

NEW MODEL PROJECTOR

FOR AN IMMERSIVE AGE



@historictheatrephotos

VINTAGE VIDEO PROJECTORS



UGLY PLASTIC BOXES





VIDEO PROJECTORS: HOW DID YOU CHOOSE AND USE?

- The best resolution and output you could afford
- Hopefully one with enough light to work in your space
- Bring it home, try to mount it somewhere that wouldn't be in the way; hope no one will notice the ugly plastic box in your living room
- Leave it there until you realize that the image isn't nearly as bright as in new projectors, and that your television has much better resolution than your 5-year-old 720P projector
- Toss the monstrosity

CURRENT VIDEO PROJECTORS

Professional \$10k Option



Christie Digital @ \$10k Price Point
~6,000 Lumens
1080p -> Semi-4k
Choice of ~7 Lenses
Big Plastic Boxes

High End Home Option



Optoma UHD50 @ \$1k Price Point
2,400 Lumens
4K UHD
One Lens
Slightly Smaller Plastic Box

SAME UGLY PLASTIC BOX

... AND PROJECTOR MOUNTS

Commercial



DIY



CURRENT VIDEO PROJECTORS

- No standardized mounting system –Mounting is ugly, time-consuming, and inclines consumers to never again move their projector, even if it means not using it.
- No choices in lenses for projectors costing <\$5,000. Limited choices in even the most expensive units.
- No options in Light Engines. You buy a beige, white or black box, and whatever lamp is in it is what you always need to use. –No ability to upgrade.
- Projectors are *dumb*. They don't know where they are, what they're projecting onto, and cannot be responsive to things that everyone now assumes that even their phone can track
- Conventional projectors are really, really hard to implement in emerging opportunities that use light, imagery, real-time SFX, and responsive architecture

