### 6.3.3 UE capability information elements

First change

#### – *FeatureSetUplink*

The IE *FeatureSetUplink* is used to indicate the features that the UE supports on the carriers corresponding to one band entry in a band combination.

*FeatureSetUplink* information element

-- ASN1START

-- TAG-FEATURESETUPLINK-START

FeatureSetUplink ::= SEQUENCE {

 featureSetListPerUplinkCC SEQUENCE (SIZE (1.. maxNrofServingCells)) OF FeatureSetUplinkPerCC-Id,

 scalingFactor ENUMERATED {f0p4, f0p75, f0p8} OPTIONAL,

 dummy3 ENUMERATED {supported} OPTIONAL,

 intraBandFreqSeparationUL FreqSeparationClass OPTIONAL,

 searchSpaceSharingCA-UL ENUMERATED {supported} OPTIONAL,

 dummy1 DummyI OPTIONAL,

 supportedSRS-Resources SRS-Resources OPTIONAL,

 twoPUCCH-Group ENUMERATED {supported} OPTIONAL,

 dynamicSwitchSUL ENUMERATED {supported} OPTIONAL,

 simultaneousTxSUL-NonSUL ENUMERATED {supported} OPTIONAL,

 pusch-ProcessingType1-DifferentTB-PerSlot SEQUENCE {

 scs-15kHz ENUMERATED {upto2, upto4, upto7} OPTIONAL,

 scs-30kHz ENUMERATED {upto2, upto4, upto7} OPTIONAL,

 scs-60kHz ENUMERATED {upto2, upto4, upto7} OPTIONAL,

 scs-120kHz ENUMERATED {upto2, upto4, upto7} OPTIONAL

 } OPTIONAL,

 dummy2 DummyF OPTIONAL

}

FeatureSetUplink-v1540 ::= SEQUENCE {

 zeroSlotOffsetAperiodicSRS ENUMERATED {supported} OPTIONAL,

 pa-PhaseDiscontinuityImpacts ENUMERATED {supported} OPTIONAL,

 pusch-SeparationWithGap ENUMERATED {supported} OPTIONAL,

 pusch-ProcessingType2 SEQUENCE {

 scs-15kHz ProcessingParameters OPTIONAL,

 scs-30kHz ProcessingParameters OPTIONAL,

 scs-60kHz ProcessingParameters OPTIONAL

 } OPTIONAL,

 ul-MCS-TableAlt-DynamicIndication ENUMERATED {supported} OPTIONAL

}

FeatureSetUplink-v1610 ::= SEQUENCE {

 -- R1 11-5: PUsCH repetition Type B

 pusch-RepetitionTypeB-r16 SEQUENCE {

 maxNumberPUSCH-Tx-r16 ENUMERATED {n2, n3, n4, n7, n8, n12},

 hoppingScheme-r16 ENUMERATED {interSlotHopping, interRepetitionHopping, both}

 } OPTIONAL,

 -- R1 11-7: UL cancelation scheme for self-carrier

 ul-CancellationSelfCarrier-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-7a: UL cancelation scheme for cross-carrier

 ul-CancellationCrossCarrier-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 16-5c: The maximum number of SRS resources in one SRS resource set with usage set to 'codebook' for Mode 2

 ul-FullPwrMode2-MaxSRS-ResInSet-r16 ENUMERATED {n1, n2, n4} OPTIONAL,

 -- R1 22-4a/4b/4c/4d: CBG based transmission for UL with unicast PUSCH(s) per slot per CC with UE processing time Capability 1

 cbgPUSCH-ProcessingType1-DifferentTB-PerSlot-r16 SEQUENCE {

 scs-15kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-30kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-60kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-120kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL

