

Top 3 things that happened on NTN and satellite direct-to-device at RAN1 #126-bis, RAN2 #135-bis and RAN4 #120-bis

THE VERDICT

1. For the 6GR NTN study, RAN1 agreed that UEs in different GNSS operation modes can operate in the same cell, with network control of access by mode. Which mode combinations are allowed remains FFS. (R1-2607315)
2. For Rel-20 GNSS resilience, RAN1 agreed a MAC RAR TAC field that can indicate positive or negative timing corrections, plus an optional SIB-configured TA offset. Connected-mode frequency adjustment uses a new MAC CE with accumulative adjustment as the baseline. (R1-2607310)
3. For Rel-20 dual PRACH, the two transmissions in an RO pair count as one random-access attempt. RAN1 supports separate PRACH configurations for coexistence with legacy NTN UEs. (R1-2607310)

WHO PUSHED WHAT

OPEN QUESTION	COMPANY	WHAT THEY PUSH	TDOC
RAN2, agreements pending the session reports: how should mobility work without reliable GNSS location?	Qualcomm	Qualcomm asks RAN2 to consider using a provided cell reference location for location-based triggers, otherwise suspending them, and suspending location-dependent reporting whenever GNSS is not valid.	R2-2607552 available
	Nokia	Nokia proposes RRM-based operation as the baseline for GNSS-free mobility, with a configured RRM fallback whenever a location condition cannot be evaluated.	R2-2607138 available
	Huawei (with HiSilicon)	Huawei with HiSilicon proposes SSB-beam information and elevation-angle measurements for GNSS-free mobility.	R2-2607645 available
RAN2, agreements pending the session reports: can UEs with different uplink-compensation behaviour share a downlink-compensated cell or carrier?	vivo	vivo observes that existing specifications already support co-channel NTN and TN cells, which avoid same-cell sharing but duplicate broadcast and common-channel resources.	R2-2606661 available
	Apple	If RAN1 finds coexistence feasible, Apple asks RAN2 to consider allowing MIB cellBarred = notBarred for DTC UEs, configuring cellBarredNTN-r17 = notBarred for Rel-17 NTN UEs, and possibly separate uplink resources.	R2-2607405 available
	Thales	Thales argues existing access rules prevent unmodified UEs and NTN UEs sharing an NTN cell. RAN1 recorded the same observation.	R2-2607501 available
What TN UE antenna should coexistence evaluations assume?	OPPO	OPPO proposes -5 dB as the TN UE antenna gain, using the contribution's unit.	R4-2620404 noted
	ZTE (with Sanechips)	ZTE with Sanechips proposes an omni-directional TN UE pattern at 0 dBi.	R4-2621026 noted
	Ericsson	Ericsson proposes an isotropic TN UE pattern at 0 dBi, without beamforming.	R4-2621164 noted

KEY OUTCOMES

- **6GR study: mixed GNSS modes in one cell.** For the 6GR NTN study, UEs with different GNSS operation modes can operate simultaneously in one cell, and network functionality will control access by mode. Which mode combinations are allowed, and the details, are FFS. (R1-2607315)
- **Rel-20: initial-access timing correction.** To handle TA over-compensation, RAN1 agreed a MAC RAR TAC field for positive or negative corrections and an optional SIB-configured TA offset that the UE applies to all uplink transmissions when configured. The offset's granularity, range and per-beam or per-cell configuration are FFS. (R1-2607310)
- **Rel-20: connected-mode frequency control.** Connected-mode FAC uses a new MAC CE, with its structure coordinated with RAN2 and accumulative adjustment as the closed-loop baseline. The relative FAC range in the MAC CE and state handling at a reference change or satellite handover are FFS. (R1-2607310)
- **RAN4: higher-power-class draft CRs.** The register records endorsed draft CRs for n254 PC2 from Apple with Amazon and Globalstar, n255 PC2/PC1 at 3 MHz, and band 253 NB1/NB2 PC1.5. These are not yet agreed CRs. (R4-2620740, R4-2621402, R4-2621399)

Full brief with every quote, source and caveat: [HTML](#) · [PDF](#)

Coverage: RAN1 #126-bis, RAN2 #135-bis, RAN4 #120-bis (South Korea, 2026-10-12 to 2026-10-16), topic agenda items only. Scout read 34 recorded decisions and 689 company positions or passages; the full brief cites 15 TDocs and shows each verbatim quote, matched against the TDoc text. Summaries are Scout's reading. Register status not treated means the meeting recorded no decision on the document, not that it was rejected. Not covered: plenary decisions after the meeting, email discussions.

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