

FMC activities in ITU-T SG13

1、 Motivation and background

During 2016, ITU-T FG IMT-2020 initiated a study of FMC in 5G.

The FMC study had the following objectives:

- 1) Seamless service operation from the end-user perspective across heterogeneous fixed networks and mobile networks.
- 2) Seamless service provisioning from the service provider's perspective across heterogeneous fixed and mobile networks.
- 3) Generalized mobility in FMC (i.e., terminal device mobility, user mobility and session mobility). For a given scenario, different levels of mobility may be needed.
- 4) Ubiquity of service availability where the end-users can enjoy virtually any application, from any location, on any terminal device. The service subscription takes into account any limitations imposed by the characteristics of the particular access technologies and the terminal devices being used.
- 5) A common network architecture for fixed and mobile convergence in 5G, i.e., the FMC network architecture is required to support newly-defined RATs for IMT-2020, evolved IMT-advanced RATs, WLAN access networks, and fixed broadband access networks.

The FMC work from the Focus Group has been assigned to Question 23 of Study Group 13 (Q23/13) for further progress during study period 2017 -2020.

2、 Outputs from IMT-T FG IMT-2020

At end of 2016, the FG IMT-2020 delivered a report to SG13 including two FMC related documents, which were not fully completed. The documents provide input for SG13 on the topic of FMC during the new study period from 2017 to 2020.

The related documents are publicly accessible at the link [FG IMT-2020 Deliverables 2016](#).

The FMC related documents to SG13 are introduced in the following:

1) O-44: Requirements of IMT-2020 fixed mobile convergence

This document, targeted as a draft Recommendation, aims to define the scenarios and requirements on IMT-2020 fixed and mobile convergence over cellular access, fixed access and WLAN access networks. This document will address, but not limited to, consistent users experience, access independence, unified user plane, connection management, interworking, and charging and accounting for fixed and mobile convergence in IMT-2020. This document is intended to be the input of the FG IMT-2020 to its parent group SG13 for further development of this draft Recommendation.

2) O-45: Unified network integrated cloud for fixed mobile convergence

This document proposes a technical report on a unified cloud based Fixed and Mobile Convergence architecture in IMT-2020 which includes the motivation of the architecture and the related key technologies. This document will also address FMC service requirements in IMT-2020 and how the whole IMT-2020 network architecture including fixed and mobile network should evolve to be more efficient, cost-effective, and flexible to accommodate new services.

This document is the initial study on IMT-2020 FMC architecture and there are many other issues to be studied further based on this baseline document in the next period of SG13.

3、 FMC draft recommendations and time plan

Based on the outputs from ITU-T FG IMT-2020, SG13 Q23/13 is initiating two draft Recommendations, which are scenarios and requirements of FMC (Y.FMC-REQ), and high-level architecture and solution description of FMC (Y.FMC-ARCH).

The draft time plan for these two Recommendations is as follows:

- 1) Recommendation on requirements for FMC (07/2017)
- 2) Recommendation on FMC high level architecture (early 2018)