 } OPTIONAL,

 -- R1 22-3a/3b/3c/3d: CBG based transmission for UL with unicast PUSCH(s) per slot per CC with UE processing time Capability 2

 cbgPUSCH-ProcessingType2-DifferentTB-PerSlot-r16 SEQUENCE {

 scs-15kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-30kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-60kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL,

 scs-120kHz-r16 ENUMERATED {one-pusch, upto2, upto4, upto7} OPTIONAL

 } OPTIONAL,

 supportedSRS-PosResources-r16 SRS-AllPosResources-r16 OPTIONAL,

 intraFreqDAPS-UL-r16 SEQUENCE {

 dummy ENUMERATED {supported} OPTIONAL,

 intraFreqTwoTAGs-DAPS-r16 ENUMERATED {supported} OPTIONAL,

 dummy1 ENUMERATED {supported} OPTIONAL,

 dummy2 ENUMERATED {supported} OPTIONAL,

 dummy3 ENUMERATED {short, long} OPTIONAL

 } OPTIONAL,

 intraBandFreqSeparationUL-v1620 FreqSeparationClassUL-v1620 OPTIONAL,

 -- R1 11-3: More than one PUCCH for HARQ-ACK transmission within a slot

 multiPUCCH-r16 SEQUENCE {

 sub-SlotConfig-NCP-r16 ENUMERATED {set1, set2} OPTIONAL,

 sub-SlotConfig-ECP-r16 ENUMERATED {set1, set2} OPTIONAL

 } OPTIONAL,

 -- R1 11-3c: 2 PUCCH of format 0 or 2 for a single 7\*2-symbol subslot based HARQ-ACK codebook

 twoPUCCH-Type1-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-3d: 2 PUCCH of format 0 or 2 for a single 2\*7-symbol subslot based HARQ-ACK codebook

 twoPUCCH-Type2-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-3e: 1 PUCCH format 0 or 2 and 1 PUCCH format 1, 3 or 4 in the same subslot for a single 2\*7-symbol HARQ-ACK codebooks

 twoPUCCH-Type3-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-3f: 2 PUCCH transmissions in the same subslot for a single 2\*7-symbol HARQ-ACK codebooks which are not covered by 11-3d and

 -- 11-3e

 twoPUCCH-Type4-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-3g: SR/HARQ-ACK multiplexing once per subslot using a PUCCH (or HARQ-ACK piggybacked on a PUSCH) when SR/HARQ-ACK

 -- are supposed to be sent with different starting symbols in a subslot

 mux-SR-HARQ-ACK-r16 ENUMERATED {supported} OPTIONAL,

 dummy1 ENUMERATED {supported} OPTIONAL,

 dummy2 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4c: 2 PUCCH of format 0 or 2 for two HARQ-ACK codebooks with one 7\*2-symbol sub-slot based HARQ-ACK codebook

 twoPUCCH-Type5-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4d: 2 PUCCH of format 0 or 2 in consecutive symbols for two HARQ-ACK codebooks with one 2\*7-symbol sub-slot based HARQ-ACK

 -- codebook

 twoPUCCH-Type6-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4e: 2 PUCCH of format 0 or 2 for two subslot based HARQ-ACK codebooks

 twoPUCCH-Type7-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4f: 1 PUCCH format 0 or 2 and 1 PUCCH format 1, 3 or 4 in the same subslot for HARQ-ACK codebooks with one 2\*7-symbol

 -- subslot based HARQ-ACK codebook

 twoPUCCH-Type8-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4g: 1 PUCCH format 0 or 2 and 1 PUCCH format 1, 3 or 4 in the same subslot for two subslot based HARQ-ACK codebooks

 twoPUCCH-Type9-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4h: 2 PUCCH transmissions in the same subslot for two HARQ-ACK codebooks with one 2\*7-symbol subslot which are not covered

 -- by 11-4c and 11-4e

 twoPUCCH-Type10-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 11-4i: 2 PUCCH transmissions in the same subslot for two subslot based HARQ-ACK codebooks which are not covered by 11-4d and

