18xy OPTIONAL, -- Cond HO

...

}

SL-PRS-TxPoolDedicated-r18 ::= SEQUENCE {

sl-PRS-PoolToReleaseList-r1 SEQUENCE (SIZE (1..maxNrofSL-PRS-TxPool-r18)) OF SL-PRS-ResourcePoolID-r18 OPTIONAL, -- Need N

sl-PRS-PoolToAddModList-r18 SEQUENCE (SIZE (1..maxNrofSL-PRS-TxPool-r18)) OF SL-PRS-ResourcePoolConfig-r18 OPTIONAL -- Need N

}

SL-PRS-ResourcePoolConfig-r18 ::= SEQUENCE {

sl-PRS-ResourcePoolID-r18 SL-PRS-ResourcePoolID-r18,

sl-PRS-ResourcePool-r18 SL-PRS-ResourcePool-r18 OPTIONAL -- Need M

}

SL-PRS-ResourcePoolID-r18 ::= INTEGER (1.. maxNrofSL-PRS-TxPool-r18)

-- TAG-SL-BWP-PRS-POOLCONFIG-STOP

-- ASN1STOP

|  |
| --- |
| *SL-BWP-PRSPoolConfig* field descriptions |
| ***sl-PRS-TxPoolSelectedNormal***  Indicates the resources by which the UE is allowed to perform SL-PRS transmission by UE autonomous resource selection on the configured BWP. |
| ***sl-PRS-TxPoolScheduling***  Indicates the resources by which the UE is allowed to perform SL-PRS transmission based on network selection on the configured BWP. |
| ***sl-PRS-TxPoolExceptional***  Indicates the resources by which the UE is allowed to perform SL-PRS transmission in exceptional conditions on the configured BWP. |

|  |  |
| --- | --- |
| Conditional Presence | Explanation |
| *HO* | This field is optionally present, need M, in an *RRCReconfiguration* message including *reconfigurationWithSync*; otherwise it is absent, Need M. |

#### – *SL-BWP-PRS-PoolConfigCommon*

The IE *SL-BWP-PRSPoolConfigCommon* is used to configure the cell-specific NR sidelink PRS dedicated resource pool.

*SL-BWP-PRS-PoolConfigCommon* information element

-- ASN1START

-- TAG-SL-BWP-PRS-POOLCONFIGCOMMON-START

SL-BWP-PRS-PoolConfigCommon-r18 ::= SEQUENCE {

sl-PRS-RxPool-r18 SEQUENCE (SIZE (1..maxNrofRXPool-r16)) OF SL-PRS-ResourcePool-r18 OPTIONAL, -- Need R

sl-PRS-TxPoolSelectedNormal-r18 SEQUENCE (SIZE (1..maxNrofSL-PRS-TxPool-r18)) OF SL-PRS-ResourcePoolConfig-r18 OPTIONAL, -- Need R

sl-PRS-TxPoolExceptional-r18 SL-PRS-ResourcePoolConfig-r18 OPTIONAL, -- Need R

...,

[[

sl-PRS-RxPool-v18xy SEQUENCE (SIZE (1..maxNrofRXPool-r16)) OF SL-PRS-ResourcePool-v18xy OPTIONAL -- Need R

]]

}

-- TAG-SL-BWP-PRSPOOLCONFIGCOMMON-STOP

-- ASN1STOP

| *SL-BWP-PRS-PoolConfigCommon* field descriptions |
| --- |
| ***sl-PRS-TxPoolExceptional***  Indicates the resources by which the UE is allowed to perform NR sidelink transmission in exceptional conditions on the configured BWP. This field is not present when *SL-BWP-PRS-PoolConfigCommon* is included in *SL-PreconfigurationNR* |

*NEXT CHANGE*

#### – *SL-CBR-CommonTxDedicated-SL-PRS-RP-List*

The IE *SL-CBR-CommonTxConfigListDedicated-SL-PRS-RP* indicates the list of SL PRS transmission parameters (such as Maximum SL PRS transmission power, Maximum Number of SL PRS (re-)transmissions, and CR limit) in *sl-CBR-SL-PRS-TxConfigList*, and the list of CBR ranges in *sl-CBR-RangeConfigList-Dedicated-SL-PRS-RP*, to configure congestion control to the UE for sidelink positioning.

