

BENCHMARK

Benchmark's OTT AD Insertion

***Now, increase revenues and
flexibility with personalised Ads
over multiple devices***

BACKGROUND

The organic changes in media viewing behavior leading to multiple displays such as smart phones and tablets seem to have, over a period of time, eroded at least part of the benefits that advertisers get out of TV advertisements. As a result, TV broadcasters are faced with the challenge of serving the needs of their advertising clients to reach targeted viewership, while meeting their own revenue goals. Since the viewing habits have been changing drastically over the past

decade, and a significant proportion of the viewers choose to watch video streams on their desktops, laptops and mobile devices, it becomes all the more necessary for the TV broadcaster to be able to provide content relevancy to the viewer. Particularly as the significance of national, cultural, social and economic boundaries are being reduced owing to the multi-screen, multi-device viewing habits that seem to have taken strong roots among viewers.

OBJECTIVE

If there was a way to identify the geography, demography and other particulars of the viewer, while displaying the ad content, it would be of enormous advantage to Broadcasters since they would be able to show content-relevant advertisements on different screens, depending on the background of the viewer. Streaming of video over IP through OTT and other FTA channels, gives Broadcasters precisely the required information on viewer profiles.

Therefore, the ability to dynamically replace advertisements, based on viewer profiles, will provide a significant advantage to Broadcasters as well as their advertising clients. The Benchmark Ad Replacement Application empowers Broadcasters to precisely do this.

The following advantages accrue to TV Channels:

- More localised and personalised advertisements will increase the

attention and retention levels of viewers, thereby increasing the effectiveness of the ad dollars spent by the advertisers.

- Showing different ads in different geographies or to different demographics enables the Broadcaster to attract more local businesses which may not be interested in advertisements at huge rates for a nation-wide or global scale telecast.
- Increase the effectiveness of the ad content by improving the viewer experience.

Package all this into a seamless dynamic automated workflow and the Broadcaster will really be able to increase advertisement effectiveness as well as dollar revenues.

This is exactly what the Benchmark Automated Ad Replacement Application provides for the broadcaster.

APPLICATION OVERVIEW

The Benchmark Automated Ad Replacement engine replaces original broadcast advertisements with personalised video ads. The application is able to intelligently recognise the end of the program and the start of a commercial break and is able to automatically replace the original ads with ads chosen by the broadcaster based on geography, demography or other criteria.

Features:

- Accurately identifies original broadcast TV ad-breaks in real time
- Works seamlessly with any CDN, any encoder and any video player
- Precisely inserts replacement ads, based on TV ad-break duration
- No need for any cue tones or DTMF
- Integrates with in-house ad sales or a 3rd party VAST compliant Ad-Server

THE BENCHMARK AUTOMATED AD REPLACEMENT ENGINE

Execution:

The Benchmark Automated Ad Replacement engine works fully on the cloud. The TV channel that wishes to replace ads dynamically on multiple screens on its streaming video has two different options:

- Replace ads with ads available from any VAST compliant 3rd party ad-server using a client-side implementation
- Replace ads from their own ad assets, using a server-side implementation

Client-Side Implementation:

The AD scanner / identifier scans and creates a fingerprint of the commercials that are residing and being used by the source channel. It creates a database of the scanned clips.

The AD transcoder software uses the source channel's equipment [Transcoder] and extracts multiple profiles of all the ads needed and streams them in real time. This process leads to multiple bitrate streams with different sets of ads as required. Also, different streams can be generated for different geographies with targeted sets of ads.

- Assigns priority to ads, order of ad-payout and backfill
- The client-side implementation requires very little computing resources and runs on the Benchmark Cloud
- Works on any IP streaming protocol (HLS, RTMP, etc.)

Benefits:

- The Broadcaster is able to manage ad campaigns, allocate inventory and target ads using business rules that reflect partner agreements
- Ability to add mid-roll ads to increase ad monetization
- Broadcasters can play different ads on multiple devices/platforms, based on viewer demographics
- The application dashboard manages campaigns and tracks revenues in real time

The Ad-Server integrates with any VAST compliant ad servers [like Google, YouTube, etc.] in the Cloud and fetches the ads to replace the original ads played by the source channel.

