## Gateway Service for Integration of Heterogeneous Networks using Different **Interworking Solutions**

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Abstract— Heterogeneous networks with different radio access technologies such as GSM, UMTS, LTE, WiMAX, and WLAN has been deployed to support various communication services. Network operators want to manage the heterogeneous networks using interworking solutions such as MIH (Media Independent Handover), ANQP (Access Network Query Protocol), and ANDSF (Access Network Discovery and Selection Function). However, the interworking solutions were developed without any compatibility. The network operators have difficulties to manage heterogeneous networks using different interworking solutions. This paper proposes gateway service that supports cost-effective integration of heterogeneous networks using different interworking solutions. The gateway service is provided through gateway function of general network entities by using message encapsulation with MIH protocol header. The gateway service can help network operators manage integration of heterogeneous networks effectively.

## Keywords- Gateway service, interworking solutions, MIH, ANQP, ANDSF



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