

## New Services. Delivered.



From the Global Leader in  
Advanced IP Service Fulfillment  
Solutions.

## Mediation | Delivered.

### **Sigma Active Mediation Platform (AMP)**

Communication service providers are faced with the challenge of managing increasingly complex networks, services and charging infrastructures. Competition requires continuous rollout of new services, associated payment options, and targeted advertising packages. To meet this demand, new network elements and protocols are introduced on a regular basis which must be integrated into the Operational Support Systems and Business Support Systems (OSS/BSS) architecture as quickly as possible.



**SIGMA SYSTEMS**  
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A flexible and advanced mediation platform is one of the most important enablers to achieving the agility service providers require to collect and process information from a diverse and complex network environment and feed it into their service fulfillment, charging, billing and business control systems. Integration needs to be performed in an integrated manner by combining online and offline modes, to enable true pre- and post-paid convergence for all services.

## Sigma's Active Mediation Platform

Sigma Active Mediation Platform (AMP) is a flexible, advanced, and convergent mediation system that supports any data exchange between any system in real-time (on-line or active mediation) or batch mode (off-line mediation). It provides maximum flexibility and enables service providers to quickly adapt to the ever-changing requirements and challenges of the communication industry.

AMP is based on a modular architecture, where functionality and processing capacity can seamlessly be added to over time. AMP provides a future-proof mediation infrastructure that promotes deployment of mediation solutions that scale dynamically with business requirements and volume.

AMP enables the convergence of communications services, supporting a wide range of network elements and communication protocols for different networks, voice, data, and multi-media. Support for IMS-enabled services, plus both prepaid and post-paid customer types are included.

Redefining the mediation space, AMP bridges the network services delivery infrastructure from the business support systems, seamlessly insulating the way services are delivered, charged or analyzed. AMP protects current investments, reduces operational and capital expenditure, and ensures accurate and timely delivery of service resource utilization.

AMP meets the needs of multi-service operators now and in the future, and is equally suitable for deployment in traditional batch environments, as well as in next-generation, real-time networks. It seamlessly bridges any protocols and/or data formats, and provides all the functionality required to ensure that a service is delivered accurately and in concert with the rest of the OSS/BSS architecture.

AMP provides the advanced, active transfer of valuable usage data from the network and CPE devices to the OSS/BSS systems who rely on the information for accurate billing, service delivery, targeted advertising and other core operational and business processes.

## Key Concepts

Sigma AMP is an operational support system designed to adapt to each target environment and operator's specific requirements. As a fully convergent system, it provides a component based architecture built around the following concepts:

### Graphics Driven Process Modelling and Configuration

(see Figure 1) AMP provides flexibility through configuration. Its high-level graphical design and operating environment delivers a complete set of configurable tools. to meet the challenging requirements of an operator or service provider.

### Network Runtime Environment

AMP configuration and control logic is centrally managed while execution can be distributed to any number of nodes in the system. Its distributed design ensures scalability with any combination of high-end servers and commodity hardware.

### Value-added Management Applications

AMP includes a comprehensive set of supporting applications (e.g., error correction application) to ensure effective management and operation of the system and usage data.

### Advanced, Open Architecture

(see Figure 2) AMP uses the latest software technologies and provides a future proof platform, where open APIs enable compliance with the latest development in protocols and industry requirements.

### Extension Agents

To speed implementation and seamlessly integrate into incumbent OSS/ BSS architectures, AMP supports network elements, switches from leading suppliers, industry standards and protocols including Nortel, Cisco, IPDR, GTP, Diameter, TCP, FTP and many others.