VINTAGE VIDEO CAMERAS



NEW MODEL VIDEO CAMERA



MODULAR ECOSYSTEM: EXPLOITING ADDITIVE AND SUBTRACTIVE MANUFACTURING



ATOMOS



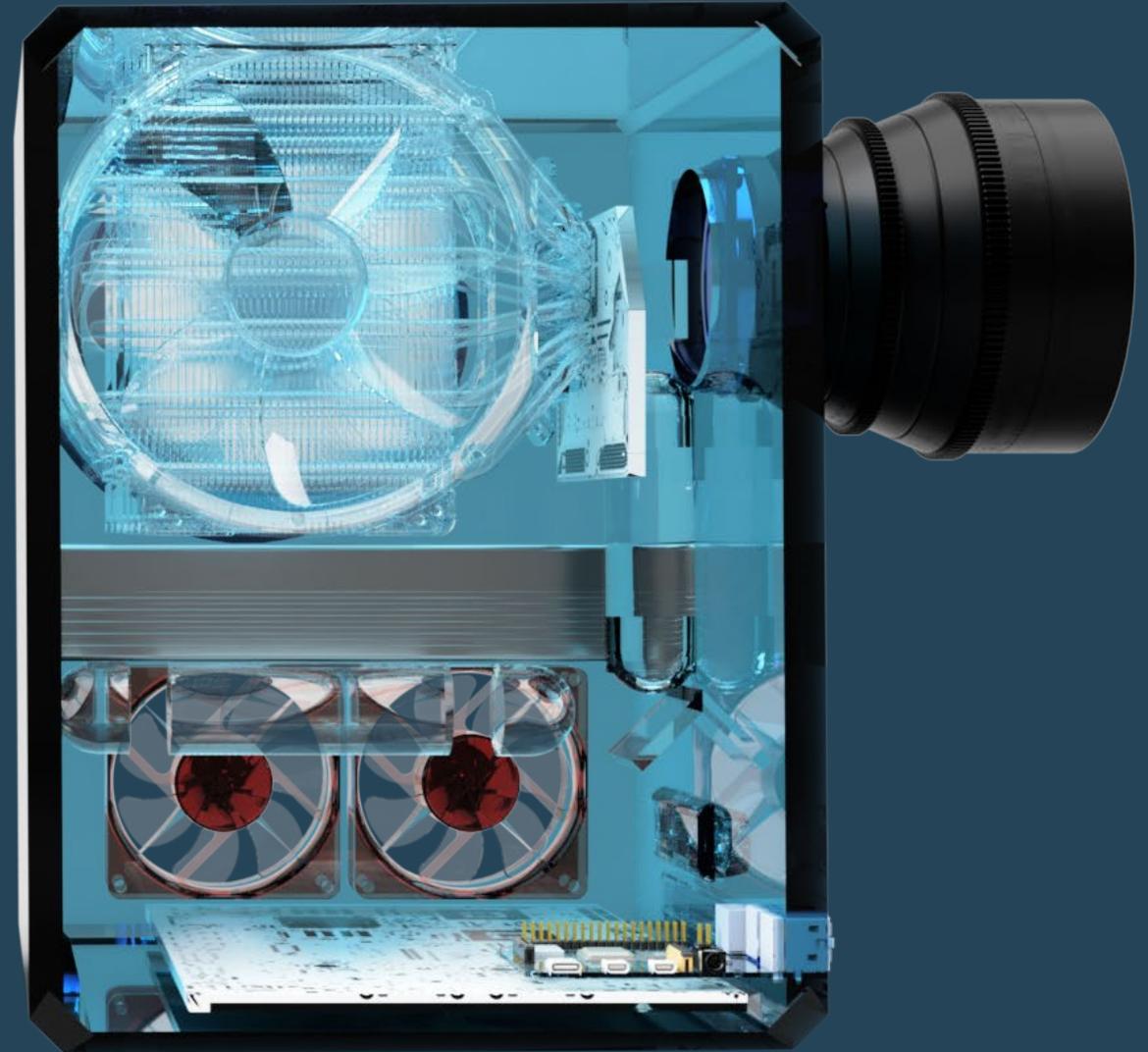
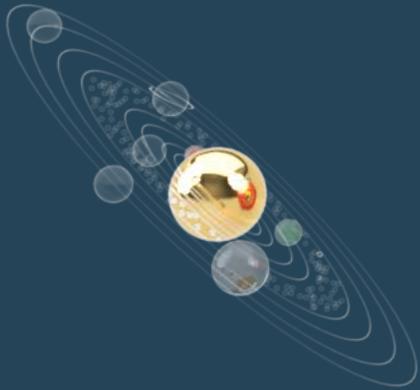
SHOT
OVER



SIGMA



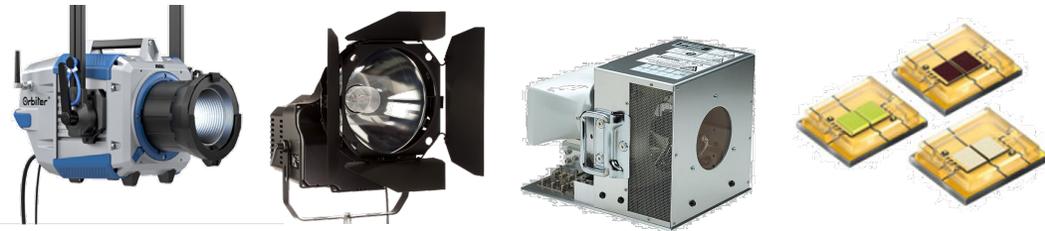
NEW MODEL VIDEO PROJECTOR



CONFIGURABLE



- Buy the components you want to create the projector you need
- Built to be used where you need it, and to adapt to that environment
- Employs physical and data standards, to ensure it can connect to whatever you need, in whatever way you need
- Change it when it needs to change

