



# R17 Time Schedule

Huawei, Hisilicon, China Mobile, China Telecom, China Unicom,  
CATT, CAICT, OPPO, ZTE, Tencent



# Agreement in TSG-SA#83

## 📶 Agreement in TSG-SA#83:

- 📶 Stage 1 target date December 2019 (all normative work results to be at or more than 80 % completion by Sept 2019)
- 📶 **Target date** for stage 2 freeze is September 2020
- 📶 No SA2 meeting in August 2019 will occur.
- 📶 Endorsed to have 15 months/5 quarter Rel-17, we will check whether this is possible in coming SA plenaries in 2019; **by Dec. 2019 the Rel-17 schedule will be fixed.**
- 📶 There is no change to the agreement in SP-180235, scheduling and prioritization will be done on the basis of 6 ordinary meetings per year.

📶 Rel-17 Stage 2 was temporarily set to September 2020. **(2019 Q1 endorsement)**

# Situation 1 - no SA2 work scheduled 2019 Q3

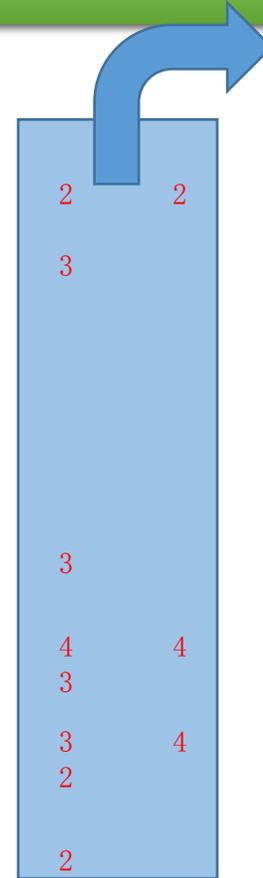


- 🌿 The endorsement “Target date for stage 2 freeze is September 2020” is decided in **2019 Q1**
  - No clear clue regarding the contents to be done for rel-17 in 2019 Q1
  - Quite a lot of works (important ones) comes into the mind and the planning of the whole R17 package after 2019 Q1
- 🌿 no Rel-17 work Scheduled in the SA2 Q3, so this means that the 15 month period **is really until December 2020** or we actually have a **12 month stage 2 release**.
  - Also there is limited time/TU allocated for R17 2019 Q4, each meeting only **around 10 TUs**.



# Situation 2- many topics ask 2020 Q4 extra work

		Jun, 19	Oct, 19	Nov, 19	Jan, 20	Feb, 20	Apr, 20	May, 20	Jul, 20	Aug, 20
		#134	#135	#136	#136AH	#137	#138	#139	#139AH	#140
		Req	Plan							
FS_5GSAT_ARCH	3	1	1	1						
FS_eNA_ph2	11 + 9		2	3	3	3	3	3		3
FS_eNPN	7 + 3.5		2	2	1.5	1.5	1	1.5		1
FS_5GLAN_enh	7 + 7		2	2	2	1	2	2		3
FS_eATSSS	9 + 6		1	2	0	2	2	2		2
FS_eLCS_ph2	8 + 6		2	2	2	2	2	2		2
FS_5WWC_enh	10 + 8		2	2	2	2	2	2		3
FS_eIMS5G	4 + 3		1	1	1	1	1	1		1
WI FLADN	1						0.5	0.5		
FS_AAI_LTE_NR	3 + 2	0	1	1	1	1	1			
FS_NG_RTC	4.5 + 2	0	1	1.5	1	1	1	1		
FS_ID_UAS-SA2	8 + 6	0	2	2	2	2	2	2		2
FS_MUSIM	5 + 2	0	1	1.5	1.5	1	1	1		
FS_enh_EC	10 + 9	0	2	2	2	2	2	3		3
FS_SB_SMS	3 + 1	0	1	1	1	1				
FS_5G_ProSe	17 + 12	0	2	3	3	3	3	3		4
FS_UPCAS	10 + 7	0	2	2	2	2	2	2		2
FS_5MBS	16 + 10	0	2	3	3	3	3	2		3
FS_UUI5	11 + 4	0	2	2	1	2	2	2		2
5G_AIS	2	0	0	0	0	0	1	1		
FS_eUEPO	9 + 6	0	1	2	2	2	2	2		2



Several items already schedule 2020 Q4 time

Too many exceptions make the 2020 Q3 stage 2 frozen no any sense



FS_eNS_ph2	6 + 3		1	1	2	2	1	1		1
FS_eV2XARC_ph2	4 + 2				1	1	1	1		1
FS_MPS	4 + 2		1	0.5	0.5	0.5	0.5	1		1
FS_IIoT	6 + 3		1	1	2	2	1	1		1

