**3GPP TSG-RAN2 Meeting # 110bis electronic  *R2-200xxxx***

**1 June - 12 June 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **38.331** | **CR** | **Draft-CR** | **rev** | **-** | **Current version:** | **16.0.0** |  |
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| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <http://www.3gpp.org/Change-Requests>.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | CR on PC5 capability on PC5-RRC and Uu-RRC (focusing on L2 capability) |
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| ***Source to WG:*** | OPPO |
| ***Source to TSG:*** | RAN2 |
|  |  |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2020-6-2 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | In RAN2#109-E, the following agreements were reachedAgreements on UE capabilities: 1: In Uu-RRC, capture SL per-band capability as a sidelink band list within RF-parameters in UE-NR-Capability (pending final RAN1 conclusion on L1 feature list).2: In Uu-RRC, introduce supported LTE / NR PC5 band combination(s) for each NR Uu band combination by referring to a list of PC6 band combinations.3: In Uu-RRC, when rat-Type=nr, UE reports NR-PC5 capability for NR standalone / NR-DC controlled NR-PC5 via UE-NR-Capability.4: In Uu-RRC, introduce supported NR PC5 band combination(s) for each LTE Uu band combination.5: For PC5-RRC, include frequencyBandListFilter in UECapabilityEnquirySidelink to indicate the requested frequency band of sidelink capability report on PC5-RRC. RAN2 to confirm that rat-Type in not included in UECapabilityEnquirySidelink.In RAN2#109bis-E, the following agreements were reachedAgreements on capabilities: 1: For LTE-Uu controlling NR-PC5, define the NR PC5 band combination in UE-EUTRA-Capability.2: For NR-Uu controlling LTE-PC5, define the NR PC5 band combination in UE-NR-Capability.3: Working assumption: The band combination of mixed LTE-PC5 and NR-PC5 will be reported, in addition to pure LTE-PC5 band combination and NR-PC5 band combination.4: RRC\_CONNECTED UE reports the received SL capability via PC5-RRC to network.5: RAN2 not pursue UE reporting the SL capability to network for network to transfer the SL capability to the counterpart UE.6: For layer-2 buffer size, leave the decision of maximum data rate discussion to RAN1, and only focus on RTT in RAN2.7: Disallow autonomous update of UE capability on PC5.8: For SL capability report on Uu-RRC, introduce MAC parameters: a) LCP restriction, b) Logical channel SR-delay timer, c) Multiple CGs.9: For SL capability report on PC5-RRC, introduce PDCP parameter: a) Out of order delivery.In RAN2#110-E, the following agreements are reached:Agreements on UE capabilities: 1a: For SL capability report on Uu-RRC, introduce RLC parameters: a) 12-bit SN length for UM, b) 18-bit SN for AM, and MAC parameter: multiple SR configuration. 1b: RRC specification will update SRB0, i.e. to 6bits.2: RAN2 will wait for RAN1 decision on the capability of range-based HARQ feedback.3: For SL capability report on Uu-RRC agreed in RAN2, they are per-UE capability.4: For SL capability report on Uu-RRC agreed in RAN2, allow FDD/TDD differentiation only for a) Logical channel SR-delay timer, and c) multiple SR configuration.5: For SL capability report on Uu-RRC agreed in RAN2, no need for FR1/FR2 differentiation.6: For SL capability report on Uu-RRC agreed in RAN2, conditionally (i.e., if UE supports NR sidelink) mandatory feature without capability signalling includes PDCP parameters: 1) 12-bit SN, 2) 18-bit SN, and RLC parameter: 1) 6-bit SN for UM, 2) 12-bit SN for AM. 18-bit PDCP SN can be revisited after PDCP discussion (if required).7: For SL capability report on Uu-RRC agreed in RAN2, optional feature with capability signaling includes RLC parameter: 1) 12-bit SN for UM, 2) 18-bit SN for AM; and MAC parameter: 1) LCP restriction, 2) Logical channel SR-delay timer, 3) Multiple CGs, 4) multiple SR configuration.8: For SL capability report on PC5-RRC, introduce RLC parameters: a) 12-bit SN length for UM, b) 18-bit SN for AM.9: For SL capability report on PC5-RRC agreed in RAN2, they are per-UE capability.10: For SL capability report on PC5-RRC agreed in RAN2, no need for either FDD/TDD or FR1/FR2 differentiation.11: For SL capability report on PC5-RRC agreed in RAN2, conditionally (i.e., if UE supports NR sidelink) mandatory feature without capability signalling includes PDCP parameters: 1) 12-bit SN, 2) 18-bit SN, and RLC parameter: 1) 6-bit SN for UM, 2) 12-bit SN for AM. 18-bit PDCP SN can be revisited after PDCP discussion (if required).12: For SL capability report on PC5-RRC agreed in RAN2, optional feature with capability signaling includes PDCP parameter: out-of-order delivery, RLC parameter: 1) 12-bit SN for UM, 2) 18-bit SN for AM.13: Maximum number of destinations is not considered in the definition of layer-2 buffer size.14: RRC\_CONNECTED UE reports the received SL capability (carrying RX UE capability received via UECapabilityInformationSidelink) via PC5-RRC to network using a container within SidelinkUEInformationNR message.15: RAN2 not pursue the timer to handle the failure case of UE capability transfer via sidelink.16: RAN2 not purse signaling overhead optimization for capability transfer procedure for TX-UE forwarding peer-UE SL capability to network via Uu-RRC.17: RAN2 not pursue signalling overhead optimization for capability transfer procedure via PC5-RRC. |
|  |  |
| ***Summary of change:*** | 1. In 5.8.3, add the PC5 capability information forwarding via Uu-RRC for peer-UE, and capture the corresponding ASN.1 change in 6.3.3;
2. In 5.8.9.2, add the capability transfer procedure via PC5-RRC, and capture the corresponding ASN.1 change in 6.3.3;
3. Capture the L2 capability for NR Sidelink of Uu-RRC in 6.3.3;
4. Capture the L2 capability for NR Sidelink of PC5-RRC in 6.3.3;
5. Capture all capability for LTE Sidelink of Uu-RRC in 6.3.3 and 6.4
6. [Capture the L1/RAN4 capability for NR Sidelink of Uu-RRC in 6.3.3;
7. Capture the L1/RAN4 capability for NR Sidelink of PC5-RRC in 6.3.3;]
 |
|  |  |
| ***Consequences if not approved:*** | UE capability transfer via Uu-RRC and PC5-RRC is missing for Rel-16 NR V2X WI.  |
|  |  |
| ***Clauses affected:*** | 5.8.3, 5.8.9.2, 6.3.3, 6.4 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

*Start Change*

### 5.8.3 Sidelink UE information for NR sidelink communication

#### 5.8.3.1 General



Figure 5.8.3.1-1: Sidelink UE information for NR sidelink communication

The purpose of this procedure is to inform the network that the UE is interested or no longer interested to receive NR sidelink communication, as well as to request assignment or release of transmission resource for NR sidelink communication and to report parameters related to NR sidelink communication.