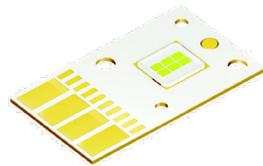


THIRD-PARTY MODULAR ECOSYSTEM: BOTH CONVENTIONAL + INNOVATIVE LIGHT ENGINES

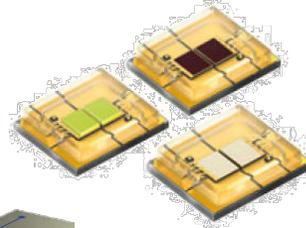
Arri Orbiter



Full Spectrum LED w/
Color Wheel

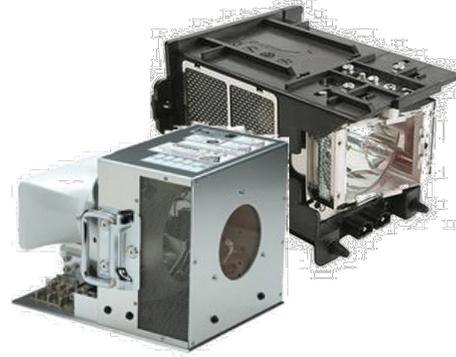


3x LED System w/o
Color Wheel



Lasers (Full Spectrum + Color Wheel)

Xenon



Hive Plasma Lamps

THIRD-PARTY MODULAR ECOSYSTEM: MOUNTS AND HOUSINGS

Production and Installation – Standardized Quick Release to Design or Production Tools

