



SeaChange® ≡ Axiom™ Open Suite

The SeaChange® Axiom™ Open Suite is the brain behind Video on Demand (VOD). Sophisticated software modules act in unison to manage and automate every aspect of operations — streams, subscribers, billing, advertising, network load and more:

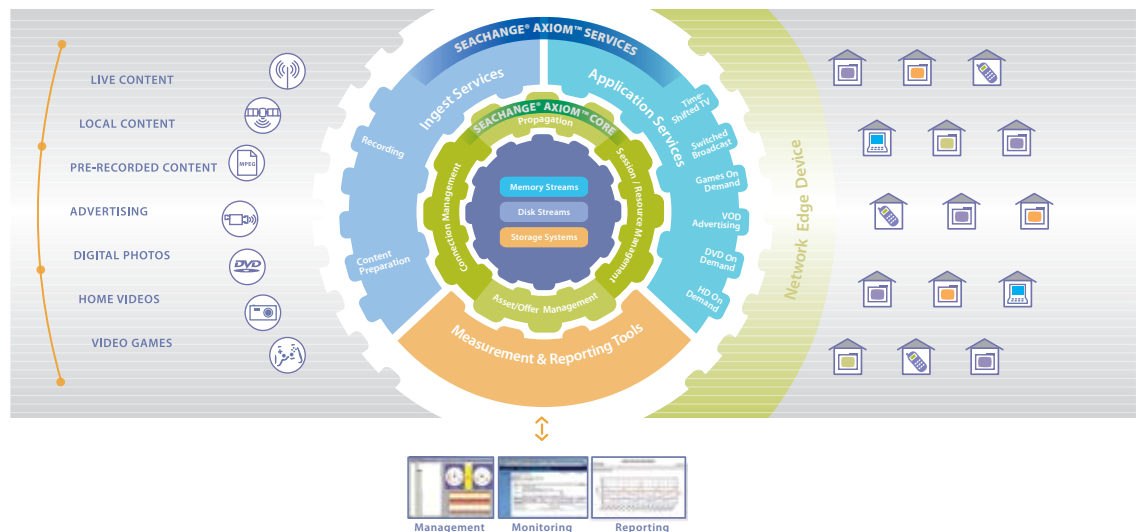
- Globally manages sessions and resources for all video services and ensures that content and network bandwidth are optimized
- Provides sophisticated monitoring and management tools for complete purview into the operation of the infrastructure for engineering and operations staff.
- Provides an easy integration point for subscriber applications, like VOD and switched broadcast, to access network services. Stream requests from clients are routed through Axiom, which determines the delivery network path and sets up the sessions – making content accessibility and bandwidth management transparent to client applications.

Because the suite's innovative design automates and manages every detail, adding content or viewers to your VOD system does not mean adding personnel or operating expense. Axiom Open Suite makes it simple to manage, market, and profit from VOD, while at the same time giving you total control over every aspect of your operation.

The SeaChange Axiom Open Suite is the first video operations services software (VOSS) to provide a completely automated IT approach to system-wide management in a multi-vendor environment. The suite is built on an open, standards-compliant, modular architecture that enables modules to be selected and combined as required to support the unique needs of any VOD installation, while preserving interoperability with existing applications and equipment.

The SeaChange® VOD Solution

Personal video services for every subscriber — and you are in control.



SEACHANGE AXIOM CORE SERVICES

Core Services provide essential functions that manage core VOD network resources (servers, bandwidth, storage, etc.). Core services are the heart of every VOD system, automatically optimizing network resources to serve requests from every client in the most efficient manner possible.

SeaChange® Axiom™ Session & Resource Manager Software

– manages network bandwidth to insure that content can be delivered efficiently. It presents a highly available interface for requesting the streaming of video and controlling the streaming process. It presents a logically abstracted delivery-network-independent interface to the client.

SeaChange Axiom Propagation Service Software

– optimizes both network usage and storage by continually monitoring demand for content, and moving content to locations where it is needed most. Ensures that popular content is replicated to the edge servers closest to clients, and less popular content is moved to central locations. Operational staffing requirements are minimized because replica management across the network is completely automated.

SeaChange Axiom Connection Manager Software

– mediates client requests, establishing the shortest path between the client and the requested content. The Connection Manager ensures that content is streamed from the closest storage location to the requesting client, delivering a high quality user experience with minimal latency.

SeaChange Axiom Asset Manager Software

– manages the life cycle of content stored on the VOD system. Content is typically created, uploaded, activated, deactivated and deleted by the Asset Manager in accordance with business rules supplied by the operator. The Asset Manager provides full visibility into the location and state of managed content through a browser-based GUI.

SeaChange Directory Service Software

– The Asset Manager utilizes the SeaChange Directory Service™ as its underlying database. The Directory Service provides high-speed access to content attributes such as metadata, prioritization, application links, groups and locations.

SeaChange Axiom Configuration Suite Software

– a graphical tool providing centralized configuration management for servers in an VOD network. The Configuration Suite enables operators to maintain system configurations in a central database, insure consistency between servers, and modify the configuration of any server from a central location.

SeaChange Axiom Subscriber Management Utility Software

– provides support for automated and manual interfaces to external subscriber management systems to enable exchange of subscriber data, such as subscriber ID, HomeID, name and

address, package entitlements, subscriber credit status, etc. Subscriber data is used to offer features such as SVOD entitlement checks, credit checks, and online signup for SVOD packages. Included is a web-based utility for managing subscriber data.

SEACHANGE AXIOM APPLICATION SERVICES

Application Services provide clients (settop boxes, PCs, etc.) with access to a broad range of compelling VOD resources through a simple set of APIs that manage client requests and deliver requested services.