#### 5.8.3.2 Initiation

A UE capable of NR sidelink communication that is in RRC\_CONNECTED may initiate the procedure to indicate it is (interested in) receiving NR sidelink communication in several cases including upon successful connection establishment or resuming, upon change of interest, or upon change to a PCell providing *SIB12* including *sl-ConfigCommonNR*. A UE capable of NR sidelink communication may initiate the procedure to request assignment of dedicated resources for NR sidelink communication transmission.

Upon initiating this procedure, the UE shall:

1> if *SIB12* including *sl-ConfigCommonNR* is provided by the PCell:

2> ensure having a valid version of *SIB12* for the PCell;

2> if configured by upper layers to receive NR sidelink communication on the frequency included in *sl-FreqInfoList* in *SIB12* of the PCell:

3> if the UE did not transmit a *SidelinkUEInformationNR* message since last entering RRC\_CONNECTED state; or

3> if since the last time the UE transmitted a *SidelinkUEInformationNR* message the UE connected to a PCell not providing *SIB12* including *sl-ConfigCommonNR*; or

3> if the last transmission of the *SidelinkUEInformationNR* message did not include *sl-RxInterestedFreqList*; or if the frequency configured by upper layers to receive NR sidelink communication on has changed since the last transmission of the *SidelinkUEInformationNR* message:

4> initiate transmission of the *SidelinkUEInformationNR* message to indicate the NR sidelink communication reception frequency of interest in accordance with 5.8.3.3;

2> else:

3> if the last transmission of the *SidelinkUEInformationNR* message included *sl-RxInterestedFreqList*:

4> initiate transmission of the *SidelinkUEInformationNR* message to indicate it is no longer interested in NR sidelink communication reception in accordance with 5.8.3.3;

2> if configured by upper layers to transmit NR sidelink communication on the frequency included in *sl-FreqInfoList* in *SIB12* of the PCell:

3> if the UE did not transmit a *SidelinkUEInformationNR* message since last entering RRC\_CONNECTED state; or

3> if since the last time the UE transmitted a *SidelinkUEInformationNR* message the UE connected to a PCell not providing *SIB12* including *sl-ConfigCommonNR*; or

3> if the last transmission of the *SidelinkUEInformationNR* message did not include *sl-TxResourceReqList*; or if the information carried by the *sl-TxResourceReqList* has changed since the last transmission of the *SidelinkUEInformationNR* message:

4> initiate transmission of the *SidelinkUEInformationNR* message to indicate the NR sidelink communication transmission resources required by the UE in accordance with 5.8.3.3;

2> else:

3> if the last transmission of the *SidelinkUEInformationNR* message included *sl-TxResourceReqList*:

4> initiate transmission of the *SidelinkUEInformationNR* message to indicate it no longer requires NR sidelink communication transmission resources in accordance with 5.8.3.3.

#### 5.8.3.3 Actions related to transmission of *SidelinkUEInformationNR* message

The UE shall set the contents of the *SidelinkUEInformationNR* message as follows:

1> if the UE initiates the procedure to indicate it is (no more) interested to receive NR sidelink communication or to request (configuration/ release) of NR sidelink communication transmission resources (i.e. UE includes all concerned information, irrespective of what triggered the procedure):

2> if *SIB12* including *sl-ConfigCommonNR* is provided by the PCell:

3> if configured by upper layers to receive NR sidelink communication:

4> include *sl-RxInterestedFreqList* and set it to the frequency for NR sidelink communication reception;

3> if configured by upper layers to transmit NR sidelink communication:

4> include *sl-TxResourceReqList* and set its fields (if needed) as follows for each destination for which it requests network to assign NR sidelink communication resource:

5> set *sl-DestinationIdentiy* to the destination identity configured by upper layer for NR sidelink communication transmission;

5> set *sl-CastType* to the cast type of the associated destination identity configured by the upper layer for the NR sidelink communication transmission;

5> set *sl-RLC-ModeIndication* to include the RLC mode(s) and optionally QoS profile(s) of the sidelink QoS flow(s) of the associated RLC mode(s), if the associated bi-directional sidelink DRB has been established due to the configurationby *RRCReconfigurationSidelink*;

5> set *sl-Failure* as *rlf* for the associated destination for the NR sidelink communication transmission, if the sidelink RLF is detected;

5> set *sl-Failure* as *configFailure* for the associated destination for the NR sidelink communication transmission, if *RRCReconfigurationFailureSidelink* is received as sidelink RRC reconfiguration failure;

5> set *sl-QoS-InfoList* to include QoS profile(s) of the sidelink QoS flow(s) of the associated destination configured by the upper layer for the NR sidelink communication transmission;

5> set *sl-InterestedFreqList* to indicate the frequency for NR sidelink communication transmission;

5> set *sl-TypeTxSyncList* to the current synchronization reference type used on the associated *sl-InterestedFreqList* for NR sidelink communication transmission.

5> set *sl-CapabilityInformationSidelink* to include *UECapabilityInformationSidelink* message, if any, received from peer UE.

1> The UE shall submit the *SidelinkUEInformationNR* message to lower layers for transmission.

*Next Change*

#### 5.8.9.2 Sidelink UE capability transfer

#### 5.8.9.2.1 General

This clause describes how the UE compiles and transfers its sidelink UE capability information for unicast to the initiating UE.



Figure 5.8.9.2.1-1: Sidelink UE capability transfer

#### 5.8.9.2.2 Initiation

The UE may initiate the sidelink UE capability transfer procedure upon indication from upper layer when it needs (additional) UE radio access capability information.

