



SEA: SEAmless content delivery

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NAVS Concertation Meeting
October 2008

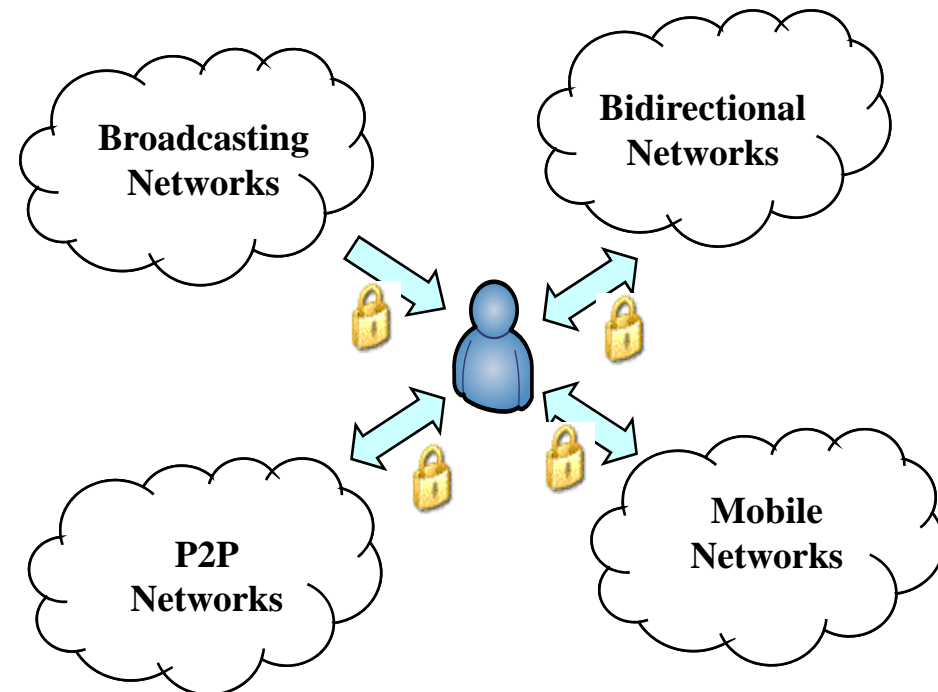


What is SEA

SEA is focused on seamless, personalised, trusted and PQoS-optimised multimedia content delivery, across broadband networks, varying from broadband broadcasting to P2P topologies

Within SEA everyone can be:

