

Whitepaper: Avoiding Image Burn In

Flat panel plasma screens have represented a revolution in the growing industry of dynamic digital signage for their high-resolution monitors and thin form factors. However, if deployments are not thought out properly, the final costs will far exceed the initial investment. One particular threat to plasma display panels is that of image burn-in, which occurs when an image remains stationary after an extended period of time. This problem is not unique to plasma screens, as it can even happen in ordinary televisions or monitors, but the investment in PDPs is so much higher that it magnifies the risk of poor design for broadcast (cable television) or narrowcast (closed circuit) playback.

In the broadcast world, burn-in is likely to happen through the continued use of a 'bug' or station logo at the bottom of the screen. A simple switch to commercial breaks every 10 or 15 minutes usually avoids burn-in. However in community calendars or 24-hour news channels, this becomes more troublesome.

A few approaches to narrowcasting have taken this a step further, by forever delineating the display into three or more zones. While it manages to get across a lot of information, improper planning can lead to disastrous results. Some users have tried to cobble a homegrown solution out of video splitters emulating a video wall. These forever mark boundaries and burn-in is all but guaranteed over time. A number of competing products have also largely taken this idea but added tools to occasionally move the display a few pixels to the left or right and up or down.

This sounds good in theory because the change is not too noticeable and technically screens do not show the same pixels for hours on end - but that does not mean that the pixels will actually show something different. Therefore despite jittering, screens will still not be immune to burn-in when the majority of content is stationary. And, in fact, relying on jitter makes the problem worse because it gives people the false impression that it will save their investment of several thousands of dollars.

While both broadcasting and narrowcasting are different mediums, they can both suffer from similar problems. When choosing a solution, it is important to look at which will be best for the long run and has a history in both industries because it takes broad expertise understand the requirements of 24/7 operation - not just in terms of stability. Before you even begin to design for your next broadcast or narrowcast, make sure you have the tools to ensure your success, not prevent it. If they don't give you the opportunity to give your playback a fullscreen breather often, your screens will quickly be out of breath and rendered useless if not unattractive and ultimately detrimental.