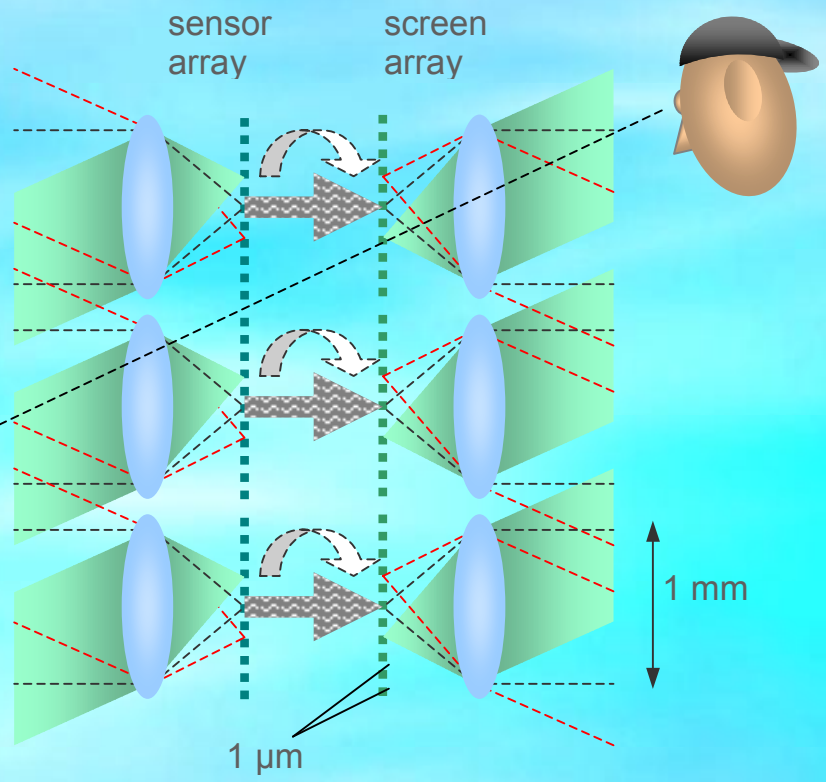
The other extreme: light field pure

- A dense array of micro cameras could record all light beams approaching a recording window: angle, position and intensity.
- Each camera just converts angle to position on its image sensor.
- An equivalent array of micro projectors could reproduce these beams with high accuracy.
- Signal transmission could use raw data (problem: we have n^4 pixels!), compressed light field specific data, or synthesized holographic data.

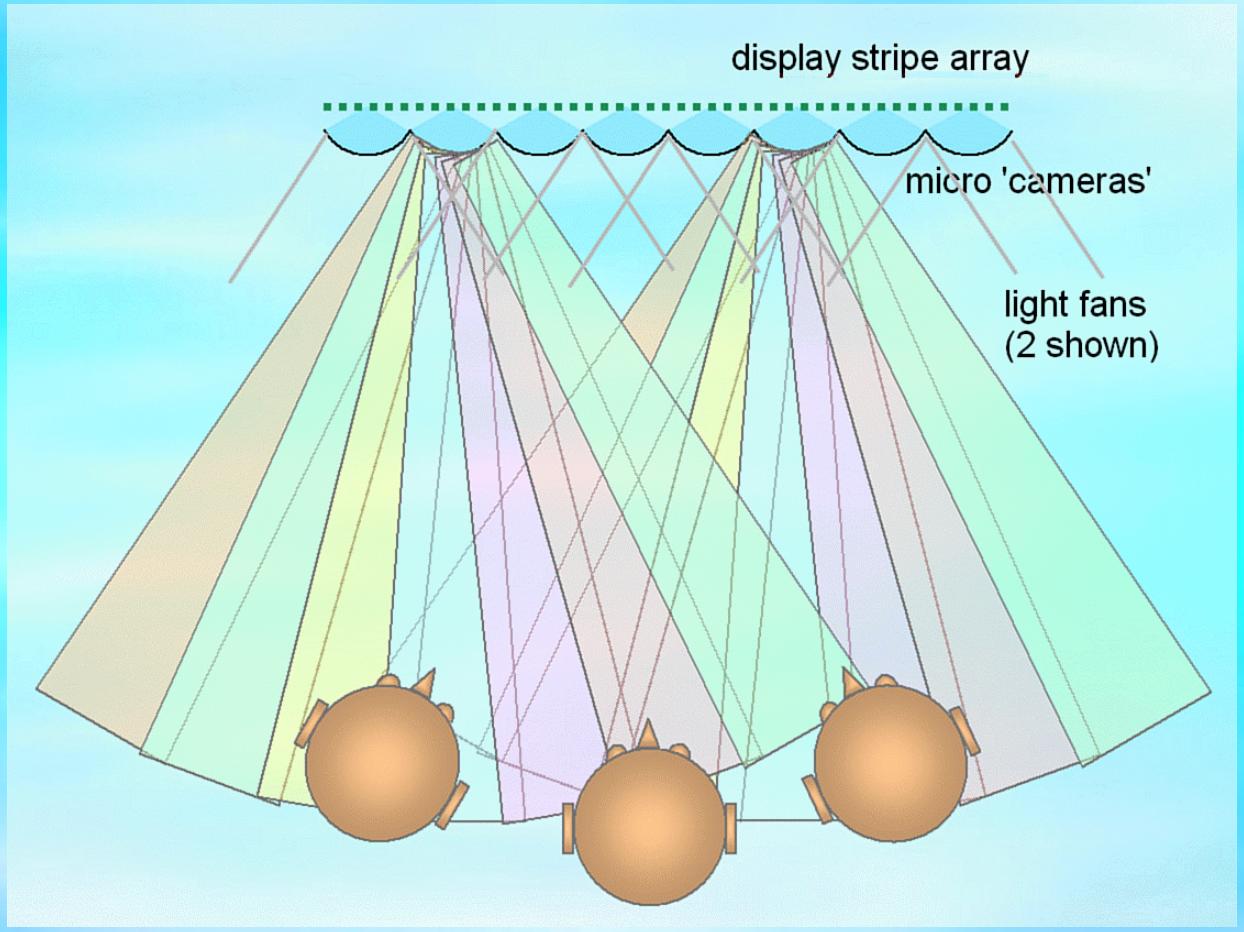


- Physically, the approach is possible (1mm camera size, 1 um pixel size are in the achievable range and well fit for large screens).
- Each camera/projector pair acts like a camera obscura, i.e. a small hole, and many such holes simply are nothing but a window.
- In practice, one would use fewer cameras, fill the perspective gaps at encoding, and chose a simpler reproduction approach.

Simpler: dynamic reconstruction (horizontal only)

Here we have a special lenticular display, the inverse of a camera array.

- Each lens forms a micro projector (inverted camera) with extreme depth of field.
- Pixel position is converted into angle.
- High angular resolution possible.
- Would best work **time multiplexed, viewer adaptive**, monocular or binocular.
- Could be manufactured as OLED display wallpaper (roll-to-roll printing and lens stripe engraving).



- Problem: adaptive perspectives for one viewer may interfere with others.
- Advantage: 'only' about 10 times as complex as normal displays.