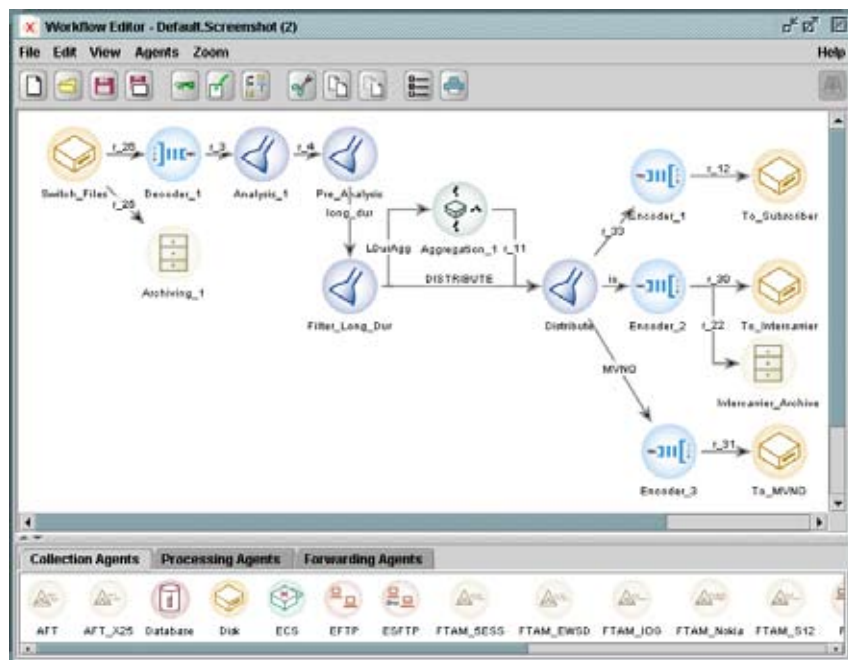


Figure 1

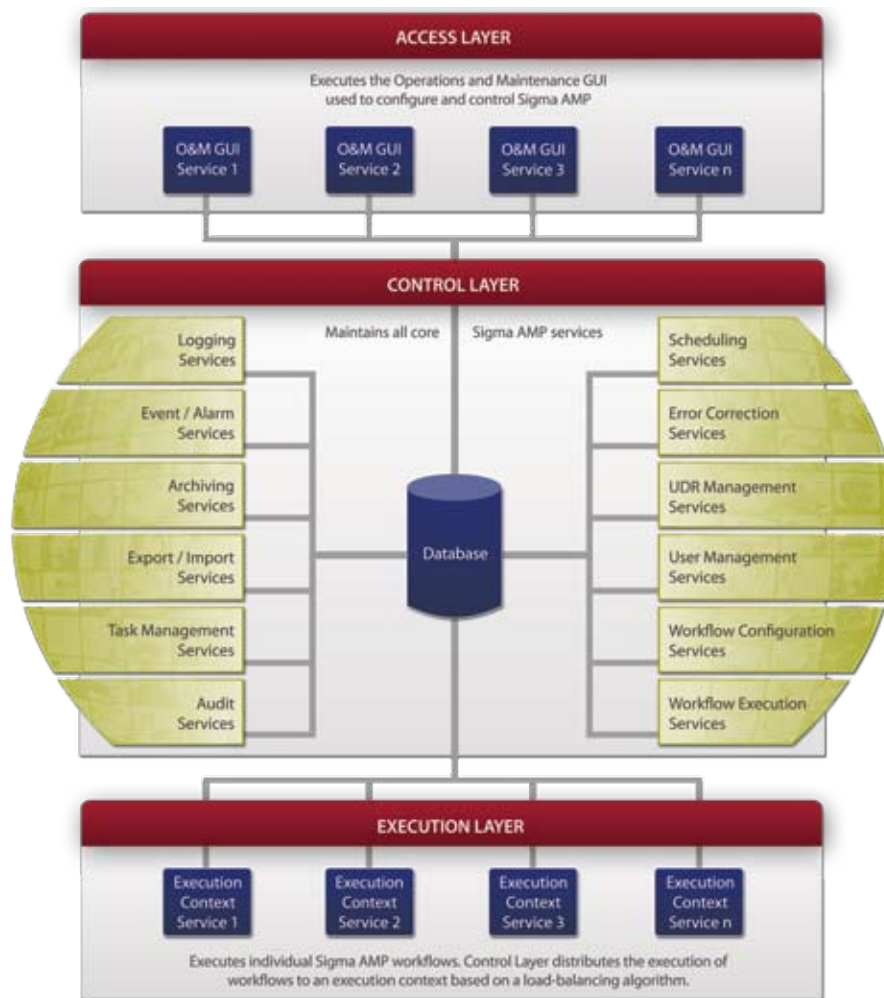


Figure 2

### Active (On-Line) Mediation Support

Sigma AMP provides real-time active mediation and service control that integrates the service delivery infrastructure with the charging systems for real-time exchange of control and charging information. At the same time, it shields the charging systems and processing logic from how the network infrastructure delivers the services.

### Batch (Off-Line) Mediation Support

Sigma AMP is a fully convergent, multi-service mediation system. Core capabilities include its ability to correlate information from any source, transform that information into a desired form, and distribute the resulting information to any destination. AMP provides all of the necessary mediation features and functionality to perform high quality and accurate processing, including:

- Any Usage Data - Supports the processing of any kind of network or service information related to usage; usage data of any logical structure, field layout and semantics can be managed; data is translated between any physical 'on-the-wire' format.
- Any Processing Function - Analyze and manipulate information in session; correlation, aggregation, and consolidation mediation functions can be performed in real-time and in batch-mode.
- Any Transaction Type - Flexible transaction granularity – from large data files to single transaction requests.

