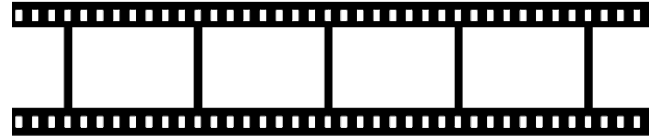


Music TV and Video streaming

Mendlesham Computer Club

By Giles Godart-Brown

What is Video?



- A video is simply a sequence of still images, just like on a cine film. Each image or frame consists of rows of coloured dots called pixels. An HD TV is 1920 pixels wide by 1080 high (phones are about 896 by 414).
- Each frame is compressed by similar techniques as those for still images, and they are also compressed inter-frame – only the pixels that are different from the previous frame are stored
 - Compression is VERY efficient, only about 2% of the data captured in a TV camera ends up being used!
 - Compression is very compute intensive, even today it causes about a 2 second delay on TV signals
- Each video is compressed at several rates, the lower the rate the worse the quality
- When you start a video stream it uses the lowest rate, then it hops over to a faster rate if the network and device you are using can support it.

User Generated Vs Commercial Content

Mendlesham Computer Club

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User Generated Vs Commercial

- User generated content is free, e.g. your own photos and home videos
- Commercial may be free (BBC) or Pay (Sky)
- Platforms like YouTube and TikTok blur this distinction as it is advertisement funded (i.e. free to consume) but often commercially produced.
- Commercial music and video is often bundled with other services e.g. Amazon Prime.
- With the advent of secure streaming, the time between a movie being in the cinema and available to download (the Window) has collapsed.

How to share your own photos and videos

How to share your personal photos and videos.

- To one person
 - Email attachments
 - Google photos - sharing
 - Phone to Phone or PC sharing e.g. Apple Airdrop or Android Nearby Share
- To a group
 - As above but with multiple recipients
 - File sharing e.g. Dropbox
 - Social media – WhatsApp, Instagram, Facebook ...
 - Photo sharing app – Flickr, Amazon Photos

Commercial players

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Who are the big players?

- By far the biggest players are the new platforms
 - X (was Twitter)
 - WhatsApp
 - Spotify
 - Snapchat
 - Facebook
 - TikTok
 - YouTube
 - Instagram

Who are the big traditional players in TV and video?

Free

BBC iPlayer
ITVx (replaces ITV hub and Britbox)
All 4
My5
Sky News

Pay

Sky Go
NowTV
Sky Sports
BT Sport
Amazon
Prime
Netflix

AppleTV
Paramount+
Disney+
Discovery+

What do you need to view these.

- Ideally a Wi-Fi network. Streaming video over the 3/4/5G network will quickly use up your monthly bandwidth allowance
- Pay services will require you to have an account, some are monthly (e.g. Amazon Prime), some are pay as you go (e.g. NowTV)
- An App or a web page running on a suitable device
 - PC/Mac
 - Smartphone
 - Tablet
 - Modern smart TV
 - External device e.g. Amazon Fire stick, Sky puck

Options for watching on the TV

- Free services can usually be watched by connecting your PC to the TV via HDMI. Pay services may not work due to HDCP encryption on the cable.
- Some TVs support 'casting' or 'mirroring' from a smartphone or tablet, again this may not work for pay services.
- Most Set top boxes (Freeview Play, FreeSat, Sky) and modern TVs have many of the Apps built in and also support pay services.
- The Amazon Fire stick is a good solution for Amazon Prime customers with unconnected TVs.



Do you need a TV license to watch TV from Broadband?

- Irrespective of the device you are using, you need a TV license if;
 - You watch or record shows on ANY TV CHANNEL as they're being shown live in the UK. This includes BBC iPlayer, ITVX, Channel 4, My5 and YouTube as well as pay services such as Amazon Prime Video, BT Sport, NowTV, and Sky Go or
 - You use BBC iPlayer for any content.
- You do not need a License for BBC Sounds.
- In other words, you most probably need a license for TV over Broadband.