3GPP TSG-RAN WG2 #124 R2-23xxxxx

**Chicago, USA, 13th – 17th November 2023**

Agenda Item: 7.2.1

Source: Ericsson

Title: [Post124][415][POS] Rel-18 Positioning 38.331 CR (Ericsson)

Document for: Discussion, Decision

# Introduction

This is to kick off the email discussion.

* [Post124][415][POS] Rel-18 Positioning 38.331 CR (Ericsson)

 Scope: Finalise and check the Rel-18 positioning 38.331 CR (including taking into account parameter list updates).

 Intended outcome: Agreed CR

 Deadline: Short (for RP)

# 2 Discussion

## 2.1 Sidelink

Please provide your comments on the CR for sidelink. The changes are track marked with “sidelinkPositioning”

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| Company Name | Comments |
| Sharp | * **Comment #1, on the field for configuring SL PRS resources within** ***SL-PRS-ResourcePool*:**

We suggest the following yellow highlighted changes:

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| SL-PRS-ResourcePool-r18 ::= SEQUENCE { [...] sl-PRS-ResourcesDedicatedSL-PRS-RP-r18 SEQUENCE (SIZE (1..12)) SL-PRS-ResourceDedicatedSL-PRS-RP-r18 OPTIONAL, -- Need M |

 Reason why the IE *SL-PRS-ResourceDedicatedSL-PRS-RP-r18* should correspond to one (rather than multiple) SL PRS resource: - Fields in *SL-PRS-ResourceDedicatedSL-PRS-RP-r18*: sl-PRS-ResourceID, sl-CombSize, sl-PRS-comb-offset, sl-PRS-starting-symbol, sl-NumberOfSymbols.- Each SL PRS resource is associated with a SL PRS resource ID, a comb-size, a comb-offset, a starting symbol, and a number of symbols, as can be found in the endorsed CR to TS 38.214, R1-2310764,

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| 8.2.4 SL PRS transmission procedureThe following parameters for SL PRS transmission are associated with each SL PRS resource:- [*SL PRS resource ID*] indicates an identity of a SL PRS resource. The SL PRS resource is identified by the SL PRS resource ID that is unique within a slot of a dedicated SL PRS resource pool. For a shared SL PRS resource pool, a SL PRS resource is uniquely identified by a combination of the SL PRS resource ID and a SL PRS frequency domain allocation within a slot indicated by “frequency resource assignment” field in the associated SCI.- [*SL PRS comb offset and comb size*] indicates a comb offset and a comb size of the SL PRS resource- [*Starting symbol and the number of SL PRS symbols*] indicates the starting symbol index and the number of symbols of the SL PRS resource within a slot in a dedicated SL PRS resource pool. [*number of SL PRS symbols*] indicates the number of symbols of the SL PRS resource within a slot in a shared SL PRS resource pool. |

Reason why the field “*sl-PRS-ResourcesDedicatedSL-PRS-RP-r18*” should correspond to “a sequence of” *SL-PRS-ResourceDedicatedSL-PRS-RP-r18*:- As captured in the endorsed CR to TS 38.212, R1-2310744, “*sl-PRS-ResourcesDedicatedSL-PRS-RP-r18*” is used to configure a number () of SL PRS resources in a slot of a dedicated SL PRS resource pool.

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| 8.3.1.2 SCI format 1-B[...]- Resource ID indication –bits when the value of the higher layer parameter *sl-MaxNumPerReserve-Dedicated-SL-PRS-RP*  is configured to 2; otherwise bits when the value of the higher layer parameter *sl-MaxNumPerReserve-Dedicated-SL-PRS-RP* is configured to 3. The value is the total number of SL PRS resources within a slot in a dedicated SL PRS resource pool and provided by the higher layer parameter *sl-PrsResources-Dedicated-SL-PRS-RP*. |

 Reason for 1..12:

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| RAN1#114bis AgreementThe maximum number of SL PRS resources that can be (pre)configured in a slot of a dedicated resource pool is 12. |

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| ZTE | Delete sl-PRS-TxPoolExceptional-r18. no agreement is made regarding whether exceptional pool should be used for SL-PRS in both R1 and R2 |
| ZTE | Delete the following field description since there is no corresponding ASN.1 IE***sl-TxParameters***Indicates PSSCH transmission parameters. |
| ZTE |

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| SL PRS in a shared resource pool | sl-TriggerConditionRequest | Existing | Update to the current description in 38.331:Indicates the trigger condition of an explicit request from UE-B to UE-A for transmission in a shared SL PRS resource pool. Value 0 means the explicit request is triggered by UE-B's implementation. Value 1 means the explicit request can be triggered only when UE-B has data or SL PRS to be transmitted to UE-A. | INTEGER (0 .. 1) | Per shared SL PRS RP |

For the legacy IE sl-TriggerConditionRequest-r17, field description should be added according to above R1 parameter list;And, sl-TriggerConditionRequest-r18 in SL-ResourcePool should be deleted |
| ZTE | 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-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-SequenceID-r18 INTEGER (0..4095) OPTIONAL, -- Need M sl-PRS-ResourcesDedicatedSL-PRS-RP-r18 SL-PRS-ResourcesDedicatedSL-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 M sl-SRC-ID-LenDedicatedSL-PRS-RP-r18 ENUMERATED {n12, n24} OPTIONAL, -- Need M sl-CBR-PriorityTxConfigDedicatedSL-PRS-RP-List-r18 SEQUENCE (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 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-CBR-CommonTxDedicatedSL-PRS-RP-List-r18 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-PriorityTxConfigIndexDedicatedSL-PRS-RP-r18 ::= SEQUENCE { sl-PriorityThresholdDedicatedSL-PRS-RP-r18 INTEGER (1..8) OPTIONAL, -- Need M sl-TxConfigIndexDedicatedSL-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} Green part should be deleted, yellow part should be moved to SL-PriorityTxConfigIndexDedicatedSL-PRS-RP-r18 |

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# Conclusion

In the previous sections we made the following observations:

Based on the discussion in the previous sections we propose the following:

# References