SLRelay Comments file

Template:

# Xnnn

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Xnnn |  |  |  |  |  |  | vnnn | ToDo |

 **[Description]**:

**[Proposed Change]**:

**[Comments]**:

# Z001

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z001 | NR\_SL\_relay\_multihop-Core | 1 | Single hop and multi-hop type differentiation | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: For below description, differentiation of single hop and multi-hop message is needed.

4> if the UE is configured by upper layers to transmit NR sidelink L2 U2N relay discovery messages and *sl-L2U2N-Relay* is included in SIB12; or

4> if the UE is configured by upper layers to transmit NR sidelink L2 U2N relay discovery messages and *sl-L2U2N-MH-Relay* is included in SIB12; or

**[Proposed Change]**: Adopt below change for all related conditions, will submit the RIL TP to show the necessary places if needed:

4> if the UE is configured by upper layers to transmit NR sidelink L2 single hop U2N relay discovery messages and *sl-L2U2N-Relay* is included in SIB12; or

4> if the UE is configured by upper layers to transmit NR sidelink L2 MH U2N relay discovery messages and *sl-L2U2N-MH-Relay* is included in SIB12; or

**[Comments]**:

# Z002

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z002 | NR\_SL\_relay\_multihop-Core | 1 | RRC connection setup/resume initiation | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: As legacy, UE is allowed initiate RRC setup or resume to transmit L2 multihop relay discovery message if *sl-L2U2N-MH-Relay* is included in in SIB12..

**[Proposed Change]**: RAN2 is to agree that UE can initiate RRC Setup and Resume if network indicate support of MH, but corresponding pool is not configured, capture new condition in 5.3.3.1a and 5.3.13.1a as below:

if the UE is configured by upper layers to transmit NR sidelink L2 U2N MH relay discovery messages and sl-L2U2N-MH-Relay is included in *SIB12*

**[Comments]**:

# Z003

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z003 | NR\_SL\_relay\_multihop-Core | 1 | SUI initiation for MH | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: As legacy, My understanding is that for each condition for *sl-L2U2N-Relay*, there should be a corresponding new condition for *sl-L2U2N-MH-Relay*. Will submit the CR to show all the necessary changes, if needed.

**[Proposed Change]**:In clause 5.8.3.3, review all conditions of *sl-L2U2N-Relay*, and create new conditions for *sl-L2U2N-MH-Relay* correspondingly, if necessary, for example:

2> if configured by upper layer to receive NR sidelink L2 U2N single hop relay discovery messages on the frequency included in *sl-FreqInfoList* in *SIB12* of the PCell including *sl-L2U2N-Relay*;if configured by upper layer to receive NR sidelink L2 U2N MH relay discovery messages on the frequency included in *sl-FreqInfoList* in *SIB12* of the PCell including *sl-L2U2N-MH-Relay* or if configured by upper layer to receive NR sidelink L3 U2N relay discovery messages on the frequency included in *sl-FreqInfoList* in *SIB12* of the PCell including *sl-L3U2N-RelayDiscovery*

**[Comments]**:

# Z004

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z004 | NR\_SL\_relay\_multihop-Core | 1 | Source L2 ID report | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: In legacy, for D2I path switch, remote UE will report it’s source L2 ID to network, so that network can send SRAP configuration to target relay UE before remote UE switch to target path.

**[Proposed Change]**: Suggest RAN2 to agree MH remote UE will report it’s own SRC L2 ID to network and capture below text:

3> if *SIB12* includes *sl-L2U2N-Relay* or *sl-L2U2N-MH-Relay* and the UE is capable of L2 U2N remote UE:

4> include *sl-SourceIdentityRemoteUE* corresponding to the upstream direction and set it to the source identity configured by upper layer for NR sidelink L2 U2N relay communication transmission;

**[Comments]**:

# Z005

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z005 | NR\_SL\_relay\_multihop-Core | 1 | Paging ID report | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: In legacy, relay UE will report paging ID information of it’s connected remote UE, each paging ID is associated to L2 ID of connected remote UE. For MH relay, relay UE may also receives the more than one unconnected child UE’s paging information from it’s connected child UE, all these paging information will be associated to connected child UE’s L2 ID. In last RAN2 meeting, we have agreed to introduce a paging ID list in PC5 remote UE information message to solve this issue. We think same rule shall be applied in SUI message.