 -- 11-4f

 twoPUCCH-Type11-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 12-1: UL intra-UE multiplexing/prioritization of overlapping channel/signals with two priority levels in physical layer

 ul-IntraUE-Mux-r16 SEQUENCE {

 pusch-PreparationLowPriority-r16 ENUMERATED {sym0, sym1, sym2},

 pusch-PreparationHighPriority-r16 ENUMERATED {sym0, sym1, sym2}

 } OPTIONAL,

 -- R1 16-5a: Supported UL full power transmission mode of fullpower

 ul-FullPwrMode-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 18-5d: Processing up to X unicast DCI scheduling for UL per scheduled CC

 crossCarrierSchedulingProcessing-DiffSCS-r16 SEQUENCE {

 scs-15kHz-120kHz-r16 ENUMERATED {n1,n2,n4} OPTIONAL,

 scs-15kHz-60kHz-r16 ENUMERATED {n1,n2,n4} OPTIONAL,

 scs-30kHz-120kHz-r16 ENUMERATED {n1,n2,n4} OPTIONAL,

 scs-15kHz-30kHz-r16 ENUMERATED {n2} OPTIONAL,

 scs-30kHz-60kHz-r16 ENUMERATED {n2} OPTIONAL,

 scs-60kHz-120kHz-r16 ENUMERATED {n2} OPTIONAL

 } OPTIONAL,

 -- R1 16-5b: Supported UL full power transmission mode of fullpowerMode1

 ul-FullPwrMode1-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 16-5c-2: Ports configuration for Mode 2

 ul-FullPwrMode2-SRSConfig-diffNumSRSPorts-r16 ENUMERATED {p1-2, p1-4, p1-2-4} OPTIONAL,

 -- R1 16-5c-3: TPMI group for Mode 2

 ul-FullPwrMode2-TPMIGroup-r16 SEQUENCE {

 twoPorts-r16 BIT STRING(SIZE(2)) OPTIONAL,

 fourPortsNonCoherent-r16 ENUMERATED{g0, g1, g2, g3} OPTIONAL,

 fourPortsPartialCoherent-r16 ENUMERATED{g0, g1, g2, g3, g4, g5, g6} OPTIONAL

 } OPTIONAL

}

FeatureSetUplink-v1630 ::= SEQUENCE {

 -- R1 22-8: For SRS for CB PUSCH and antenna switching on FR1 with symbol level offset for aperiodic SRS transmission

 offsetSRS-CB-PUSCH-Ant-Switch-fr1-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 22-8a: PDCCH monitoring on any span of up to 3 consecutive OFDM symbols of a slot and constrained timeline for SRS for CB

 -- PUSCH and antenna switching on FR1

 offsetSRS-CB-PUSCH-PDCCH-MonitorSingleOcc-fr1-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 22-8b: For type 1 CSS with dedicated RRC configuration, type 3 CSS, and UE-SS, monitoring occasion can be any OFDM symbol(s)

 -- of a slot for Case 2 and constrained timeline for SRS for CB PUSCH and antenna switching on FR1

 offsetSRS-CB-PUSCH-PDCCH-MonitorAnyOccWithoutGap-fr1-r16 ENUMERATED {supported} OPTIONAL,

 -- R1 22-8c: For type 1 CSS with dedicated RRC configuration, type 3 CSS, and UE-SS, monitoring occasion can be any OFDM symbol(s)

 -- of a slot for Case 2 with a DCI gap and constrained timeline for SRS for CB PUSCH and antenna switching on FR1

 offsetSRS-CB-PUSCH-PDCCH-MonitorAnyOccWithGap-fr1-r16 ENUMERATED {supported} OPTIONAL,

 dummy ENUMERATED {supported} OPTIONAL,

 -- R1 22-9: Cancellation of PUCCH, PUSCH or PRACH with a DCI scheduling a PDSCH or CSI-RS or a DCI format 2\_0 for SFI

 partialCancellationPUCCH-PUSCH-PRACH-TX-r16 ENUMERATED {supported} OPTIONAL

}

FeatureSetUplink-v1640 ::= SEQUENCE {

 -- R1 11-4: Two HARQ-ACK codebooks with up to one sub-slot based HARQ-ACK codebook (i.e. slot-based + slot-based, or slot-based +

