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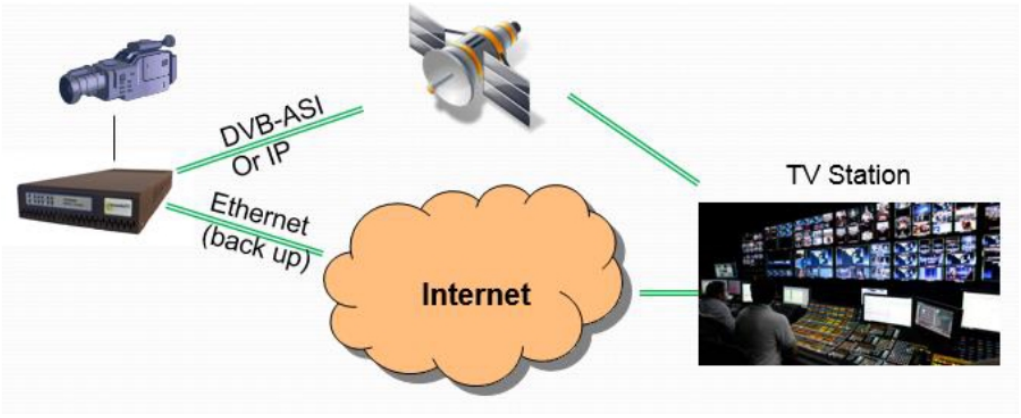
This paper provides an overview on how to use Cobalt MPEG Encoders for both traditional *and* Over The Top (OTT) live video services. In the past broadcasters have had to use different encoders for their traditional workflow and their OTT workflow. Cobalt MPEG Encoders are among the first true broadcast encoders that can provide the proper output formats for both workflows at the same time while ensuring the highest reliability and superb video picture quality.

This not only saves capital expenditures but also simplifies operational expenses, training, sparing and maintenance. In addition to saving money there are several Online Video Providers (OVPs) that can also enable new features and capabilities so there are two main reasons to look at these types of solutions.

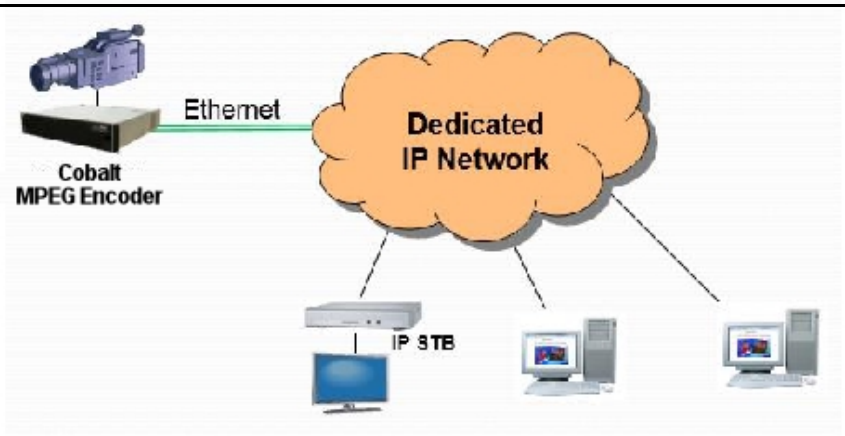
Traditional Application

Traditionally, broadcasters have used satellite for live video transmission in particular for news and sporting events and as such the traditional interface was DVB-ASI. In more recent times IP has become more prevalent either as a back-up or as the new interface for satellite transmission. This has been the model and will continue to be very important as the traditional video market still commands more revenue than newer ones both as a paid service and in terms of advertising revenues. The other salient feature of the traditional application is that it still primarily takes into consideration the TV set in the home as the primary device type.



Traditional Digital Sports and News Gathering (DSNG)

