**Issue 2-1-3: Resource pool configuration**

* Proposals
  + Option 1:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Information Element** | | | **Value** | |
| **20 MHz** | **40 MHz** |
| SL-ResourcePool-r16 | sl-PSCCH-Config-r16 | sl-TimeResourcePSCCH-r16 | n2 | n2 |
|  |  | sl-FreqResourcePSCCH-r16 | n10 | n10 |
|  | sl-SyncAllowed-r16 |  | gnss-Sync-r16 | gnss-Sync-r16 |
|  | sl-SubchannelSize-r16 |  | n10 | n10 |
|  | sl-TimeResource-r16 |  | ones(1, 160) | ones(1, 160) |
|  | sl-StartRB-Subchannel-r16 |  | 0 | 0 |
|  | sl-NumSubchannel-r16 |  | 5 | 10 |
|  | sl-RB-Number-r16 |  | 51 | 106 |

* + Option 2:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | | Unit | Value |
| Resource pool configuration | PSCCH Time resource | Symbols | 2 |
|  | PSCCH Frequency resource | PRBs | 10 |
|  | Synchronization reference |  | GNSS |
|  | Subchannel size | PRBs | 10 |
|  | Number of sub-channels |  | 5 for 20 MHz and 10 for 40 MHz |
|  | Start PRB for first sub-channel |  | 0 |
|  | Time resource bitmap |  | ones(1, 160) |
|  | Number of PRBs |  | 51 for 20 MHz and 106 for 40 MHz |

* + Option 3:

|  |  |  |
| --- | --- | --- |
| Information Element | Value/Remark | Comment |
| SL-BWP-ConfigCommon-r16 ::= SEQUENCE { |  |  |
| sl-BWP-Generic-r16 SEQUENCE { |  |  |
| sl-LengthSymbols-r16 | sym14 |  |
| sl-StartSymbol-r16 | sym0 |  |
| } |  |  |
| sl-BWP-PoolConfigCommon-r16 SEQUENCE { |  |  |
| sl-RxPool-r16 SEQUENCE (SIZE (1..maxNrofRXPool-r16)) OF SEQUENCE | 1 entry | SL-ResourcePool-r16 |
| sl-TxPoolSelectedNormal-r16 SEQUENCE { |  |  |
| sl-PoolToReleaseList-r16 |  |  |
| sl-PoolToAddModList-r16 SEQUENCE (SIZE (1..maxNrofTXPool-r16)) OF SEQUENCE { | 1 entry | SL-ResourcePoolConfig-r16 |
| sl-ResourcePoolID-r16 |  |  |
| sl-ResourcePool-r16 { |  |  |
| sl-PSCCH-Config-r16 { |  |  |
| sl-TimeResourcePSCCH-r16 | n2 |  |
| sl-FreqResourcePSCCH-r16 | n10 |  |
| } |  |  |
| sl-PSFCH-Config-r16 { |  |  |
| sl-NumMuxCS-Pair-r16 | n1 |  |
| sl-PSFCH-HopID-r16 | 0 |  |
| sl-PSFCH-CandidateResourceType-r16 | startSubCh |  |
| } |  |  |
| sl-SyncAllowed-r16 | gnss | ENUMERATED {gnss, gnbEnb, ue } |
| sl-SubchannelSize-r16 | n10 |  |
| sl-TimeResource | 11111111  11111111  1111 | Indicates the time resource of resource pool within sl-Period. |
| sl-StartRB-Subchannel-r16 | 0 |  |
| sl-Additional-MCS-Table-r16 | Not presented |  |
| sl-PTRS-Config-r16 | Not presented |  |
| sl-X-Overhead-r16 | n0 |  |
| } |  |  |
| } |  |  |
| } |  |  |
| sl-TxPoolSelectedNormal-r16 |  |  |
| sl-TxPoolExceptional-r16 |  |  |
| } |  |  |
| } |  |  |
| SL-ThresPSSCH-RSRP | 66 | Threshold to allow PSSCH transmission for PSFCH reception is infinity dBm. |

* + Option 4: simplified from option 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Information Element** | | | | **Value/Remark** |
| sl-RxPool-r16 |  |  |  | 1 entry |
| sl-TxPoolSelectedNormal-r16 |  |  |  | 1 entry |
|  | sl-ResourcePool-r16 | sl-PSCCH-Config-r16 | sl-TimeResourcePSCCH-r16 | n2 |
|  |  |  | sl-FreqResourcePSCCH-r16 | n10 |
|  |  | sl-PSFCH-Config-r16 | sl-NumMuxCS-Pair-r16 | n1 |
|  |  |  | sl-PSFCH-HopID-r16 | 0 |
|  |  |  | sl-PSFCH-CandidateResourceType-r16 | startSubCh |
|  |  | sl-SyncAllowed-r16 |  | gnss |
|  |  | sl-SubchannelSize-r16 |  | n10 |
|  |  | sl-TimeResource |  | 11111111 11111111 1111 |
|  |  | sl-Additional-MCS-Table-r16 |  | Not presented |
|  |  | sl-X-Overhead-r16 |  | n0 |
|  |  | sl-UE-SelectedConfigRP-r16 | SL-ThresPSSCH-RSRP | 66 |

-----------------GTW Discussion--------------------

Intel: we can capture some common information into general section of v2x requirements. We prefer option 2.