 -- sub-slot based) simultaneously constructed for supporting HARQ-ACK codebooks with different priorities at a UE

 twoHARQ-ACK-Codebook-type1-r16 SubSlot-Config-r16 OPTIONAL,

 -- R1 11-4a: Two sub-slot based HARQ-ACK codebooks simultaneously constructed for supporting HARQ-ACK codebooks with different

 -- priorities at a UE

 twoHARQ-ACK-Codebook-type2-r16 SubSlot-Config-r16 OPTIONAL,

 -- R1 22-8d: All PDCCH monitoring occasion can be any OFDM symbol(s) of a slot for Case 2 with a span gap and constrained timeline

 -- for SRS for CB PUSCH and antenna switching on FR1

 offsetSRS-CB-PUSCH-PDCCH-MonitorAnyOccWithSpanGap-fr1-r16 SEQUENCE {

 scs-15kHz-r16 ENUMERATED {set1, set2, set3} OPTIONAL,

 scs-30kHz-r16 ENUMERATED {set1, set2, set3} OPTIONAL,

 scs-60kHz-r16 ENUMERATED {set1, set2, set3} OPTIONAL

 } OPTIONAL

}

FeatureSetUplink-v16d0 ::= SEQUENCE {

 pusch-RepetitionTypeB-v16d0 SEQUENCE {

 maxNumberPUSCH-Tx-Cap1-r16 ENUMERATED {n2, n3, n4, n7, n8, n12},

 maxNumberPUSCH-Tx-Cap2-r16 ENUMERATED {n2, n3, n4, n7, n8, n12}

 } OPTIONAL

}

FeatureSetUplink-v1710 ::= SEQUENCE {

 -- R1 23-3-1 Multi-TRP PUSCH repetition (type A) -codebook based

 mTRP-PUSCH-TypeA-CB-r17 ENUMERATED {n1,n2,n4} OPTIONAL,

 -- R1 23-3-1-2 Multi-TRP PUSCH repetition (type A) - non-codebook based

 mTRP-PUSCH-RepetitionTypeA-r17 ENUMERATED {n1,n2,n3,n4} OPTIONAL,

 -- R1 23-3-3 Multi-TRP PUCCH repetition-intra-slot

 mTRP-PUCCH-IntraSlot-r17 ENUMERATED {pf0-2, pf1-3-4, pf0-4} OPTIONAL,

 -- R1 23-8-4 Maximum 2 SP and 1 periodic SRS sets for antenna switching

 srs-AntennaSwitching2SP-1Periodic-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 23-8-9 Extension of aperiodic SRS configuration for 1T4R, 1T2R and 2T4R

 srs-ExtensionAperiodicSRS-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 23-8-10 1 aperiodic SRS resource set for 1T4R

 srs-OneAP-SRS-r17 ENUMERATED {supported} OPTIONAL,

 -- R4 16-8 UE power class per band per band combination

 ue-PowerClassPerBandPerBC-r17 ENUMERATED {pc1dot5, pc2, pc3} OPTIONAL,

 -- R4 17-8 UL transmission in FR2 bands within an UL gap when the UL gap is activated

 tx-Support-UL-GapFR2-r17 ENUMERATED {supported} OPTIONAL

}

FeatureSetUplink-v1720 ::= SEQUENCE {

 -- R1 25-3: Repetitions for PUCCH format 0, 1, 2, 3 and 4 over multiple PUCCH subslots with configured K = 2, 4, 8

 pucch-Repetition-F0-1-2-3-4-RRC-Config-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 25-3a: Repetitions for PUCCH format 0, 1, 2, 3 and 4 over multiple PUCCH subslots using dynamic repetition indication

 pucch-Repetition-F0-1-2-3-4-DynamicIndication-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 25-3b: Inter-subslot frequency hopping for PUCCH repetitions

