Technical Specification Group Services and System Aspects **TSGS#28(05)0327**

Meeting #28, 06 - 08 June 2005,

Quebec, Canada

Source:	**NTT DoCoMo, Inc.**
Title:	**Work Item Relationships**
Agenda Item:	**9**
Document for:	**Discussion & Decision**

1. Introduction

This contribution highlights the current situation within 3GPP regarding the production of new work items and their alignment/non-alignment with the scope of other work items. In particular, the All-IP Network (AIPN)/System Architecture Evolution (SAE) work and its relationships to other work items are considered as a specific example where coordination between work items would be beneficial.

Based on the discussion presented recommendations are made to TSG-SA in order to ensure that the relationships between existing and new work items are fully considered and clarified within the future work of 3GPP.

2. Discussion

2.1 Current Situation

Currently there is a wide variety of work items included within the 3GPP work plan for Rel-7, these vary from enhanced functionality for existing features, such as Fixed BB access to IMS, to major new developments (i.e. 'Evolution-related' work items), such as All-IP Network (AIPN) and System Architecture Evolution (SAE). At present, the relationship between each of the individual work items does not appear to be being considered. In particular, the relationship between the 'evolution-related' work items and other work items is not being clarified when new work items are produced or as the work on individual work items progresses.

2.2 Problem Statement

The AIPN and SAE work items are wide-ranging work items providing a harmonised approach to 3GPP system evolution. These work items are clearly linked within the Work Item Description documentation. However, even though the relationship is clearly documented, the scope of each work item is slightly different hence the precise relationship between the two work items requires some further clarification. For example, it appears that SAE will not include enhancements to IMS (see TR 23.882 v0.1.1 in S2-0501358) but AIPN clearly impacts IMS (see TR 22.978 v7.0.0 chapter 6).

Additionally, work items within the 3GPP work plan for Rel-7 related to AIPN/SAE are progressing and/or being proposed separately. Examples of these include Voice Call Continuity (VCC), End-to-End QoS, Multimedia Telephony Capabilities for IMS (MITE) and Personal Network Management (PNM). One of the problems apparent when attempting to clarify the relationship between the 'evolution-related' work items, in particular AIPN/SAE and other work items, is a general assumption that the evolution-related work items are 'long-term' activities with timescales that go far beyond those for work items aimed at completion within Rel-7. This results in concerns that recognising a relationship with an 'evolution-related' work item may result in a delay in completion of a particular work item that is not originally intended to be 'evolution-related'.

The problem that arises in this situation is that without clarification of the relationship between work items, particularly the relationship of 'evolution-related' work items to other work items, it is likely that the harmonised approach of AIPN

& SAE will be lost. This could result in future problems when designing and deploying the 3GPP system such as an inefficient system design and independent solutions being produced with limited or no ability to interact.

Considering the above, it can be concluded that some organisation of work items, especially those related to AIPN/SAE is needed to ensure a harmonised and efficient system design. Also, it seems necessary to clarify in particular that AIPN/SAE are not 'long-term' activities. In other words, these pieces of work do not have a timeline that goes considerably beyond that of the other work items currently included within the 3GPP Work Plan for Rel-7.
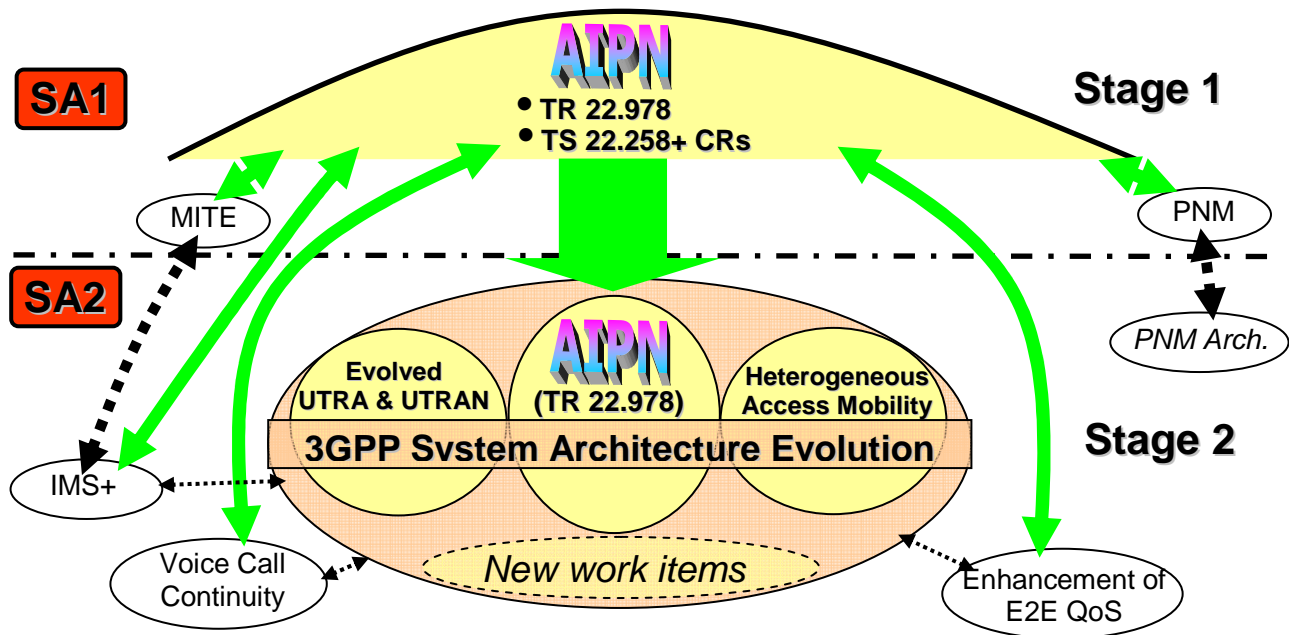
2.3 Relationship of AIPN/SAE and other work items