*SL-CBR-CommonTxDedicatedSL-PRS-RP-List* information element

-- ASN1START

-- TAG- SL-CBR-COMMONTXDEDICATEDSL-PRS-RP-LIST-START

SL-CBR-CommonTxDedicatedSL-PRS-RP-List-r18 ::= SEQUENCE {

sl-CBR-RangeDedicatedSL-PRS-RP-List-r18 SEQUENCE (SIZE (1..maxCBR-ConfigDedSL-PRS-1-r18)) OF SL-CBR-LevelsDedicatedSL-PRS-RP-r18

OPTIONAL, -- Need M

sl-CBR-SL-PRS-TxConfigList-r18 SEQUENCE (SIZE (1.. maxNrofSL-PRS-TxConfig-r18)) OF SL-CBR-SL-PRS-TxConfig-r18

OPTIONAL -- Need M

}

SL-CBR-CommonTxDedicatedSL-PRS-RP-List-v18xy ::= SEQUENCE {

sl-CBR-RangeDedicatedSL-PRS-RP-ListExt-v18xy SEQUENCE (SIZE (1..maxCBR-ConfigDedSL-PRS-1-r18)) OF SL-CBR-DedicatedSL-PRS-RP-r18

OPTIONAL, -- Need M

SL-CBR-LevelsDedicatedSL-PRS-RP-Ext-v18xy SEQUENCE (SIZE (1..maxCBR-ConfigDedSL-PRS-1-r18)) OF SL-CBR-Dedicated-SL-PRS-RP-r18

OPTIONAL, -- Need M

...

}

SL-CBR-LevelsDedicatedSL-PRS-RP-r18 ::= SEQUENCE (SIZE (0..maxCBR-LevelDedSL-PRS-1-r18)) OF SL-CBR-Dedicated-SL-PRS-RP-r18

SL-CBR-SL-PRS-TxConfig-r18 ::= SEQUENCE {

sl-PRS-CR-Limit-r18 INTEGER(0..10000) OPTIONAL, -- Need M

sl-PRS-MaxTx-power-r18 INTEGER (-30..33) OPTIONAL, -- Need M

sl-PRS-MaxNum-Transmissions-r18 INTEGER(1..32) OPTIONAL -- Need M

}

SL-CBR-Dedicated-SL-PRS-RP-r18 ::= INTEGER (0..100)

-- TAG-SL-CBR-COMMONTXDEDICATEDSL-PRS-RP-LIST-STOP

-- ASN1STOP

| *SL-CBR-CommonTxDedicatedSL-PRS-RP-List* field descriptions |
| --- |
| ***sl-CBR-RangeDedicatedSL-PRS-RP-List***  Indicates the list of CBR ranges. Each entry of the list indicates in *SL-CBR-LevelsConfig-Dedicated-SL-PRS-RP* the upper bound of the CBR range for the respective entry. The upper bounds of the CBR ranges are configured in ascending order for consecutive entries of *SL-CBR-LevelsConfig-Dedicated-SL-PRS-RP*. For the first entry of *SL-CBR-LevelsConfig-Dedicated-SL-PRS-RP* the lower bound of the CBR range is 0. Value 0 corresponds to 0, value 1 to 0.01, value 2 to 0.02, and so on. |
| ***sl-CBR-SL-PRS-TxConfigList***  Indicates the list of available SL PRS transmission parameters configurations. |
| ***sl-PRS-CR-Limit***  Indicates the maximum limit on the occupancy ratio. Value 0 corresponds to 0, value 1 to 0.0001, value 2 to 0.0002, and so on (i.e. in steps of 0.0001) until value 10000, which corresponds to 1. |
| ***sl-PRS-MaxNum-Transmissions***  Indicates maximum Number of SL PRS (re-)transmissions. |
| ***sl-PRS-MaxTx-power***  Indicates maximum SL PRS transmission power. The unit is dBm. |

*NEXT CHANGE*

#### – *SL-PRS-ResourcePool*

The IE *SL-PRS-ResourcePool* specifies the configuration information for NR sidelink PRS dedicated resource pool.