 interSubslotFreqHopping-PUCCH-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 25-8: Semi-static HARQ-ACK codebook for sub-slot PUCCH

 semiStaticHARQ-ACK-CodebookSub-SlotPUCCH-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 25-14: PHY prioritization of overlapping low-priority DG-PUSCH and high-priority CG-PUSCH

 phy-PrioritizationLowPriorityDG-HighPriorityCG-r17 INTEGER(1..16) OPTIONAL,

 -- R1 25-15: PHY prioritization of overlapping high-priority DG-PUSCH and low-priority CG-PUSCH

 phy-PrioritizationHighPriorityDG-LowPriorityCG-r17 SEQUENCE {

 pusch-PreparationLowPriority-r17 ENUMERATED{sym0, sym1, sym2},

 additionalCancellationTime-r17 SEQUENCE {

 scs-15kHz-r17 ENUMERATED{sym0, sym1, sym2} OPTIONAL,

 scs-30kHz-r17 ENUMERATED{sym0, sym1, sym2, sym3, sym4} OPTIONAL,

 scs-60kHz-r17 ENUMERATED{sym0, sym1, sym2, sym3, sym4, sym5, sym6, sym7, sym8} OPTIONAL,

 scs-120kHz-r17 ENUMERATED{sym0, sym1, sym2, sym3, sym4, sym5, sym6, sym7, sym8, sym9,

 sym10, sym11, sym12, sym13, sym14, sym15, sym16} OPTIONAL

 },

 maxNumberCarriers-r17 INTEGER(1..16)

 } OPTIONAL,

 -- R4 17-5 Support of UL DC location(s) report

 extendedDC-LocationReport-r17 ENUMERATED {supported} OPTIONAL

}

FeatureSetUplink-v1800 ::= SEQUENCE {

 -- R1 40-3-3-1a: Supported maximum delay value larger than D\_basic

 maxDelayValueBeyondD-Basic-r18 ENUMERATED {sl2,sl3,sl4,sl5,sl6,sl10} OPTIONAL,

 -- R1 40-3-3-2: Number of delay values

 tdcp-NumberDelayValue-r18 INTEGER (2..4) OPTIONAL,

 -- R1 40-3-3-4: Phase report

 phaseReportMoreThanOne-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-3-3-6: Maximum number of TRS resource sets in a report configuration

 maxNumberTRS-ResourceSet-r18 INTEGER (2..3) OPTIONAL,

 -- R1 40-3-3-7: Maximum number of TDCP report settings per-BWP

 maxNumberTDCP-PerBWP-r18 INTEGER (1..4) OPTIONAL,

 -- R1 40-4-6c: DMRS type for Rel.18 enhanced DMRS ports for PUSCH

 pusch-DMRS-TypeEnh-r18 SEQUENCE {

 dmrs-Type-r18 ENUMERATED {etype1, both},

 pusch-TypeA-DMRS-r18 SEQUENCE {

 -- R1 40-4-6: Basic feature of Rel.18 enhanced DMRS ports for PUSCH for scheduling type A for Rel.18 enhanced DMRS ports

 dmrs-TypeA-r18 ENUMERATED {supported},

 -- R1 40-4-6d: 2 symbols front-loaded DMRS (uplink) for Rel.18 enhanced DMRS ports for PUSCH

 pusch-2SymbolFL-DMRS-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6e: 2-symbol FL DMRS + one additional 2-symbols DMRS for Rel.18 enhanced DMRS ports for PUSCH

 pusch-2SymbolFL-DMRS-Addition2Symbol-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6f: 1 symbol FL DMRS and 3 additional DMRS symbols for Rel.18 enhanced DMRS ports for PUSCH

 pusch-1SymbolFL-DMRS-Addition3Symbol-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-10: DMRS port configuration for PUSCH with 8Tx

