

Leading Pay-TV Operator Revolutionizes TV Advertising

Sky uses Cisco Videoscape Cloud Fusion solutions to power intelligent targeted ad platform.

EXECUTIVE SUMMARY	
Sky	<ul style="list-style-type: none"> • Pay-TV Service Provider • London, England • 10.5 million TV subscribers
BUSINESS CHALLENGE	<ul style="list-style-type: none"> • Deliver more targeted, strategic advertising capabilities • Expand advertising market share and revenue • Solidify role as industry leader and innovator
NETWORK SOLUTION	<ul style="list-style-type: none"> • Sky AdSmart, with ability to create highly targeted advertisements for TV STBs • Essential capabilities provided by Cisco Cloud Fusion for Videoscape solutions
BUSINESS RESULTS	<ul style="list-style-type: none"> • Delivered 165 million targeted ads and 700 campaigns on behalf of more than 100 advertisers • Increased sales and brand retention for advertiser customers • Improved Sky Media business and revenue - 50 percent of advertisers were new to Sky, some were new to TV

Business Challenge

Sky is the largest pay-TV operator in Europe, with a long track record of media innovation. The company encompasses a direct-to-home (DTH) pay-TV service offering over 500 channels, voice and broadband services, the Sky Media advertising house that sells TV advertising on 127 channels, and the Sky IQ data analytics business. Given the scope of Sky's product and service portfolio, the company was in prime position to shake up the TV advertising model.

Like most DTH providers, Sky's advertising revenues were based primarily on delivering linear ads to mass audiences - with all viewers watching the same channel and seeing the same ad at the same time. But Sky leaders recognized that the media landscape is changing, with video consumption becoming more personalized and extending across new devices - tablets, smartphones, gaming consoles, and more. They knew their advertisers wanted to provide more relevant and targeted ads, but Sky's existing technology limited its ability to serve ads more selectively or strategically.

As a result, Sky leaders saw an opportunity to create a new kind of advertising platform, one that wasn't just better than other pay-TV systems, but that would reassert TV's relevance in a growing

multiscreen viewing and advertising market. To achieve this, Sky needed to create a platform to provide regional targeting and greater addressability of audiences who were consuming Sky content via set-top boxes (STBs). That meant creating new capabilities to target ads more narrowly and serve them more intelligently - adjusting the type and frequency of ads depending on viewer, device, and behavior. At the same time, the solution had to be fully compatible with the United Kingdom's established Broadcasters Audience Research Board (BARB) standards, which measure TV viewing to allow operators to charge advertisers accurately.

From a technical perspective, Sky needed to launch new advertising capabilities on the millions of Sky+ high-definition (HD) STBs already deployed in the field, without interrupting services to viewers or requiring expensive equipment upgrades. The company needed to build an advanced, intelligent ad placement mechanism that could operate across a one-way satellite distribution system. And most importantly, the company needed to abstract away the complexity and sophistication of its new system, and create a simple, powerful business proposition for advertisers.

Network Solution

Sky made substantial commitments, both commercially and in terms of resources, to develop a first-of-its-kind Targeted Advertising solution that would transform the TV advertising industry. Working with innovators across the company's TV, advertising, and analytics arms, as well as external partners including Cisco and BARB, in January 2014 Sky officially launched the service that was the culmination of this multiyear effort: Sky AdSmart.

Sky AdSmart is not a single algorithm, application, or technology. It is an end-to-end digital delivery chain for personalized advertising, spanning the entire broadcast system including transmission technologies, STB software and hardware, data collection, and reporting, all designed to operate on one-way satellite systems. The solution includes:

- State-of-the-art back-end system that controls scheduling of AdSmart ads, taking into account business rules and regulatory restrictions governing ad placements
- Sophisticated ad-targeting engine that classifies viewers according to 90 combinable audience attributes
- Transparent, frame-accurate ad insertion that can imperceptibly swap targeted ads into linear programs
- First-of-its-kind viewing measurement capability that can measure advertising exposure across 500,000 subscribers, encompassing 40 million viewing events a day (for example, every time a viewer changes channels, pauses, rewinds, etc.)
- Mechanisms to download Sky AdSmart software and advertisements to millions of Sky+ HD STBs without disruption to viewers, converting deployed hardware to dynamic ad servers without the need to replace customer hardware
- Aggregation of third-party demographic data with Sky IQ, Sky's data analysis division