*SL-PRS-ResourcePool* information element

-- ASN1START

-- TAG-SL-PRS-RESOURCEPOOL-START

SL-PRS-ResourcePool-r18 ::= SEQUENCE {

sl-PRS-PSCCH-Config-r18 SetupRelease { SL-PSCCH-ConfigDedicatedSL-PRS-RP-r18} OPTIONAL, -- Need M

sl-StartRB-SubchannelDedicatedSL-PRS-RP-r18 INTEGER (0..265) OPTIONAL, -- Need M

sl-FilterCoefficient-r18 FilterCoefficient OPTIONAL, -- Need M

sl-ThreshS-RSSI-PRS-CBR-r18 INTEGER (0..45) OPTIONAL, -- Need M

sl-RB-Number-r18 INTEGER (10..275) OPTIONAL, -- Need M

sl-TimeResource-r18 BIT STRING (SIZE (10..160)) OPTIONAL, -- Need M

sl-PosAllowedResourceSelectionConfig-r18 ENUMERATED {c1, c2, c3} OPTIONAL, -- Need M

sl-PRS-ResourceReservePeriodList-r18 SEQUENCE (SIZE (1..16)) OF SL-ReservationPeriodAllowedDedicatedSL-PRS-RP-r18

OPTIONAL,

sl-PRS-ResourcesDedicatedSL-PRS-RP-r18 SEQUENCE (SIZE (1..12)) OF SL-PRS-ResourceDedicatedSL-PRS-RP-r18 OPTIONAL, -- Need M

sl-PRS-PowerControl-r18 SL-PRS-PowerControl-r18 OPTIONAL, -- Need M

sl-SensingWindowDedicatedSL-PRS-RP-r18 ENUMERATED {ms100, ms1100} OPTIONAL, -- Need M

sl-TxPercentageDedicatedSL-PRS-RP-List-r18 SEQUENCE (SIZE (8)) OF SL-TxPercentageDedicatedSL-PRS-RP-Config-r18 OPTIONAL, -- Need M

sl-SCI-basedSL-PRS-TxTriggerSCI1-B-r18 BOOLEAN OPTIONAL, -- Need M

sl-NumSubchannelDedicatedSL-PRS-RP-r18 INTEGER (1..27) OPTIONAL, -- Need M

sl-SubchannelSizeDedicatedSL-PRS-RP-r18 ENUMERATED {n10, n12, n15, n20, n25, n50, n75, n100} OPTIONAL, -- Need M

sl-MaxNumPerReserveDedicatedSL-PRS-RP-r18 ENUMERATED {n2, n3} OPTIONAL, -- Need M

sl-NumReservedBitsSCI1B-DedicatedSL-PRS-RP-r18 INTEGER (0..20) OPTIONAL, -- Need R

sl-SRC-ID-LenDedicatedSL-PRS-RP-r18 ENUMERATED {n12, n24} OPTIONAL, -- Need M

dummy1SEQUENCE (SIZE (1..8)) OF SL-PriorityTxConfigIndexDedicatedSL-PRS-RP-r18

OPTIONAL, -- Need M

sl-TimeWindowSizeCBR-DedicatedSL-PRS-RP-r18 ENUMERATED {ms100, slot100} OPTIONAL, -- Need M

sl-TimeWindowSizeCR-DedicatedSL-PRS-RP-r18 ENUMERATED {ms1000, slot1000} OPTIONAL, -- Need M

dummy2 SL-CBR-CommonTxDedicatedSL-PRS-RP-List-r18 OPTIONAL, -- Need M

sl-PriorityThreshold-UL-URLLC-r18 INTEGER (1..9) OPTIONAL, -- Need M

sl-PriorityThreshold-r18 INTEGER (1..9) OPTIONAL, -- Need M

sl-SelectionWindowListDedicatedSL-PRS-RP-r18 SEQUENCE (SIZE (8)) OF SL-SelectionWindowConfigDedicated-SL-PRS-RP-r18

OPTIONAL, -- Need M

sl-Thres-RSRP-ListDedicatedSL-PRS-RP-r18 SEQUENCE (SIZE (64)) OF SL-PRS-ThresRSRP-r18 OPTIONAL, -- Need M

sl-PreemptionEnableDedicatedSL-PRS-RP-r18 ENUMERATED {enabled, pl1, pl2, pl3, pl4, pl5, pl6, pl7, pl8} OPTIONAL -- Need R

}

SL-PRS-ResourcePool-v18xy ::= SEQUENCE {

sl-CBR-PriorityTxConfigDedicatedSL-PRS-RP-List-v18xy SEQUENCE (SIZE (1..8)) OF SL-PriorityTxConfigIndexDedicatedSL-PRS-RP-v18xy

OPTIONAL, -- Need M

sl-CBR-CommonTxDedicatedSL-PRS-RP-List-v18xy SL-CBR-CommonTxDedicatedSL-PRS-RP-List-v18xy OPTIONAL, -- Need M

...