 pusch-DMRS8Tx-r18 ENUMERATED {rel15, both} OPTIONAL

 } OPTIONAL,

 -- R1 40-4-6a: Basic feature of Rel.18 enhanced DMRS ports for PUSCH for scheduling type B for Rel.18 enhanced DMRS ports

 pusch-TypeB-DMRS-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6g: 1 port UL PTRS for Rel.18 enhanced DMRS ports for PUSCH with rank 1-4

 pusch-rank-1-4-1Port-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6h: 1 port UL PTRS for Rel.18 enhanced DMRS ports for PUSCH with rank 5-8

 pusch-rank-5-8-1Port-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6i: 2 port UL PTRS for Rel.18 enhanced DMRS ports for PUSCH with rank 1-4

 pusch-rank-1-4-2Port-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-6j: 2 port UL PTRS for Rel.18 enhanced DMRS ports for PUSCH with rank 5-8

 pusch-rank-5-8-2Port-r18 ENUMERATED {supported} OPTIONAL

 } OPTIONAL,

 -- R1 40-4-13: Support Rel-18 UL DMRS with single-DCI based M-TRP

 ul-DMRS-SingleDCI-M-TRP-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-4-14: Support Rel-18 UL DMRS with M-DCI based M-TRP

 ul-DMRS-M-DCI-M-TRP-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-5-5: Maximum 2 SP and 1 periodic SRS sets for 8T8R antenna switching

 srs-AntennaSwitching8T8R2SP-1Periodic-r18 ENUMERATED {supported} OPTIONAL,

 -- R1 40-6-4: Single-DCI based STx2P SFN scheme for PUCCH

 pucch-SingleDCI-STx2P-SFN-r18 ENUMERATED {pf0-2, pf1-3-4, pf0-4} OPTIONAL,

 -- R1 41-4-6: Positioning SRS bandwidth aggregation in RRC\_CONNECTED

 posSRS-BWA-RRC-Connected-r18 PosSRS-BWA-RRC-Connected-r18 OPTIONAL,

 -- R1 41-4-7: Positioning SRS bandwidth aggregation independent from UL communication CA in RRC\_CONNECTED

 posSRS-BWA-IndependentCA-RRC-Connected-r18 PosSRS-BWA-IndependentCA-RRC-Connected-r18 OPTIONAL,

 -- R1 41-4-9: Indicate which other bands in the band combination are affected due to the need of a guard period

 posSRS-BWA-AffectedBandList-r18 SEQUENCE (SIZE (1..maxBands)) OF FreqBandIndicatorNR OPTIONAL,

 -- R4 27-1 TxDiversity for 4Tx

 txDiversity4Tx-r18 ENUMERATED {supported} OPTIONAL,

 -- R4 41-2: Power boosting for DFT-s-OFDM pi/2 BPSK and QPSK transmissions without modified spectrum flatness requirement

 powerBoosting-pi2BPSK-QPSK-r18 ENUMERATED {supported} OPTIONAL,

 -- R4 41-3: Power boosting for DFT-s-OFDM pi/2 BPSK and QPSK transmissions with modified spectrum flatness requirement shaping

 powerBoosting-pi2BPSK-QPSK-Modified-r18 ENUMERATED {supported} OPTIONAL,

 -- R4 44-1 TxDiversity for 2Tx

 txDiversity2Tx-r18 ENUMERATED {supported} OPTIONAL

}

SubSlot-Config-r16 ::= SEQUENCE {

 sub-SlotConfig-NCP-r16 ENUMERATED {n4,n5,n6,n7} OPTIONAL,

 sub-SlotConfig-ECP-r16 ENUMERATED {n4,n5,n6} OPTIONAL

}

SRS-AllPosResources-r16 ::= SEQUENCE {

 srs-PosResources-r16 SRS-PosResources-r16,

 srs-PosResourceAP-r16 SRS-PosResourceAP-r16 OPTIONAL,

 srs-PosResourceSP-r16 SRS-PosResourceSP-r16 OPTIONAL

}

SRS-PosResources-r16 ::= SEQUENCE {

 maxNumberSRS-PosResourceSetPerBWP-r16 ENUMERATED {n1, n2, n4, n8, n12, n16},

 maxNumberSRS-PosResourcesPerBWP-r16 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maxNumberSRS-ResourcesPerBWP-PerSlot-r16 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maxNumberPeriodicSRS-PosResourcesPerBWP-r16 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maxNumberPeriodicSRS-PosResourcesPerBWP-PerSlot-r16 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14}