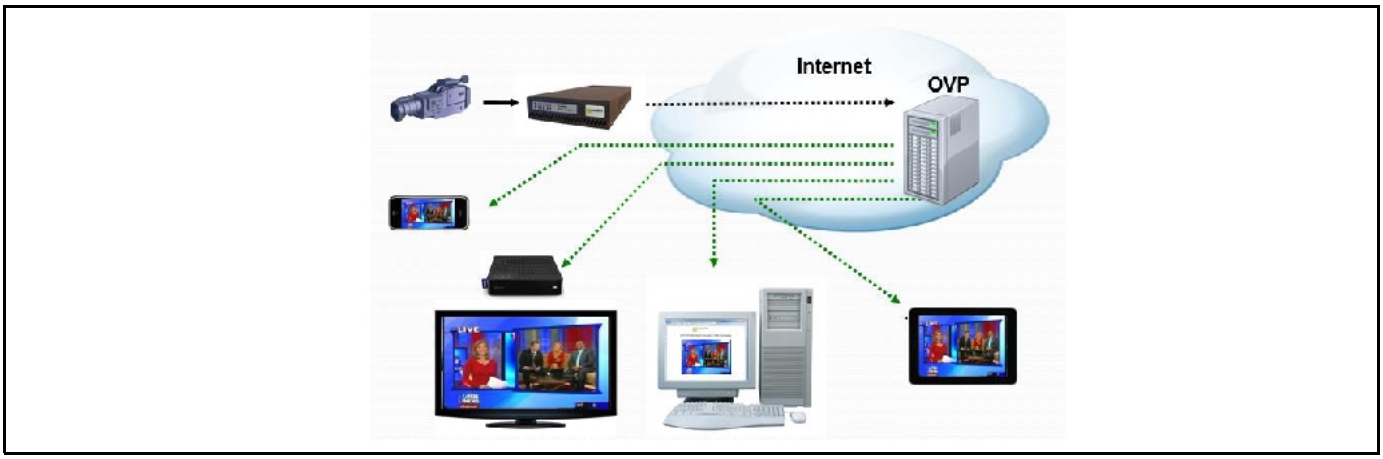
Corporations have used Transport Stream protocols for distributing video throughout their own network using STBs or PC video players.



Traditional Enterprise IPTV System

New Video Distribution – OTT

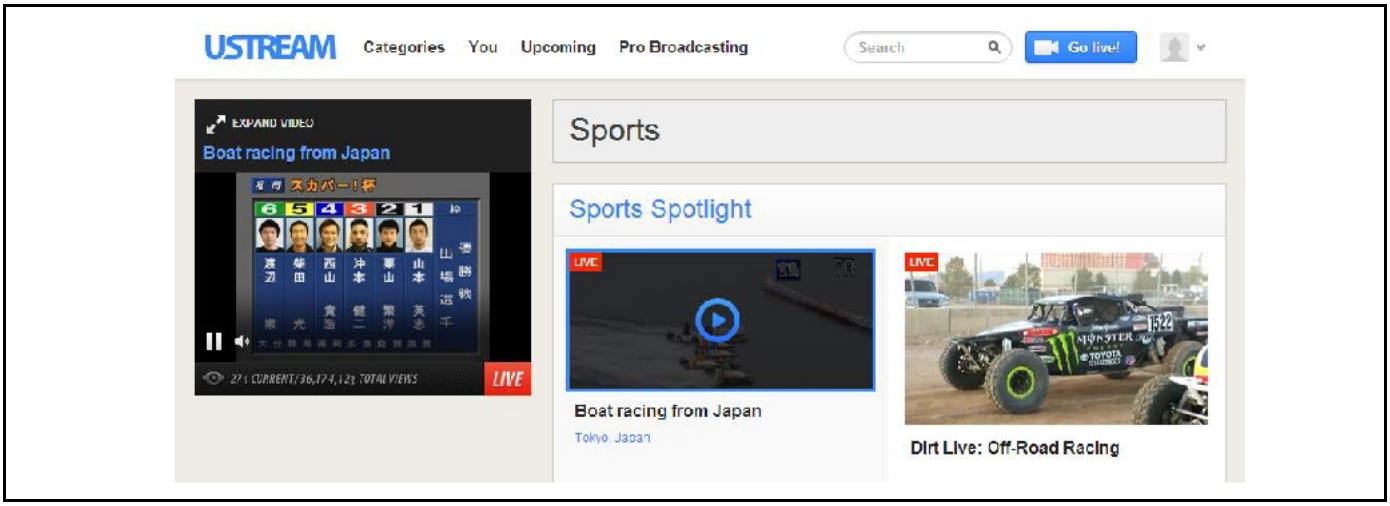
The new live video distribution application has a number of key differences compared with the traditional one. Shown below is a high level diagram of this distribution application. The initial target device was the PC. Then as mobile networks and smart phones and tablets became more capable these were quickly added to the target device list. There are now even services targeting Internet Set Top Boxes such as Roku to support streaming to a TV set. The same encoder can be used for both applications at the same time. The next section will briefly cover some of the more popular OVPs and Online Services.



