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For immediate release

Patent Pending at Beam 4K for high-yield production methods to integrate microlouvers and panes.

Beam 4K, Inc. (Chagrin Falls, OH) depends on microlouver structures like those used in privacy films to keep its projected UHD display from shining through its transparent glass screen. Doing this directly on the surface of the glass screen using microstructural fabrication would have proved to be impractical to accomplish on a production scale if not for innovation. This is reflected in their Patent-Pending claim, "Combining additive and subtractive production processes to adapt microlouvers to high-yield production".

"We are covering comparatively large glass panes with microscopic slats with measurements in tens of microns," explains Beam 4K, Inc., CEO Martin Winston, "and we've tried dozens of ways to accomplish that. We even found a device that could directly cut these structures into the glass, a femtosecond laser, but we would not have been able to create more than 5 or 6 screens a month, and each of those would have been enormously expensive. But we didn't give up. We found another way to take advantage of the precision of the femtosecond laser while allowing us a production yield that could reach thousands of screens per day. As technology often reminds us, the greater the epiphany, the more striking the lesson, and the more we lessen the stress."

Trial runs of earlier production approaches used subtractive manufacturing alone, additive manufacturing alone and some simultaneous combinations. The "secret family recipe" being deployed in Beam4K™ products is a more holistic approach that lets the same principles used in these screens be applied for other purposes, like privacy screens for secure kiosks or vehicular heads-up display screens. For those Beam4K™ products, the approach also lets microlouvers improve front reflective efficiency and renders the microstructures too small to be seen by the unaided human eye at normal operating distances of approximately 18 inches (half a meter).

Beam 4K, Inc. develops proprietary hardware and software (46 Patent-Pending claims) to make it easier for online meetings to communicate more, communicate better and end sooner.

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5-axis femtosecond laser image courtesy of Microrelleus (Barcelona)