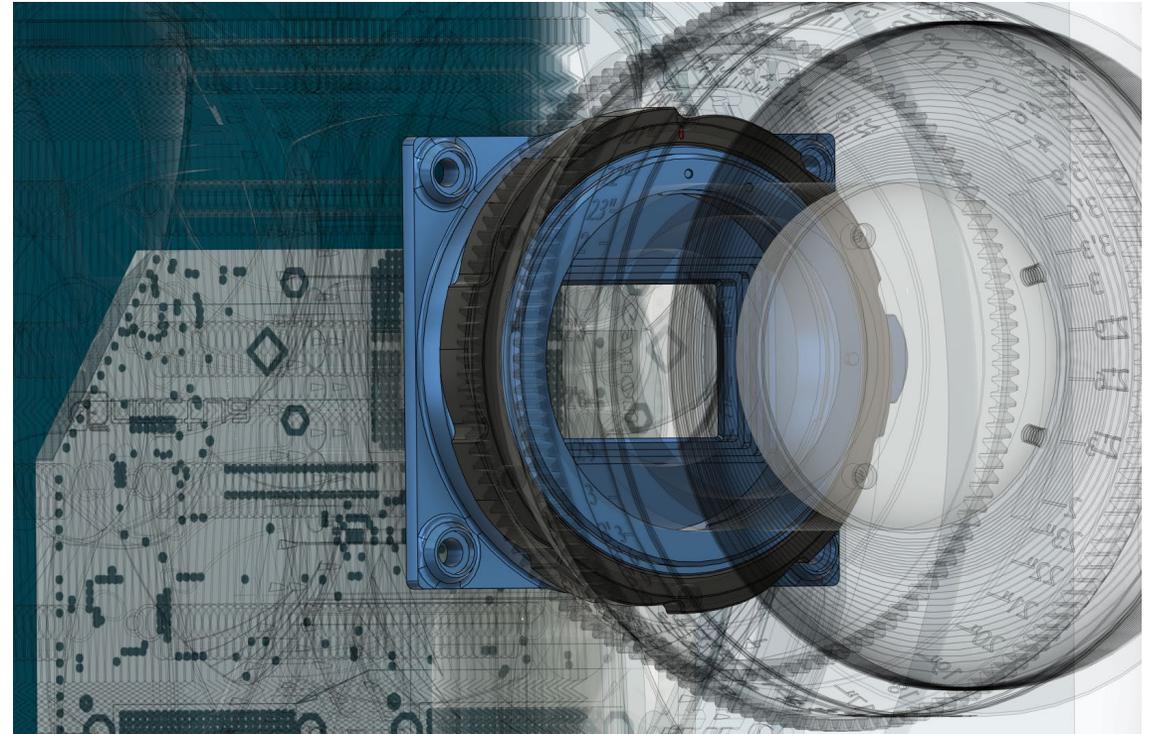


Residential – Standardized Quick Release to any Wall or Ceiling Connector



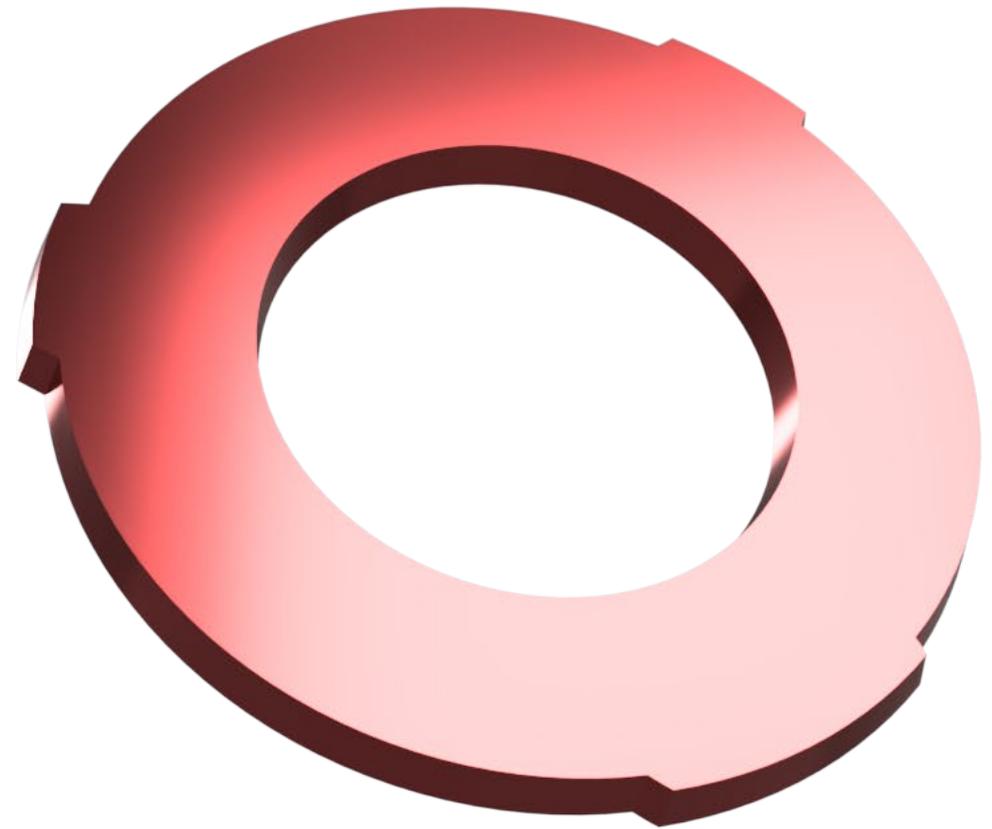
LENS MOUNT OPTIONS (SWAPPED VIA 4 M3 HEX SCREWS)

- Canon EF. Enabling control of focus and zoom, as well as real-time metadata transfer, using an extremely broad range of lens options.
- Cooke /i lens technology, as with Canon, but with specific applicability to VFX
- Simple C-type mount, for core installations, also enabling creation of inexpensive, but fully optimized compound lens designs
- Bellows lens/lens mount combination, enabling physical control of keystone and other undesired (or desired) physical effects



