



The Muddle in
the Middle Series



NATIV
Total Media Logistics

A Nativ Whitepaper/ www.nativ.tv

Delivery to the Internet:

Reaching audiences any time, any place

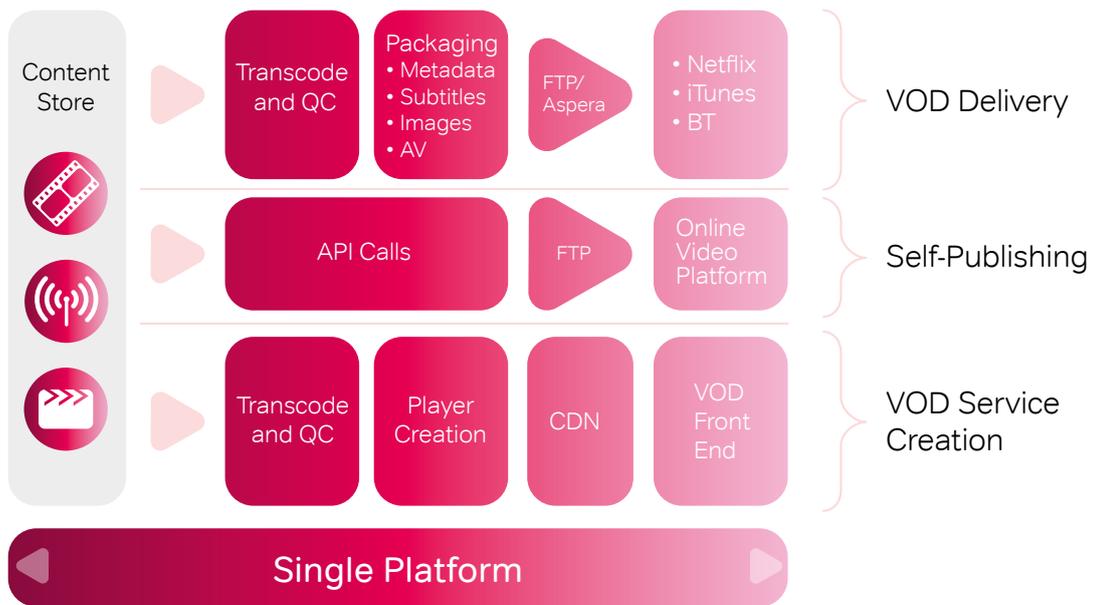


Broadcast is no longer the only show in town when it comes to delivering TV and film content to the masses. In recent years the consumption of such content over Internet-enabled devices has exploded.

From connected TV and consoles to tablets and mobiles, there is a rush to dominate the Internet TV service proposition and offer TV anytime, anyplace and in high definition.

For consumers, this is a great time as TV and film services become richer, more customisable and “always on”.

For content owners it's a mixed bag of increased opportunity and increased operational pain. Content owners can no longer bet on a single Internet TV platform - they must sweat value from their content by leveraging multiple deals to stay in the game. The fulfilment and delivery side of things can be incredibly painful and costly with content preparation and repurposing costs often negating the commercial upsides for smaller deals. However, the same technologies that have enabled Internet TV have enabled file-based workflows and digital delivery that help overcome this.



When delivering content to Internet-enabled platforms and devices there are a number of key issues for content owners to think about:

1. **Delivery** – How to push bundled content to a remote internet service or have it pulled through a querying interface.
2. **Service** – Whether to create your own TV service; deliver it to existing internet TV platforms; or both.
3. **Packaging and delivery technologies** – How to handle file formats, metadata, subtitling and digital delivery in order to get the right content in the right format to the right player, on time.
4. **Standards** – Remember that for every component of VOD delivery (AV, metadata, subtitles, network delivery) there are a growing number of competing standards.



Delivery Paradigms

There are a number of delivery paradigms to consider when addressing the challenge of delivering content to the Internet. The first is a **“push”-based** approach where content is bundled up and pushed to a remote Internet TV service. With this model, the content owner or content services partner is responsible for AV formatting, preparation of metadata, subtitles, art work and organising the related files into the correct directory hierarchy. The other concept is **“pull”-based** where a remote Internet TV service requests content from a content owner through a form of remote browse or querying interface. The former is far more popular a concept and is analogous to the old world of tape-based fulfilment through content services companies.