- Content Producer/Provider
- Content Mediator
- Content Consumer



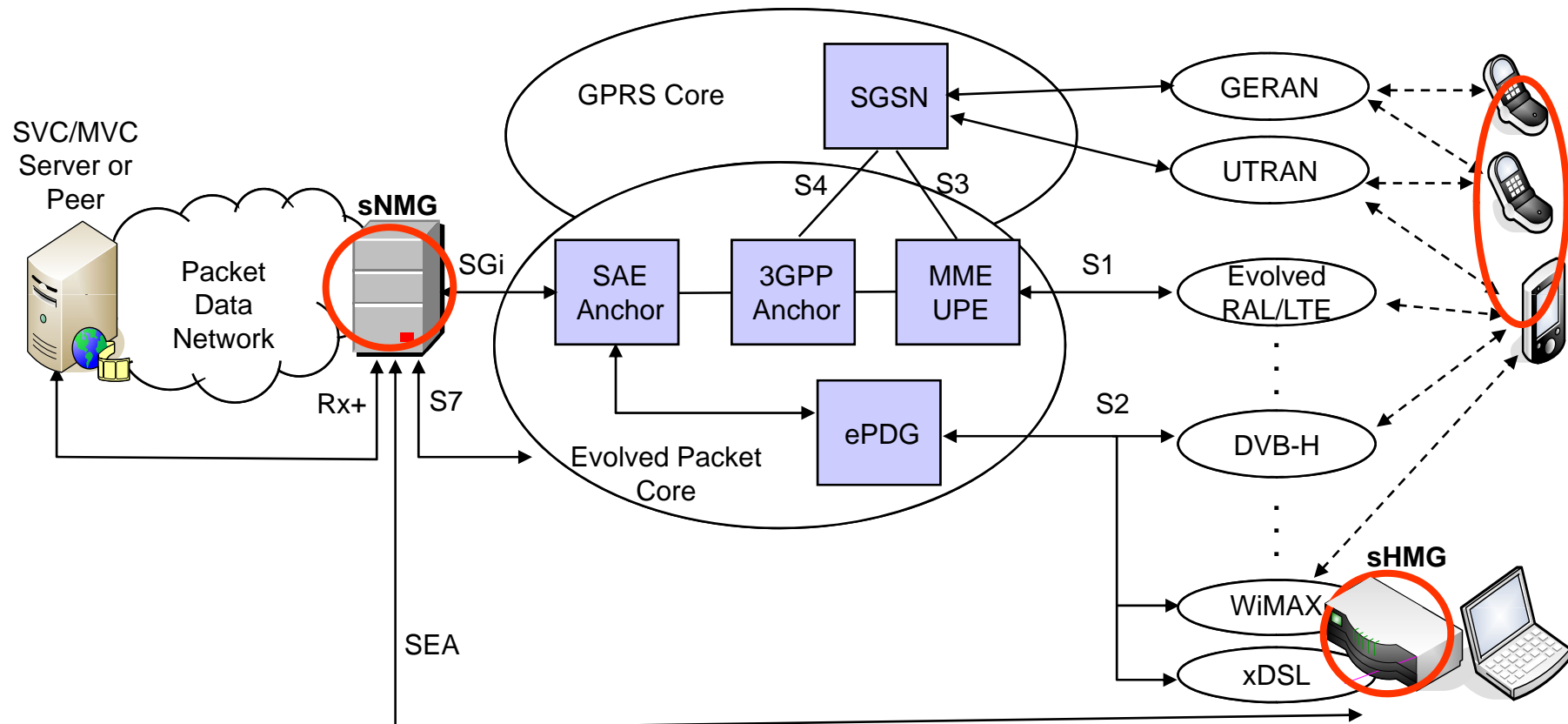


SEA Innovation Pillars

- **Multi-layered/Multi-viewed/Multi-description content coding**
 - H.264 SVC (Scalable Video Coding): Layered temporal/spatial/quality scalability
 - H.264 MVC (Multi View Coding): Different views embedded in a single video stream
 - MDC (Multiple Description Coding): Inherited resilience
- **Multi-source/Multi-network streaming & adaptation**
 - **Enriched PQoS** by on-the fly **content adaptation** and **dynamic reconstruction** of different layers (SVC), views (MVC) and representations (MDC) of the same resource transmitted from multiple sources (servers/P2P) and/or received over multiple diverse paths.
 - New equipment in the network (Nentwork Media Gateways) and at home (Home Media Gateways) will offer **cross-network adaptation** and **cross-layer optimisation**.
- **P2P video streaming**
 - Peer retrieval optimization (exploiting proper cross layer parameters),
 - Proper coding techniques (e.g. to limit the traffic and delays due to buffer map exchange)
 - Optimization of the visual quality via exploitation of advanced source coding techniques
- **Content Protection and lightweight asset management**
 - Cover not only the legacy content creation chain, but also the private multimedia content, which may be soon the major content category.

