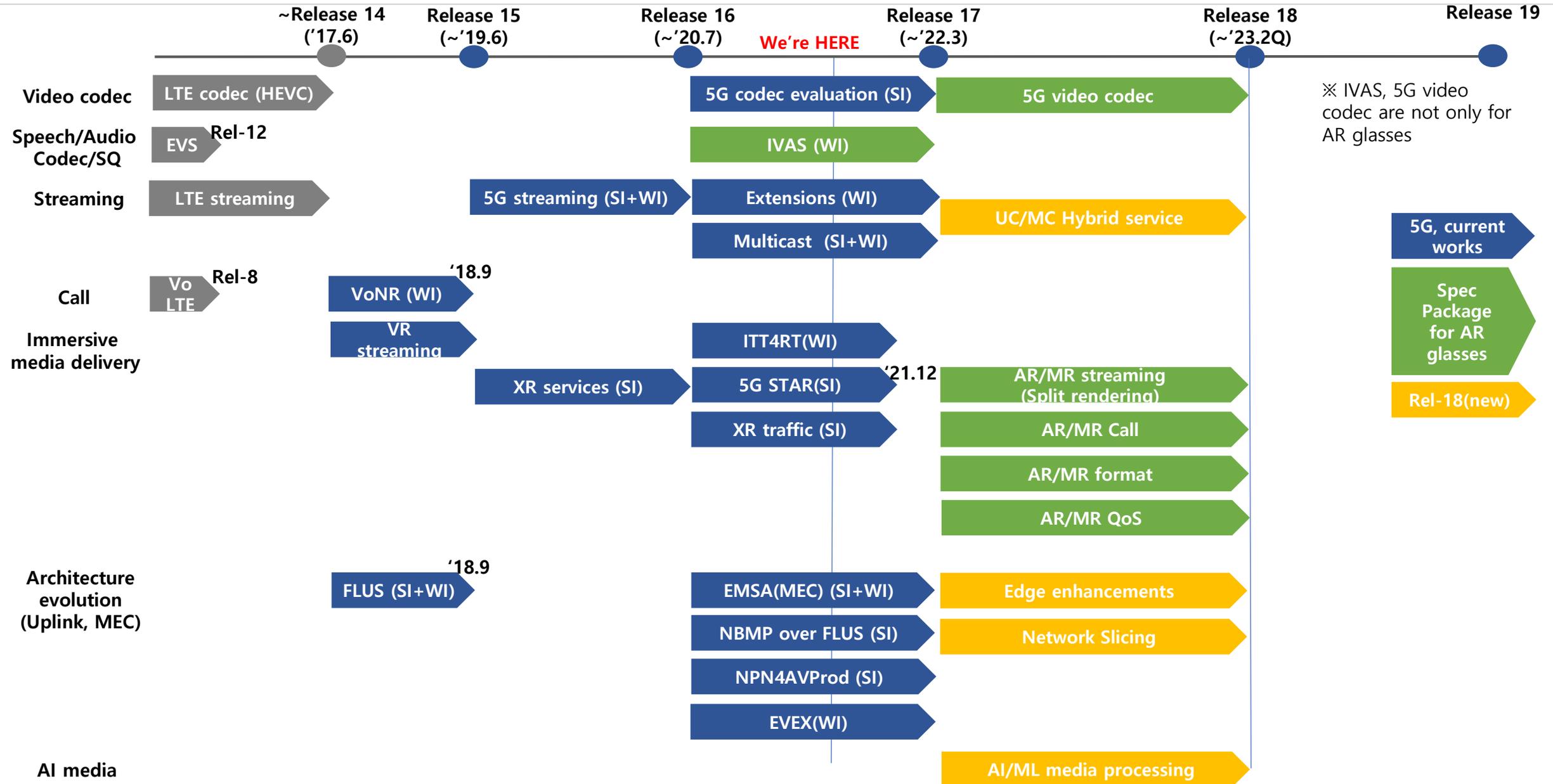


# Samsung view on SA4 Rel-18 roadmap

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# Samsung's view on SA4 Rel-18 roadmap