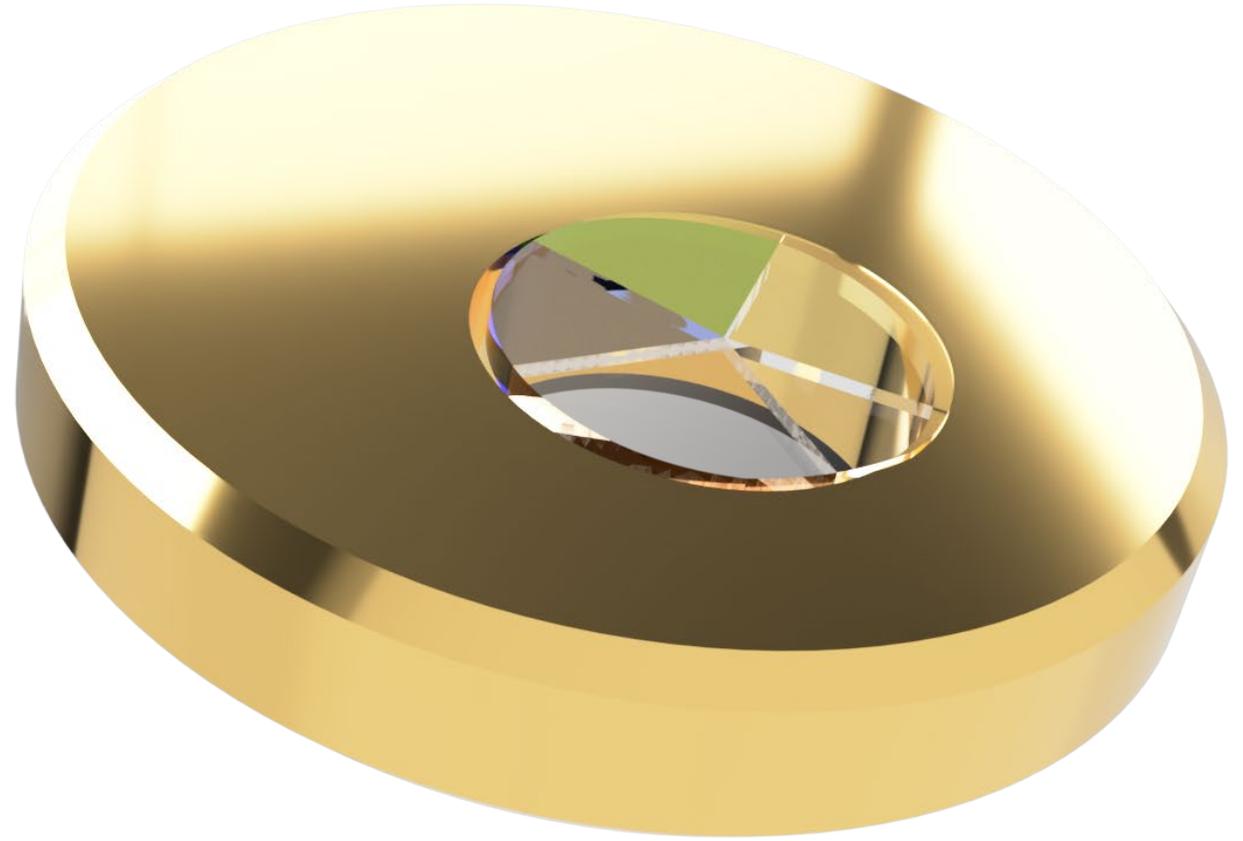
LIGHT ENGINES

- Light Engines connect via Arri's Quick Lighting Mount (QLM) system, or adaptors integrating that locking mechanism
- The projector's internal light path is designed to make effective use of as diverse light sources as possible. This includes:
 - Single Color LEDs, using intermediary color wheel
 - Multiple Color LEDs, controlled by the projector
 - Plasma, using intermediary color wheel



COLOR WHEEL

- Optional QLM-mounted component, between the housing and continuous full-spectrum light engine



MUCH OF THE CAMERA ECOSYSTEM IS ALSO OUR ECOSYSTEM:



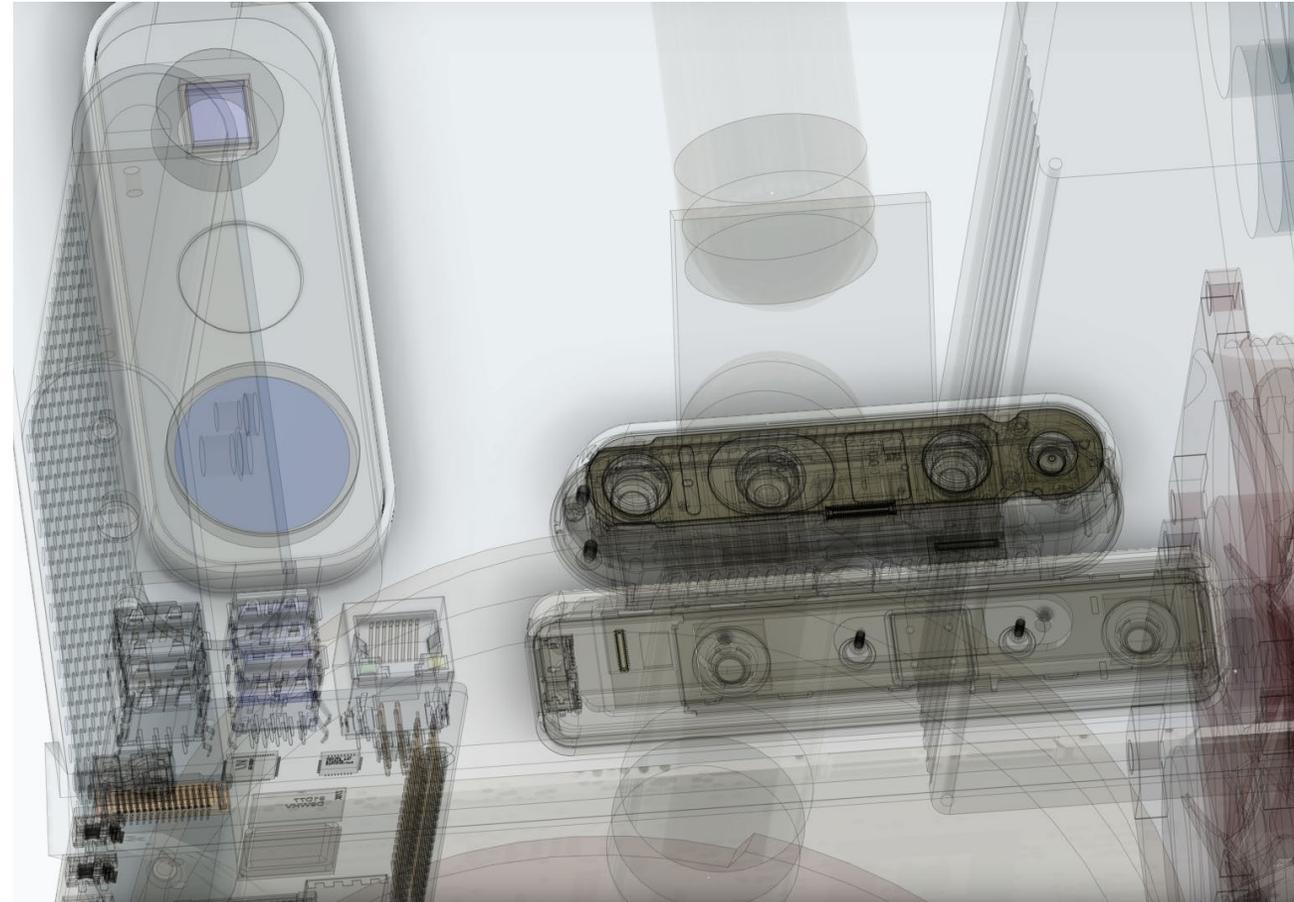
IMAGING (DLP)

- Designed around the Texas Instruments DLP660TE 0.66 4K UHD DMD
- Initial (high-end) cost estimates based on TI's EVM boards