}

SL-PSCCH-ConfigDedicatedSL-PRS-RP-r18 ::= SEQUENCE {

timeResourcePSCCH-DedicatedSL-PRS-RP-r18 ENUMERATED {n2, n3} OPTIONAL, -- Need M

freqResourcePSCCH-DedicatedSL-PRS-RP-r18 ENUMERATED {n10,n12, n15, n20, n25} OPTIONAL, -- Need M

...

}

SL-ReservationPeriodAllowedDedicatedSL-PRS-RP-r18 ::= CHOICE {

sl-ResourceReservePeriod1-r18 ENUMERATED {ms0, ms100, ms160, ms200, ms300, ms320, ms400, ms500, ms600, ms640,

ms700, ms800, ms900, ms1000, ms1280, ms2560, ms5120, ms10240},

sl-ResourceReservePeriod2-r18 INTEGER (1..99)

}

SL-PRS-ResourceDedicatedSL-PRS-RP-r18::= SEQUENCE {

sl-PRS-ResourceID-r18 INTEGER (0..11) OPTIONAL, -- Need M

sl-NumberOfSymbols-r18 INTEGER (1..9) OPTIONAL, -- Need M

sl-CombSize-r18 ENUMERATED{n2,n4,n6} OPTIONAL, -- Need R

sl-PRS-starting-symbol-r18 INTEGER (4..12) OPTIONAL, -- Need M

sl-PRS-comb-offset-r18 INTEGER(1..5) OPTIONAL -- Need M

}

SL-PRS-PowerControl-r18::= SEQUENCE {

dl-P0-SL-PRS-r18 INTEGER(-202..24) OPTIONAL, -- Need M

dl-Alpha-SL-PRS-r18 ENUMERATED {alpha0, alpha04, alpha05, alpha06, alpha07, alpha08, alpha09, alpha1} OPTIONAL, -- Need M

sl-P0-SL-PRS-r18 INTEGER(-202..24) OPTIONAL, -- Need M

sl-Alpha-SL-PRS-r18 ENUMERATED {alpha0, alpha04, alpha05, alpha06, alpha07, alpha08, alpha09, alpha1} OPTIONAL -- Need S

}

SL-TxPercentageDedicatedSL-PRS-RP-Config-r18::= SEQUENCE {

sl-TxPercentageDedicatedSL-PRS-RP-r18 INTEGER (1..8) OPTIONAL, -- Need M

sl-Priority-DedicatedSL-PRS-RP ENUMERATED {p20, p35, p50} OPTIONAL -- Need M

}

SL-PriorityTxConfigIndexDedicatedSL-PRS-RP-r18 ::= SEQUENCE {

sl-PriorityThresholdDedicatedSL-PRS-RP-r18 INTEGER (1..8) OPTIONAL, -- Need M

sl-DefaultTxConfigIndexDedicatedSL-PRS-RP-r18 INTEGER (0..maxCBR-LevelDedSL-PRS-1-r18) OPTIONAL, -- Need M

sl-CBR-ConfigIndexDedicatedSL-PRS-RP-r18 INTEGER (0..maxCBR-ConfigDedSL-PRS-1-r18) OPTIONAL, -- Need M

sl-PRS-TxConfigIndexList-r18 SEQUENCE (SIZE (1.. maxCBR-LevelDedSL-PRS-1-r18)) OF SL-PRS-TxConfigIndex-r18

OPTIONAL -- Need M

}

SL-PriorityTxConfigIndexDedicatedSL-PRS-RP-v18xy ::= SEQUENCE {

sl-PriorityThresholdDedicatedSL-PRS-RP-r18 INTEGER (1..8) OPTIONAL, -- Need M

sl-DefaultTxConfigIndexDedicatedSL-PRS-RP-r18 INTEGER (0..maxCBR-LevelDedSL-PRS-1-r18) OPTIONAL, -- Need M

sl-CBR-ConfigIndexDedicatedSL-PRS-RP-r18 INTEGER (0..maxCBR-ConfigDedSL-PRS-1-r18) OPTIONAL, -- Need M

sl-PRS-TxConfigIndexList-v18xy SEQUENCE (SIZE (1.. maxCBR-LevelDedSL-PRS-r18)) OF SL-PRS-TxConfigIndex-r18

OPTIONAL -- Need M

}

SL-PRS-TxConfigIndex-r18 ::= INTEGER (0.. maxNrofSL-PRS-TxConfig-r18)