#### 5.8.9.2.3 Actions related to transmission of the *UECapabilityEnquirySidelink* by the UE

The initating UE shall set the contents of *UECapabilityEnquirySidelink* message as follows:

1> include in UE radio access capabilities for sidelink within *ueCapabilityInformationSidelink*;

NOTE: It is up to initiating UE to decide whether *ueCapabilityInformationSidelink* should be included.

1> set *frequencyBandListFilterSidelink* to include frequency bands for which the peer UE is requested to provide supported bands and band combinations;

1> submit the *UECapabilityEnquirySidelink* message to lower layers for transmission.

#### 5.8.9.2.4 Actions related to reception of the *UECapabilityEnquirySidelink* by the UE

The peer UE shall set the contents of *UECapabilityInformationSidelink* message as follows:

1> include in UE radio access capabilities for sidelink within *ueCapabilityInformationSidelink*;

1> compile a list of "candidate band combinations" only consisting of bands included in *frequencyBandListFilter*, and prioritized in the order of *frequencyBandListFilterSidelink* (i.e. first include band combinations containing the first-listed band, then include remaining band combinations containing the second-listed band, and so on). Include into *supportedBandCombinationList* as many band combinations as possible from the list of "candidate band combinations", starting from the first entry;

1> submit the *UECapabilityInformationSidelink* message to lower layers for transmission.

*Next Change*

– *SidelinkUEInformationNR*

The *SidelinkUEinformationNR* message is used for the indication of NR sidelink UE information to the network.

Signalling radio bearer: SRB1

RLC-SAP: AM

Logical channel: DCCH

Direction: UE to Network

***SidelinkUEInformationNR* message**

-- ASN1START

-- TAG-SIDELINKUEINFORMATIONNR-START

SidelinkUEInformationNR-r16::= SEQUENCE {

 criticalExtensions CHOICE {

 sidelinkUEInformationNR-r16 SidelinkUEInformationNR-r16-IEs,

 criticalExtensionsFuture SEQUENCE {}

 }

}

SidelinkUEInformationNR-r16-IEs ::= SEQUENCE {

 sl-RxInterestedFreqList-r16 SL-InterestedFreqList-r16 OPTIONAL,

 sl-TxResourceReqList-r16 SL-TxResourceReqList-r16 OPTIONAL,

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

SL-InterestedFreqList-r16 ::= SEQUENCE (SIZE (1..maxNrofFreqSL-r16)) OF INTEGER (1..maxNrofFreqSL-r16)

SL-TxResourceReqList-r16 ::= SEQUENCE (SIZE (1..maxNrofSL-Dest-r16)) OF SL-TxResourceReq-r16

SL-TxResourceReq-r16 ::= SEQUENCE {

 sl-DestinationIdentity-r16 SL-DestinationIdentity-r16,

 sl-CastType-r16 ENUMERATED {broadcast, groupcast, unicast, spare1},

 sl-RLC-ModeIndicationList-r16 SEQUENCE (SIZE (1.. maxNrofSLRB-r16)) OF SL-RLC-ModeIndication-r16 OPTIONAL,

 sl-QoS-InfoList-r16 SEQUENCE (SIZE (1..maxNrofSL-QFIsPerDest-r16)) OF SL-QoS-Info-r16 OPTIONAL,

 sl-Failure-r16 ENUMERATED {rlf, configFailure, spare2, spare1} OPTIONAL,

 sl-TypeTxSyncList-r16 SEQUENCE (SIZE (1..maxNrofFreqSL-r16)) OF SL-TypeTxSync-r16 OPTIONAL,

 sl-TxInterestedFreqList-r16 SEQUENCE (SIZE (1..maxNrofFreqSL-r16)) OF INTEGER (1..maxNrofFreqSL-r16) OPTIONAL,

 sl-CapabilityInformationSidelink-r16 OCTET STRING OPTIONAL

}

SL-QoS-Info-r16 ::= SEQUENCE {

 sl-QoS-FlowIdentity-r16 SL-QoS-FlowIdentity-r16,

 sl-QoS-Profile-r16 SL-QoS-Profile-r16 OPTIONAL

}

SL-RLC-ModeIndication-r16 ::= SEQUENCE {

 sl-AM-Mode-r16 SEQUENCE {

 sl-AM-Mode-r16 ENUMERATED {true},

 sl-AM-QoS-InfoList-r16 SEQUENCE (SIZE (1..maxNrofSL-QFIsPerDest-r16)) OF SL-QoS-Info-r16

 } OPTIONAL,

 sl-UM-Mode-r16 SEQUENCE {

 sl-UM-Mode-r16 ENUMERATED {true},

 sl-UM-QoS-InfoList-r16 SEQUENCE (SIZE (1..maxNrofSL-QFIsPerDest-r16)) OF SL-QoS-Info-r16

 } OPTIONAL

}

-- TAG-SIDELINKUEINFORMATIONNR-STOP

-- ASN1STOP

| ***SidelinkUEinformationNR* field descriptions** |
| --- |
| ***sl-RxInterestedFreqList***Indicates the index of frequency on which the UE is interested to receive NR sidelink communication. The value 1 corresponds to the frequency of first entry in *sl-FreqInfoList* broadcast in *SIB12*, the value 2 corresponds to the frequency of second entry in *sl-FreqInfoList* broadcast in *SIB12* and so on. In this release, only value 1 can be included in the interested frequency list.  |
| ***sl-TxResourceReq***Paramters to request the transmisison resouces for NR sidelink communication to the network in the Sidelink UE Information report. |