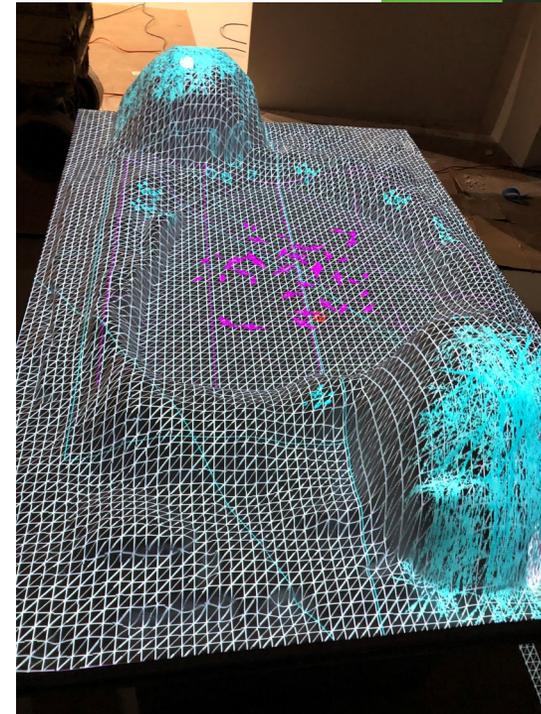
BRAINS

- Data/control to and from lenses is managed via small onboard processing unit, as is real-time sensor data
- Because a projector should always know where it stands, and what it is projecting upon, two sensor types are integrated into the basic design
 - RealSense T265 Tracking Camera, for projector positioning; real-time integration with computer-generated 3D components.
 - RealSense D435 Depth Camera, for awareness of physical space, and integration with physical components.
 - The Azure Kinect is an optional add-on, along with a required modified Magnus EN72070V
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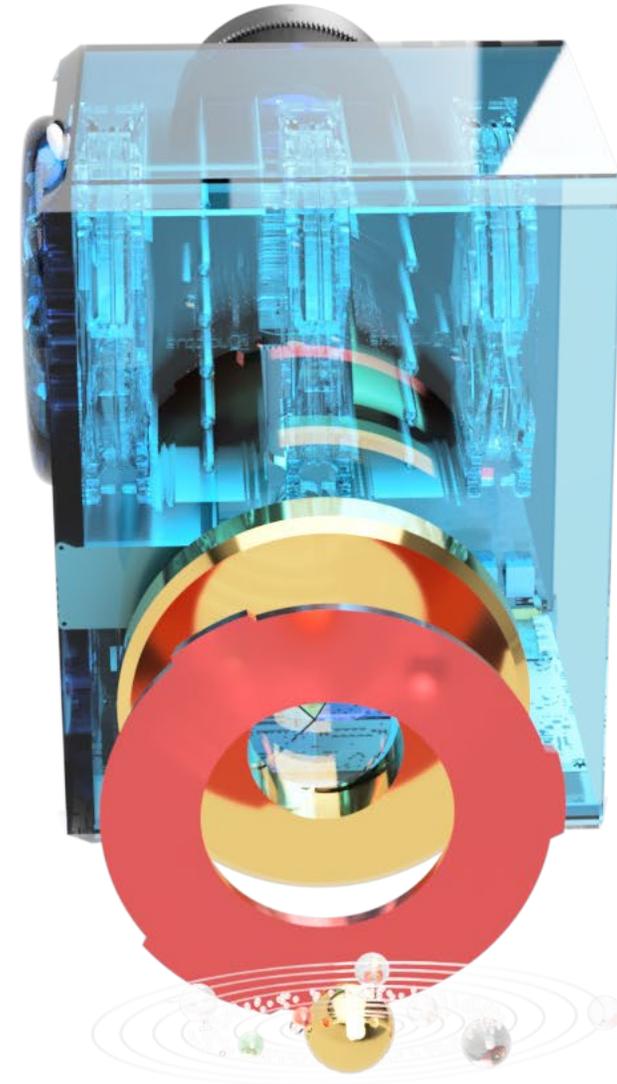
SHARING DATA