When viewers are watching a channel, say on a laptop / tablet / mobile device, a set of scenarios can be manipulated. Assume that the users have a login ID and during the creation of their profile for the first time, they have answered a few questions: the application uses this profile to pull advertisements that will be most interesting to the viewer. Since the system knows who is watching which channel and also from where the person is logged in, replacing context relevant ads becomes feasible. The application keeps watching the source channel and when it detects the switch from program to commercial in the source channel, it pulls ads from the VAST compliant ad-service networks and plays them. While pulling ads from a VAST compliant ad-server, the application also interacts with the 3rd party ad-server to switch to a better bitrate stream if the client has a better bandwidth. The source channel can also schedule ads, provided they

have a sales force catering to that market. The application provides a UI to schedule those ads in such a way that if in a two minute commercial break there is only a minute of ads scheduled by the source channel, the balance one minute gets pulled from the VAST compliant networks. So ads on a mobile can be different from ads on a tablet and so on. The application also provides a log detailing how many ads were played and how many were watched in full and how many in partial. This in turn helps in fair billing to the advertisers.

Server Side:

The Benchmark Ad Scanner / Identifier scans and creates a fingerprint of the commercials that are residing and being used by the source channel. It creates a finger print directory of the scanned clips. In the case of a server-side solution, the fingerprint technology is not used since the ads are stitched based on the source channel's ad sales team inputs.

The Benchmark Ad Transcoder Software uses the source channel's equipment [Transcoder] and extracts multiple profiles of all the commercials needed and streams them in real time. Each of these

streams can have a different set of ads.

The Benchmark Ad Management Console enables the source channel's ad sales team to schedule ads across all streams, generates an analytics report on the schedule as it progresses and also provides real time monetisation monitoring.

The Benchmark Ad Server integrates with the Ad Management Console and when ads are not scheduled, replaces with different ads to fill the slot based on the source channel playlist. In the server-side solution, the ad-server is where the ad sales management team uploads the ads.

The Benchmark AD Payout is a real time ad player which can play source channel programs and replace source channel ads with a new set of ads across the streams.

Benchmark Video player is the client software residing on the mobiles/tablets/PC's providing interface for the user to choose the program to watch and also provides behavioral feed back to the Benchmark Ad system.

SUMMARY

The Benchmark Ad Replacement Engine for Streaming Media helps the TV broadcasters of today to maximize their ad revenues by displaying ads that will resonate with their viewers. With the ability to understand the geography, age, gender and other demographics of their viewers, Broadcasters will also be able to bring in better bang for the buck of their advertising clients.

The automated dynamic replacement of ads also provides the Broadcasters with significant information of the audience they are reaching, such that they will be able to not only replace advertisements but also provide appropriate content suggestions and incorporate recommendation engines to increase their viewership. The

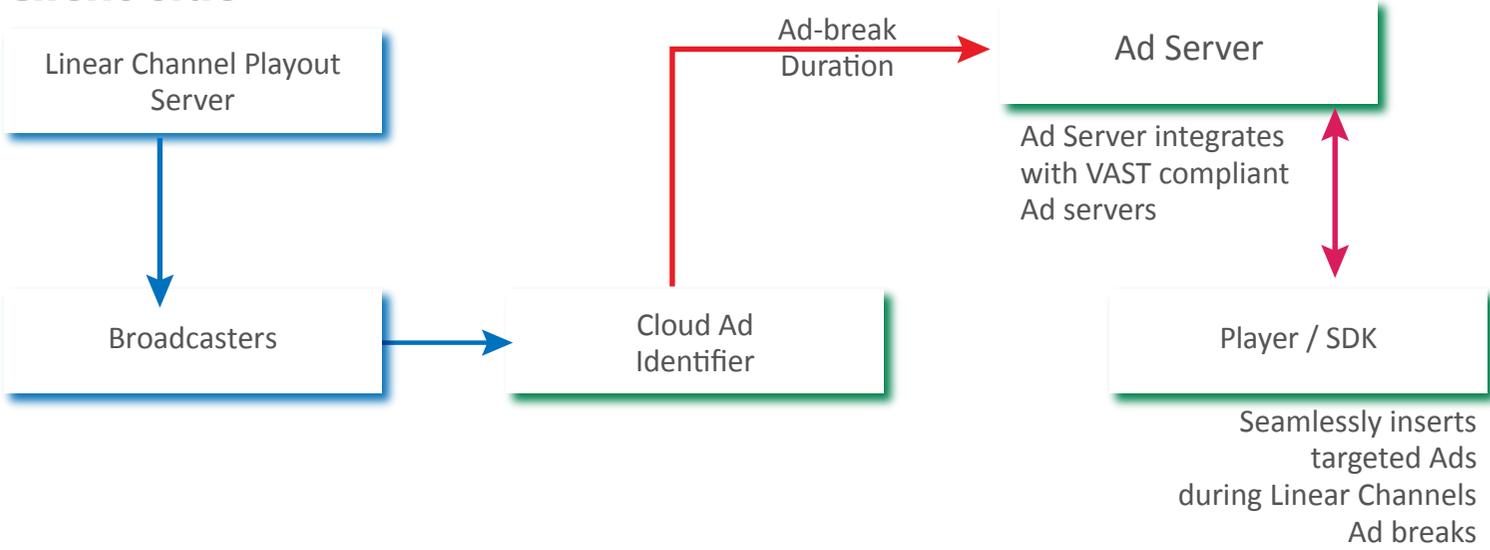
battle for the eyeballs is on, and the winner will be the media that is able to not only attract but also retain viewership. This can be done better with Ad and Content replacement.