**[Proposed Change]**: RAN2 is to agree to introduce a paging ID list in *SL-TxResourceReqL2U2N-Relay-r17*.

**[Comments]**:

# Z006

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z006 | NR\_SL\_relay\_multihop-Core | 1 | UE type in SUI message | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

 **[Description]**: For intermediate relay UE, it has both relay UE and remote UE functionality. In SUI message, UE should report the requirements of discovery message and set the UE type to remote UE or relay UE. How intermediate relay UE set the UE type in *sl-TxResourceReqListDisc* is not clear.

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

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5> if the UE is acting as L2/L3 U2U Relay UE:

6> include *ue-TypeU2U* and set it to *relayUE*;

5> if the UE is acting as L2/L3 U2U Remote UE:

6> include *ue-TypeU2U* and set it to *remoteUE*;

**[Proposed Change]**:

Solution1: Clarify that intermediate relay UE will use different L2 ID for remote UE discovery and relay UE discovery, which may need double check with SA2.

Solution2: If it is possible that UE use same L2 ID for remote UE and relay UE discovery, a new UE type is needed.

**[Comments]**:

# Z007

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z007 | NR\_SL\_relay\_multihop-Core | 1 | Paging info list reception handling | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

**[Description]**:operation related to sl-PagingInfo-RemoteUE-List is missing in clause 5.8.9.8.3

**[Proposed Change]**:

2> if the UE is in RRC\_IDLE or RRC\_INACTIVE:

3> if the *sl-PagingInfo-RemoteUE or sl-PagingInfo-RemoteUE-List* is set to *setup*:

4> monitor the *Paging* message at the L2 U2N Remote UE's paging occasion calculated according to *sl-PagingIdentityRemoteUE* and *sl-PagingCycleRemoteUE* included in *sl-PagingInfo-RemoteUE*;

3> else (the *sl-PagingInfo-RemoteUEor sl-PagingInfo-RemoteUE-List* is set to *release*):

4> stop monitoring the *Paging* message at the L2 U2N Remote UE's paging occasion;

4> release the received paging information in *sl-PagingInfo-RemoteUE*;

2> else:

3> if the *sl-PagingInfo-RemoteUEor sl-PagingInfo-RemoteUE-List* is set to *setup*:

4> include the received *sl-PagingIdentityRemoteUE* in *SidelinkUEInformationNR* message and perform Sidelink UE information transmission in accordance with 5.8.3;

3> else (the *sl-PagingInfo-RemoteUE or sl-PagingInfo-RemoteUE-List* is set to *release*):

4> initiate transmission of the *SidelinkUEInformationNR* message to release the *sl-PagingIdentityRemoteUE* in *SidelinkUEInformationNR* message in accordance with 5.8.3;

4> release the received paging information in *sl-PagingInfo-RemoteUE*;

**[Comments]**:

# Z008

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z008 | NR\_SL\_relay\_multihop-Core | 1 | Upper bound for intermediate relay UE | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

**[Description]**: RAN2 agreed that “*The network can configure an upper bound of Uu RSRP for the UE to operate as an intermediate relay UE. If the upper bound is not configured, there is no threshold, but this does not override the previous agreement.*”. I believe this should be a new separate Uu threshold for intermediate relay UE, but corresponding new threshold is missing

**[Proposed Change]**: Introduce a new separate Uu threshold for intermediate relay UE.

**[Comments]**:

# Z009

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| RIL Id | WI | Class | Title | Tdoc | Delegate | Misc | File version | Status |
| Z009 | NR\_SL\_relay\_multihop-Core | 1 | Prioritization between last relay UE and intermediate relay UE | R2-25xxxxx | ZTE (Weiqiang Du) |  | V003 | ToDo |

**[Description]**: In case the Uu threshold for intermediate relay UE and last relay UE is not configured or only Uu threshold for last relay UE is configured, we think UE should prioritize to operate as a last relay UE

**[Proposed Change]**: Capture in normative text to say that if both conditions for last relay UE operation and intermediate relay UE operation are met, UE shall prioritize to act as a last relay UE.

**[Comments]**:

Instructions:

1. Copy the template RIL comments fields above (including the Heading Xnnn)
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