SL-SelectionWindowConfigDedicated-SL-PRS-RP-r18::= SEQUENCE {

sl-PRS-Priority-r18 INTEGER (1..8),

sl-PRS-SelectionWindow-r18 ENUMERATED {n1, n5, n10, n20}

}

SL-PRS-ThresRSRP-r18 ::= INTEGER (0..66)

-- TAG-SL-PRS-RESOURCEPOOL-STOP

-- ASN1STOP

|  |
| --- |
| *SL-PRS-ResourcePool* field descriptions |
| ***dummy1, dummy2***  This field is not used in the specification. If received it shall be ignored by the UE. |
| ***sl-CBR-ConfigIndexDedicatedSL-PRS-RP***  Indicates the CBR ranges to be used by an index to the entry of the CBR range configuration in *sl-CBR-RangeConfigList-Dedicated-SL-PRS-RP*. |
| ***sl-CBR-PriorityTxConfigDedicatedSL-PRS-RP-List***  Indicates the mapping between SL-PRS transmission parameter (such as transmission power, etc.) sets by using the indexes of the configurations  in *sl-CBR-SL-PRS-TxConfigList*, CBR ranges by using the indexes to the entry of the CBR range configurations in *sl-CBR-SL-PRS-RangeConfigList*, and priority ranges. It also indicates the default SL-PRS transmission parameters to be used when CBR measurement results are not available. |
| ***sl-DefaultTxConfigIndexDedicatedSL-PRS-RP***  Indicates the SL PRS transmission parameters to be used by the UEs which do not have available CBR measurement results, by means of an index to the corresponding entry in *sl-PRS-TxConfigIndexList*. Value 0 indicates the first entry in *sl-PRS-Tx-ConfigIndexList*. The field is ignored if the UE has available CBR measurement results. |
| ***sl-FilterCoefficient***  This field indicates the filtering coefficient for long-term measurement and reference signal power derivation used for sidelink open-loop power control. |
| ***sl-MaxNumPerReserveDedicatedSL-PRS-RP***  Indicates the maximum number of SL PRS reservations that can be indicated by an SCI. |
| ***sl-NumReservedBitsSCI1B-DedicatedSL-PRS-RP***  Indicates the number of reserved bits in SCI format 1-B. |
| ***sl-NumSubchannelDedicatedSL-PRS-RP***  Indicates the number of subchannels in the corresponding resource pool, which consists of contiguous PRBs only. |
| ***sl-PosAllowedResourceSelectionConfig***  Indicates allowed resource allocation method configured per resource pool.  C1: only sensing allowed  c2: only random resource selection allowed  c3: sensing and random resource selection allowed |
| ***sl-PreemptionEnableDedicatedSL-PRS-RP***  Indicates whether pre-emption is disabled or enabled in a resource pool. If the field is present and the value is *pl1*, *pl2*, and so on (but not *enabled*), it means that pre-emption is enabled and a priority level p\_preemption is configured. If the field is present and the value is *enabled*, the pre-emption is enabled (but p\_preemption is not configured) and pre-emption is applicable to all levels. |
| ***sl-PriorityThreshold***  Indicates the threshold used to determine whether NR sidelink transmission in dedicated SL PRS resource pool is prioritized over uplink transmission of priority index 0 as specified in TS 38.213[13], clause 16.2.4.3, or whether PUCCH transmission carrying SL HARQ is prioritized over PUCCH transmission carrying UCI of priority index 0 if they overlap in time as specified in TS 38.213 [13], clause 9.2.5.0. |
| ***sl-PriorityThresholdDedicatedSL-PRS-RP***  Indicates the upper bound of priority range which is associated with the configurations in *sl-CBR-ConfigIndex-Dedicated-SL-PRS-RP* and in *sl-PRS-Tx-ConfigIndex*. The upper bounds of the priority ranges are configured in ascending order for consecutive entries of *SL-PriorityTxConfigIndex-Dedicated-SL-PRS-RP* in *SL-PriorityTxConfigList-Dedicated-SL-PRS-RP*. For the first entry of *sl-PriorityThreshold-Dedicated-SL-PRS-RP*, the lower bound of the priority range is 1. |
| ***sl-PriorityThresholdUL-URLLC***  Indicates the threshold used to determine whether NR sidelink transmission in dedicated SL PRS resource pool is prioritized over uplink transmission of priority index 1 as specified in TS 38.213[13], clause 16.2.4.3, or whether PUCCH transmission carrying SL HARQ is prioritized over PUCCH transmission carrying UCI of priority index 1 if they overlap in time as specified in TS 38.213 [13], clause 9.2.5.0. |
| ***sl-PRS-ResourceReservePeriodList***  Indicates set of possible resource reservation period in the unit of ms allowed in the resource pool. Up to 16 values can be configured per resource pool. The value *ms0* is always configured. |
| ***sl-PRS-ResourcesDedicatedSL-PRS-RP***  Indicates SL PRS resources in a slot of dedicated SL PRS resource pool as defined in TS 38.211 [16]. |
| ***sl-PRS-TxConfigIndex***  Indicates SL PRS transmission Configuration index. |
| ***sl-PRS-TxConfigIndexList***  Indicates List of *sl-PRS-Tx-ConfigIndex* indicating the SL PRS transmission index |
| ***sl-RB-Number***  Indicates the number of PRBs in the corresponding SL PRS dedicated resource pool, which consists of contiguous PRBs only. |
| ***sl-SCI-basedSL-PRS-TxTriggerSCI1-B***  Indicates presence of a bit-field in SCI format 1-B to trigger SL-PRS transmission by a receiving UE. |
| ***sl-SelectionWindowListDedicatedSL-PRS-RP***  Parameter that determines the end of the selection window in the resource selection for a SL-PRS with respect to priority indicated in SCI. Value n1 corresponds to 1\*2µ , value n5 corresponds to 5\*2µ , and so on, where µ = 0,1,2,3 refers to SCS 15,30,60,120 kHz respectively. |
| ***sl-SensingWindowDedicated-SL-PRS-RP***  Indicates Parameter that indicates the start of the sensing window for SL PRS in a dedicated resource pool. |
| ***sl-SRC-ID-LenDedicatedSL-PRS-RP***  Indicates the number of bits used for the source ID in SCI format 1-B. |
| ***sl-StartRB-Subchannel-DedicatedSL-PRS-RP***  Indicates the lowest RB index of the SL PRS dedicated resource pool with respect to the lowest RB index of a SL BWP. |
| ***sl-SubchannelSizeDedicatedSL-PRS-RP***  Indicates size of a subchannel for PSCCH in number of RBs. |
| ***sl-Thres-RSRP-ListDedicatedSL-PRS-RP***  Indicates a list of 64 thresholds, the threshold should be selected based on the priority in the decoded SCI and the priority in the SCI to be transmitted. |
| ***sl-ThreshS-RSSI-PRS-CBR***  Indicates the S-RSSI threshold for determining the contribution of a sub-channel to the SL-PRS CBR measurement in a dedicated SL-PRS resource pool. Value 0 corresponds to -112 dBm, value 1 to -110 dBm, value n to (-112 + n\*2) dBm, and so on. |
| ***sl-TimeResource***  This field indicates the bitmap of the SL PRS dedicated resource pool, which is defined by repeating the bitmap with a periodicity during a SFN or DFN cycle. |
| ***sl-TimeWindowSizeCBR-DedicatedSL-PRS-RP***  Indicates the time window size for CBR measurement in a dedicated SL-PRS resource pool. |
| ***sl-TimeWindowSizeCR-DedicatedSL-PRS-RP***  Indicates the time window size for CR evaluation in a dedicated SL-PRS resource pool. |
| ***sl-TxPercentageDedicatedSL-PRS-RP-List***  Indicates List of minimum Tx percentage (list per priority) |

