

## The World is Not All Flat: Video Projectors for Digital Signage

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It is time once again to play our favorite game and debunk more conventional wisdom myths relative to digital signage. Come on now you know this is going to be fun and there may even be a certain degree of smugness you might gain from being better informed than the masses. As a refresher at debunking myths relating to digital signage, the biggest one that we have reported on so far is that digital signage industry is dominated by retail and ad driven networks. As we now know, retail is the most visible sector of the market but actually makes up 33% to 35% of the overall market depending upon whose numbers you believe. The second myth is that digital signage is simply a video version of a static sign. As our kids would say to us with a healthy dose of skepticism, "oh really?". Those of you "in the know" realize that these myths are just that, myths and the truth goes far beyond their apparent reality. Now on to the latest and perhaps greatest myth of the day that states that digital signage is made up almost entirely of applications using flat panel displays.

This one has to be true doesn't it? After all we just went to the local Wal-Mart and saw all the flat panels hanging from the ceiling and we just got back from our most recent trip and the airport was covered with flat panel intrusion into the depths of our exhaustion. This anecdotal evidence is where the conventional wisdom is born. The fact of the matter is that 25% to 30% of the digital signage industry is projection and not flat panel and further research shows that this is not going to change anytime soon.

With the proliferation of flat panel displays in much bigger sizes above 60 inches, why is projection holding onto its segment of the digital signage market? The answer is threefold; one is the cost of large flat panel displays, another is physically installing these huge devices, and last but not least, we have the environment and ambient light to consider. It is obvious that projection is not practical for most applications below 60 inches. I say most applications because there are exceptions to the rule. One "rule breaker" are those cute little Christie Digital MicroTiles that are projection technology and not flat panels and of course there are special applications where extreme brightness is needed on a small screen but in general screen size matters where projection is involved.

The flat panel camp will argue that their 70", 82", 103", and 152" will suit the needs for large screen images just short of a video wall and they offer further proof of the invincibility of flat panels by stacking them to create a videowall of immense size. In some cases they are right and they will fill the proverbial bill but where cost and image size is concerned it may be another story. If we begin by looking at cost, a commercial 70" LCD flat panel is in the \$12K street price range and the 82" LCD is in the neighborhood of \$52K. The 103" plasma is \$36K and the 152" is a whopping \$500K and just under 300 pounds! The reality is that there are numerous applications where a larger screen size is needed but the budget, physical limitations, and the environment will not support the price of a larger sized flat panel display.

A cost versus size comparison is not the only differentiator. We also need to consider installation parameters and the environment in which a digital signage display must live. To the first order, hanging a heavy flat panel up in a ceiling where large screens normally reside is not an easy feat. It can be much simpler and less expensive to hang a screen and projector on a mount and get the desired effect.

Speaking of getting the desired effect we must consider the environment where the large display will reside. A typical LCD flat panel will produce 450 to 700 nits of brightness. Depending upon the ambient light in the area this may be insufficient to give the kind of brightness and more importantly contrast level desired to give the quality of image we are seeking. A washed out image lacks impact and actually can become a negative rather than a positive or even a neutral impression. This type of performance can negate the benefits of digital signage all together. With projection you can select brighter and brighter projectors and employ gain screens to give you the desired effect in high ambient light environments.

The naysayers will bring up the issue of bulk in a projector and of course the omni-present need to replace lamps on a regular basis. Of course there is a need to replace lamps every 2K to 4K hours but this too is changing. With the advent of LED illumination and more recently laser and LED combinations we are up to 3,000 lumens of light output and with a gain screen these projectors can become an ideal solution and with a TCO and maintenance cost that makes perfect sense. As a side note, lamp replacement is a cost "adder" but the flat panel people are not without a continuing maintenance cost with the necessity to clean the displays that are installed in what impolitely may be called dirty environments.

I love the bulk argument when it comes to projectors. Today's modern projectors come in a huge variety of sizes, types, and light output for nearly any application. The little Pico Projectors the size of cell phones can produce up to 60 lumens of light output. They can be tucked away in nooks and crannies and use both front and rear gain screens in small areas to create digital signage magic. The next step up the ladder is the Micro Portable the size of 4 decks of cards. LG has one that produces 300 lumens of light output and as with the Pico Projectors, imagine the applications with small, high gain, front or rear screens. By the way, these all use LED illumination so the lamp replacement argument goes away. My favorite group of projectors is the Ultra-Portable weighing in at a couple of pounds at the size of a laptop computer and producing up to 3.5K lumens. Casio even has a new one with a laser-LED illumination system that eliminates the need for lamp replacements for over 20K hours! If this is not enough horsepower for your screen size and illumination needs we can bring in the big guns with the Large Venue guys at companies like Christie Digital and Digital Projection and blast the largest of screens with nearly 40K lumens. Imagine that on a gain screen!

As my regular readers know I could go on and on but I won't. I am not saying that flat panels are bad or that digital signed should use only projection. On the contrary, I am simply expanding the scale and scope of digital signage displays to encompass all display technologies. What I am saying is that projection continues to have its place in the digital signage universe and that the world is not all flat!