

Design Base for IP Multimedia

All IP Value Proposition

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

What needs to be done...

- 3GPP need to continue to leverage Internet technology as a means to realize the All-IP proposition.
- Enhance the mobile systems to support those emerging Internet services, for example, real-time IP multimedia services.

Steps already taken

- 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) approach was chosen to accelerate service/application development.
- The separation of control and user plane enables transport independence.

But, which multimedia control protocol?

- 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.
- Ericsson recommends the session initiation protocol (SIP) and its companion protocols (SDP, RTP, RTCP, RTSP) 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.

Why SIP?

- SIP is part of the internet paradigm.
- Standardization efforts of IETF. Beneficial to adopt the IETF/IP model
- SIP is simple, HTTP like: Interests the internet application development community
- Better industry perception

SIP as a design base means...

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

Recommendation

- TSG-SA endorses SIP and its companion protocols as the design base for realizing the interactive, real-time IP multimedia services.
- TSG-SA to task the relevant groups within 3GPP to analyze the consequences of choosing SIP,
- Assess the Release 2000 impacts, and outline a roadmap in the case of phased approach.
- Start the R00 specification development accordingly