

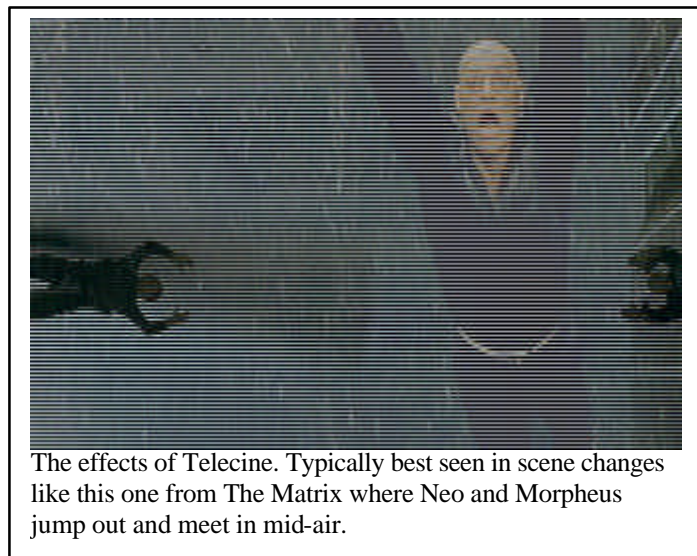
PROGRESSIVE SCAN FOR EVERYONE

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What is progressive scan

When they shoot movies the cameras snapshot 24 pictures per second (or frames per second). When the movies is then to be broadcasted on television (or distributed on VHS or DVD) the number of frames has to be spread across the 30 (or 25 in Europe) frames television shows per second. To do this they scan the frames and runs them through a process calls "*Telecine*". It's a process of blending (interlacing) the frames together so they seem to last longer.

E.g. they put frame1, frame1 + frame2, frame2, frame2 + frame3 etc. It's a bit more complicated than that but to keep it simple let's say it is so. The effects of this process can be seen if you grab a few frames from the movie with your computer and magnifies them. Some frames look stripy where you can see two frames. One every second row.



If the movie is shot with the same number of frames per second as the television (like with a cam recorder) the Telecine process is not necessary and you therefore doesn't see the artefacts from Telecine. This is called Progressive Scan where each frame is shown by itself.

How to accomplish this for everyone

Nowadays digital cameras are becoming more common and George Lucas for instance have decided to shoot Star Wars: Episode 2 entirely with these digital cameras. By designing a camera that captures 69 frames per second you would have progressive scans for 24 (cinema), 25 (PAL) and 30 (NTSC) frames per second. The 69 frames isn't taken at a

regular interval but at a fixed timesheet. The times is made from laying out the frames from the three standards on a timeline and removing the duplicates or ones that are nearly duplicates. When distributing the movie there are frames for every standard and everyone gets progressive scans.

There are some things that make it a complicated matter. The worst of these are editing. When splitting a scene in mid-second

the editing software must note where in it's time cycle it is so that the end result (24, 25 or 30 fps) will be with frames at a regular interval. This would mean that the software has to cut two or three more or less frames than the

editor wants. As it's a split second one wouldn't really notice it.

It sure would be something to experiment with as progressive scan movies often look better than telecined.