# **[101-e-NR-5G\_V2X\_NRSL-SL\_PHY\_Procedure-01] Email discussion/approval regarding: power control**

[101-e-NR-5G\_V2X\_NRSL-SL\_PHY\_Procedure-01] Email discussion/approval regarding: power control

* + Issue 1-1: The lower bound of the transmitted PSFCH number in Case 1-2 and Case 2-2
	+ Issue 1-2: How to determine the number of transmitted PSFCHs when P\_(O,PSFCH) is not provided
	+ Issue 1-3: RS used to derive DL pathloss for open-loop power control based on DL pathloss.

Till 5/29, with potential TPs by 6/4 – Hanbyul (LGE)

**1. The lower bound of the transmitted PSFCH number in Case 1-2 and Case 2-2**

Agreements in RAN1#100bis-e

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| When the UE supports up to Nmax,psfch simultaneous PSFCH transmissions in a PSFCH TX occasion and UE have Nreq PSFCHs to be transmitted in a given PSFCH TX occasion, the UE selects N PSFCHs for actual transmission with ascending order of the priority in a PSFCH TX occasion as follows: * Case 1: When Nreq<=Nmax,psfch and is (pre-)configured,
	+ Case 1-1: N=Nreq if the sum of for the Nreq PSFCHs is smaller than or equal to determined for the Nreq PSFCH transmissions.
	+ Case 1-2: Otherwise, N is up to UE implementation under N >= X >= 1.
* Case 2: When Nreq>Nmax,psfch and is (pre-)configured, the UE firstly selects Nmax,psfch PSFCHs with ascending order of the priority.
	+ Case 2-1: N=Nmax,psfch if the sum of for the Nmax,psfch PSFCHs is smaller than or equal to determined for the Nmax,psfch PSFCH transmissions.
	+ Case 2-2: Otherwise, N is up to UE implementation under N >= X >= 1.
* Down select X in RAN1#101-e
	+ Alt 1: X = max {1, the largest value which doesn’t lead to the power limited case}
	+ Alt 2: X= 1
	+ Other alternatives are not precluded.
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Q1: For Case 1-2 and Case 2-2, how is N determined?

* Option 1-1: X = max {1, the largest value which doesn’t lead to the power limited case}
* Option 1-2: X=1
* Option 1-3: Others (please specify)

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**2. How to determine the number of transmitted PSFCHs when P\_(O,PSFCH) is not provided**

Q2: If is not provided, how is N determined?

* Option 2-1: N is up to UE implementation with X=1
* Option 2-2: N=1
* Option 2-3: N= min(Nreq, Nmax,psfch)
* Option 2-4: Others (please specify)

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Q3: If is not provided, what is the UE transmit power of each PSFCH transmission when N is determined by the conclusion of Q2?

* Option 3-1: where determined for the N PSFCH transmission
* Option 3-2: Others (please specify)

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**3. RS used to derive DL pathloss for open-loop power control based on DL pathloss**

Q4: Do you agree that one of the RS resources used to derive DL pathloss for PUSCH power control is reused for the DL pathloss for the power control of PSCCH/PSSCH/PSFCH? If yes, which option do you prefer? If no, please specify which other RS resource is used for PSCCH/PSSCH/PSFCH power control.

* Option 4-1: DL pathloss used for PUSCH transmission scheduled by DCI format 0\_0
* Option 4-2: DL pathloss used for PUSCH transmission scheduled by DCI format 0\_1
* Option 4-3: DL pathloss used for PUSCH transmission before the UE is provided with dedicated higher layer parameters
* Option 4-4: Others (please specify)

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| Company | Answer and preferred option | Comment |
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