Huawei: If those parameters into general section as common parameters, following NR demod approach. Or in Annex similar as LTE V2X. We prefer to capture common parameters into general section and option 2 used for this.

LGE: We are fine with Intel proposal.

Agreement:

Capture common parameters into general section of V2X requirements and option 2 as starting points.

**Issue 2-1-1: Table of test parameters and minimum performance**

* Proposals
  + Add the information for bandwidth/SCS and propagation condition in the table of minimum performance
  + Remove the information for 2nd stage SCI configuration, bandwidth/SCS, and propagation condition in the table of test parameters
* Recommended WF based on 1st round companies’ comments
  + Add the information for bandwidth/SCS and propagation condition in the table of minimum performance
  + Remove the information for 2nd stage SCI configuration, bandwidth/SCS, and propagation condition in the table of test parameters
  + Add the information of the number of DMRS symbols in test parameter table for PSSCH test case

-----------------GTW Discussion----------------

Agreement:

* + Add the information for bandwidth/SCS and propagation condition in the table of minimum performance
  + Remove the information for 2nd stage SCI configuration, bandwidth/SCS, and propagation condition in the table of test parameters
  + Add the information of the number of DMRS symbols in test parameter table for PSSCH test case

**Issue 2-1-2: RMC table**

* Proposals:
  + Make the following changes to PSCCH RMC table

1) Reference measurement channels are defined for different physical channels like LTE V2X

2) Remove information about number of DMRS symbols and keep only information about number of DMRS REs

3) Add information about overhead for TBS determination

4) Add information about number of resource elements allocated for SCI1 transmission

5) Add information about number of resource elements allocated for SCI2 transmission or add SCI2 configuration which is required for calculation of number of resource elements

* Recommended WF based on 1st round companies’ comments
  + Make the following changes to PSCCH RMC table

1) Reference measurement channels are defined for different physical channels like LTE V2X

2) Remove information about number of DMRS symbols and keep only information about number of DMRS REs

3) Add information about overhead for TBS determination (e.g., Overhead for TBS determination = 0)

5) Add SCI2 configuration which is required for calculation of number of resource elements

* + No need to add 4) based on majority views

4) Add information about number of resource elements allocated for SCI1 transmission

---------------GTW discussion------------------------

Intel: PSCCH, we also want to include all the necessary information. Concern for SCI1 inclusion?

Huawei: The number symbols of configured SCI1 already included and that’s sufficient.

MTK: Similar view Huawei.

Intel: We have number of symbols, number of RBs, we don’t have information for number of PRBs for PSSCH and PSFCH.

Agreements:

* + Make the following changes to PSSCH RMC table

1) Reference measurement channels are defined for different physical channels like LTE V2X

2) Remove information about number of DMRS symbols and keep only information about number of DMRS REs

3) Add information about overhead for TBS determination (e.g., Overhead for TBS determination = 0)

5) Add SCI2 configuration which is required for calculation of number of resource elements

FFS for following changes:

4 ) Add information about number of resource elements allocated for SCI1 transmission

**Issue 1-1-1: Requirements for single link test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test cases** | **AVE** | **Margin** | **Requirement** |
| PSSCH\_Test1  (QPSK\_TDLA30-2700) |  | 0.5 |  |
| PSSCH\_Test2  (16QAM\_TDLA30-1400) |  | 0.5 |  |
| PSSCH\_Test3 (64QAM\_TDLA30-180) |  | 0.8 |  |
| PSCCH |  | 0.5 |  |
| PSBCH |  | 0.5 |  |
| PSFCH |  | 0.5 |  |

* Proposals from moderator to the progress
  + To define performance requirements, add margin in Table 2 to the average value of the companies’ impairment results
  + Capture the requirements with [ ] in draft CRs
* Recommended WF based on companies’ comments
  + To define performance requirements, add margin in Table 2 to the average value of the companies’ impairment results
  + Capture the requirements with [ ] in draft CRs
* Need further check (seems to be acceptable)
  + The acceptable largest span among the companies’ simulation results to derive performance requirement is 2.5dB (the same as NR Rel-15 UE demodulation)
  + Handling test cases which alignment results from companies have large span > 2.5dB (agreements from R4-1907235 in Rel-15 NR UE demodulation)
    - Step 1. Omit results from outliers in the test cases where the span limit can be met by excluding those result
    - Step 2. Keep requirements with [ ] for the cases which have larger span > 2.5dB
    - Step 3. Allow companies to update results in the next meeting and revise requirement of these test cases.
    - Note: Target to remove [ ] for these test cases in the next meeting

--------------------GTW discussion----------------------

Agreement:

* + To define performance requirements, add margin in Table 2 to the average value of the companies’ impairment results
  + Capture the requirements with [ ] in draft CRs
  + The acceptable largest span among the companies’ simulation results to derive performance requirement is 2.5dB (the same as NR Rel-15 UE demodulation)
  + Handling test cases which alignment results from companies have large span > 2.5dB (agreements from R4-1907235 in Rel-15 NR UE demodulation)
    - Step 1. Omit results from outliers in the test cases where the span limit can be met by excluding those result
    - Step 2. Keep requirements with [ ] for the cases which have larger span > 2.5dB
    - Step 3. Allow companies to update results in the next meeting and revise requirement of these test cases.
    - Note: Target to remove [ ] for these test cases in the next meeting