| ***SL-TxResourceReq* field descriptions** |
| --- |
| ***sl-CapabilityInformationSidelink***Includes the *UECapabilityInformationSidelink* message (which can be also included in *ueCapabilityInformationSidelink-r16* in *UECapabilityEnquirySidelink* from peer UE) received from the peer UE. |
| ***sl-CastType***Indicates the cast type for the correponding destination for which to request the resource. |
| ***sl-DestinationIdentity***Indicates the destination for which the TX resource request and allocation from the network are concerned. |
| ***sl-Failure***Indicates the sidelink RLF (value *rlf*) for the associated destination, when the sidelink RLF is detected. Indicates the sidelink AS configuration failure (value *configFailure*) for the associated destination, in case PC5-RRC AS configuration failure by receiving *RRCReconfigurationFailureSidelink*. |
| ***sl-QoS-InfoList***Includes the QoS profile of the sidelink QoS flow as specified in TS 23.287 [55] |
| ***sl-QoS-FlowIdentity***This identity uniquely identifies one sidelink QoS flow between the UE and the network in the scope of UE, which is unique for different destination and cast type. |
| ***sl-RLC-ModeIndication***This field indicates the RLC mode and optionally the related QoS profiles for the sidelink radio bearer, which has not been configured by the network and is initiated by another UE in unicast. The RLC mode for one sidelink radio bearer is aligned between UE and NW by the sl-QoS-FlowIdentity. |
| ***sl-TxInterestedFreqList***Each entry of this field indicates the index of frequency on which the UE is interested to transmit NR sidelink communication. The value 1 corresponds to the frequency of first entry in *sl-FreqInfoList* broadcast in *SIB12*, the value 2 corresponds to the frequency of second entry in *sl-FreqInfoList broadcast* in *SIB12* and so on. In this release, only value 1 can be included in the interested frequency list. In this relase, only one entry can be included in the list. |
| ***sl-TypeTxSyncList***A list of synchronization reference used by the UE. The UE shall include the same number of entries, listed in the same order, as in *sl-TxInterestedFreqList*, i.e. one for each carrier freqeuncy included in *sl-TxInterestedFreqList*. |

*Next Change*

6.3.3 UE capability information elements

– *BandCombinationList*

The IE *BandCombinationList* contains a list of NR CA and/or MR-DC band combinations (also including DL only or UL only band).

***BandCombinationList* information element**

-- ASN1START

-- TAG-BANDCOMBINATIONLIST-START

BandCombinationList ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination

BandCombinationList-v1540 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1540

BandCombinationList-v1550 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1550

BandCombinationList-v1560 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1560

BandCombinationList-v1570 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1570

BandCombinationList-v1580 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1580

BandCombinationList-v1590 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v1590

BandCombinationList-v16xy ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombination-v16xy

BandCombination ::= SEQUENCE {

 bandList SEQUENCE (SIZE (1..maxSimultaneousBands)) OF BandParameters,

 featureSetCombination FeatureSetCombinationId,

 ca-ParametersEUTRA CA-ParametersEUTRA OPTIONAL,

 ca-ParametersNR CA-ParametersNR OPTIONAL,

 mrdc-Parameters MRDC-Parameters OPTIONAL,

 supportedBandwidthCombinationSet BIT STRING (SIZE (1..32)) OPTIONAL,

 powerClass-v1530 ENUMERATED {pc2} OPTIONAL

}

BandCombination-v1540::= SEQUENCE {

 bandList-v1540 SEQUENCE (SIZE (1..maxSimultaneousBands)) OF BandParameters-v1540,

 ca-ParametersNR-v1540 CA-ParametersNR-v1540 OPTIONAL

}

BandCombination-v1550 ::= SEQUENCE {

 ca-ParametersNR-v1550 CA-ParametersNR-v1550

}

BandCombination-v16xy ::= SEQUENCE {

 bandList-v16xy SEQUENCE (SIZE (1..maxSimultaneousBands)) OF BandParameters-v16xy

}

BandCombination-v1560::= SEQUENCE {

 ne-DC-BC ENUMERATED {supported} OPTIONAL,

 ca-ParametersNRDC CA-ParametersNRDC OPTIONAL,

 ca-ParametersEUTRA-v1560 CA-ParametersEUTRA-v1560 OPTIONAL,

 ca-ParametersNR-v1560 CA-ParametersNR-v1560 OPTIONAL

}

BandCombination-v1570 ::= SEQUENCE {

 ca-ParametersEUTRA-v1570 CA-ParametersEUTRA-v1570

}

BandCombination-v1580 ::= SEQUENCE {

 mrdc-Parameters-v1580 MRDC-Parameters-v1580

}

BandCombination-v1590::= SEQUENCE {

 supportedBandwidthCombinationSetIntraENDC BIT STRING (SIZE (1..32)) OPTIONAL,

 mrdc-Parameters-v1590 MRDC-Parameters-v1590

}

BandParameters ::= CHOICE {

 eutra SEQUENCE {

 bandEUTRA FreqBandIndicatorEUTRA,

 ca-BandwidthClassDL-EUTRA CA-BandwidthClassEUTRA OPTIONAL,

 ca-BandwidthClassUL-EUTRA CA-BandwidthClassEUTRA OPTIONAL

 },

 nr SEQUENCE {

 bandNR FreqBandIndicatorNR,

 ca-BandwidthClassDL-NR CA-BandwidthClassNR OPTIONAL,

 ca-BandwidthClassUL-NR CA-BandwidthClassNR OPTIONAL

 }

}

BandParameters-v1540 ::= SEQUENCE {

 srs-CarrierSwitch CHOICE {

 nr SEQUENCE {

 srs-SwitchingTimesListNR SEQUENCE (SIZE (1..maxSimultaneousBands)) OF SRS-SwitchingTimeNR

 },

 eutra SEQUENCE {

 srs-SwitchingTimesListEUTRA SEQUENCE (SIZE (1..maxSimultaneousBands)) OF SRS-SwitchingTimeEUTRA