| *SL-PRS-PSCCH-Config* field descriptions |
| --- |
| ***freqResourcePSCCH-Dedicated-SL-PRS-RP***  Indicates the number of PRBs for PSCCH in a dedicated SL PRS resource pool. |
| ***timeResourcePSCCH-Dedicated-SL-PRS-RP***  Indicates the number of symbols for PSCCH in a dedicated SL PRS resource pool. |

| *SL-PRS-PowerControl* field descriptions |
| --- |
| ***dl-P0-SL-PRS***  Indicates P0 value for DL pathloss based open loop power control for SL PRS transmission in dedicated SL PRS resource pool. |
| ***dl-AlphaSL-PRS***  Indicates alpha value for DL pathloss based open loop power control for SL PRS transmission in dedicated SL PRS resource pool. |
| ***sl-P0-SL-PRS***  Indicates P0 value for SL pathloss based open loop power control for SL PRS transmission in dedicated SL PRS resource pool. |
| ***sl-AlphaSL-PRS***  Indicates alpha value for downlink pathloss based power control for PSCCH/PSSCH when *dl-P0-PSSCH-PSCCH* is configured. When the field is absent the UE applies the value 1. |

*NEXT CHANGE*

#### – *SL-UE-SelectedConfig*

IE *SL-UE-SelectedConfig* specifies sidelink communication configurations used for UE autonomous resource selection.