OTT Video Distribution

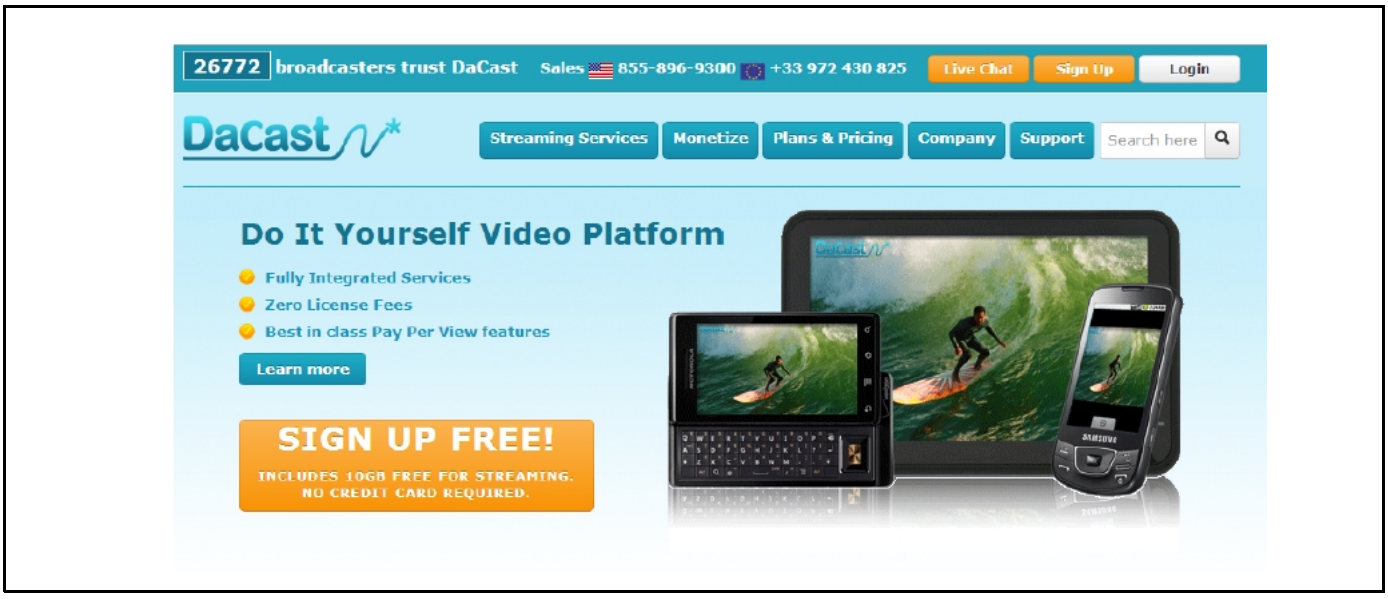
Online Video Providers and New Online Services

Online Video Providers (OVPs) such as Ustream and DaCast have made streaming simple and cost-effective for a great many users ranging from churches to corporations to schools and broadcasters.