 }

 } OPTIONAL,

 srs-TxSwitch SEQUENCE {

 supportedSRS-TxPortSwitch ENUMERATED {t1r2, t1r4, t2r4, t1r4-t2r4, t1r1, t2r2, t4r4, notSupported},

 txSwitchImpactToRx INTEGER (1..32) OPTIONAL,

 txSwitchWithAnotherBand INTEGER (1..32) OPTIONAL

 } OPTIONAL

}

BandParameters-v16xy ::= SEQUENCE {

 srs-TxSwitch SEQUENCE {

 supportedSRS-TxPortSwitch-r16 ENUMERATED {t1r1-t1r2, t1r1-t1r2-t1r4, t1r1-t1r2-t2r2-t2r4, t1r1-t1r2-t2r2-t1r4-t2r4,

 t1r1-t2r2, t1r1-t2r2-t4r4}

 } OPTIONAL

}

-- TAG-BANDCOMBINATIONLIST-STOP

-- ASN1STOP

|  |
| --- |
| ***BandCombination* field descriptions** |
| ***BandCombinationList-v1540, BandCombinationList-v1550, BandCombinationList-v1560, BandCombinationList-v1570, BandCombinationList-v1580, BandCombinationList-v1590, BandCombinationList-r16***The UE shall include the same number of entries, and listed in the same order, as in *BandCombinationList* (without suffix). |
| ***ca-ParametersNRDC***If the field is included for a band combination in the NR capability container, the field indicates support of NR-DC. Otherwise, the field is absent. |
| ***ne-DC-BC***If the field is included for a band combination in the MR-DC capability container, the field indicates support of NE-DC. Otherwise, the field is absent. |
| ***srs-SwitchingTimesListNR***Indicates, for a particular pair of NR bands, the RF retuning time when switching between a NR carrier corresponding to this band entry and another (PUSCH-less) NR carrier corresponding to the band entry in the order indicated below:- For the first NR band, the UE shall include the same number of entries for NR bands as in *bandList*, i.e. first entry corresponds to first NR band in *bandList* and so on,- For the second NR band, the UE shall include one entry less, i.e. first entry corresponds to the second NR band in *bandList* and so on- And so on |
| ***srs-SwitchingTimesListEUTRA***Indicates, for a particular pair of E-UTRA bands, the RF retuning time when switching between an E-UTRA carrier corresponding to this band entry and another (PUSCH-less) E-UTRA carrier corresponding to the band entry in the order indicated below:- For the first E-UTRA band, the UE shall include the same number of entries for E-UTRA bands as in *bandList,* i.e. first entry corresponds to first E-UTRA band in *bandList* and so on,- For the second E-UTRA band, the UE shall include one entry less, i.e. first entry corresponds to the second E-UTRA band in *bandList* and so on - And so on |

– *BandCombinationListSidelink*

The IE *BandCombinationListSidelink* contains a list of V2X sidelink and NR sidelink band combinations.

***BandCombinationListSidelink* information element**

-- ASN1START

-- TAG-BANDCOMBINATIONLISTSIDELINK-START

BandCombinationListSidelink-r16 ::= SEQUENCE {

supportedBandCombinationListSidelink-r16 SupportedBandCombinationListSidelink-r16 OPTIONAL,

supportedBandCombinationListSidelinkEUTRA-r16 SupportedBandCombinationListSidelinkEUTRA-r16 OPTIONAL,

 supportedBandCombinationListSidelinkEUTRA-NR-r16 SupportedBandCombinationListSidelinkEUTRA-NR-r16 OPTIONAL,

 ...

}

SupportedBandCombinationListSidelink-r16 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombinationParametersSidelink-r16

BandCombinationParametersSidelink-r16 ::= SEQUENCE (SIZE (1..maxSimultaneousBands)) OF BandParametersSidelink-r16

BandParametersSidelink-r16 ::= SEQUENCE {

 freqBandSidelink-r16 FreqBandIndicatorNR

}

SupportedBandCombinationListSidelinkEUTRA-r16 ::= SEQUENCE {

 bandCombinationListEUTRA1-r16 OCTET STRING OPTIONAL,

 bandCombinationListEUTRA2-r16 OCTET STRING OPTIONAL

}

SupportedBandCombinationListSidelinkEUTRA-NR-r16 ::= SEQUENCE (SIZE (1..maxBandComb)) OF BandCombinationParametersSidelinkEUTRA-NR-r16

BandCombinationParametersSidelinkEUTRA-NR-r16 ::= SEQUENCE (SIZE (1..maxSimultaneousBands)) OF BandParametersSidelinkEUTRA-NR-r16

BandParametersSidelinkEUTRA-NR-r16 ::= CHOICE {

eutra SEQUENCE {

 bandParametersSidelinkEUTRA1-r16 OCTET STRING OPTIONAL,

 bandParametersSidelinkEUTRA2-r16 OCTET STRING OPTIONAL

 },

 nr SEQUENCE {

 bandParametersSidelinkNR-r16 BandParametersSidelink-r16

}

}

BandParametersSidelink-r16 ::= FreqBandIndicatorNR

-- TAG-BANDCOMBINATIONLISTSIDELINK-STOP

-- ASN1STOP

|  |
| --- |
| ***BandCombinationSidelink* field descriptions** |
| ***bandParametersSidelinkEUTRA1,*** ***bandParametersSidelinkEUTRA2***This field includes the *V2X-BandParameters-r14* and *V2X-BandParameters-v1530* IE as specified in 36.331 [10]. It is used for reporting the per-band capability for V2X sidelink communication. |
| ***bandCombinationListEUTRA1, bandCombinationListEUTRA2***This field includes the *V2X-SupportedBandCombination-r14* and *V2X-SupportedBandCombination-v1530* IE as specified in 36.331 [10]. It is used for reporting the band combination list for V2X sidelink communication. |

*Next Change*

– *SRS-SwitchingTimeNR*

The IE *SRS-SwitchingTimeNR* is used to indicate the SRS carrier switching time supported by the UE for one NR band pair.

***SRS-SwitchingTimeNR information element***

-- ASN1START

-- TAG-SRS-SWITCHINGTIMENR-START

SRS-SwitchingTimeNR ::= SEQUENCE {

 switchingTimeDL ENUMERATED {n0us, n30us, n100us, n140us, n200us, n300us, n500us, n900us} OPTIONAL,

 switchingTimeUL ENUMERATED {n0us, n30us, n100us, n140us, n200us, n300us, n500us, n900us} OPTIONAL

}

-- TAG-SRS-SWITCHINGTIMENR-STOP

-- ASN1STOP

– *Sidelink-Parameters*

The IE *Sidelink-Parameters* is used to convey capabilities related to NR sidelink communication.