Sky AdSmart Agility with Cisco Videoscape Cloud Fusion

Sky has long collaborated with Cisco® to support its pay-TV, voice, and broadband services. Therefore, to support key aspects of the new AdSmart system, Sky turned to the Cisco Cloud Fusion for Videoscape solutions team. Cisco Videoscape Cloud Fusion empowers pay-TV operators to build personalized, immersive video services by providing advanced video capabilities both as “a la carte” applications and turn-key, end-to-end solutions. The platform's scalable cloud software-based building blocks and open APIs provide the flexibility to mix and match cloud software- and appliance-based capabilities within a single integrated solution, and operate them as a single system. So operators like Sky can easily integrate specific video services and components into an existing ecosystem, and rapidly develop, test, and scale new video applications.

Drawing on these capabilities, Sky partnered with Cisco to create new service control solutions for the Sky AdSmart system and integrate them into Sky's existing video infrastructure, which included both internally-developed and third-party components. Cisco contributions to the Sky AdSmart ecosystem include:

- Channel scheduling interface
- Playout automation interface
- Encoder control and management
- Metadata creation and generation
- Digital mux and up-link capabilities
- STB service reception
- DVR disk storage and filing control

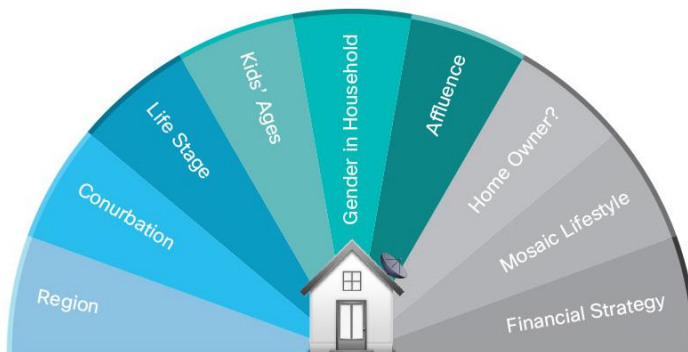
- Conditional access and device addressability
- De-mux and decoding of live and stored transport streams
- Video presentation
- Audience Measurement System
- Appliance-level event logging and return path data reporting

To efficiently manage all these functions with frame-accurate timing end-to-end, Cisco also helped Sky develop next-generation control plane solutions that automate many aspects of the targeted advertising system.

Sky AdSmart in Action

Sky AdSmart provides an efficient, automated platform to deliver highly targeted advertising to Sky TV subscribers. Drawing on information from Sky TV and Experian, the system creates granular profiles of subscriber households. Households are associated with 90 combinable attributes according to region and metropolitan area, household composition (including gender and life stage of the subscriber, whether the subscriber has children, children's ages, etc.), and measurements of financial outlook, lifestyle and affluence, as depicted in Figure 1.

Figure 1. Sky AdSmart's Main Categories of Targeted Ad Attributes



With that in mind, advertisers are empowered to combine as many ad attributes as they wish to target specific groups of consumers, down to a minimum of 1000 households targeted. Subscriber profiles, metadata, and targeted advertisements are continuously updated and transmitted down to the STB, without disrupting service or the end user's viewing experience.

Based on the subscriber's profile, Sky AdSmart pre-positions up to 200 targeted ads on the viewer's STB. The system automatically selects the most relevant ad to serve based on the content and time of day, drawing on metadata to help ensure that it complies with all regulatory and policy rules to deliver a particular ad at a specific time. The system also provides intelligence to ensure a better user experience, for example, allowing advertisers to define exactly how often a viewer sees an ad, and how many times an ad will run in a given timeframe.

Furthermore, AdSmart only charges advertisers when at least 75 percent of the ad is viewed - compared to the online commercial model, where advertisers are charged even if just a single second or frame of their ad plays.