Service Types

When delivering to the Internet, one must consider the type of platform service and there are several concepts to consider.

Self-Publishing

The first concept is self-publishing, where content owners create their own direct-to-consumer TV service. The easiest way to achieve this is to set up an account with the likes of YouTube or Daily Motion and push content and metadata to the service via plain FTP and simple XML. Most APIs of this ilk support programmatic control of delivery so that software and workflows can be used to automatically deliver to Internet TV platforms. Such APIs are now robust and relatively mature. It's in the interest of Internet TV service providers to make it as easy as possible for content owners to publish their content and reach a wider audience.

A more sophisticated approach to consider is the creation of a white-labelled TV or film service. The content owner creates and manages their own video players and typically embeds them within their own website offering. It ensures much greater control over functionality, branding and user experience than merely configuring a YouTube channel. Probably the best way to get the ball rolling on this is to enlist the service of an online video platform which allows users to customise players to a larger degree. The upside of using these services is that many of them are multi-device aware and will support playback on mobile and tablet.



Occasionally content owners will go one stage further and build their own Internet TV service from scratch. This involves developing their own player and utilising CDNs, transcoding technology and various payment and content protection software. Ditching out of the box video platform solutions and enlisting the likes of an end to end video management company can be expensive and may involve enlisting systems integrators and front-end developers, but it allows content owners to create a completely customised and integrated Internet TV and film business.

VOD Delivery

The alternative approach is to use what's there and deliver to existing Internet TV platforms, removing the need to build a front-end service altogether. Where this approach differs is that it typically follows a commercial content deal and delivery can only commence following a contractual agreement between the content owner and the Internet TV platform provider. In this case content services partners may be involved. They take responsibility for preparing and delivering content to the platform operator on behalf of the content owner. The reason for this is that paid-for Internet TV services such as iTunes and Netflix need to pay careful consideration to content quality and supplementary information such as regional subtitles.

Often the Internet TV service provider will have bought specific titles, seasons and episodes from a content owners' back catalogue. Hence the content is very specific and must be delivered in a timely matter to meet the commercial obligations. Content services companies often keep a copy of the content owners' back catalogue on tape and take on responsibility for content preparation and delivery. This removes the burden and complexity from the content owner, but often at a large cost.

In most cases, content owners will hedge their bets and use all of the above to ensure they are on the most popular platforms whilst retaining a direct relationship with the viewers through their own service.

Packaging and Delivery Technologies for VOD

Self-publishing is by far the most simple approach for getting content onto the Internet. Often it's as simple as manually or programmatically sending an AV file and some metadata via FTP. VOD delivery however is worthy of more discussion given the complexity and variation in packaging formats.

When it comes to VOD delivery, there is a myriad of technology considerations in order to get the right content in the right format to the right player, on time.

File Formats

The first is the audio visual (AV) content itself. Some Internet services providers will be kind enough to accept a wide range of AV file formats and standards. However, many won't and the burden of AV transcoding and quality control (QC) will reside with the content owner or content services partner. What may at first seem a trivial issue quickly becomes hugely complicated. Many Internet TV services such as iTunes have a brand to protect and expect AV content to be delivered in very high quality with no audio-visual glitches. Often the only way to avoid rejection is to manually QC all content prior to delivery.

Metadata

Many Internet VOD platforms allow end-users to browse for content by category, release date, free search, and the list goes on. In order that content can be discovered by the end-user, VOD content must be delivered with the correct metadata. For the content owner, this means that delivering AV content is not enough. The content must be bundled with metadata (often XML format) that describes the content in as much detail as possible and in the format requested by the Internet TV service provider. Often this metadata preparation is done by hand and is very labour intensive and error-prone. As Internet TV platforms grow with greater content availability and increased back-catalogues, metadata richness becomes increasingly important to ensure content is discovered and ultimately monetized.



