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Title: IETF-3GPP Report
Document for: Discussion

This document highlights the main areas of collaboration, the results of the last three months and also some recommendations derived from this experience.

Summary:

- 3GPP participated in the last IETF meeting - in March - with two presentations supported by Keith Drage, covering the IMS architecture and Thadeus Kobylarz covering the charging requirements.
  Note: it was very useful to present the 3GPP IMS architecture and to show how, using the signaling path, many networks/operators could potentially be involved in a call. It was agreed that several issues need settlement (e.g. notification from a UA in a proxy-initiated de-registration may use the SIP presence draft as a potential solution).

- The 3GPP project plan was updated to reflect the CN IETF dependencies.

- Monthly discussions were promulgated, with the ultimate goal of utilizing the Internet functionality, when possible, in the 3G wireless network.

- SIP's was a slow standardization process but the group was split into SIP and Session Initiation Protocol Project INvestiGation (SIPPING) groups, to increase its efficiency.

- An IETF IPNg/3GPP ad-hoc was organized and the SA WG2 coordinated and presented the 3GPP system architecture in order to improve the knowledge of the 3GPP Project.

- The IETF/3GPP collaboration process had passed to the final stage, and the review of the IETF-3GPP collaboration draft was finalized in April.

AAA/Diameter

Initially the SA5 approved a liaison statement in February (TdocS5-010127) summarizing the release 4 AAA requirements. Presently, all fourteen salient differences between the Charging rapporteur group protocol requirements and the main IETF AAA protocol requirement document are incorporated into the RFC 2989.

The Diameter Based Protocol is intended to provide an AAA framework for Mobile-IP, NASREQ, and ROAMOPS (Roaming Operations). This document, <**draft-ietf-aaa-diameter-05.txt**>, issued in June 01, specifies the "message format, transport, error reporting and security services to be used by all Diameter applications and must be supported by all Diameter applications and must be supported by all Diameter implementations."

The following timeline is currently proposed for this document:

- Service requirements finalized by 1st of July
- IESG review scheduled in September

- Interoperability test event - 1st week in October.

Considering the current stage of development, and with efficient coordination, it appears possible to have the first AAA charging protocol version completed within the Release 5 timeframe.
Note: <**draft-ietf-aaa-diameter-02.txt**> was issued in April.

SIP

IETF SIP Group Reorganization

This was a slow standardization process but the group was split into SIP and Session Initiation Protocol Project INvestiGation (SIPPING) groups, to increase its efficiency.

The Session Initiation Protocol (SIP) working group is chartered to continue the development of SIP, currently specified as proposed standard RFC 2543. The SIP working group will concentrate on the specification of SIP and its extensions (i.e. general-purpose requirements for changes to SIP provided by other working groups, including the SIPPING working group).

The SIPPING working group is chartered to document the application of SIP to certain domain tasks and to develop requirements for the changes or extensions to SIP needed to accomplish those tasks. The SIPPING working group will concentrate on the frameworks, requirements, and practices related to SIP and its extensions, and will not specify changes or extensions to SIP
The specific deliverables of the group are:

- Analyze the requirements for application of SIP to several different tasks (e.g. SIMPLE that is using SIP for instant messaging and presence).
- Support seamless inter-working between ISUP and SIP for the phone-to-phone call without making SIP overly complex for the calls between the PSTN/ISDN and IP phone.

Tracked Documents

The specific deliverables of the SIP and SIPPING groups that are related with the existing 3GPP working items:

1. The RFC 2543 is the only work on SIP that can be referenced. The main SIP document, RFC 2543, is currently being updated by a new id **draft-ietf-sip-rfc2543bis-03.txt**, revised at the end of May.
   The following timeline is currently proposed for this document:

   - Draft-03 ready in late May
   - Draft-04 should be ready in September
   - Last call process is scheduled for 6th of October
   - Conclusion collections and integration by 3rd of November
   - Final document ready - 24 of November
   - Available for IESG review at the 15 of December

Note: for some subjects such as codecs negotiation the solutions are very broad. Additional work may be needed to align the draft with the current CRs.

2. Reliability of provisional responses in SIP (**draft-ietf-sip-100rel-02.txt**). This document defines a new PRACK method (i.e. new header fields) and it does not have dependencies on 2543bis. The following timeline is currently proposed for this document:

   - Ready for the IESG review by 15 of September.

- Final document ready - 15th of October
- Document submission - 1s half of November

3. Integration of resource management and SIP. This document **(draft-sip-manyfolks-resource-00.txt)** discusses how establishment of QoS and security procedures can be made a precondition to sessions initiated by the SIP. It proposes an extension to SIP to add a new COMET method. The current version does not have dependencies on 2543bis. The following timeline is proposed for this document:

   - Ready for IESG review by 15th of September
   - Final document ready - 15th of October
   - Document submission - 1st half of November

4. SIP extensions for caller identity and privacy (**draft-ietf-sip-privacy-00.txt**). This document defines new Anonymity and Remote-Party-Id headers and the extensions that allow the parties to be identified either by name or by type, the latter of which can be used to identify some group of callers and callees. There are no known issues, and only few comments were received. The following timeline is currently proposed for this document:

   - Ready for the IESG review by 1st of September.

   Note: This document was not on the SIP/SIPPING calendar, but this matter was remedied. However, 3GPP should be proactive to prioritize the service requirements (e.g. call trace, called ID, emergency calls).

5. SIP extensions for media authorization **(draft-ietf-sip-call-auth-00.txt**). This document defines a new Media-Authorization header. It was accepted as a SIP WG item in December and it depends of 2543bis draft as uses 183 response.

