VML
Technology

The Video Engine of the Future

The Current State of Video

Video in 2021 is much the same as it always has been for the last decade. As video has become more and more central to our working and personal lives, we have seen the incremental improvement in video quality, streaming speeds and the options of where and how to view content. From conferencing, online events and digital marketing to entertainment and advertising, 2021 will be an even bigger year for video.

With this mass adoption of video, the most surprising thing is that video processes and capabilities have largely remained the same. The linear path from creation to distribution to consumption is fundamentally the same as it was when video was first distributed digitally. A video created and published online is consumed in the same way by all viewers. Video, in essence, is static from the moment the creation and editing process is completed.

Video is the most informative medium to consume information, yet it remains static and unactionable. Consumer journeys are forcibly extended to account for the inability to take direct action straight from consuming video content. There have been attempts to create in-video CTAs. These are typically chunky, obtrusive, and inherently still static; every consumer receives the same actionable button overlaid on top of the video.

There is a clear need and opportunity for technology that transforms video allowing it to be reactively dynamic, fully interactive and integrate with data at scale. We have identified and researched these challenges and the changing landscape.

Taking a revolutionary approach, we have created VML.

What is VML?

VML is a unique technology that redefines how we experience video.

VML removes the linear, one way process that current video must follow. Video can be truly dynamic, optimised and individualised to each viewer. VML reverses the video lifecycle meaning that video is only fully formed at the time it is being viewed. Utilising the power of edge computing, content is created in nanoseconds at the exact moment the viewer presses play.

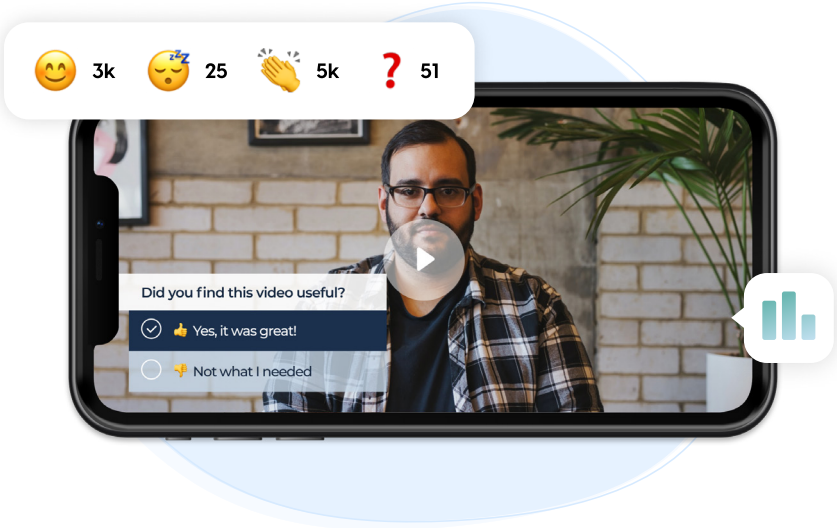
VML is a unique functional-based language that describes how video is to be rendered in real time. Video clips, audio tracks, text, graphics, animations etc can all be added, removed and manipulated in real time as the video is being viewed. VML was created to enable video to be optimised and personalised to levels and scale that have never been possible with any existing technology.

A comparison to understand how VML works securely and at scale is to equate it with viewing your online banking. When you view your online banking transactions in a web browser, then close it, that data no longer exists within that browser or your device. VML works in the same way, data is pulled into the video on the device just in time for viewing. As soon as the video finishes or the viewer leaves the page, the video as it was viewed with the data no longer exists. The data used in the video remains in its initial location and that location only.

The VML Player Engine

The player engine is the client-side video rendering SDK. It enables any media to be dynamically converged with data in real time to create personalised and contextually aware content for any viewer. The player engine's ability to create video on the edge enables unique interactive in-video elements that can directly affect and optimise the video as it's being viewed.

In-video CTAs which can be personalised help drive customer engagement and shorten the user journey, enabling viewers to take action directly within video for the first time. In-video buttons, surveys and polls can be personalised on a per user basis and enable the video to update itself as it's being viewed based on the viewers' actions or lack thereof.

