Personalized Channels

An ARRIS Global Services Solution
to Generate Custom HTML5 Content

FEATURES

- Local, targeted and personalized content
- Single stream video, images and graphics
- Custom software development
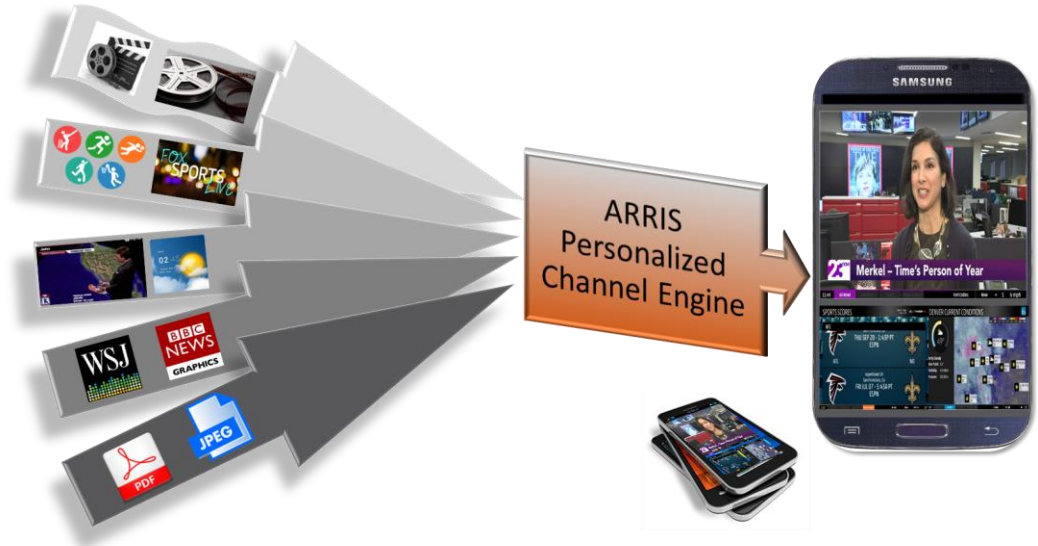- Planning, design, integration and operation

SOLUTION OVERVIEW

The ARRIS Personalized Channel Solution provides capabilities to offer local, targeted, and/or personalized channels direct to an end user in a cost effective manner. The solution can combine video, still images, or graphics into a single stream. It also provides the capability to selectively deliver categories of content to an end user.

