Bitesize

GCSE Bitesize Computer Science
Ivo Jansch on video streaming

My name is Ivo and I work at Egenic. We build mobile apps for iPhones and iPads and we're currently working on a number of applications for television watching, so apps that you would use while you're watching TV.

Video apps are challenging because video is very data intensive. There's a lot of data goes into a video. For example, a typical movie might be gigabytes big. But on an app or on apps, we need to stream those over our 3G connections or over our slower internet connections. So there's a lot of technology that deals with streaming video and making sure it is optimised for the device that we're viewing it on, so that on our phones we get a different video format than on our desktops or on our televisions. So it's optimised, based on the amount of bandwidth we have available in our internet connections. There are a number of ways to do that. One simple way is just to have multiple versions of the same video file. But there are a number of interesting open standards, such as HLS, which deal with this in a really smart way.

HLS basically means that a video stream is built up out of an enormous amount of tiny fractions of the video in all kinds of different bit rates and, based on our connection, it can decide which package to send us. So if we have a good connection it will send us bigger packages with better quality, and if our connection drops it will start sending us smaller packages so that we can still watch the video at a lower quality.