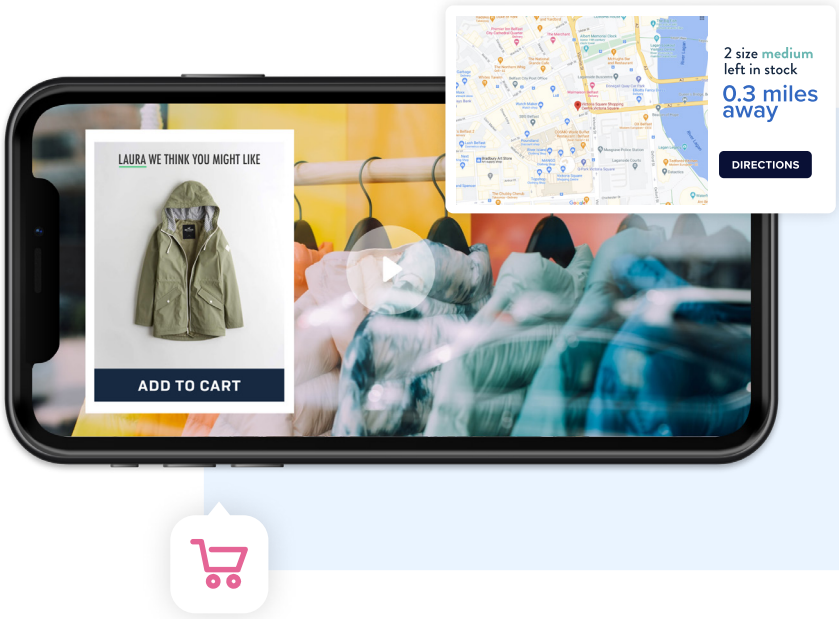


These actionable in-video triggers enable video to respond and update according to programmable rules, actions and interactions. The VML player engine ensures video is always fully optimised and engaging to each viewer.

The video thumbnail is critical to increasing clicks and views. The player engine enables thumbnails to be contextual and personalised, just like the video content. Live animated thumbnails with bespoke copy and imagery for each viewer is designed to ensure your video playback rates are exponentially increased.

The final frame of a video encourages the viewer to take action based on the content they have just viewed. From logging into a web portal to adding an item of clothing to your basket, the VML engine enables the final frame of a video to always be visible on screen once the video has completed. Animated post-roll ads, actionable and personalised CTAs and buttons can display or redirect other related content to increase engagement and drive traffic. The final frame of the video is fully customisable and controllable.

The player engine SDK is easily embedded into any website, portal, or mobile app to instantly enable the distribution and creation of personalised and fully interactive content.



Big Data Video

The creation of video utilising edge computing enables new and unique opportunities for organisations. Data can now be used within the overall video campaign creation process in ways that have never been previously possible. Customer, product, location, viewer and any other data an organisation possesses can now be used to create unique, dynamic and data-optimised video content. For the first time, the most engaging medium, video, and the most valuable digital asset, data, can now be combined to enhance all digital media that an organisation creates and distributes.

The term ‘Big Data Video’ is a new technology term that has been born from VML’s capabilities. VML enables the ingestion of any data to manipulate and effect video. This data can be traditional data such as data that clients will have within their many internal systems or unique data such as biometric data from a VR training experience. All of this data can be processed and utilised in real time to update and optimise the viewing experience.

Alongside organisations’ internal data and public API data, video can be optimised and enhanced from its analytics. Live in-campaign A/B testing enables video to self- analyse and update segments, duration, data and animations to ensure all viewers in each demographic, geographic region, timezone, customer segment, etc always receive the most relevant and optimised video. VML not only utilises existing big data, it creates a lake of valuable data to enable itself to continuously self-optimise.

Responsible Data Management

In the age of exponential cybersecurity risk, increasing data protection and privacy laws, the need for organisations to fully understand, manage and control their data is critical. In 2021, organisations will need to ensure their internal and consumer data is secured and that data is not processed or utilised by unnecessary third parties.

The power of the VML player engine allows for a unique paradigm, the usage of personalised data at scale within video without the need to share, export or potentially compromise any internal data.

The player engine’s unique edge rendering mechanism allows for data to be retrieved and passed in locally from within the organisation’s own internal authentication systems and for it to be dynamically embedded into the video. Organisations can retain full control and ownership of their data while enabling the mass creation of personalised video.

Environmental Technology

2021 is a pivotal year for technology that is eco-friendly and helps reverse the upward trend in carbon emissions. Heightened public demand twinned with increased global Governmental action is driving the need for change.

Video processing is notoriously complex, time consuming and energy intensive, this makes the creation of personalised video, in the traditional sense, extremely inefficient. Outside the issues of cost and time, the amount of energy required to create contextual and personalised video on any scale is incredibly high. Intense server processing and storage requirements for each variation mean that there will always be a high environmental cost and carbon footprint required to create personalised video at scale.

Reversing the rendering process to occur on the edge enables video to be personalised at any scale with zero extra overhead in comparison to distributing a generic video. With VML, there is no increase in cost, time or environmental impact whether the video is being personalised to 10 individuals or 1 billion. It is the only technology that enables mass personalisation at scale, instantly and with no additional environmental impact. This radical new capability helps tackle the increasingly prevalent environmental concerns surrounding video creation, management and distribution.

The Future

Looking into the future we believe in the necessity for VML to become the industry standard for contextual, interactive, personalised video creation and consumption. With increasing demand for more personalised content across all mediums; VML will become central to this shift within digital media. The main drivers behind this will be the ability to instantly deliver content at scale, data segregation to ensure the maximum levels of data privacy and guaranteed minimal to zero environmental impact.

To find out how VML can transform your communication and engagement speak to a member of our team today via email: sales@vmltechnology.com or visit www.vmltechnology.com to learn more.