

***Factsheet:******The Wired-Up Guide to Video Email***

Justin Anderson, Founder and Managing Director of Frontwire guides Wired-Up readers through the video email maze.

Video email takes HTML email to the next level. It has all the benefits of HTML email plus the added benefit of being able to deliver more compelling video content, streamed directly into the recipient's inbox. As such video email is a highly effective way of building awareness of marketing campaigns, and potentially creating viral activity.

It is already a growing area of digital marketing and one which will experience greater growth over the next year according to the findings of the Frontwire digital marketing survey.

Key early adopters of video email as a marketing tool are the automotive and film industries.

How do you send a video email?

Video emails can be sent as attachments or by using a process called streaming. But, unlike the offline counterpart VHS there are no video players that are universal to all online users. Therefore you need to make a selection based on the quality of output and the likelihood that the recipients will be able to see what you send.

What is best - an attachment or a streamed video email?

There is no simple answer. The benefits of attachment are that recipients can forward them more easily – as was the case with the phenomenally viral John West Salmon ad. Because of this and because they are not perceived to have a corporate sponsor, attachments lend themselves to greater viral activity. Also, once downloaded, further access to the internet is not required in order for the recipient to read the file.

However because the option to forward it not part and parcel of the campaign, it is incredibly hard to determine the actual number of final recipients. Added to which a high proportion of corporate firewalls and mail servers will reject emails sent with a video attachment.

In the case of a streamed video email, the video is hosted on a server until it is played. This means the size of the email delivered will be smaller, making it easier to receive and less intrusive for dial-up users. It also allows you to deliver a longer clip and reach a greater number of people. For example if you're running a consumer campaign that targets people with web-based email such as Hotmail, streaming the video will keep the size of the message within their limits. To read a streamed video does require internet access.

What are the streaming video options?

There are two key options for streaming the video, they are:

- i. Streaming video to a proprietary video player
- ii. Streaming video to a Java player

Streaming video to a virtual video player

One or more players may already be loaded on the recipient's system, and if not, most are available as free downloads from the web – firewalls, corporate policies and enthusiasm of the recipient to get the video permitting.



Generally speaking there is a quality/file size trade-off whereby the bigger the file the better the quality. However, as algorithms improve so does the quality, with little if any effect on file size. Each also varies in terms of market penetration. The main ones are:

- Real Player - an excellent player with high quality compression and 85% market penetration
- Windows Media Player - another excellent player with high quality compression and approximately 65% market penetration but rising fast.
- Apple QuickTime – arguably the highest quality player, but with the lowest penetration.

With each of these a high quality digital file is encoded and compressed by the sender, the recipient's player then decodes and decompresses the file for viewing. When streaming from a Web server, the quality of stream to download is chosen at the start and cannot be changed mid-stream.

Some players, like Real Player, stream video from a special server, rather than a standard Web server. While this requires more set-up, the special server can cooperate with the player to automatically switch to a lower quality version if the users' system can't cope with delivering high quality video, even if the network conditions change while the playing is in progress.

NB The figures quoted above are Frontwire's best current estimates of penetration of the universe of machines with players installed - not the computer market at large.

Streaming video with a Java player

The Java player streaming video is perhaps the most elegant solution as it requires no proprietary player to be installed on the machine desktop. But it only works if the computer is Java-enabled, which over 95% of computers now are.

Unlike Real Player this option does not require a player application to be installed. To keep the e-mail size small, the player may be stored on a server linked to the email and automatically downloaded when the recipient opens the email.

What factors affect video quality, and how can they be overcome?

There are three key factors that affect video quality for recipients:

- Bandwidth
- Packet loss
- Compression algorithm

Bandwidth is the rate at which data can be sent from the server to the client, in bits per second. Modems typically provide around fifty thousand bits per second at best, while 'broadband' services provide more like five hundred thousand or a million bits per second. Corporate users will often have access to two or more million bits per second (although they have to share this with many other users).

Packet loss is the likelihood of data sent by the server from being lost in the network, rather than being delivered to the client. Packet loss can occur because the server is sending information faster than the client can receive it, due to insufficient bandwidth, or due to general overloading in the network or equipment failure.

Better compression algorithms can provide more streaming video quality in a given amount of bandwidth - and cope better with packet loss. When streaming video from a Web server, if even a single packet is lost the entire stream is paused until a replacement packet can be requested by the player and supplied by the server. Players that work with special servers are able to keep the stream flowing despite losing a packet and will just cause a slight drop in quality.



If a campaign has global reach, which in essence every digital campaign does, you need to minimise packet loss and provide as much bandwidth as possible. This can be done by placing servers on each major Internet backbone worldwide and using a few tricks to make all those servers have the same Internet address. That way, recipients attempting to start fetching a stream will be connected to the nearest server, ensuring that the load is spread; making more efficient use of available server bandwidth and ensuring that the number of intermediate networks between recipient and server is minimised. This reduces the number of places where overloading and failure can occur, which might result in packet loss. Also, should a server fail, after a period of a few minutes while the Internet 'heals', recipients in that server's catchment area will start being served by the next nearest working server.

response rates.

What options are there for the digital marketer sending a streamed video email?

Digital marketers running a video email campaign have a number of options.

They can licence software that allows them to encode and host the video on their own or a third-party backbone. Alternatively they can buy a 'bundled' solution that includes the encoder, host and bandwidth plus consultancy.

Delivering video email requires a reasonable amount of bandwidth. The typical home user will stream at 40kbits/sec (56k modems rarely manage the full 56k). So a 2Mbit/sec link can theoretically sustain 512 concurrent streamers in ideal conditions. Although 450 is more likely if you consider the bandwidth required to cover the retransmission of dropped packets and a shared link.

Bandwidth providers generally sell big chunks of it at a fixed cost. To stream a video you will pay a cost per stream. Prices start at 10 pence per stream and go down as quantities go up.

How will video streaming improve in the future?

There is a range of new Java applications coming out that make use of increasingly effective algorithms to improve video encoding and decoding. This means more video for less bandwidth and so even without an improvement in the uptake of broadband, better quality video can be streamed.

Added to which bandwidth itself is improving, meaning that the number of bytes that can be transmitted per second are on the increase.

These two trends combined are bringing out a steady increase in the quality of streaming video to the recipient.

About Frontwire

Frontwire helps organisations acquire and retain customers in more cost effective ways using digital marketing solutions (with e-mail, SMS and streaming video). Frontwire's core services include: Strategy & Planning, List Building and Rental, Data Management, Design & Editorial, Message Dispatch & Tracking, Response Management, Research & Analysis.

To find out more about our solutions, clients and case studies please visit our web site www.frontwire.com or call Jason Meads on 020 7368 9700.

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