



Reply LS to LS on "Reservation of two new sub domains under '.3gppnetwork.org'" from 3GPP TSG-CN (NP-040622)

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High Level Document Summary:

This document is a reply LS to 3GPP on reserving a certain domain name for WLAN implementation but which will never be assigned and, if it be used for any other reason, GSMA IREG will have to approve it. This is in order to maintain the stability and integrity of the GRX.

This document is the output from an emergency conference call held at 14:00 GMT on Thursday 13th January 2005.

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To: 3GPP TSG-CN, 3GPP TSG-CN WG 1, 3GPP TSG-CN WG4, 3GPP TSG-SA WG1
Copy: N/A

From: GSMA IREG
Subject: Reply LS to LS on "Reservation of two new sub domains under '.3gppnetwork.org'"
from 3GPP TSG-CN (NP-040622)
Date: 13/01/2005

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Introduction

GSMA IREG thanks 3GPP TSG-CN for their LS on "Response LS to GSMA IREG on Reservation of two new sub domains under ".3gppnetwork.org" in connection with WLAN Interworking (NP-040622).

3GPP TSG-CN asked GSMA IREG to consider the additional information presented in this LS, discuss with CN1 and CN4 participants and evaluate whether the "Alternative NAI" based solution is acceptable and for GSMA to respond formally to SA1, CN1 and CN4 before the 14th – 18th February TSG CN working group meetings. GSMA IREG also notes that 3GPP TSG-SA WG1 are meeting on the 17th January 2005 and so has abnormally expedited discussion and conclusion on this subject.

Discussion

In the information provided in the received LS from CN, it was stated that it would be a relatively small amount of users using the manual PLMN selection in a smaller number of situations than for automatic PLMN selection. GSMA IREG notes this but also notes that this is still only a prediction/opinion and not an inevitability (such factors which decide this include a combination of user ability and MMI).

However, GSMA IREG also considered extra information as discussed on the 3GPP TSG-CN WG4 mailing list. Specifically, the following:

- RADIUS does not use DNS to find a next hop, only Diameter does. RADIUS uses only static look-up tables.
- The use of DNS in Diameter to look-up the next hop is optional. A static look-up table can still be used as the only method, or, the method used *before* a DNS look-up is performed (as per section 5.2 of the "Diameter Base protocol" - IETF RFC 3588).
- Negative caching can be used to limit previously determined failed look-ups to certain realms/domains. These can be set per domain/sub-domain. However, it was noted that negative caching is only an option and relies on configuration on the client side.
- If the WLAN AN is owned by an operator, then the look-up to DNS can be blocked for certain realms from the first AAA hop (as the operator will own this first AAA hop).
- Currently only WLAN ANs owned by operators can be connected to the inter-PLMN IP backbone network known as the "GRX" and they have a set of recommendations to adhere to. It is expected that if non-operator owned WLAN ANs are allowed to connect to the GRX, then they too will have to adhere to these recommendations, if not a stronger set (e.g. to limit their use only for WLAN interworking purposes).
- It is foreseen that static look-up tables (at least in WLAN ANs owned by operators) will more than likely be the only method of finding the next AAA hop in Diameter; there

currently is no business case to provide for the extra functionality needed for Diameter peer discovery using DNS (in this use case).

Therefore, it was noted that although the probability of DNS requests for the non-existent domain name reaching the GRX's DNS servers in this use case is still not zero, such probability is much lower than originally conceived and potentially quite manageable. It was also noted that it could possibly be made lower still by adding recommendations in GSMA IREG Permanent Reference Documents (PRDs).

Conclusion

GSMA IREG, before accepting the proposal from 3GPP TSG-CN WG4, would like to modify the proposed sub-domain to the following which is considered to be less prone to configuration errors (e.g. mis-spelling):

`unreachable.3gppnetwork.org`

Finally, but most importantly, GSMA IREG accepts the use of the above mentioned domain name *only* in the context for which it was originally requested. If the "Alternative NAI" is to be used for any other purpose, i.e. something other than for obtaining a list of PLMNs connected to a WLAN AN in the I-WLAN work item, or the sub-domain is to be used in any other URL/URI etc. then GSMA IREG shall be requested to approve this sub-domain for the new use case(s). This is because GSMA IREG in principle does not agree with the concept of the mis-use of DNS in performing look-ups that are deliberately meant to fail, but in this *particular* use case, GSMA IREG accepts that the probability of DNS look-ups for the domain name ever actually reaching the GRX's DNS servers are very small and can, to a certain extent, be controlled.

Actions:

GSMA IREG kindly requests **all 3GPP plenary and working groups addressed in this LS** to note the following:

- GSMA IREG can now accept the reservation of the requested sub-domain of "3gppnetwork.org" but with the proposed modified name change (see above).
- GSMA IREG be requested for approval for further uses of this sub-domain in addition to the use currently being proposed in 3GPP I-WLAN work item so that the stability and integrity of the GRX can be maintained.

GSMA IREG kindly requests **3GPP TSG-CN** specifically to inform GSMA IREG if/when the proposed sub-domain (with the proposed modification to the naming) is approved so that GSMA IREG can set about updating their documentation set.