The application is powered by Vidgyor Ad Replacement algorithms. Vidgyor is a Bangalore based startup that already has several implementations with leading TV channels and OTT operators in India. In addition to Vidgyor algorithms, the application comes with integration, warranty and support from Benchmark Broadcast Systems, a leading Broadcast Systems Integrator with established operations in S E Asia and South Asia.

BENCHMARK

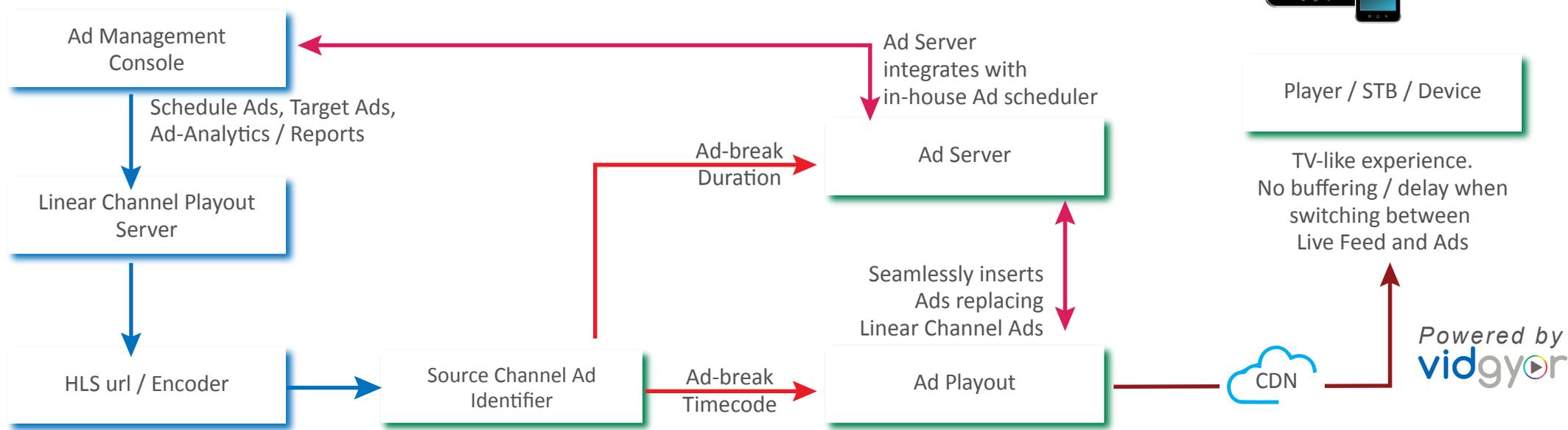
Seamless Dynamic Ad Insertion – an application note

Client-side



The Workflows

Server-side



BENCHMARK

Seamless Dynamic Ad Insertion –
an application note

ABOUT BENCHMARK

Benchmark Broadcast Systems, is a consultant and technology partner for media and broadcast companies in Asia. Headquartered in Singapore, the Company has offices in Bangkok, Chennai, Delhi, Dhaka, Kuala Lumpur and Manila. Its on-site engineering, software programming, software & systems integration, testing and support services are highly specialised. It operates in network mode with senior managers functioning out of Singapore, Chennai, Delhi and Manila.

Benchmark focuses on providing complete solutions for broadcast and post production applications. The spectrum starts from simple

modules to complete turnkey systems integration services for setting up a totally new TV station or upgrading/modernising existing ones. The Company also provides a complete range of services from pre-sale consultancy, through to systems design and integration, installation, user training, support and even to managed services. Benchmark Broadcast's capabilities extend to configuration of comprehensive enterprise-wide solutions, application support, systems installation and customer training and, importantly, to development of customised solutions.

When you absolutely, positively have to be on-air 24/7

BENCHMARK
B R O A D C A S T S Y S T E M S

Benchmark Broadcast Systems (S) Pte Ltd

12 Tannery Road #09-05/06/07 HB Centre I

Singapore 347722

Phone: +65 6749 3372

Fax: +65 6749 3326

Email: info@benchmarkbroadcast.com

w w w . b e n c h m a r k b r o a d c a s t . c o m