

Data capture for VR

(Two examples from recent work)

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3D models

- Rosemary Island, archaeology (April 2017)
- Atlas of Maritime Buddhism (May 2017)













360 camera capture

- Roundshot camera
- Digital replacement

	Monoscopic Panorama Still	Monoscopic Panorama Video	Stereoscopic Panorama Stills	Stereoscopic Panorama Video
4K	Trivial	Easy	A number of solution	A number of solutions
8K	Easy	Not hard	Only a few solutions	Only a few solutions
>12K	Not hard	Only 1 or 2 solutions	Only 1 or 2 solutions	?
>40K	Not hard	?		?

Roundshot camera

- Built by Seitz, Switzerland
- Only 4,5 ever made
- Records slit continuously for perfect omnidirection stereoscopic pairs
- Strength (now a problem), records onto two rolls of 700mm film rolls
- Could reasonably be scanned at 30,000 pixels across the 360 degrees.



Left eye



Right eye



Left eye



Right eye



Left eye



Left eye



Design

- Aim for 40,000 pixels across 360 degrees
- Require 6.5cm interocular separation
 - built custom lens holder
- Lens option for variable vertical FOV
 - current demo is 50 degrees
 - lenses available up to full 180 fisheye
- Bonus (GH5 camera): 10bit recording
- Avoid the parallax issues with other solutions

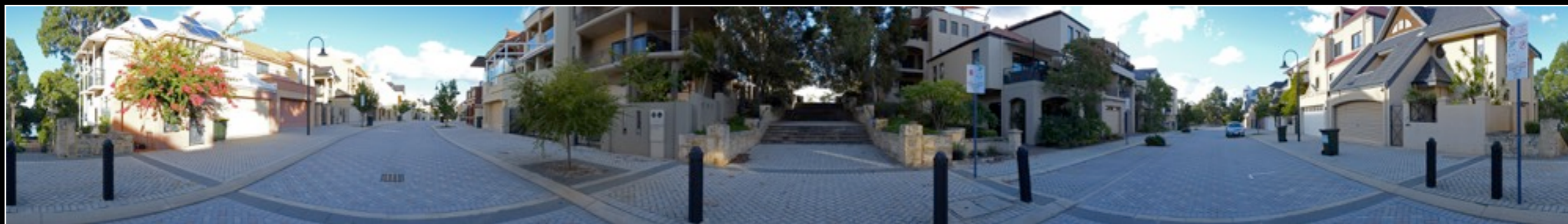
Left eye



40,000 pixels



Right eye



Questions?