***Sidelink-Parameters information element***

-- ASN1START

-- TAG-SIDELINK-PARAMETERS-START

Sidelink-Parameters-r16 ::= SEQUENCE {

 rlc-ParametersSidelink-r16 RLC-ParametersSidelink-r16 OPTIONAL,

 mac-ParametersSidelink-r16 MAC-ParametersSidelink-r16 OPTIONAL,

 fdd-Add-UE-Sidelink-Capabilities-r16 UE-Sidelink-CapabilityAddXDD-Mode-r16 OPTIONAL,

tdd-Add-UE-Sidelink-Capabilities-r16 UE-Sidelink-CapabilityAddXDD-Mode-r16 OPTIONAL,

supportedBandListSidelink-r16 SupportedBandListSidelink-r16 OPTIONAL,

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

RLC-ParametersSidelink-r16 ::= SEQUENCE {

 am-WithLongSN-Sidelink-r16 ENUMERATED {supported} OPTIONAL,

 um-WithLongSN-Sidelink-r16 ENUMERATED {supported} OPTIONAL,

 ...

}

MAC-ParametersSidelink-r16 ::= SEQUENCE {

 mac-ParametersSidelinkCommon-r16 MAC-ParametersSidelinkCommon-r16 OPTIONAL,

 mac-ParametersSidelinkXDD-Diff-r16 MAC-ParametersSidelinkXDD-Diff-r16 OPTIONAL,

 ...

}

UE-Sidelink-CapabilityAddXDD-Mode-r16 ::= SEQUENCE {

 mac-ParametersSidelinkXDD-Diff-r16 MAC-ParametersSidelinkXDD-Diff-r16 OPTIONAL

}

MAC-ParametersSidelinkCommon-r16 ::= SEQUENCE {

 lcp-RestrictionSidelink-r16 ENUMERATED {supported} OPTIONAL,

 multipleConfiguredGrantsSidelink-r16 ENUMERATED {supported} OPTIONAL,

 ...

}

MAC-ParametersSidelinkXDD-Diff-r16 ::= SEQUENCE {

 multipleSR-ConfigurationsSidelink-r16 ENUMERATED {supported} OPTIONAL,

 logicalChannelSR-DelayTimerSidelink-r16 ENUMERATED {supported} OPTIONAL,

 ...

}

-- TAG-SIDELINK-PARAMETERS-STOP

-- ASN1STOP

– *Sidelink-ParametersEUTRA*

The IE *Sidelink-Parameters* is used to convey capabilities related to V2X sidelink communication.

***Sidelink-ParametersEUTRA information element***

-- ASN1START

-- TAG-SIDELINK-PARAMETERSEUTRA-START

Sidelink-ParametersEUTRA-r16 ::= SEQUENCE {

sl-ParametersEUTRA1-r16 OCTET STRING OPTIONAL,

sl-ParametersEUTRA2-r16 OCTET STRING OPTIONAL,

sl-ParametersEUTRA3-r16 OCTET STRING OPTIONAL,

 supportedBandListSidelinkEUTRA-r16 SupportedBandListSidelinkEUTRA-r16 OPTIONAL,

 ...

}

SupportedBandListSidelinkEUTRA-r16 ::= SEQUENCE {

 freqBandSidelinkEUTRA-r16 FreqBandIndicatorEUTRA,

 --15-7: 1/2

 gnb-ScheduledMode3SidelinkEUTRA-r16 SEQUENCE {

 gnb-ScheduledMode3DelaySidelinkEUTRA-r16 ENUMERATED {ms0, ms0dot25, ms0dot5, ms0dot625,

 ms0dot75, ms1, ms1dot25, ms1dot5, ms1dot75,

 ms2, ms2dot5, ms3, ms4, ms5, ms6, ms8,

 ms10, ms20}

 } OPTIONAL,

 --15-9

 gnb-ScheduledMode4SidelinkEUTRA-r16 ENUMERATED {supported} OPTIONAL

}

-- TAG-SIDELINK-PARAMETERSEUTRA-STOP

-- ASN1STOP

|  |
| --- |
| ***Sidelink-ParametersEUTRA* field descriptions** |
| ***sl-ParametersEUTRA1, sl-ParametersEUTRA2, sl-ParametersEUTRA3***This field includes IE of *SL-Parameters-v1430* (where *v2x-eNB-Scheduled*-r14 and *V2X-SupportedBandCombination-r14* shall not be included), *SL-Parameters-v1530* (where *V2X-SupportedBandCombination-r1530* shall not be included) and *SL-Parameters-v1540* respectively defined in 36.331 [10]. It is used for reporting the per-UE capability for V2X sidelink communication. |

*Next Change*

– *UE-MRDC-Capability*

The IE *UE-MRDC-Capability* is used to convey the UE Radio Access Capability Parameters for MR-DC, see TS 38.306 [26].

***UE-MRDC-Capability* information element**

-- ASN1START

-- TAG-UE-MRDC-CAPABILITY-START

UE-MRDC-Capability ::= SEQUENCE {

 measAndMobParametersMRDC MeasAndMobParametersMRDC OPTIONAL,

 phy-ParametersMRDC-v1530 Phy-ParametersMRDC OPTIONAL,

 rf-ParametersMRDC RF-ParametersMRDC,

 generalParametersMRDC GeneralParametersMRDC-XDD-Diff OPTIONAL,

 fdd-Add-UE-MRDC-Capabilities UE-MRDC-CapabilityAddXDD-Mode OPTIONAL,

 tdd-Add-UE-MRDC-Capabilities UE-MRDC-CapabilityAddXDD-Mode OPTIONAL,

 fr1-Add-UE-MRDC-Capabilities UE-MRDC-CapabilityAddFRX-Mode OPTIONAL,

 fr2-Add-UE-MRDC-Capabilities UE-MRDC-CapabilityAddFRX-Mode OPTIONAL,

 featureSetCombinations SEQUENCE (SIZE (1..maxFeatureSetCombinations)) OF FeatureSetCombination OPTIONAL,

 pdcp-ParametersMRDC-v1530 PDCP-ParametersMRDC OPTIONAL,

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension UE-MRDC-Capability-v1560 OPTIONAL

