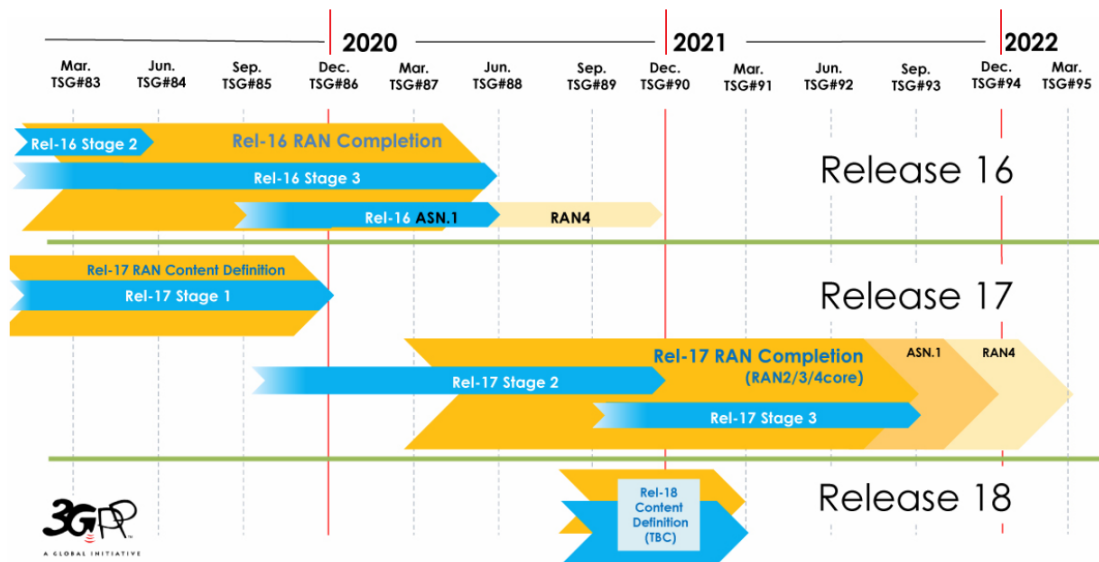


5G Rel-16 冻结后，Rel-17 要做这些事！

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3GPP Release 16 (Rel-16) stage 3 于本月 3 日初冻结，预计 Rel-17 stage3 将在 2021 年 9 月冻结。2020 年 12 月开始 Rel-18 内容定义。见下表。



Source: 3GPP TSG SA#87e, 17-20 March 2020, e-meeting document SP-200222

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Rel-15 和 Rel-16 回顾

3GPP Release 15 是第一个完整的 5G 标准，是 IMT-2020 的第一个里程碑。Release 15 于 2018 年冻结。

Release 16 是 5G 第二个标准，是 5G 的进一步发展，按照 3GPP 的说法，也就是 5G 第二个发展阶段的标准 ("5G phase 2")。较之 Rel-15，Rel-16 重点加强了场景 URLLC 和 mMTC 标准。

3GPP Release 15

- NR
- The 5G System – Phase 1
- Massive MTC and Internet of Things (IoT)
- Vehicle-to-Everything Communications (V2x) Phase 2
- Mission Critical (MC) interworking with legacy systems
- WLAN and unlicensed spectrum use
- Slicing – logical end-2-end networks
- API Exposure – 3rd party access to 5G services
- Service Based Architecture (SBA)
- Further LTE improvements
- Mobile Communication System for Railways (FRMCS)

3GPP Release 16

- The 5G System – Phase 2
- V2x Phase 3: Platooning, extended sensors, automated driving, remote driving
- Industrial IoT
- Ultra-Reliable and Low Latency Communication (URLLC) enhancements
- NR-based access to unlicensed spectrum
- 5G Efficiency: Interference Mitigation, SON, eMIMO, Location and positioning, Power Consumption, eDual Connectivity, Device capabilities exchange, Mobility enhancements
- Enhancements for Common API Framework for 3GPP Northbound APIs (eCAPIF)
- FRMCS Phase 2

Rel-17

Rel-17 将有 5G 更多系统增强功能，预计将于 2021 年完结。Rel-17 第 3 阶段预计于 2021 年 9 月冻结，Rel-17 ASN.1 and OpenAPI 预计 2021 年 12 月冻结。（注：ASN.1 是 ISO 和 ITU 的联合标准）。

2019 年 12 月 9 日至 12 日举行的 3GPP RAN#86 就 5G NR 的进一步发展做出了实质性决定。RAN 全体会议批准了 Release-17 的内容，包括功能列表和每个功能细节。

Release 17

- NR MIMO
- NR Sidelink enh.
- 52.6 - 71 GHz with existing waveform
- Dynamic Spectrum Sharing (DSS) enh.
- Industrial IoT / URLLC enh.
- Study - IoT over Non Terrestrial Networks (NTN)
- NR over Non Terrestrial Networks (NTN)
- NR Positioning enh.
- Low complexity NR devices
- Power saving
- NR Coverage enh.
- Study - NR eXtended Reality (XR)
- NB-IoT and LTE-MTC enh.
- 5G Multicast broadcast
- Multi-Radio DCCA enh.
- Multi SIM
- Integrated Access and Backhaul (IAB) enh.
- NR Sidelink relay
- RAN Slicing
- Enh. for small data
- SON / Minimization of drive tests (MDT) enh.
- NR Quality of Experience
- eNB architecture evolution, LTE C-plane / U-plane split
- Satellite components in the 5G architecture
- Non-Public Networks enh.
- Network Automation for 5G - phase 2
- Edge Computing in 5G
- Proximity based Services in 5GS
- Network Slicing Phase 2
- Enh. V2x Services
- Advanced Interactive Services
- Access Traffic Steering, Switch and Splitting support in the 5G system architecture
- Unmanned Aerial Systems
- 5GC LoCation Services
- Multimedia Priority Service (MPS)
- 5G Wireless and Wireline Convergence
- 5G LAN-type services
- User Plane Function (UPF) enh. for control and 5G Service Based Architecture (SBA)

These are some of the Rel-17 headline features, prioritized during the December 2019 Plenaries (TSG#86)

Start of work: January 2020

Full details of the content of Rel-17 are in the Work Plan: www.3gpp.org/specifications/work-plan

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