

TSG-SA WG1 #25
Montreal, Canada, 28 June - 2 May 2004

S1-040709

Title: Reply to request for Guidance on E112 Accuracy
Reply to: S2-042343 (S1-040561)
Release: Release 6
Work Item: LCS2

Source: SA1
To: SA2, TISPAN,
Cc: SA, GSMA

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Attachments: S1-040561

SA1 agree that proposal 1), as described in the attached liaison is the best solution for Release 6. SA1 also believes that the specification of location accuracy for E112 emergency services should be strictly confined to that currently required by the European Regulatory authority i.e. 'best effort'.

Actions

None

Date of Next SA1 Meetings:

SA1 SWG ad-hoc	23-27 August 2004	Wien, Austria
SA1#26	11 -15 October 2004	Sophia Antipolis, France
SA1#27	17 - 21 January 2005	Cape Town, South Africa

3GPP TSG-SA WG2 Meeting #40

Tdoc S2-042343

Sophia-Antipolis, France, 17th – 21th May 2004

Title: Request for Guidance on E112 Accuracy

Release: Rel 6

Work Item: LCS2

Source: 3GPP TSG-SA WG2

To: 3GPP TSG-SA WG1, TISPAN

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1. Overall Description:

In creating modifications to 23.271 in order to support emergency caller location delivery to a PSAP, SA2 has uncovered an issue relating to providing a location estimate that meets the accuracy requirements according to our understanding.

Late last year, SA1 confirmed the EMTEL requirement that the wireless network location estimate “best available” to be interpreted as “most accurate”. In attempting to fulfill this requirement, SA2 notes that the following scenario will arise, resulting in a potentially unacceptable service delivery. How this will happen is described by detailing how the location is delivered today.

When the UE makes an emergency call, one of the steps that the mobile switch performs is to initiate a location request in order to capture the UE’s geolocation. Once this position is obtained, it is forwarded to the GMLC, along with details about the call. This position is then used by the GMLC to reply to an emergency operator’s request for the mobile position.

Since the accuracy requirement is for the “best” location available, operators are free to return a location based on the serving cell location for existing mobiles. Since this is static information, the location estimate is quickly available to the PSAP. On the other hand, if the UE is capable of advanced location methods, e.g., GPS, then obtaining the location estimate takes much longer.

Thus, with the existing deployments, the PSAP operators will learn that they can get location (at cell accuracy) very quickly, based on the fact that the call originates from a non-GPS capable UE. This system behavior will then become the expected norm. However, if an emergency call originates from a GPS-capable UE, the location will not be quickly available, and the operator will assume that in this case, the system is malfunctioning.

In attempting to avoid this situation, SA2 has come up with a number of alternatives, and seek guidance from SA1 and TISPAN on the best course of action.

1. Implement the capability as described above and accept the consequences. Provide PSAPs with information that high accuracy locations take a longer time. This course meets all current requirements but may lead to a bad service experience.
2. Relax the accuracy requirement so that an initial location estimate would always be quickly available. This course then does not meet the accuracy requirement, but does provide a satisfactory (consistent) service experience. Emergencies that would benefit from having a high accuracy estimate would require the PSAPs to ask for it (which they might not do, based on the fact that this does not produce tangible results in the vast majority of cases).
3. Modify the procedures to provide cell level accuracy quickly, and also initiate a high accuracy request if the mobile and network capability warrants such action. This course meets all requirements, but requires extensive modifications to the existing procedures. This also requires the PSAPs to re-query to get the more accurate location.
4. Modify the procedures to provide cell level accuracy quickly, and if the mobile and network capability warrants such action, notify the PSAP that a high accuracy estimate may be available if the PSAP requests current location with high accuracy. This course does not strictly meet the accuracy requirement, but provides a satisfactory service experience, and allows the operator to re-query for a high accuracy location.

SA2 would also like to point out that in considering their response, SA1 and TISPAN also consider the fact that modifying procedures and protocols for deployed systems at earlier release levels is difficult at best. SA2 is currently embarking on the 1st solution, and would need guidance to change.

2. Actions:

SA2 kindly requests SA1 And TISPAN to provide guidance on the best course of action, or suggest an alternative course if none of the above are acceptable.

3. Date of Next TSG SA WG 2 Meetings:

TSG-SA2 Meeting #41	16-20 August 2004	Montreal, Canada
TSG-SA2 Meeting #42	11-15 October 2004	Sophia-Antipolis, France