Subtitling

Another (often forgotten) component of a VOD delivery is subtitle information. There are a growing number of different subtitle formats and all of them must be considered by a content owner wishing to monetise their content cross-platform. Subtitle creation can be costly and time consuming but is often a necessity when delivering content to overseas territories. Many subtitle formats are delivered as accompanying XML in the same VOD package.

Digital Delivery

Many areas of the TV and film supply chain are replacing tapes with files and taking advantage of file-based workflows. VOD delivery is no exception and many content owners and Internet TV platform operators alike expect content to be delivered as bundles or files (AV, metadata, subtitles etc). In the case of delivering this content digitally, another challenge is that many operators take advantage of file acceleration for managing the delivery of large volumes of large assets. File acceleration UDP technologies such as Aspera and Signiant can offer benefits over and above plain FTP in terms of faster delivery and more sophisticated delivery orchestration. This can be a challenge for content owners as different VOD operators support different delivery technologies from tape to accelerated delivery.

The Standards Paradox

One of the reasons that content owners offload the responsibility of content preparation and delivery for VOD platforms to content services companies is the sheer level of complexity. This is brought about by a lack of standardisation and the amount of manual labour involved in delivering to multiple operators – often at short notice. This often results in a large cost of fulfilment for content owners wishing to monetise their content over the Internet.

It's easy to look at the various components of VOD delivery and surmise that there are already standards in place to make life easier. However it couldn't be further from the truth. The explosion of multi-platform TV over the past few years has been brought about by a large number of technology innovators working in isolation to create new standards. As a result of this, for every component of VOD delivery (AV, metadata, subtitles, network delivery) there is a growing number of competing standards. Therefore the paradox is that with many competing standards there really is no official standard. As a consequence, delivery of TV and film to the Internet is still in its infancy and desperately in need of standards frameworks to remove the manual processes, complexity and costs.

The good news is that standards are emerging that are better thought out and more relevant to the world of multi-platform delivery. Another nice side effect of the maturing industry is that end-users are consolidating to a smaller number of larger VOD platforms such as iTunes and Netflix. They're also self-publishing to fewer and larger platforms such as YouTube and DailyMotion. Therefore it will be easier for content owners to hit a larger audience while delivering to a smaller number of platforms.



Taking control with a single software platform

Delivering high-quality video experiences to the internet means rising to five key business process challenges:

- 1. Centralising all assets** – In-house and externally managed content in one central place and in the right format.
- 2. Managing video and audio assets** – Tagging, linking, storing, versioning and structuring every asset so it can quickly and easily be found, sliced, diced, previewed and manipulated.
- 3. Automating workflows** – Creating streamlined workflows that match real world processes, with as few manual tasks as possible.
- 4. Repurposing and distributing for every service** – Automatically generating the best format for each channel and delivering it on time at the highest possible quality.
- 5. Measuring the impact** – Working out which video is the most successful and which channels and platforms work the best.

Software platforms are emerging to answer the challenges this new world of Internet TV delivery presents – whether through self-publishing or VOD delivery – and it's a clear case for a single, centralised platform.

New advanced media asset management (MAM) and workflow platforms have been developed that can automate the complex business rules around VOD delivery, including transcoding, metadata transforming, re-publishing, packaging and delivery. These new software solutions offer adaptors that plugin to existing platforms such as YouTube and DailyMotion and offer workflow orchestration for more advanced VOD delivery. Much of this new software is being offered as a service so content owners can take control of their content and delivery, thus increasing visibility and dramatically lowering their Internet delivery costs.

Although the industry is moving at a lightning pace and technology is changing and evolving all the time, one thing that is for sure – content delivery to the Internet will be quicker, easier and less costly in the next five years compared to the previous five years. This will be brought about by the consolidation of film and TV services and a slow adoption of standards for all elements of content delivery.

**Contact us to take back
control of your content**

t: +44 207 580 9488

e: info@nativ.tv

🐦: [@NativLtd](https://twitter.com/NativLtd)

www.nativ.tv