Companies interested in owning and controlling the development of high demand content for a regional market, or individual target, are able to do so using the ARRIS Personalized Channel Solution. From regional content like traffic reports and weather to notification services for nearby attractions or news based on a subscriber's location, the ARRIS solution can add and remove content from the Personalized Channel. Additionally, different categories of video content can be delivered to offer genre-based channel offerings.
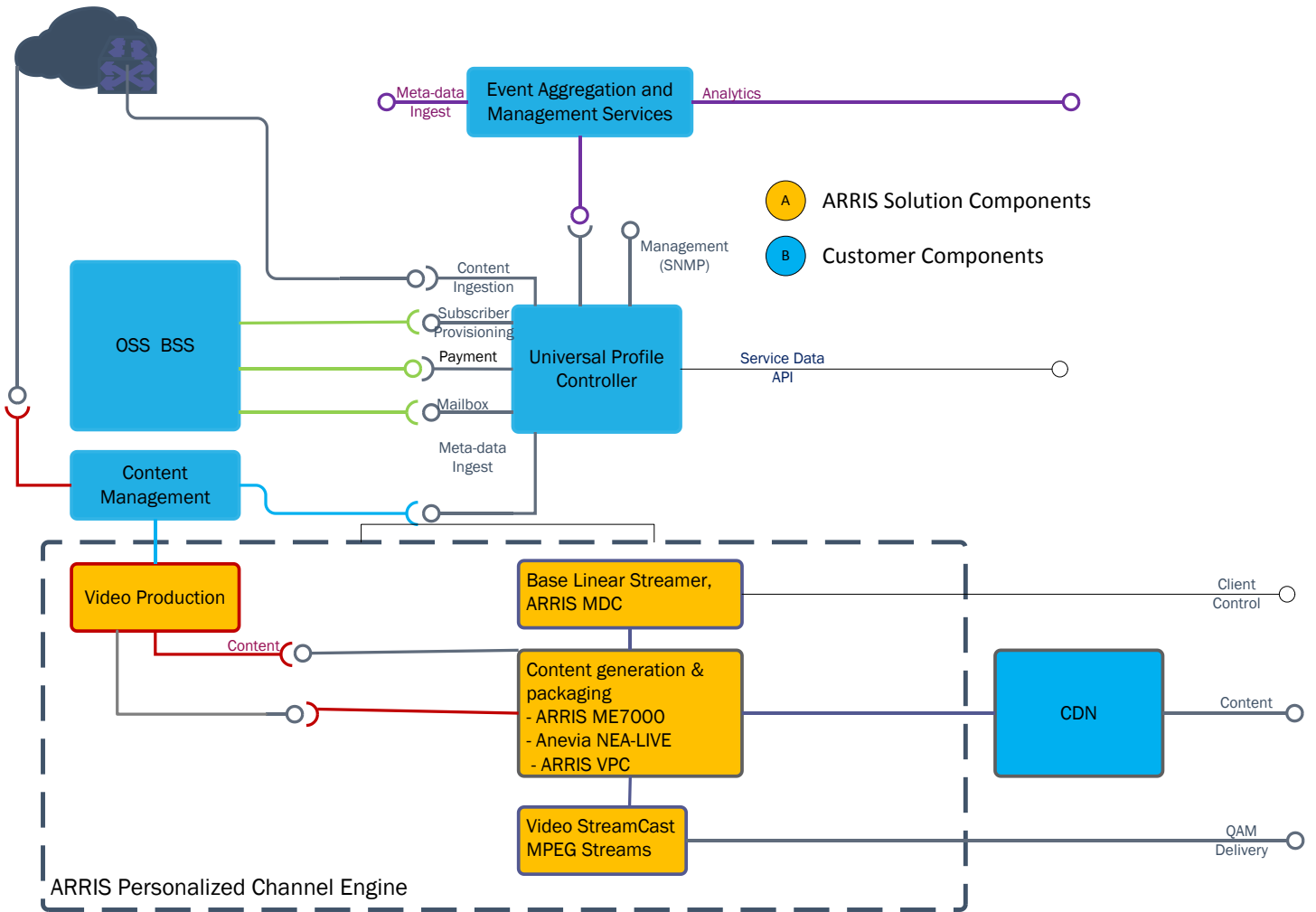
The solution includes a dynamic advertising component which allows the programmer or service provider to generate significant additional revenue through incremental targeted spot advertising.

ARRIS has developed a software solution that can ingest multi-formatted content and generate a multi-panel MPEG2 video stream capable of being distributed through normal QAM networks or to multi-screen IP platforms via Adjustable Bit Rate (ABR) formats. The ingest content can be MPEG2 video, HTML streaming content, images (PDF, GIF, JPEG, etc. see Reference Section for full list). The content is processed via the ARRIS Personalized Channel software suite and generated into a MPEG2, HLS, or DASH stream. The produced channel can be derived from single or multiple sources with seamless transitions between sources. The content within the channel can be selectable by the consumer interactively. The solution also supports targeted dynamic advertising that can be at the individual consumer level.

Ingest Formats and Supported Platforms	Features	Environmental Highlights

Ingest Formats
 	
• MPEG2
• MEPG4
• HTML5
• Support the most common image formats like:
    ▪ JPEG
    ▪ TIF
    ▪ GIF
    ▪ Bit Map
 	
Supported Platforms
 	
• QAM Set Top Boxes
• Hybrid Set Top Boxes
• IP Set Top Boxes
• Android Mobile Devices
• Apple Mobile Devices
	Features
	
	• Deliver custom personalized content to all devices
	• Passive linear streams or custom linear streams per subscriber
	• Supports HLS and DASH
	• Supports CDN pull or push method
	• Supports dynamic advertising per subscriber
	• High Availability (HA) for all components in architecture
	• Supports Hosted and On-Premise/Cloud implementations
	• Solution Options for Content Management and Client Applications
		• VMWare Cloud Environment
		• ActiveVideo Cloud TV
		• ARRIS ME7000 Transcoders
		• Anevia – Packager and Origin Server
		• ARRIS – Manifest Delivery Controller (MDC)
		• ARRIS VPC – VOD Product Controller
		• ARRIS SC – Stream Controller
		• ARRIS BLSC – Base Linear Stream Creator

