

Agenda Item: 6.6

Source: Ericsson

Title: Design Base For IP Multimedia

Document: Discussion/ Decision

All IP Value Proposition

From operators perspective, an All-IP system should help:

- a) Capture the revenue generating streams of the emerging wireless/internet datacom market,
- b) Facilitate mobile users access those emerging services while on the move,
- c) Enable service differentiation by capitalizing on the innovative and flexible service/ Application development environment of the internet
- d) Lower the operational cost by ensuring synergies on the technology front.

This means that 3GPP need to continue to leverage Internet technology as a means to realize the All-IP proposition.

The wireless network should be enhanced to offer those emerging services, for example, real-time IP multimedia services.

3GPP Today

3GPP has already taken a number of steps towards this Internet paradigm. The IP based bearer service of GPRS was a fundamental and significant step in enabling IP services over EDGE and WCDMA. With robust header compression (ROCCO), the radio bearer IP flows over the air has been optimized for real-time IP services. Standardized and Internet friendly API (OSA/Parlay) was a step towards accelerating service/application development. Finally, the separation of control and

user plane enables transport independence.

As identified during the All-IP workshop in Nice (Feb 7-9), Ericsson recognizes the need to select a design base for developing the concepts and mechanisms required to support the real time IP multimedia services in UMTS.

Proposal

Ericsson recommends the session initiation protocol (SIP) and its companion protocols to be the basis for realizing the real-time IP multimedia service development, taking cellular aspects into account (radio and terminal). SIP is a text-based protocol, similar to HTTP and SMTP, for initiating interactive communication sessions between users. Such sessions include voice, video, chat, interactive games and virtual reality.

The development of SIP and its companion protocols is underway in IETF. IETF is the selected forum for the wireless adaptations.

3GPP needs to analyze its complete architecture with respect to SIP and its companion protocols, address all affected areas and identify the resulting changes. In particular,

1. Apply SIP and its companion protocols (SDP, RTP, RTCP, RTSP etc.) to the overall architecture and identify the necessary changes
2. Ensure radio network capabilities (e.g. radio bearer realization, radio driven implications towards the applications);
3. Evaluate mobile terminal requirements (e.g. capacity, memory, complexity, power consumption and so forth),
4. And resolve issues such as security and mobility aspects

Recommendation

Ericsson recognizes the need to selecting a single design base for realizing the interactive, real-time IP multimedia services. Ericsson recommends the selection of SIP (and its companion protocols) from IETF as the basis.

It is recommended that SA endorses the design base selection and:

- a) task the relevant groups within 3GPP to analyze the consequences of choosing SIP,
- b) Assess the Release 2000 impacts, and outline a roadmap in the case of phased approach.
- c) Start the R00 specification development accordingly