Before making proposals to rectify the problems detailed in the preceding sections of this contribution, it seems worthwhile to clarify in particular the relationship between AIPN and SAE, as well their relationship to other work items.

Based on the current Work Item Description documentation and the current status of work within SA1 and SA2 the relationship between AIPN and SAE is understood to be as follows:

- AIPN work in SA1 is the stage 1 for the 3GPP System Architecture Evolution study in SA2 and also includes definition of service requirements for Evolved UTRA(N)

- The AIPN Stage 1 in TS 22.258 will specify service requirements for AIPN including service requirements for Evolved UTRA(N)

    - Multi-access mobility service requirements applicable to Heterogeneous Access Mobility will also be included within the AIPN Stage 1 in TS 22.258

- Technical Specification work on Personal Network Management (PNM) has been delineated from the AIPN Stage 1 in TS 22.258 but will be based on results of the AIPN Feasibility Study in TR 22.978

- AIPN includes IMS capabilities hence the Multimedia Telephony Capabilities for IMS (MITE) may be used by the AIPN for the provision of multimedia telephony services

- The SAE work in SA2 is a component part of AIPN

    - In general, the SAE work in SA2 covers:

        - Inter & Intra-system access system mobility

        - Evolved UTRA(N) accommodation and associated performance improvements

            - RAN - CN functional split (to be studied in conjunction with RAN WGs)

    - SAE work in SA2 may result in the creation of new work items to address certain aspects and to care for the respective specification work

    - IMS enhancements for AIPN will most likely be handled separately to SAE within SA2 i.e. by other work items in SA2 covering enhancements to IMS

- Other work items in SA2 cover aspects of AIPN not covered by SAE e.g.

    - End-to- End QoS

        - Inter & Intra NW IP QoS control & assurance

    - Voice Call Continuity

        - Potentially for UTRAN/GERAN (CS) to/from EUTRAN (VoIP) transitions

- Work for AIPN may be needed in other groups e.g. security work within SA3

To summarise the above AIPN can be shown as an umbrella for other work items in SA1 and SA2 including: SAE, MITE, VCC, E2E QoS, and PNM as shown in figure 1 below.

Figure 1: Relationship between SAE, AIPN and other work items

Note1:   'IMS+' in the figure above is used to denote all current and future work items in SA2 for enhancing IMS

Note2:   *'PNM Arch.'* is a foreseen work item in SA2 to define the architecture to satisfy the service requirements defined by SA1 for the Personal Network Management (PNM) work item

3. Proposal

Based on the discussion contained within section 2 of this contribution the following recommendations are provided for the consideration of TSG-SA.

1.   It should be clarified that AIPN/SAE is *not* a 'long-term' activity. There is substantial content hence time is needed for the system design, but the aim is to design a system for commercial deployment in near to mid-term i.e. within the next 5 years.

2.   The goal of 3GPP should be to produce a harmonised system architecture. Therefore, there is a general need for evaluation of new and ongoing work items to determine whether they are related to the 'evolution-related' work items, in particular AIPN/SAE, or not? If a work item is identified as being related then the relationship should be clarified. If it is determined that there is no relationship then no action is necessary.

SA2 traditionally performs the role of coordinating the work within 3GPP. Therefore, it is felt that SA2 is the most appropriate group to take responsibility for this task.

Formation of a new SWG within SA2 dedicated to coordination of work items would seem to be an appropriate approach. TSG-SA is requested to advise SA2 to study methods for coordinating work items and conclude on the most effective and pragmatic approach.