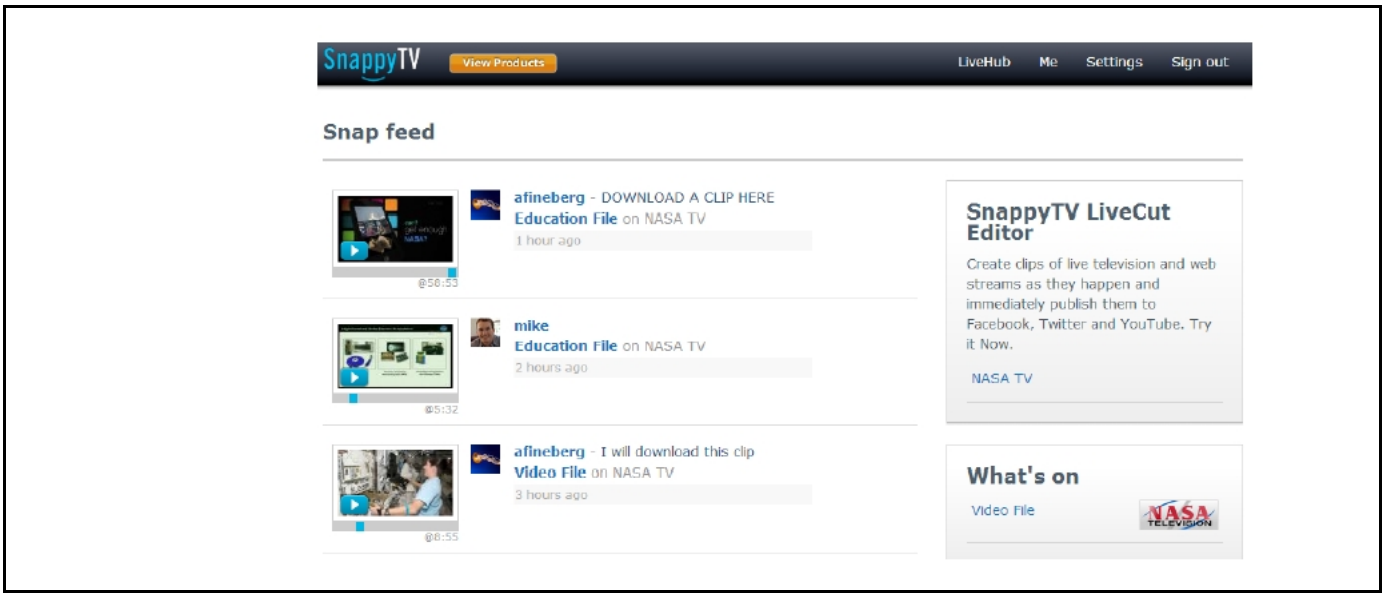
Ustream Home Page

Usstream supports both paid models as well as advertising-driven models. (Typically, if the viewer doesn't object to ads, then the streaming service is free.)



DaCast Home Page

DaCast has support of a variety of services although they have chosen to not have advertisements in their options. More recently, a new class of online video service provider has emerged and one example of that is SnappyTV. Their service allows for two capabilities; the ability to edit video and the ability to publish that content out to other video platforms such as Ooyala, Brightcove and Kaltura as well as social sites such as Twitter, Facebook and YouTube.

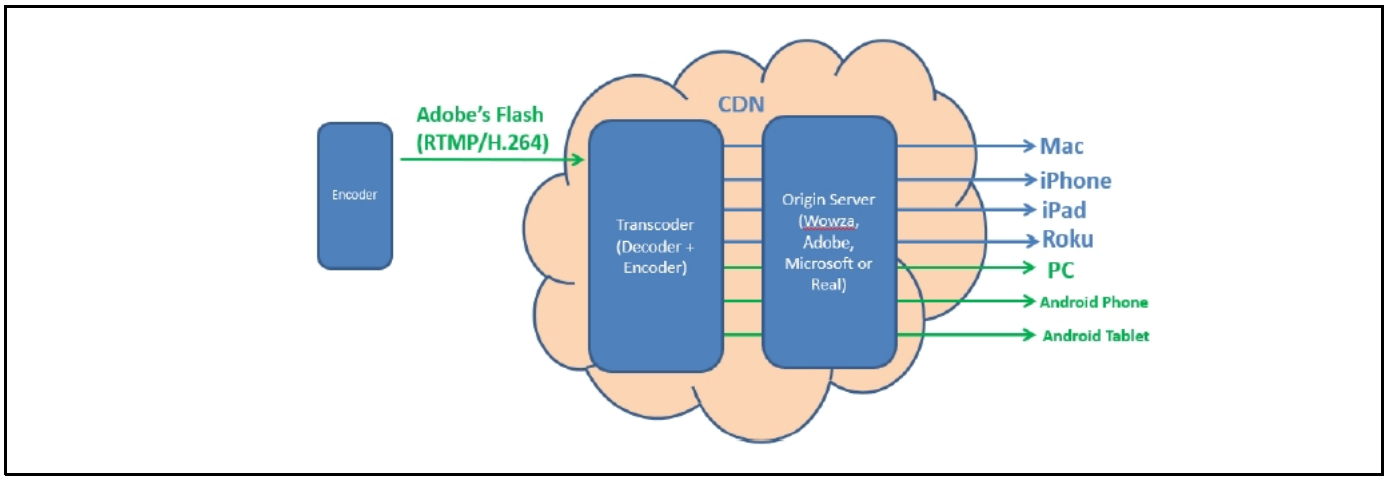


SnappyTV Home Page

Cobalt Digital MPEG Encoders have been verified with these platforms and more. (Other Cobalt white papers provide step-by-step information on how to stream to these platforms.)

Requirements for Cloud Based Transcoding

Cloud based transcoding is the latest new and exciting video service that allows for even simpler workflow from the encoder. However, this service comes with a price as the secondary decode and re-encode results in lower quality than the primary encode. This means that the primary encoder has to have very high quality in order to give all users a satisfactory experience.



Cloud Transcoding

Summary

Cobalt Digital MPEG Encoders have proven quality since the devices are hardware-based. The devices are also true appliances meaning that the devices are not built on a PC platform; the devices run on a Linux operating system. The encoders can also support legacy as well as new streaming formats. These are the features that high-end users are now demanding for mission-critical video operations.