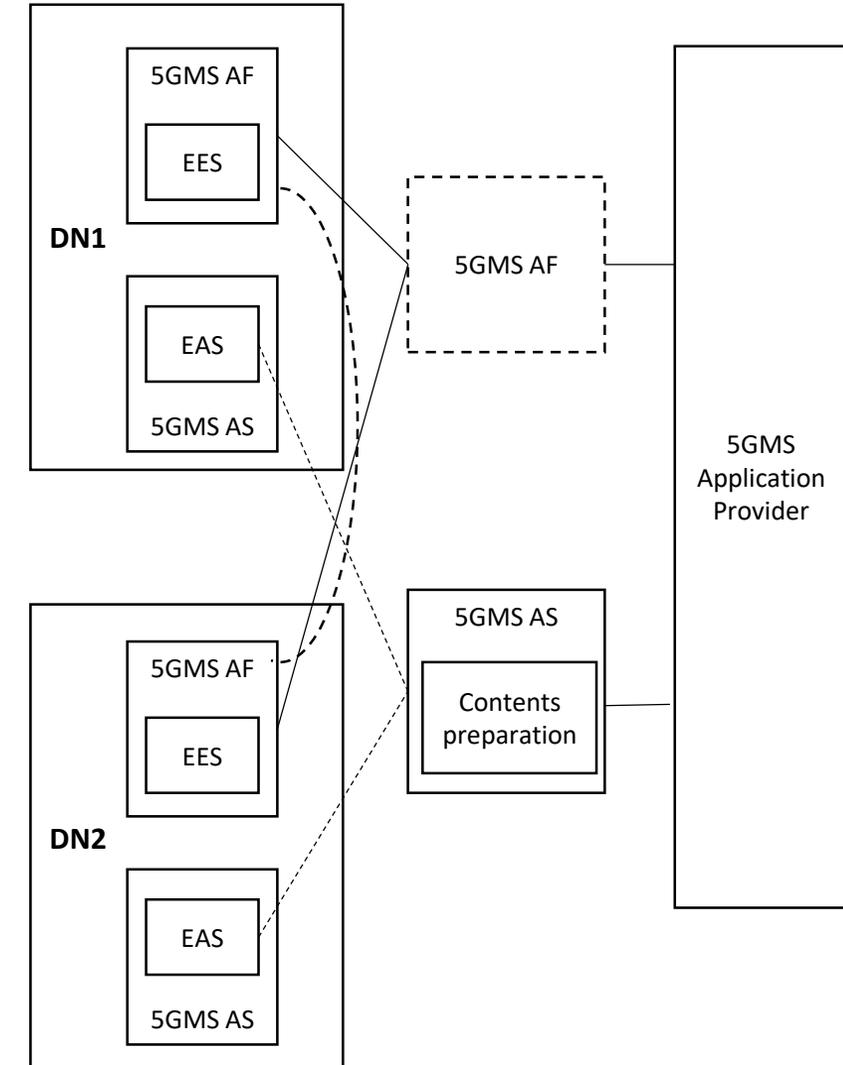


- High priority for supporting the commercial requirements
- High priority for supporting new immersive media service as the distinguishable service of 5G
- Making 5GMS being adopted and stability is most required
  - Adding essential features
  - Integration of 5G Architecture evolution
  - 5GMS Ref. SW collaboration with the industry forum
- Align with SA1 & SA2 (for identifying the potential impact on SA4)
  - TR 22.873 “Study on evolution of the IP multimedia Subsystem(IMS) multimedia telephony service”
  - TR 22.874 “Study on traffic characteristics and performance requirements for AI/ML model transfer”
  - TR 22.847 “Study on supporting tactile and multi-modality communication services”

