# **[102-e-NR- 5G\_V2X\_NRSL-PHYprocedure-01] Email discussion/approval regarding the following aspects for HARQ operation**

[102-e-NR- 5G\_V2X\_NRSL-PHYprocedure-01] Email discussion/approval regarding the following aspects for HARQ operation

* Issue 3-1: Details of indicating groupcast HARQ feedback option
* Issue 3-2: Capturing PSFCH reception behavior in the specifications
* Issue 3-3: Exact location of PSFCH slots in the time domain

By 8/21, followed by potential TPs by 8/26 – Hanbyul (LGE)

**1. Details of indicating groupcast HARQ feedback option**

Q1: Do you support physical layer signaling to indicate groupcast with HARQ feedback Option 1 (i.e., NACK only) without distance-based feedback?

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| Company | Answer | Comment |
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Q2: If the answer to Q1 is yes, which option is used to indicate groupcast with HARQ feedback Option 1 (i.e., NACK only) without distance-based feedback?

* + Option 1: SCI format 2-A is used
    - Option 1-1: A value of Cast type indicator in SCI format 2-A is used to indicate groupcast HARQ feedback option 1 without distance-based feedback
    - Option 1-2: Additional 1-bit indicator in SCI format 2-A is introduced to indicate whether the distance-based feedback is applied or not.
  + Option 2: SCI format 2-B is used
    - Option 2-1: Communication range requirement field in SCI format 2-B is used to indicate distance-based HARQ-ACK feedback is disabled
  + Option 3: Others (please specify)

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**2. Capturing PSFCH reception behavior in the specifications**

Q3: Do you agree to capture UE behavior that physical layer reports HARQ-ACK information of the received PSFCH to higher layer?

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Q4: If the answer to Q3 yes, what is the UE behavior when SL HARQ-ACK information includes NACK-only (i.e., groupcast option 1)?

* + Option 1: UE reports NACK if the UE determines NACK from the received PSFCH. It reports ACK, otherwise.
  + Option 2: Others (please specify)

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Q5: If the answer to Q3 yes, what is the UE behavior when SL HARQ-ACK information includes ACK or NACK (unicast and groupcast option 2)?

* + Option 1: UE reports NACK if the UE determines NACK from the at least one received PSFCH. It reports ACK if the UE determines ACK from all the received PSFCH(s).
  + Option 2: UE report NACK if the UE determines NACK from the at least one received PSFCH. It reports ACK if the UE determines ACK from all the received PSFCH(s). DTX is reported otherwise.
  + Option 3: Others (please specify)

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**3. Exact location of PSFCH slots in the time domain**

Q6: Which options is used to define PSFCH slot location in a resource pool when PSFCH resource period is N,

* + Option 1: Logical slot index #0, #N, #2N, …. within 10240 ms period
  + Option 2: Logical slot index #N-1, #2N-1, #3N-1, … within 10240 ms period
  + Option 3: Logical slot index …, #M-2N, #M-N, #M within 10240 ms period, where logical slot #M is the last slot of a resource pool
  + Option 4: Others (please specify)

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Q7: Do you think the number of logical slots of a resource pool is always a multiple of N, the PSFCH resource period?

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