}

SRS-PosResourceAP-r16 ::= SEQUENCE {

 maxNumberAP-SRS-PosResourcesPerBWP-r16 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maxNumberAP-SRS-PosResourcesPerBWP-PerSlot-r16 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14}

}

SRS-PosResourceSP-r16 ::= SEQUENCE {

 maxNumberSP-SRS-PosResourcesPerBWP-r16 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maxNumberSP-SRS-PosResourcesPerBWP-PerSlot-r16 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14}

}

SRS-Resources ::= SEQUENCE {

 maxNumberAperiodicSRS-PerBWP ENUMERATED {n1, n2, n4, n8, n16},

 maxNumberAperiodicSRS-PerBWP-PerSlot INTEGER (1..6),

 maxNumberPeriodicSRS-PerBWP ENUMERATED {n1, n2, n4, n8, n16},

 maxNumberPeriodicSRS-PerBWP-PerSlot INTEGER (1..6),

 maxNumberSemiPersistentSRS-PerBWP ENUMERATED {n1, n2, n4, n8, n16},

 maxNumberSemiPersistentSRS-PerBWP-PerSlot INTEGER (1..6),

 maxNumberSRS-Ports-PerResource ENUMERATED {n1, n2, n4}

}

DummyF ::= SEQUENCE {

 maxNumberPeriodicCSI-ReportPerBWP INTEGER (1..4),

 maxNumberAperiodicCSI-ReportPerBWP INTEGER (1..4),

 maxNumberSemiPersistentCSI-ReportPerBWP INTEGER (0..4),

 simultaneousCSI-ReportsAllCC INTEGER (5..32)

}

PosSRS-BWA-RRC-Connected-r18 ::= SEQUENCE {

 numOfCarriersIntraBandContiguous-r18 ENUMERATED {two, three, twoandthree},

 maximumAggregatedBW-TwoCarriersFR1-r18 ENUMERATED { mhz20, mhz40, mhz50, mhz80, mhz100, mhz160, mhz200}

 OPTIONAL,

 maximumAggregatedBW-TwoCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz400, mhz600, mhz800} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR1-r18 ENUMERATED {mhz80, mhz100, mhz160, mhz200, mhz240, mhz300} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz300, mhz400, mhz600,

 mhz800, mhz1000, mhz1200} OPTIONAL,

 maximumAggregatedResourceSet-r18 ENUMERATED {n1, n2, n4, n8, n12, n16},

 maximumAggregatedResourcePeriodic-r18 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourceAperiodic-r18 ENUMERATED {n0, n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourceSemi-r18 ENUMERATED {n0, n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourcePeriodicPerSlot-r18 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maximumAggregatedResourceAperiodicPerSlot-r18 ENUMERATED {n0, n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maximumAggregatedResourceSemiPerSlot-r18 ENUMERATED {n0, n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 ...

}

PosSRS-BWA-IndependentCA-RRC-Connected-r18 ::= SEQUENCE {

 numOfCarriersIntraBandContiguous-r18 ENUMERATED {two, three, twoandthree},

 maximumAggregatedBW-TwoCarriersFR1-r18 ENUMERATED {mhz20, mhz40, mhz50, mhz80, mhz100, mhz160, mhz190, mhz200}