   - This draft will be included in the SIP group calendar
   - It was ready for the last call in April
   - Its schedule will be reviewed at the next meeting.

6. SIP event notification extension is defined by the **draft-ietf-sip-subscriber-notify-03.txt**. The purpose of this extension is to provide a generic framework for the SIP nodes to request notification from remote nodes. It can be used for many purposes such as network management. This document expires in August and the document should be:

   - Ready for the IESG review by 7th of October

7. SIP calls control transfer. The **draft-ietf-sip-cc-transfer-04.txt** defines the SIP extensions within the call control. The following timeline is proposed for this document:

   - Ready for the IESG review by 1st of August

8. The encapsulation of ISUP over SIP messages using MIME format has become a standard in the IETF. This document defines the MIME types for application/ISUP and application/QSIG objects for use in SIP applications.

9. The mapping of ISUP-over-SIP. The **draft-ietf-sip-isup-00.txt** provides the intelligence of routing as well as service creation capability over the SIP network in the following call scenarios: PSTN phone-to-PSTN phone via SIP network, PSTN phone-to SIP phone, SIP phone-to PSTN phone. The timeline for this document is:

- Ready for the IESG review in 1st of September.
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10. SIP-H.232 Interworking. The timeline for the **draft-agrawal-sip-h323-interworking-reqs-02.txt** is as follows:

    - Ready for the IESG review in July

11. ISUP to SIP mapping. The **draft-ietf-sip-isup-header-00.txt** describes a way to perform the mapping between the two signaling protocols.

    - Not scheduled

SIP Possible Dependencies

The following documents are temporarily referenced in 3GPP documents (e.g. TS 24.229 - IP Multimedia Call Control Protocol based on SIP and SDP):

1. Draft-ietf-sip-callerprefs-03.txt; it describes the caller preferences and caller capabilities
2. Draft-ietf-sip-serverfeatures-04.txt; it describes the service features supported by the header
3. Draft-ietf-sip-state-01.txt; it describes the SIP extensions for supporting distributed call state
4. Draft-ietf-sip-session-timer-04.txt;
5. RFC 2327 (April 1998): “SDP: Session Description Protocol”.

Ipv6

An IETF/3GPP meeting was held at the end of May in Redmond. The 3GPP members presented an introduction to the 3GPP architecture, the concepts of the UMTS packet domain, the Ipv6 requirements on the CN and UE systems and the possible Ipv4/Ipv6 transition methods. As examples, three alternatives were discussed: dual stack, NAT/PT and tunneling (see 23.221).

It was proposed to form an IETF/3GPP design team with specific interests on some questions raised at the meeting (e.g. the PDP context support of multiple IP addresses). The general idea is that the design team will get together, review the issues and submit their work. They may correspond on the main list, on private lists, or however they need to get their work done. This is not a formal structure.

Other Area Dependencies – Observations

1. XML encoding for SMS messages. The <**draft-koonen-sms-xml-01.txt**>, posted on April 18, 2001, presents an encoding and simple protocol for describing and submitting SMS messages over the Internet (i.e. between service providers and SMS gateways)
2. SIP security. SIP has the built-in mechanism for the end-to-end security using PGP and related things. However, the crossing of the firewalls and NATs by application layer protocols like SIP is still a problem. The security has become the main focus especially for SIP. In this context, at the last IETF meeting a tutorial on security (http://jis.mit.edu/sectutorial) was presented.

3. At the last IETF meeting an unofficial BOF was conducted among the SIP WG participants to formulate the features needed for SIP emergency services. An URL (http://www.cs.columbia.edu/sip/emergency.html) has been established for this particular purpose.
4. Two documents relating to the smart cards were listed in January but there is no progress to report:
   - The "draft-guthery-tcp7816-01.txt draft describes the transport of TCP and UDP packets over the IP layer of ISO 7816 integrated circuit (“smart”) cards with particular attention to header compression. It expires in July and there is no working item defined in Release 5.
   - The "draft-guthery-ip7816-01.txt" draft describes the transport of IP datagrams and ARP messages over the ISO 7816 link layer of integrated circuit (“smart”) cards. It expires in July and there is no working item related with this item in Release 5.
5. AVT WG supports the real time protocol (RTP) to enhance its capabilities for codecs with improved performance that can be used by SIP.
6. SIMPLE WG supports to enhance SIP capabilities for integration with the real-time instant messaging (IM) and presence.

Recommendations

1. 3GPP individual members are encouraged to be active within the IETF via mailing lists and participate in the various studies and answering the various questions posed by the IETF ADs. For important drafts (e.g. 2543bis) we should start to assign people to read-proof sections and read the entire document(s) and verify that their current organization needs no major changes.
2. We will continue to solicit help from IETF to accelerate the standardization process in the areas were strong 3GPP release 5 project plan exists (i.e. transport - SIP)
3. Proactively, I will continue the periodic dialogue with ADs and build the awareness of the areas of importance for Release 4/5 fulfillment (e.g. SIP, QoS, Ipv6).
4. Understand the scope of some new IETF efforts and their relation with relevant areas to 3GPP (e.g. presence services and SIP, IPv6, local area)
   - Presence and Instant Messaging Protocol (prim) group defines a protocol compliant with CPIM (Common Profile for Instant Messaging)
   - SIP for Instant Messaging and Presence Leveraging Extensions (SIMPLE) group investigates the ongoing work towards the standardization of SIP for presence as a transfer protocol supported within the CPIM framework
   - Site Multihoming in Ipv6 - the group aims is to discuss the multihoming approach.