Business Results

Within weeks of its launch, Sky AdSmart was hailed by advertisers and press as a revolutionary approach to TV advertising. Sky is the first European broadcaster to offer targeted linear advertising to this degree of granularity, and is the world's first operator to offer an end-to-end targeted advertising system at scale.

Sky AdSmart officially launched in January 2014 on 6.5 million Sky+ HD STBs across 22 channels, working with 15 advertising agencies representing 40 brands. In the first eight months since Sky began trialing the program, AdSmart has delivered more than 165 million ads across live TV channels to consumer HD STBs. Advertisers have launched more than 700 campaigns, targeting more than 200 distinct audiences.

The new service has cemented Sky's leadership role in the TV and advertising industries. And despite the novelty and sophistication of the solution, the compelling business value it offers has allowed Sky to substantially improve some key trading metrics. As of March 2014, Sky AdSmart had grown to include more than 100 brands, half of which were new to Sky TV, and many of which had never advertised on television before.

Communications industry magazine, [Campaign](#), highlighted some of the early successes:

- East Coast Trains crafted three distinct targeted ads for viewers in three metropolitan areas, and generated 26 percent more online sales than traditional TV campaigns.
- Car manufacturer Audi found that targeted viewers seeing AdSmart ads were twice as likely to buy a new car within the next year compared to traditional TV ad viewers.
- Lego targeted a campaign at affluent fathers, and found that viewers exposed to the ad through both AdSmart and traditional linear TV were 27 percent more likely to recall the ad than those seeing it with traditional TV alone.

Sky has accomplished all of this with a system that fully integrates with both its existing TV and advertising ecosystem, and co-exists comfortably with BARB, the TV trading currency. The company has succeeded with a solution that operates efficiently over a one-way DTH broadcast medium. And it has implemented the campaign in a manner that is imperceptible to subscribers. The only thing viewers may have noticed is that suddenly, commercials seem far more relevant to them - and they are paying more attention.

Cisco Videoscape solutions played a key role in the success of the Sky AdSmart system, providing next-generation control plane, video transmission, security, and advertising management capabilities that make Sky's revolutionary system possible. And by implementing these capabilities with Cisco Videoscape Cloud Fusion solutions, Sky was able to integrate them easily into its existing ecosystem. With the flexibility and agility that Cisco Cloud Fusion for Videoscape provides, Sky will be able to quickly develop, test, and scale new services as the system evolves.

Next Steps

Sky is now working to extend the AdSmart service across more Sky Media channels including those of Sky's media partners, as well as to expand its regions-focused AdSmart sales team. Sky is also working to further refine ad targeting attributes, including the ability to take advertisers' own data sets and correlate them with the Sky targeting system to serve ads. In the coming months and years, Sky expects to continue building the volume and sophistication of AdSmart campaigns, and ultimately drive more advertising revenue from other media (direct marketing, online search, regional press and radio, etc.) to its targeted TV system. The success of the Sky AdSmart system will likely affect the larger TV and advertising industries for many years. Drawing on its extensive AdSmart engineering effort, Cisco has incorporated many similar next-generation control plane and advertising capabilities into Cisco Videoscape components as appliances and in the cloud. As a result, these products are currently available to TV and video operators worldwide to implement their own targeted advertising service.

For More Information

To learn more about Sky AdSmart, visit <http://www.skymedia.co.uk/sky-adsmart/>.

And to explore Cisco Videoscape Cloud Fusion solutions that can be used to implement targeted advertising, visit <http://www.cisco.com/c/en/us/solutions/service-provider/videoscape-unity/index.html>.

Related Product List

Operators interested in deploying a targeted advertising solution similar to Sky AdSmart should leverage control plane and other key components (many of which have been moved into the cloud) from the following relevant suites in the Cisco Cloud Fusion for Videoscape portfolio:

- [Cisco Videoscape Control Suite](#)
- [Cisco Videoscape Advertising Suite](#)
- [Cisco Videoscape Security Suite](#)
- [Cisco Videoscape Client Software Suite](#)
- [Cisco Videoscape Processing Suite](#)



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