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3rd Generation Partnership Project (3GPP), Service Architecture Working Group 2
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RE: 3GPP Response to ATIS ESIF Correspondence

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Dear 3GPP Leaders,

Thank you for your response to the ATIS ESIF correspondence on the proposed standard on *Parameter Conveyance for Location Determination of Devices Attached to Access Networks*. With respect to the question of the performance of location determination techniques supported by this framework and, in particular, whether they would meet emergency service requirements such as those defined by the US FCC, ESIF is not aware of any studies specifically done for the Flexible Location Determination Function (LDF) to Access Measurement Function (AMF) Protocol (FLAP) framework that demonstrate or imply impacts on compliance with different regulatory requirements (e.g., US FCC requirements). ESIF also wishes to clarify that this framework does not specify any particular location determination technique. ESIF made efforts to communicate this characteristic of the proposal in the document and thanks 3GPP for highlighting that further clarification may be required.

The architecture and protocols defined are generic and provide a common mechanism by which the values of network parameters pertinent to a particular target device can be conveyed from the network elements that are aware of this information to the network element responsible for determining location (the LDF). The LDF then uses the information to calculate the location of the target device according to methods and algorithms that are independent of the conveyance function.

As such, the FLAP framework is suitable for conveying the same types of cell-identity, radio interface timing, and signal strength measurements that are typically used for phase 2 CMRS E911 applications today as well as similar types of measurements for packet-only wireless networks such as WiMAX, LTE, and WiFi but, also, for conveying other types of measurements such as circuit identifiers which may be applicable in wired access networks such as DSL and cable. Further, the framework does not preclude the use of measurements obtained by and conveyed from the target device itself, such as GPS measurements. These latter are out of scope as far as the framework is concerned.

The best answer to the question is that the FLAP framework is capable of supporting location determination techniques covering a range of varying capabilities but does not, of itself, define what those location determination techniques are.

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ESIF acknowledges that technology-specific solutions for the measurement-conveyance function have previously been defined for some access networks – in particular 2G and 3G cellular networks - as, for example, manifested in the 3GPP BSSLAP protocol and some aspects of the PCAP protocol respectively. In situations such as these where solutions have been designed, specified, implemented, and deployed, ESIF does not envisage that the proposed FLAP framework would displace that existing investment in standards and physical infrastructure. ESIF envisages the FLAP framework as being able to be adopted for new network types and providing a specification for an implementation of the measurement conveyance function that is common across a range of network technology types. This would reduce the load on SDOs with respect to developing and maintaining specifications for this common function. It would also reduce the physical effort required for implementing measurement conveyance by creating a reusable technology that can be applied repeatedly to different access network types – lowering the cost of providing location solutions for vendors and operators alike. For example, 3GPP may consider utilizing the framework within the proposed E-UTRAN control plane location specification for LTE. Efforts had been made in the document to ensure that it was understood that ESIF did not recommend the FLAP framework as a replacement for existing technologies and thanks 3GPP for highlighting that further clarification may be required.

With respect to the comment on SUPL, ESIF notes that the Technical Report is focused on a mechanism for the conveyance of measurements directly from access network elements to the LDF. A fundamental operating principle of SUPL is that all measurements are obtained by and conveyed from the target device (the SET) to the LDF (the SLP). As such, the proposed FLAP framework does not fall within the architectural scope of SUPL and ESIF observes that it has no direct application to the SUPL specification. ESIF also notes that the i2 and i3 architectures defined by NENA and the ECRIT architecture defined by the IETF identify the LIS function and that the LIS function does not restrict measurement conveyance to just the device-LDF channel. Similarly, the control plane solutions provided for cellular networks do not assume this restriction. The IMS emergency services recommendations of 3GPP are not, to our knowledge, limited or otherwise restricted to SUPL and the FLAP framework is intended for those alternative approaches to providing a location service.

ESIF appreciates the review and input provided by 3GPP and welcomes additional input.

Sincerely,

Dave Irwin
ATIS ESIF Chair

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