### Next Generation Mediation Support – IMS

Communication service providers are now rolling out IP Multimedia Subsystem (IMS) as their next-generation service delivery infrastructure. IMS enables seamless convergence between any access technology, such as telco, mobile and cable.

IMS defines charging standards for both offline and online charging based on the Diameter protocol. These interfaces coexist with other charging protocols. Mediation plays a key role to ensure the interaction and end-to-end transactions between systems.

The rollout and implementation of a next-generation service fulfillment and BSS infrastructure requires an advanced and convergent mediation system to enable the charging of new services delivered over multi-technology networks. It enables the consolidation of multiple disparate mediation systems for different network architectures onto a single mediation platform, reducing complexity and cost.

## Benefits of Sigma Active Mediation Platform

### Converged Mediation (On- and Off-Line)

- Consolidation of all mediation functions in single platform – leads to increased revenue control
- High degree of deployment & configuration flexibility – resulting in increased self-sufficiency and reduced time-to-market
- Protects the billing and charging infrastructure from changes in the network architecture
- Enables and facilitates converged charging by providing an intuitive GUI to leverage protocol conversion between advanced networks and business support applications
- Introduces value-based charging for content – providing real-time active mediation between content platforms and business support systems for advanced Advice of Charge, Authentication, and Authorization of content services
- Enables prepaid and postpaid charging for any combination of services – enabling session control with advanced networks supporting industry-standard protocols including HTTP, TCP/IP, Parlay, RADIUS, and Diameter

### IMS Mediation

- Rapid time to market through flexible Diameter capability
- Full online/offline IMS mediation capability in a single platform
- Protects investments and extends existing charging architecture by providing translation between Diameter and legacy charging interfaces

## Sigma AMP and Advanced Advertising

Active mediation plays an essential role in the collection and dissemination of customer usage data to analytic engines for targeted advertising. With Sigma AMP and Sigma Subscriber Information Service solution, you can offer uniquely targeted advertising programs to your advertisers based on implied consumer interest from your customers' usage behaviors such as:

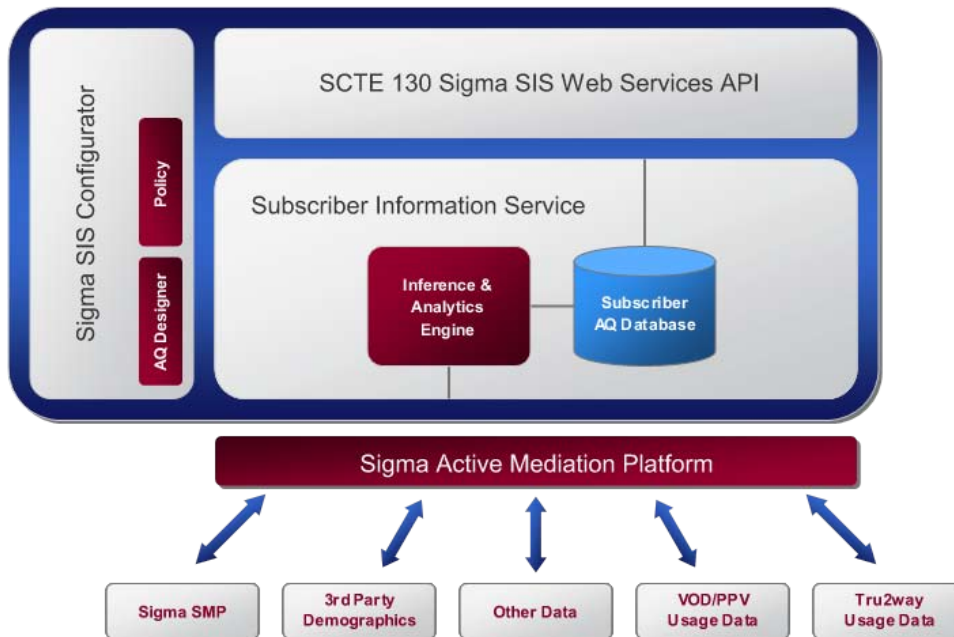
- Pay-per-view and Video-on-Demand ordering
- Service Orders
- Channel Selection
- 3rd party demographics
- Television Commerce (t-commerce) Selections

(See Figure 3).

## About Sigma Systems

Sigma Systems ([www.sigma-systems.com](http://www.sigma-systems.com)) is the proven global leader in delivering advanced IP service fulfillment solutions. Sigma's powerful OSS solutions enable the world's Communications Service Providers (CSPs) to deliver any service, over any access technology to any device. The company's award-winning software solutions include products for the fulfillment of Triple, Quad and All-Play services – and have been trusted worldwide by over 50 advanced communications providers to delivery over 100M services globally.

Figure 3



Discover what it means to deliver  
by contacting Sigma Systems today.

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