

FIGHTING THE FLAT PANEL TREND**Application and Market Strategies for Identifying Qualified Projection Prospects:**

Over the past few years, flat panels have become increasingly big in screen size, while at the same time decreasing in price. Without a doubt, flat panels are creeping into smaller-screen projection applications, and taking market share. This has not impacted DP up to this point - given the high light output of DP's projection solutions, even our lowest cost projectors are typically employed as solutions for larger screen applications.

While it is reasonable to expect the flat panel size and cost trends will continue, we can take comfort in knowing that there are practical limits to how big flat panels can get and how low the price can become. Nonetheless, given the current threat to smaller screen projection applications, we thought it would be helpful to provide some brief suggestions to help our customers identify prospects with display applications where technical demands assure projection will remain king.

Larger Screens Over 90" Diagonal: Certainly bigger panels are available, but the costs are still fairly high. In addition, larger panels are extremely heavy, and moving them into existing facilities and mounting them in those facilities is often not possible due to facility design. The majority of DP's projection solutions are 5000 lumens or much higher. Given the lumen power we offer in our product line, nearly all of the applications where DP projectors are employed are for screens that are much larger than 90" diagonal. *Strategy: Customers with very small conference rooms are not your target. Seek customers with larger screen requirements and you will identify solid DP prospects. Key markets include higher education, fortune 5000, worship, public entertainment, staging, home cinema, and anyone with a venue of a scale that exceeds what a flat panel can reasonably achieve.*

Displays for Irregularly Shaped Surfaces: An obvious point - flat panels are flat. If the application requires content displayed on a curved or irregular surface, flat panels do not provide a solution. Projectors equipped with warp capabilities can be "mapped" to nearly any projection surface geometry. *Strategy: Explore customers in vertical markets with projection applications that are atypical, such as simulation, visualization, entertainment, public displays and architectural mapping.*

Contiguous Images of Scaled Resolution: Many applications now require contiguous displays boasting resolution that exceeds what can be offered by a single flat panel. As one example, process control applications often employ multiple projectors organized in 1 x 3, 2 x 4, or far larger arrays. While certain flat panels are offered with very small mullions, the image produced by an array of flat panels is never truly contiguous. The reduced luminance uniformity and color uniformity of flat panels also detracts from their suitability for array applications. No doubt, when applications demand contiguous imagery comprised of tens of millions of pixels, projection, benefitting from image blend, remains the best solution. If the image surface is irregular (curved) then warp can also be applied across the projection array. *Strategy: Identify users who require intensive resolution or scaled display solutions. Key markets include government, military, command and control, process control, medical, oil and gas, visualization, simulation, engineering, staging and worship.*

Color Accuracy and Stability: The 3-chip DLP projectors in DP's product line benefit from our ColorMax calibration technology, and all of our 1-chip models offer extensive color alignment capabilities as well. The color space produced by DP projectors exceeds industry standards, and the

calibration capabilities assure the displayed color can be accurately set to meet customer requirements. This is especially important for multi-projector applications, where every display must be matched in color performance, or for customers with demanding color performance requirements. *Strategy: The benefits of extreme and stable color accuracy and color matching are valuable to customers in many markets, including, visualization, simulation, government and military, command and control, process control, oil and gas, medical, advertising, worship corporate branding (trade-shows), home entertainment, live entertainment and broadcast sets. Be sure to underscore the benefits of color accuracy and stability during demonstrations and employ demo content that is rich in dynamic range and saturated colors – especially memory colors. Proper demo material underscores the color performance of DP’s projectors, and leaves a lasting impression with prospects.*

Color and Luminance Uniformity: The DLP projectors in DP’s product line produce extremely flat luminance and color uniformity. This means that the brightness and color integrity of the displayed image is very consistent across the entire screen. This benefit produces imagery that appears very smooth and pleasing to view. This benefit can be appreciated in single projector applications, but it becomes especially valuable in projection array applications, as it reveals a scaled image that is consistent in brightness and color, corner to corner, in spite of the fact that the overall image is being produced by an array of projectors. *Strategy: Always promote the benefits of color and luminance uniformity to all of your prospects, and especially to prospects contemplating multiple units. Be sure to point it out during demonstrations and have demo content handy that underscores the exceptional uniformity performance of DP’s projectors.*

No Glare: Nearly all flat panels employ glass that reflects light sources in the venue. Some actually employ extremely glossy surfaces. This can be very distracting for viewers, especially on a large flat panel, and can compromise the integrity of the image. Based on typical room design (location of windows and light sources) and viewing positions, glare is a reality for at least some viewers in nearly every venue. Front projection screens produce no glare, and the vast majority of rear projection screens are diffusion type, also producing no glare. *Strategy: Any customer who has experienced the impact of screen glare from a bank of lights, or from windows on large flat screen, will appreciate a large image with no glare. When visiting with your prospects, be sure to survey the room and point out potential sources of screen glare, while emphasizing that presents no concern when using projection.*

Security: Large flat panels are expensive, and they are typically installed on walls, well within reach of harm’s way. Accidental damage, vandalism and theft are real concerns for many venues. *Strategy: Nearly all customers have experienced financial loss due to the above mentioned risks. When visiting with your prospects, survey their venues and if appropriate, point out the difference between the economic risk of placing a flat panel in harm’s way versus a much lower cost projection screen.*

Access to Wall Surfaces when the Screen is Raised: If an electric screen is employed, this presents a great opportunity for the customer to retain functionality and integrity of the room when the projector is not in use. For example, when raised, the screen could expose a whiteboard, or windows to the outside world.

Flexibility of Placement: With a two piece display solution (projector and screen), customers have the ability to easily shift the position of the projector and screen to support divisible rooms, which are increasing in popularity.

Limited (if any) ADA Mounting Requirements: Since the projection screen height can be adjusted to fit the room scale and optimum viewing considerations, there are few if any ADA mounting requirements, as there are with a flat panel on the wall.

Access to Connectivity: Pulling a new connection to a projector through a suspended ceiling is simple, compared to finding a new path through a wall behind a large flat panel.

Sheer Scale: DP offers powerhouse projectors that produce stunning imagery on truly HUGE screens!
The strategy is simple: Think large venues. They are everywhere.