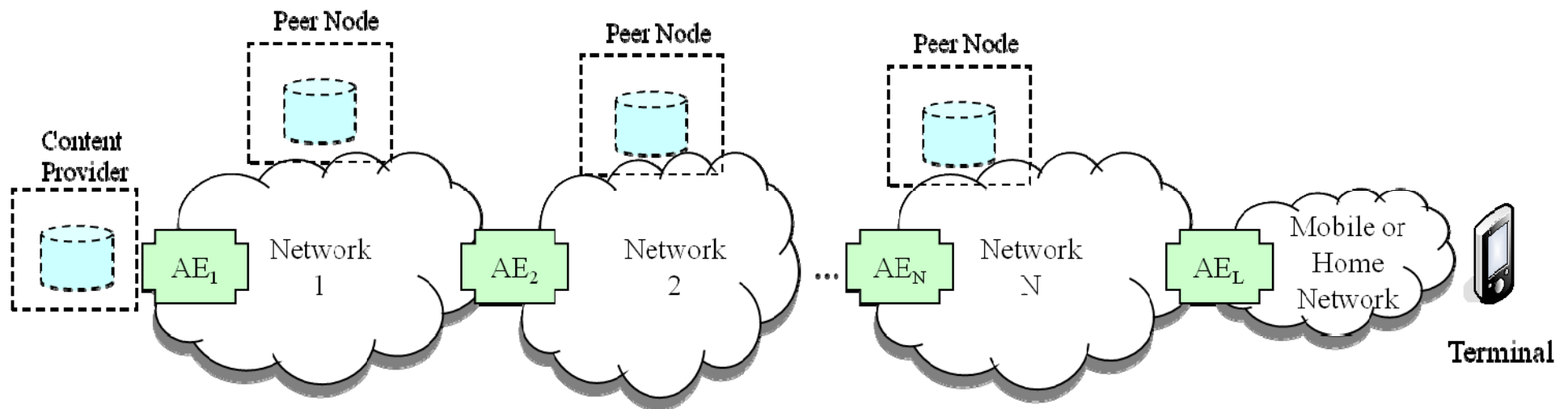


SEA/3GPP SAE Network Architecture



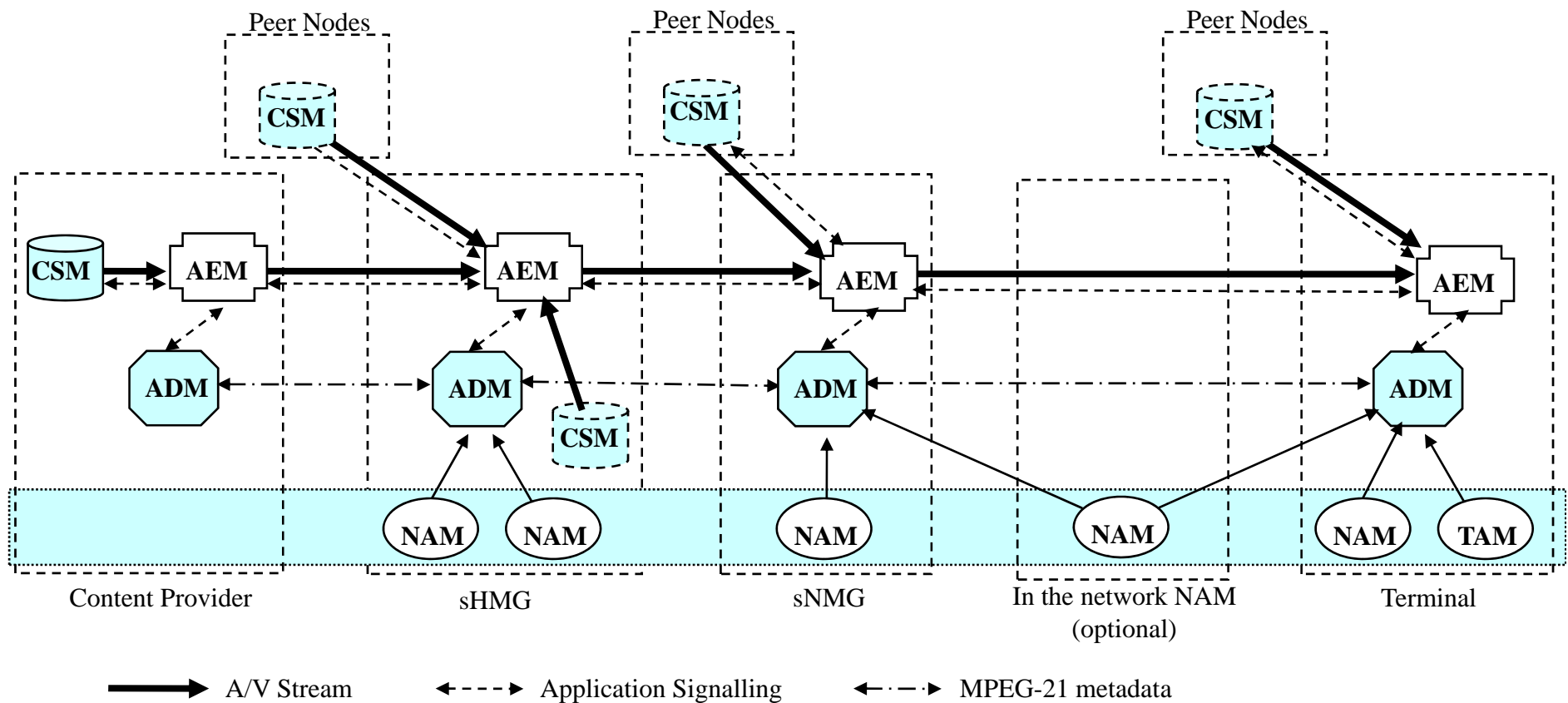


Adaptation General Architecture



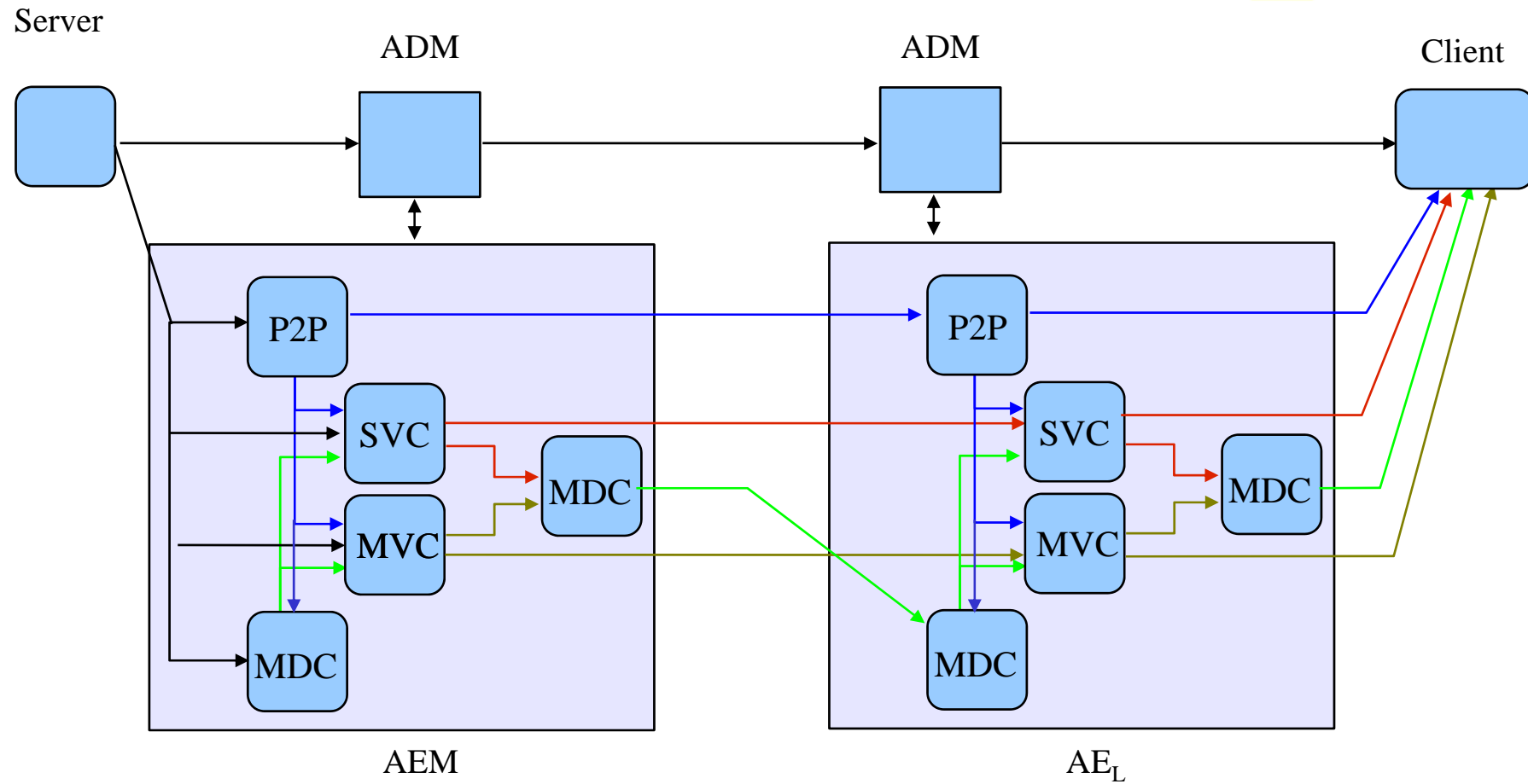


Content Adaptation Mechanism



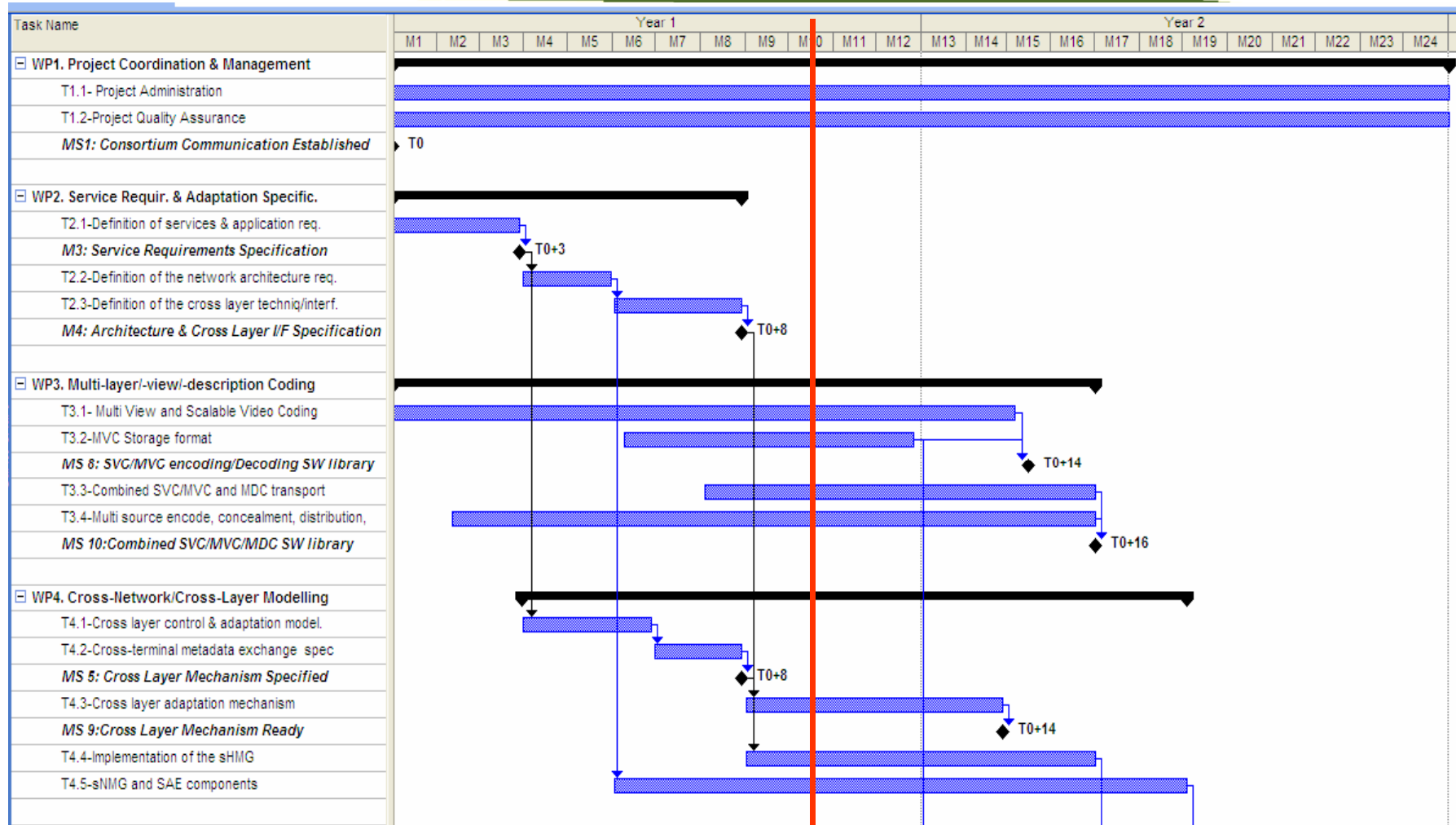


ADM/AEM Implementation



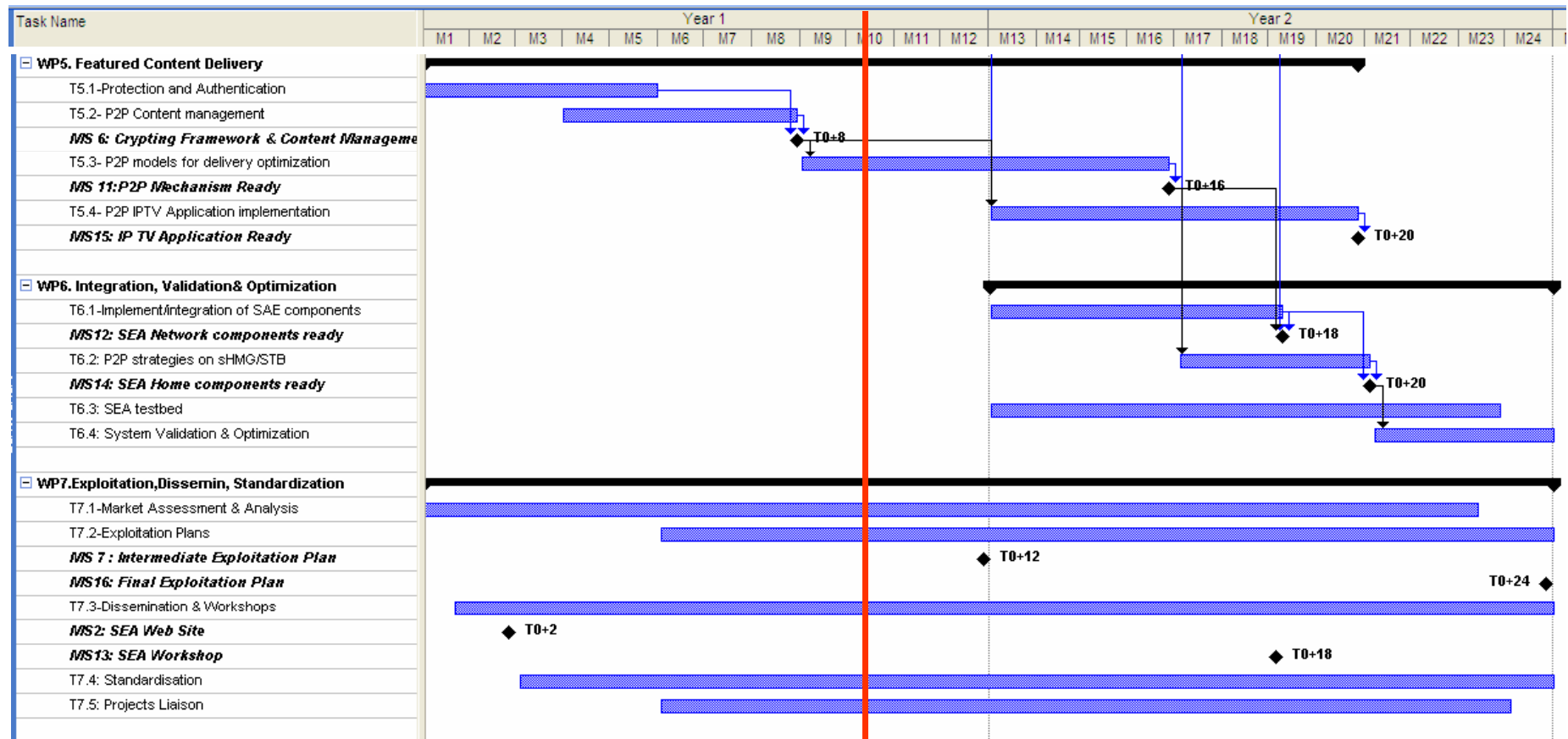


Status (1/4)





Status (2/4)





Status (3/4)

- Web Site: www.ist-sea.eu