}

UE-MRDC-Capability-v1560 ::= SEQUENCE {

 receivedFilters OCTET STRING (CONTAINING UECapabilityEnquiry-v1560-IEs) OPTIONAL,

 measAndMobParametersMRDC-v1560 MeasAndMobParametersMRDC-v1560 OPTIONAL,

 fdd-Add-UE-MRDC-Capabilities-v1560 UE-MRDC-CapabilityAddXDD-Mode-v1560 OPTIONAL,

 tdd-Add-UE-MRDC-Capabilities-v1560 UE-MRDC-CapabilityAddXDD-Mode-v1560 OPTIONAL,

 nonCriticalExtension UE-MRDC-Capability-v1560 OPTIONAL

}

UE-MRDC-Capability-v16xy ::= SEQUENCE {

 bandCombinationListSidelink-r16 BandCombinationListSidelink-r16 OPTIONAL,

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

UE-MRDC-CapabilityAddXDD-Mode ::= SEQUENCE {

 measAndMobParametersMRDC-XDD-Diff MeasAndMobParametersMRDC-XDD-Diff OPTIONAL,

 generalParametersMRDC-XDD-Diff GeneralParametersMRDC-XDD-Diff OPTIONAL

}

UE-MRDC-CapabilityAddXDD-Mode-v1560 ::= SEQUENCE {

 measAndMobParametersMRDC-XDD-Diff-v1560 MeasAndMobParametersMRDC-XDD-Diff-v1560 OPTIONAL

}

UE-MRDC-CapabilityAddFRX-Mode ::= SEQUENCE {

 measAndMobParametersMRDC-FRX-Diff MeasAndMobParametersMRDC-FRX-Diff

}

GeneralParametersMRDC-XDD-Diff ::= SEQUENCE {

 splitSRB-WithOneUL-Path ENUMERATED {supported}  OPTIONAL,

 splitDRB-withUL-Both-MCG-SCG ENUMERATED {supported} OPTIONAL,

 srb3 ENUMERATED {supported} OPTIONAL,

 v2x-EUTRA ENUMERATED {supported} OPTIONAL,

 ...

}

-- TAG-UE-MRDC-CAPABILITY-STOP

-- ASN1STOP

|  |
| --- |
| ***UE-MRDC-Capability* field descriptions** |
| ***featureSetCombinations***A list of *FeatureSetCombination*:s for *supportedBandCombinationList* and *supportedBandCombinationListNEDC-Only* in *UE-MRDC-Capability*. The *FeatureSetDownlink*:s and *FeatureSetUplink*:s referred to from these *FeatureSetCombination*:s are defined in the *featureSets* list in *UE-NR-Capability*. |

*Next Change*

– *UE-NR-Capability*

The IE *UE-NR-Capability* is used to convey the NR UE Radio Access Capability Parameters, see TS 38.306 [26].

***UE-NR-Capability* information element**

-- ASN1START

-- TAG-UE-NR-CAPABILITY-START

UE-NR-Capability ::= SEQUENCE {

 accessStratumRelease AccessStratumRelease,

 pdcp-Parameters PDCP-Parameters,

 rlc-Parameters RLC-Parameters OPTIONAL,

 mac-Parameters MAC-Parameters OPTIONAL,

 phy-Parameters Phy-Parameters,

 rf-Parameters RF-Parameters,

 measAndMobParameters MeasAndMobParameters OPTIONAL,

 fdd-Add-UE-NR-Capabilities UE-NR-CapabilityAddXDD-Mode OPTIONAL,

 tdd-Add-UE-NR-Capabilities UE-NR-CapabilityAddXDD-Mode OPTIONAL,

 fr1-Add-UE-NR-Capabilities UE-NR-CapabilityAddFRX-Mode OPTIONAL,

 fr2-Add-UE-NR-Capabilities UE-NR-CapabilityAddFRX-Mode OPTIONAL,

 featureSets FeatureSets OPTIONAL,

 featureSetCombinations SEQUENCE (SIZE (1..maxFeatureSetCombinations)) OF FeatureSetCombination OPTIONAL,

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v1530 OPTIONAL

}

UE-NR-Capability-v1530 ::= SEQUENCE {

 fdd-Add-UE-NR-Capabilities-v1530 UE-NR-CapabilityAddXDD-Mode-v1530 OPTIONAL,

 tdd-Add-UE-NR-Capabilities-v1530 UE-NR-CapabilityAddXDD-Mode-v1530 OPTIONAL,

 dummy ENUMERATED {supported} OPTIONAL,

 interRAT-Parameters InterRAT-Parameters OPTIONAL,

 inactiveState ENUMERATED {supported} OPTIONAL,

 delayBudgetReporting ENUMERATED {supported} OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v1540 OPTIONAL

}

UE-NR-Capability-v1540 ::= SEQUENCE {

 sdap-Parameters SDAP-Parameters OPTIONAL,

 overheatingInd ENUMERATED {supported} OPTIONAL,

 ims-Parameters IMS-Parameters OPTIONAL,

 fr1-Add-UE-NR-Capabilities-v1540 UE-NR-CapabilityAddFRX-Mode-v1540 OPTIONAL,

 fr2-Add-UE-NR-Capabilities-v1540 UE-NR-CapabilityAddFRX-Mode-v1540 OPTIONAL,

 fr1-fr2-Add-UE-NR-Capabilities UE-NR-CapabilityAddFRX-Mode OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v1550 OPTIONAL

}

UE-NR-Capability-v1550 ::= SEQUENCE {

 reducedCP-Latency ENUMERATED {supported} OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v1560 OPTIONAL

}

UE-NR-Capability-v1560 ::= SEQUENCE {

 nrdc-Parameters NRDC-Parameters OPTIONAL,

 receivedFilters OCTET STRING (CONTAINING UECapabilityEnquiry-v1560-IEs) OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v1570 OPTIONAL