 OPTIONAL,

 maximumAggregatedBW-TwoCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz400, mhz600, mhz800} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR1-r18 ENUMERATED {mhz80, mhz100, mhz160, mhz200, mhz240, mhz300} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz300, mhz400, mhz600,

 mhz800, mhz1000, mhz1200} OPTIONAL,

 maximumAggregatedResourceSet-r18 ENUMERATED {n1, n2, n4, n8, n12, n16},

 maximumAggregatedResourcePeriodic-r18 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourceAperiodic-r18 ENUMERATED {n0, n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourceSemi-r18 ENUMERATED {n0, n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourcePeriodicPerSlot-r18 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maximumAggregatedResourceAperiodicPerSlot-r18 ENUMERATED {n0, n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maximumAggregatedResourceSemiPerSlot-r18 ENUMERATED {n0, n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 guardPeriod-r18 ENUMERATED {n0, n30, n100, n140, n200},

 powerClassForTwoaggregatedCarriers-r18 ENUMERATED {pc2, pc3} OPTIONAL,

 powerClassForThreeaggregatedCarriers-r18 ENUMERATED {pc2, pc3} OPTIONAL,

 ...

}

-- TAG-FEATURESETUPLINK-STOP

-- ASN1STOP

|  |
| --- |
| *FeatureSetUplink* field descriptions |
| ***featureSetListPerUplinkCC***Indicates which features the UE supports on the individual UL carriers of the feature set (and hence of a band entry that refers to the feature set). The UE shall hence include at least as many *FeatureSetUplinkPerCC-Id* in this list as the number of carriers it supports according to the *ca-BandwidthClassUL*, except if indicating additional functionality by reducing the number of *FeatureSetUplinkPerCC-Id* in the feature set (see NOTE 1 in *FeatureSetCombination* IE description). The order of the elements in this list is not relevant, i.e., the network may configure any of the carriers in accordance with any of the *FeatureSetUplinkPerCC-Id* in this list. |

Next change

#### – *PosSRS-BWA-RRC-Inactive*

The IE *PosSRS-BWA-RRC-Inactive* is used to convey the capabilities supported by the UE for support of positioning SRS bandwidth aggregation in RRC\_INACTIVE

*PosSRS-BWA-RRC-Inactive information element*

-- ASN1START

-- TAG-POSSRS-BWA-RRC-INACTIVE-START

PosSRS-BWA-RRC-Inactive-r18 ::= SEQUENCE {

 numOfCarriersIntraBandContiguous-r18 ENUMERATED {two, three, twoandthree},

 maximumAggregatedBW-TwoCarriersFR1-r18 ENUMERATED {mhz20, mhz40, mhz50,mhz80, mhz100, mhz160, mhz180, mhz190, mhz200} OPTIONAL,

 maximumAggregatedBW-TwoCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz400, mhz600, mhz800} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR1-r18 ENUMERATED {mhz80, mhz100, mhz160, mhz200, mhz240, mhz300} OPTIONAL,

 maximumAggregatedBW-ThreeCarriersFR2-r18 ENUMERATED {mhz50, mhz100, mhz200, mhz300, mhz400, mhz600, mhz800, mhz1000, mhz1200} OPTIONAL,

 maximumAggregatedResourceSet-r18 ENUMERATED {n1, n2, n4, n8, n12, n16},

 maximumAggregatedResourcePeriodic-r18 ENUMERATED {n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourceSemi-r18 ENUMERATED {n0, n1, n2, n4, n8, n16, n32, n64},

 maximumAggregatedResourcePeriodicPerSlot-r18 ENUMERATED {n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 maximumAggregatedResourceSemiPerSlot-r18 ENUMERATED {n0, n1, n2, n3, n4, n5, n6, n8, n10, n12, n14},

 guardSPeriod-r18 ENUMERATED {n0, n30, n100, n140, n200},

 powerClassForTwoaggregatedCarriers-r18 ENUMERATED {pc2, pc3} OPTIONAL,

 powerClassForThreeaggregatedCarriers-r18 ENUMERATED {pc2, pc3} OPTIONAL,

 ...

}

-- TAG-POSSRS-BWA-RRC-INACTIVE-STOP

-- ASN1STOP

End of the change