SeaChange Axiom MOD Service Software

– manages requests for on-demand content, supplying streamed movies, SVOD and free programming to the client device. The On Demand service supports various types of VOD and SVOD services and provides an end to end solution for the service provider. It provides components to manage the business models defined by the service provider and also provides an external interface to back office components.

SeaChange Axiom Scheduled TV Player Software

– provides operators with the ability to create linear programming from a set of on demand content. Movies, TV shows and other content captured in the VOD system can be played out on designated channels according to an operator provided schedule. Advertising content can be spliced in to the schedule at designated locations. The Scheduled TV Player can be used to create a barker channel to promote VOD services, to create NVOD delivery of movies, etc.

SeaChange Axiom Hospitality Service Software

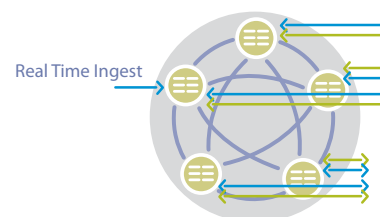
– delivers specialized on-demand functions to client devices deployed in hotel environments. Manages requests for movies, hotel guest services, billing inquiries, room service menus, etc.

SEACHANGE AXIOM CONTENT PROVISIONING SERVICES

Content Provisioning Services provide added value to the core VOD capabilities, by enabling new mechanisms for content acquisition and manipulation.

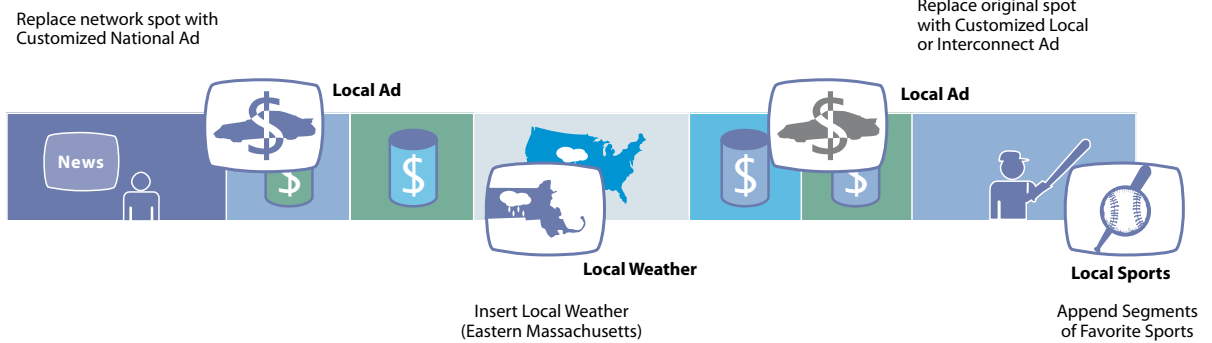
SeaChange Axiom Recording Service Software

– captures broadcast programs and publishes them as VOD content. The Recording Service can simultaneously ingest multiple channels of broadcast content, which are then distributed to the VOD system for on demand viewing by clients. New capabilities in this service include 'playout while record', enabling time shifted viewing of broadcast TV programs.



SeaChange Axiom Asset Placement Service – automates dynamic insertion of advertisements into video-on-demand streams. The service makes ad placement decisions when the IP video system sets up a stream in response to a subscriber request. The stream's playlist is modified to include ads, which can be placed before or after the content, or both. A web-based user interface is supplied for the entry of ad metadata and orders, and for monitoring the progress and status of advertising operations.

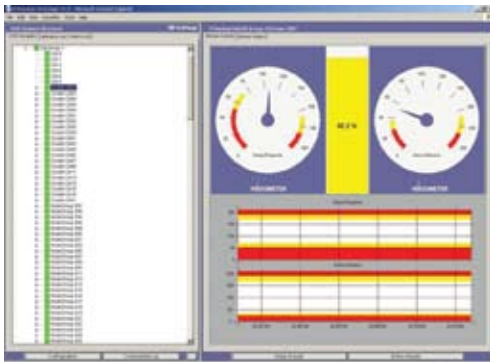
Customized Ad Replacement and Programming Assembly for Each Subscriber



SEACHANGE AXIOM MANAGEMENT TOOLS

Management Tools provide engineering and operations people command and control over the system.

SeaChange Axiom Dashboard Software – provides a real-time graphical display of streaming and propagation activity in the VOD network. A powerful utility for problem identification and resolution, the dashboard shows current activity and historic streaming activity during the preceding 7-day period.



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SeaChange Axiom Data Warehouse Software – a repository and reporting tool that enables improved management and decision support for the VOD operator. Available report categories include Accounting, Subscription, On Demand Usage,

Video Stream Analysis, Maintenance and Resource Planning. Custom reports can be added if desired. Reports are rendered using Crystal Reports™ Software, and can be exported to various formats such as Microsoft® Word®, Excel®, Text, etc.

SeaChange Axiom Secure Data Portal Application – a feature of the Data Warehouse that delivers specialized business reports to the operator's business partners via a secure web interface. The portal is fully customizable and can be used to support new business models, including the distribution of external products and services to clients via the VOD network.

SEACHANGE AXIOM – THE TRUSTED SOLUTION

Axiom has been tested and integrated with more headend equipment and network environments than any other VOSS platform. In deployment after deployment, Axiom works elegantly in Motorola, Scientific-Atlanta, Open Cable and IP environments. Proven with millions of subscribers, the SeaChange VOD System requires minimal intervention, yet gives you the freedom to customize and update programming and advertising on-the-fly.