}

UE-NR-Capability-v1570 ::= SEQUENCE {

 nrdc-Parameters-v1570 NRDC-Parameters-v1570 OPTIONAL,

 nonCriticalExtension UE-NR-Capability-v16xy OPTIONAL

}

UE-NR-Capability-v16xy ::= SEQUENCE {

 inDeviceCoexInd-r16 ENUMERATED {supported} OPTIONAL,

 dl-DedicatedMessageSegmentation-r16 ENUMERATED {supported} OPTIONAL,

 nru-Parameters-r16 NRU-Parameters-r16 OPTIONAL,

 sidelink-Parameters-r16 Sidelink-Parameters-r16 OPTIONAL,

sidelink-ParametersEUTRA-r16 Sidelink-ParametersEUTRA-r16 OPTIONAL,

bandCombinationListSidelink-r16 BandCombinationListSidelink-r16 OPTIONAL,

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

UE-NR-CapabilityAddXDD-Mode ::= SEQUENCE {

 phy-ParametersXDD-Diff Phy-ParametersXDD-Diff OPTIONAL,

 mac-ParametersXDD-Diff MAC-ParametersXDD-Diff OPTIONAL,

 measAndMobParametersXDD-Diff MeasAndMobParametersXDD-Diff OPTIONAL

}

UE-NR-CapabilityAddXDD-Mode-v1530 ::= SEQUENCE {

 eutra-ParametersXDD-Diff EUTRA-ParametersXDD-Diff

}

UE-NR-CapabilityAddFRX-Mode ::= SEQUENCE {

 phy-ParametersFRX-Diff Phy-ParametersFRX-Diff OPTIONAL,

 measAndMobParametersFRX-Diff MeasAndMobParametersFRX-Diff OPTIONAL

}

UE-NR-CapabilityAddFRX-Mode-v1540 ::= SEQUENCE {

 ims-ParametersFRX-Diff IMS-ParametersFRX-Diff OPTIONAL

}

NRU-Parameters-r16 ::= SEQUENCE {

 rssi-CO-Measurements-r16 ENUMERATED {supported} OPTIONAL

}

-- TAG-UE-NR-CAPABILITY-STOP

-- ASN1STOP

|  |
| --- |
| ***UE-NR-Capability* field descriptions** |
| ***featureSetCombinations***A list of *FeatureSetCombination:s* for *supportedBandCombinationList* in *UE-NR-Capability*. The *FeatureSetDownlink:s* and *FeatureSetUplink:s* referred to from these *FeatureSetCombination:s* are defined in the *featureSets* list in *UE-NR-Capability*. |
| ***rssi-CO-Measurements***Indicates whether the UE supports performing RSSI and Channel Occupancy (CO) measurements for operation with shared spectrum channel access. |

*Next Change*

– *UECapabilityEnquirySidelink*

The *UECapabilityEnquirySidelink* message is used to request UE sidelink capabilities. It is only applied to unicast of NR sidelink communication.

Signalling radio bearer: Sidelink SRB for PC5-RRC

RLC-SAP: AM

Logical channel: SCCH

Direction: UE to UE

***UECapabilityEnquirySidelink* information element**

-- ASN1START

-- TAG-UECAPABILITYENQUIRYSIDELINK-START

UECapabilityEnquirySidelink ::= SEQUENCE {

 rrc-TransactionIdentifier-r16 RRC-TransactionIdentifier,

 criticalExtensions CHOICE {

 ueCapabilityEnquirySidelink-r16 UECapabilityEnquirySidelink-IEs-r16,

 criticalExtensionsFuture SEQUENCE {}

 }

}

UECapabilityEnquirySidelink-IEs-r16 ::= SEQUENCE {

 ueCapabilityRequestFilterSidelink-r16 UE-CapabilityRequestFilterSidelink OPTIONAL, -- Need N

 ueCapabilityInformationSidelink-r16 OCTET STRING OPTIONAL,

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension SEQUENCE{} OPTIONAL

}

-- TAG-UECAPABILITYENQUIRYSIDELINK-STOP

-- ASN1STOP

|  |
| --- |
| ***UECapabilityEnquirySidelink*-IEs field descriptions** |
| ***ueCapabilityInformationSidelink***This filed indicates the *UECapabilityInformationSidelink* message to provide the UE sidelink capability, which can be optionally sent together with *UECapabilityEnquirySidelink*. |

– *UE-CapabilityRequestFilterSidelink*

The IE *UE-CapabilityRequestFilterSidelink* is used to request filtered UE capabilities.

***UE-CapabilityRequestFilterSidelink* information element**

-- ASN1START

-- TAG-UE-CAPABILITYREQUESTFILTERSIDELINK-START

UE-CapabilityRequestFilterSidelink ::= SEQUENCE {

 frequencyBandListFilterSidelink FreqBandList OPTIONAL, -- Need N

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

-- TAG-UE-CAPABILITYREQUESTFILTERSIDELINK-STOP

-- ASN1STOP

– *UECapabilityInformationSidelink*

The IE *UECapabilityInformationSidelink* message is used to transfer UE radio access capabilities. It is only applied to unicast of NR sidelink communication.

Signalling radio bearer: Sidelink SRB for PC5-RRC

RLC-SAP: AM

Logical channel: SCCH

Direction: UE to UE

***UECapabilityInformationSidelink* information element**

-- ASN1START

-- TAG-UECAPABILITYINFORMATIONSIDELINK-START

UECapabilityInformationSidelink ::= SEQUENCE {

 rrc-TransactionIdentifier-r16 RRC-TransactionIdentifier,

 criticalExtensions CHOICE {

 ueCapabilityInformationSidelink-r16 UECapabilityInformationSidelink-IEs-r16,

 criticalExtensionsFuture SEQUENCE {}

 }

}

UECapabilityInformationSidelink-IEs-r16 ::= SEQUENCE {

 accessStratumReleaseSidelink-r16 AccessStratumReleaseSidelink-r16,

 pdcp-ParametersSidelink-r16 PDCP-ParametersSidelink-r16 OPTIONAL,

 rlc-ParametersSidelink-r16 RLC-ParametersSidelink-r16 OPTIONAL,

supportedBandListSidelink-r16 SupportedBandListSidelink-r16 OPTIONAL,

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension SEQUENCE{} OPTIONAL

}

AccessStratumReleaseSidelink-r16 ::= ENUMERATED {

 rel16, spare7, spare6, spare5, spare4, spare3, spare2, spare1, ... }

PDCP-ParametersSidelink-r16 ::= SEQUENCE {

 outOfOrderDeliverySidelink-r16 ENUMERATED {supported} OPTIONAL,

 ...

}

RLC-ParametersSidelink-r16 ::= SEQUENCE {

 am-WithLongSN-Sidelink-r16 ENUMERATED {supported} OPTIONAL,

 um-WithLongSN-Sidelink-r16 ENUMERATED {supported} OPTIONAL,

 ...

}

-- TAG-UECAPABILITYINFORMATIONSIDELINK-STOP

-- ASN1STOP

*Next Change*