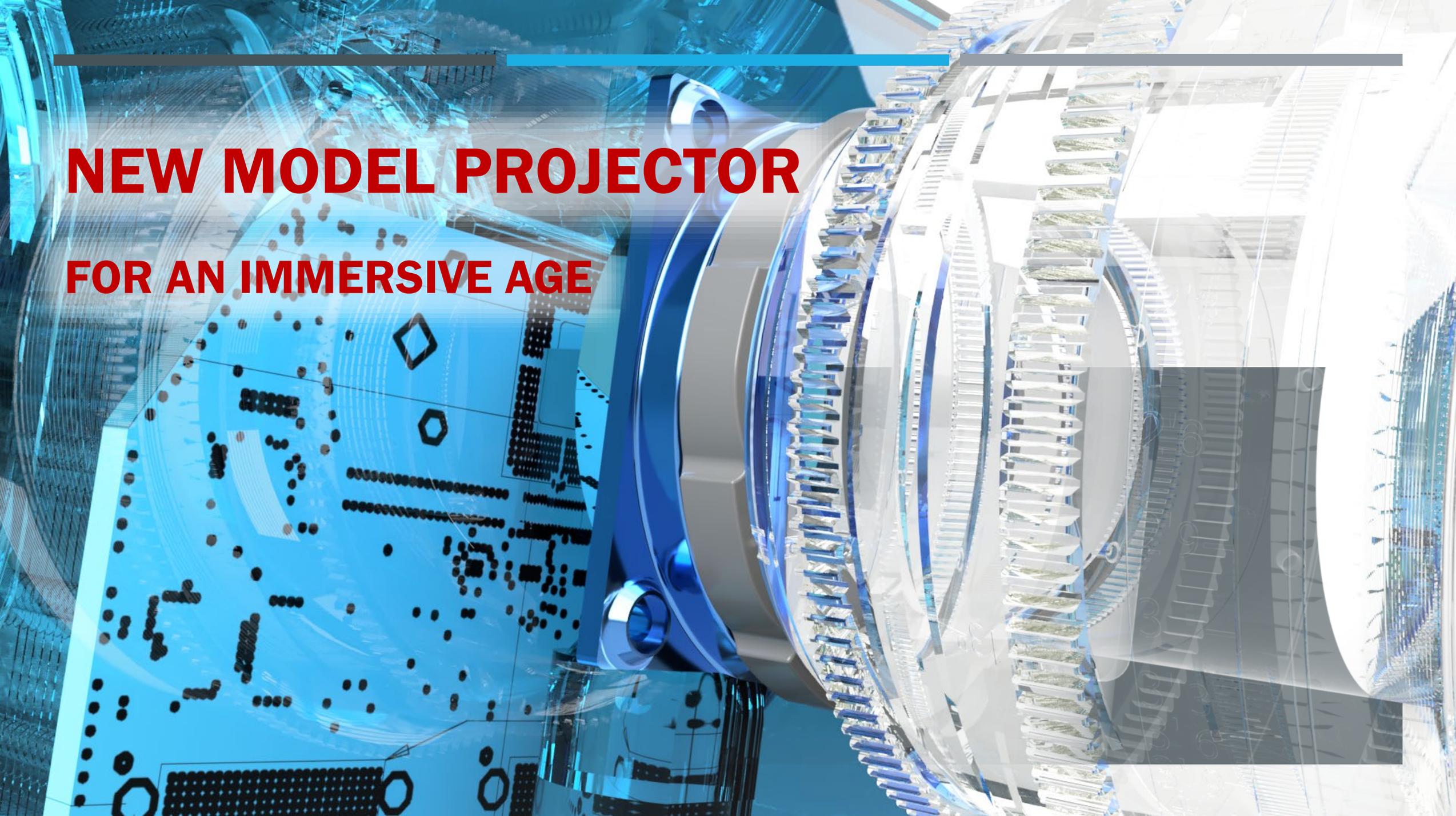
- The projector begins by tracking its own position, as well as its environment, as SLAM data
- It is built specifically to speak with the systems that are likely to be employed in advanced use of its capabilities, sharing information and control of the physical environment in which the projector is placed:
 - Unreal Engine
 - Blacktrax, Ncam, Notch, etc
 - BIM software and other tools of the physical environment



PRICING AND LAUNCH PARTNERSHIPS

- \$5,000 - \$10,000, depending on configuration
- Working toward launch partnerships with:
 - Epic (software)
 - Arri (lights)
 - Hive (plasma lights)
 - Worldstage (industry engagement and distribution)
 - Intel (RealSense)
 - Nvidia (graphics processing)
 - Microsoft (software and Azure Kinect)





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