High Level Architecture

Event Aggregation and Management Services

Meta-data Ingest

Analytics

A — ARRIS Solution Components

B — Customer Components

Content Ingestion

Management (SNMP)

OSS BSS

Subscriber Provisioning

Payment

Universal Profile Controller

Service Data API

Mailbox

Content Management

Meta-data Ingest

Video Production

Content

Base Linear Streamer, ARRIS MDC

Client Control

Content generation & packaging
- ARRIS ME7000
- Anevia NEA-LIVE
- ARRIS VPC

CDN

Content

Video StreamCast MPEG Streams

QAM Delivery

ARRIS Personalized Channel Engine

The high level architecture represents the primary functional blocks of the end to end solution. The service provider may choose specific vendor products as required and desired. Content Management can be operator supplied or jointly developed by ARRIS.

Solution Framework that can be Plugged into any Environment

Components	Summary and Value
Stream Controller & VOD Product Controller Software	Ensures 24x7 availability of a rendering farm to produce hundreds of video streams controlled by your CMS (content management system). Provides an adaption and management layer between a backend CMS and Active Video CloudTV. Continuously produces and offers a library of up-to-date and localized VOD assets for customized individual user experiences by monitoring Active Video CloudTV output and creating and managing VOD Assets in origin server storage. Ensures a continuous delivery stream of individualized content or alternate feed to the end users by providing the front end of an origin server.
ActiveVideo Cloud TV	The ActiveVideo (AV) components provide the MPEG Content Source Streams. The AV technology enables a great deal of flexibility of what is provided in the Source Streams because it uses Web Pages as input that it then turns into MPEG Streams. The AV Session Manager starts the web pages and uses unique patented technology to bring together web and video content into an output stream.
HTML5 development	ARRIS can develop custom HTML code based on the unique requirements of any operator for specific applications/needs.
ARRIS Transcoding (ME-7000)	The ARRIS ME-7000 hardware based transcoder is a converged platform that provides MPEG-2 and MPEG-4 decoding, recoding, closed-loop multiplexing and multi-bitrate streaming on a single, state-of-the-art Intel based standard off the shelf server. The ME-7000 transcoder will ingest content from ActiveVideo, transcode into Multiple Bit Rates (MBR) and deliver to a Packager or Recorder/Origin Server.
Packager/Recorder	The Packager component will take the customized (per DMA) Video output Channels from ActiveVideo that have been turned into Multiple Bit Rates (MBR) by the Transcoder and package them for HLS, and distribute to the Operator's Origin Server. The Recorder component will take the customized Video output Channels from ActiveVideo that have been turned into Multiple Bit Rates (MBR) from the Transcoders, and store individual "products" as VOD assets for selective delivery to an end user.
ARRIS Dynamic Advertising (MDC)	The ARRIS Manifest Delivery Controller (MDC) provides a dual set of functionality in this solution. The first is to dynamically stitch together the VOD assets for individual end user selection of assets. The second is to manage and deliver targeted advertising.

Methodology

Tests / Staging environment	This is an environment with limited capacity (typically less than 100 end user devices supported) which is intended for basic functionality tests and initial integration. This environment is planned to be implemented and enabled at the start of the project. This phase ends with System Integration Tests (SIT).
Pre-Production environment	This environment mimics the production environment, simulating same network, interfaces, hardware and software set-up, with larger capacity than the staging environment. ARRIS recommend support for up to 1000 end-user devices. This environment will be used for full functionality tests with capacity for limited stress and load testing. The Multiscreen System will be linked to other integration points defined in the solution design. This Phase ends with Preliminary Acceptance Tests (PAT).
Production environment	Preliminary Acceptance triggers the movement of the new system into production environment. There will be a full Operational system deployment. It ends with the Final Acceptance Tests (FAT).

CUSTOMER CARE

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