- AR/MR Format
  - Define a set of profiles for immersive media and scene description as entry point
  - Payload format : how each of components to be packed into each protocol (e.g., RTP)
- AR/MR Streaming
  - Identify streaming procedure in cooperation with 5G edge
  - Generic Real time Streaming Architecture for integrating into 5GMS architecture
  - QoS handling: QoS for WebRTC, framework for adaptive streaming
- AR/MR Conversational
  - Potential approaches addressed in TR26.998 (Single & self-contained MTSI application, Embedded MTSI client)
  - SIP/SDP protocol extension, AR-(DC)MTSI procedure, APIs for MTSI client and AR application

## 2. 5GMS Evolution

- Edge enhancement
  - Supporting a service spanning multiple DNs.
- Application provisioning
  - Provisioning of applications for user services (e.g. split-rendering) in addition to the media processing for the contents hosting and distribution
- Network slicing
  - Dynamic policy for media services with multiple network slices
  - EAS relocation with network slicing
  - Optimizing network slice parameters using collected metrics
- Hybrid services
  - Integration of 5GMS unicast-based and 5MBS delivery



- New codec expected to provide significant benefits in quality and network utilization on 5G
- General Requirements
  - Provide improved compression capability over prior video coding standards
  - Well suited for 5G video services and emerging delivery protocols and networks
  - Complexity suitable for real-time encoding and decoding implementations
  - Need for a licensing-friendly video codec
- The following normative work will need to be carried out for the new codec:
  - Provide RTP-based delivery mechanism
  - Extensions to DASH/CMAF
  - Add to TV media profiles for 4K-TV and 8K-TV
  - Add support (signaling, decoding capabilities etc.) in 3GPP services such as 5G Media Streaming and MTSI

## ■ Background

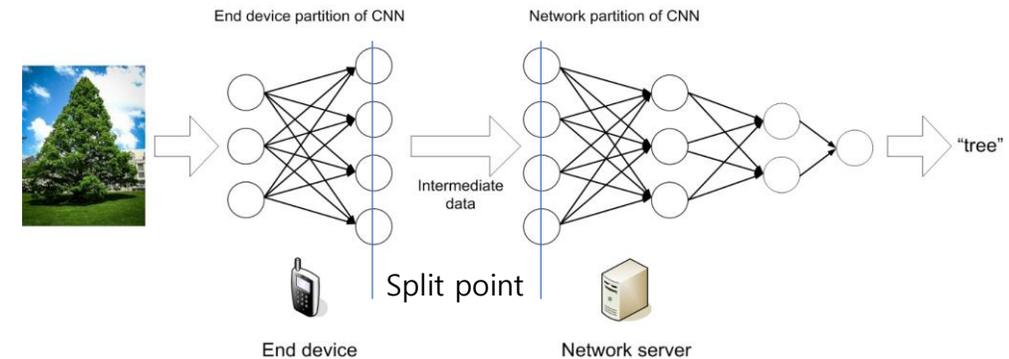
- TR 22.874, Analyzed AI/ML model transfer in 5GS
- Split AI/ML operation between endpoints
- AI/ML model/data distribution/sharing over 5G system
- Distributed/Federated learning over 5G system

## ■ SA4 potential impacts

- Investigate need to define new AI/ML based media processing
- Support provisioning of AI/ML models transfer(alignment with SA2)
- Framework for AI/ML model split based on requirements (service, media, network, device characteristics)

## ■ Potential Objectives

- Identify SA4 relevant AI/ML use cases and applications
- Investigate traffic characteristics and exchange of various AI/ML models and methods for the use cases
- Identify protocols and formats of the models, metadata and intermediate data
- Recommend integration with SA4 architectures (5GMS, MTSI, etc.)



- Focus on the commercial requirements
- Regular W/S for defining the new Release
- Create the roadmap through the W/S and define the main themes and achievements
- Keep the timeline of the spec for delivering the standard to the market on time
- Super session for sharing SA1/SA2/RAN activities, MNOs/OTT providers' voices

# Thank You



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