# Situation 3- prioritization vote result



	Total Votes	Operators	Vendors	Verticals
	108	37	37	34
<b>Acronym</b>				
enh_EC	61	20	27	14
eNPN	55	20	18	17
5MBS	50	15	13	22
eNA_Ph2	48	18	19	11
5G_ProSe	46	10	17	19
eNS_Ph2	44	20	14	10
IIoT	42	10	18	14
5G_AIS	38	13	13	12
MUSIM	38	12	15	11
eATSSS	35	9	16	10
UPCAS	35	15	18	2
5GSAT_ARCH	34	7	8	19
eV2XARC_Ph2	32	11	10	11
5GLAN_enh	30	12	9	9
eLCS_ph2	30	11	8	11
ID-UAS	25	7	11	7
UUI5	24	10	7	7
5WWC_enh	23	10	12	1
eIMS5G	22	13	5	4
eUEPO	22	7	11	4
5G_MCIoT	15	4	7	4
AAI_LTE_NR	15	8	4	3
EAV	13	4	3	6
FLADN	13	5	5	3
NG_RTC	10	4	4	2
MINT	9	5	2	2
MPS2	9	7	1	1
SB_SMS	9	4	3	2
SUP	6	2	2	2
	<b>833</b>	<b>293</b>	<b>300</b>	<b>240</b>

- The big items have common interest /top 7 above 40
  - Enh\_EC(19), eNPN(10.5), 5MBS(26), eNA\_Ph2(20), 5G\_ProSe(29), eNS\_Ph2 (9), IIoT (9)
- Top 7 items take 122.5 TU
  - Available SA2 TU is 131.5
  - No room for other important topics
- Extend to 2020 Q4 will release around at least 50 TUs for rel-17 work
  - More room for smaller items but valuable
  - More room for the R17 maintenance, and essential correction/enhancement after the first wave 5G deployment



# RAN Work Areas for Rel-17 scoping discussions

## 16 work areas endorsed at RAN#84 for email discussion

- Coverage\_enh (moderator: China Telecom) – 41 responses
- Sidelink\_enh (moderator: LG, Oppo) – 39 responses
- NR\_Light (moderator: Ericsson) – 37 responses
- NR\_multicast\_broadcast (moderator: Huawei) – 32 responses
- Multi\_SIM (moderator: Vivo) – 31 responses
- Small\_data (moderator: ZTE) – 25 responses
- NB\_IoT\_eMTC\_enh (moderator: Huawei) – 19 responses
- NR\_above\_52.6 GHz (incl 60GHz unlicensed) – 15 responses
  
- IIoT\_URLLC\_enh (moderator: Nokia) – starts after Sept
- MIMO\_enh (moderator: Samsung) – starts after Sept
- Non\_Terrestrial\_Networks (moderator: Thales) – starts after Sept
- IAB\_enh (moderator: Qualcomm) – starts after Sept
- Unlicensed\_enh (moderator: Nokia) – starts after Sept
- Powersaving\_enh (moderator: MediaTek) – starts after Sept
- RAN\_datacollection\_enh (moderator: CMCC) – starts after Sept
- Positioning\_enh (moderator: Qualcomm) – starts after Sept

## 12 work areas voluntarily started by companies after RAN#84 (even by those companies who were arguing for a 15-month release)

- XR and Cloud Gaming (Qualcomm) – 28 responses
- RAN Slicing (CMCC) – 25 responses
- MR-DC enhancements (Huawei) – 12 responses
- UAV (Ericsson) – 8 responses
- NR QoE (China Unicom) – 7 responses
- Flexible UL/DL resource utilization (LGE) – 6 responses
- Non-Public Networks (NTT Docomo) – 3 responses
- DSS between NR and LTE (Ericsson) – 2 responses
- 1024 QAM in DL in FR1 (Ericsson) – 1 response
- Deployment Option 6 (Reliance-Jio) – 2 responses (negative)
- NR Repeater (Commscope) – no response
- TCP enhancements (Mediatek) – no response

*Note: not all responses are positive*

There is a lot of interest in RAN to continue working on many areas and to start working on new areas across eMBB and verticals. Down-selection may prove impossible in Dec 2019, RAN will likely have to make room to accommodate the large industry interest in 5G. Even companies who argued for a 15-month release have started email discussions on unofficial work areas. 18 months is more reasonable for RAN.

# Proposal



- It is proposed that SA should discuss and endorse a more practical and reasonable schedule for Rel-17
- Target date for stage 2 freeze is December 2020
  - Target date for state 3 completion for R17 is September 2021 (maintain 3 quarters gap to finish the stage 3 work).