*SL-UE-SelectedConfig* information element

-- ASN1START

-- TAG-SL-UE-SELECTEDCONFIG-START

SL-UE-SelectedConfig-r16 ::= SEQUENCE {

sl-PSSCH-TxConfigList-r16 SL-PSSCH-TxConfigList-r16 OPTIONAL, -- Cond SIB12

sl-ProbResourceKeep-r16 ENUMERATED {v0, v0dot2, v0dot4, v0dot6, v0dot8} OPTIONAL, -- Need R

sl-ReselectAfter-r16 ENUMERATED {n1, n2, n3, n4, n5, n6, n7, n8, n9} OPTIONAL, -- Need R

sl-CBR-CommonTxConfigList-r16 SL-CBR-CommonTxConfigList-r16 OPTIONAL, -- Need R

ul-PrioritizationThres-r16 INTEGER (1..16) OPTIONAL, -- Need R

sl-PrioritizationThres-r16 INTEGER (1..8) OPTIONAL, -- Need R

...,

[[

sl-CBR-CommonTxDedicatedSL-PRS-RP-List-r18 SL-CBR-CommonTxDedicatedSL-PRS-RP-List-r18 OPTIONAL -- Cond notSIB12

]],

[[

sl-CBR-CommonTxDedicatedSL-PRS-RP-List-v18xy SL-CBR-CommonTxDedicatedSL-PRS-RP-List-v18xy OPTIONAL -- Cond notSIB12

]]}

-- TAG-SL-UE-SELECTEDCONFIG-STOP

-- ASN1STOP

|  |
| --- |
| *SL-UE-SelectedConfig* field descriptions |
| ***sl-PrioritizationThres***  Indicates the SL priority threshold, which is used to determine whether SL TX is prioritized over UL TX, as specified in TS 38.321 [3]. Network does not configure the *sl-PrioritizationThres* and the *ul-PrioritizationThres* to the UE separately. |
| ***sl-ProbResourceKeep***  Indicates the probability with which the UE keeps the current resource when the resource reselection counter reaches zero for sensing based UE autonomous resource selection (see TS 38.321 [3]). |
| ***sl-PSSCH-TxConfigList***  Indicates PSSCH TX parameters such as MCS, sub-channel number, retransmission number, associated to different UE absolute speeds and different synchronization reference types for UE autonomous resource selection. |
| ***sl-ReselectAfter***  Indicates the number of consecutive skipped transmissions before triggering resource reselection for sidelink communication (see TS 38.321 [3]). |
| ***ul-PrioritizationThres***  Indicates the UL priority threshold, which is used to determine whether SL TX is prioritized over UL TX, as specified in TS 38.321 [3]. Network does not configure the *sl-PrioritizationThres* and the *ul-PrioritizationThres* to the UE separately. |

|  |  |
| --- | --- |
| Conditional Presence | Explanation |
| *SIB12* | This field is optional present if included within *SIB12*, need R. Otherwise, the field is absent. |
| *notSIB12* | The field is absent in *SIB12*. Otherwise, it is optional present, Need R |

*NEXT CHANGE*

## 6.4 RRC multiplicity and type constraint values

### – Multiplicity and type constraint definitions

-- ASN1START

-- TAG-MULTIPLICITY-AND-TYPE-CONSTRAINT-DEFINITIONS-START

\*\*\*\*\*\*\*\*\*\*\*\*\*skip the unchanged parts\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

maxCBR-ConfigDedSL-PRS-1-r18 INTEGER ::= 7 -- Maximum number of CBR ranges for dedicated SL PRS resource pool minus 1

maxCBR-LevelDedSL-PRS-1-r18 INTEGER ::= 15 -- Maximum number of CBR levels for dedicated SL PRS resource pool minus 1

-- TAG-MULTIPLICITY-AND-TYPE-CONSTRAINT-DEFINITIONS-STOP

-- ASN1STOP

*END OF CHANGE*