- D2.1: Specification of Service Requirements
- D2.2 Architecture specification
- D2.3 Cross layer interfaces Specification
- D4.1 Cross layer control, adaptation modelling & metadata
- D5.1.1 SVC/MVC Crypting Framework & Content Management



Status 4/4

- MVC File Format, based on ISO + AVC File Format:
 - Proposal M15600 to MPEG85 (21 – 25 July 2008)
 - K. Grüneberg, T. Schierl, M. Hannuksela, Y.-K. Wang, Y. Chen, D. Singer, "Working Draft 2.0 for the Amendment 3 (MVC File Format) to 14496-15 (2004) (AVC File Format)", MPEG doc ref N10062
- 2. Four versions of RTP payload format for SVC video.
 - S. Wenger, Y.-K. Wang, T. Schierl, A. Eleftheriadis, "RTP Payload Format for SVC Video", <http://tools.ietf.org/html/draft-ietf-avt-rtp-svc-14.txt>, September 26, 2008
 - S. Wenger, et.al., "RTP Payload Format for SVC Video", draft-ietf-avt-rtp-svc-13.txt, July 14, 2008
 - S. Wenger, et.al., "RTP Payload Format for SVC Video", draft-ietf-avt-rtp-svc-12.txt, June 30, 2008
 - S. Wenger, et.al., "RTP Payload Format for SVC Video", draft-ietf-avt-rtp-svc-11.txt, June 17, 2008
 - S. Wenger, et.al., "RTP Payload Format for SVC Video", draft-ietf-avt-rtp-svc-10.txt, June 3, 2008.
- 3. New version of RTP payload format for MVC video
 - Y.-K. Wang, T. Schierl, "RTP Payload Format for MVC Video", 21 Aug 2008, <http://tools.ietf.org/html/draft-wang-avt-rtp-mvc-02.txt>.
- 4. Working group last call for version-02 of SDP Signaling for layered video and latest version of SDP Signaling for layered video working draft:
 - T. Schierl, S. Wenger, "Signaling media decoding dependency in Session Description Protocol (SDP)," 25 Sep 2008, <http://tools.ietf.org/html/draft-ietf-mmusic-decoding-dependency-03>



Thank you

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