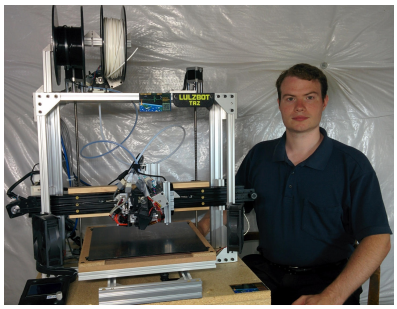
Resume, recruiting, policy, demos, etc, regarding 'author' mirage335.

Reading

Recommended reading includes...
* document-biography.pdf
* document-recruiting-complete.pdf
* document-numbering.pdf
* zzLib_895-reference/from_uTST (image gallery)
* zzLib_895-reference/demo (image gallery)
* zzLib_895-reference/demo/_misc (image gallery)

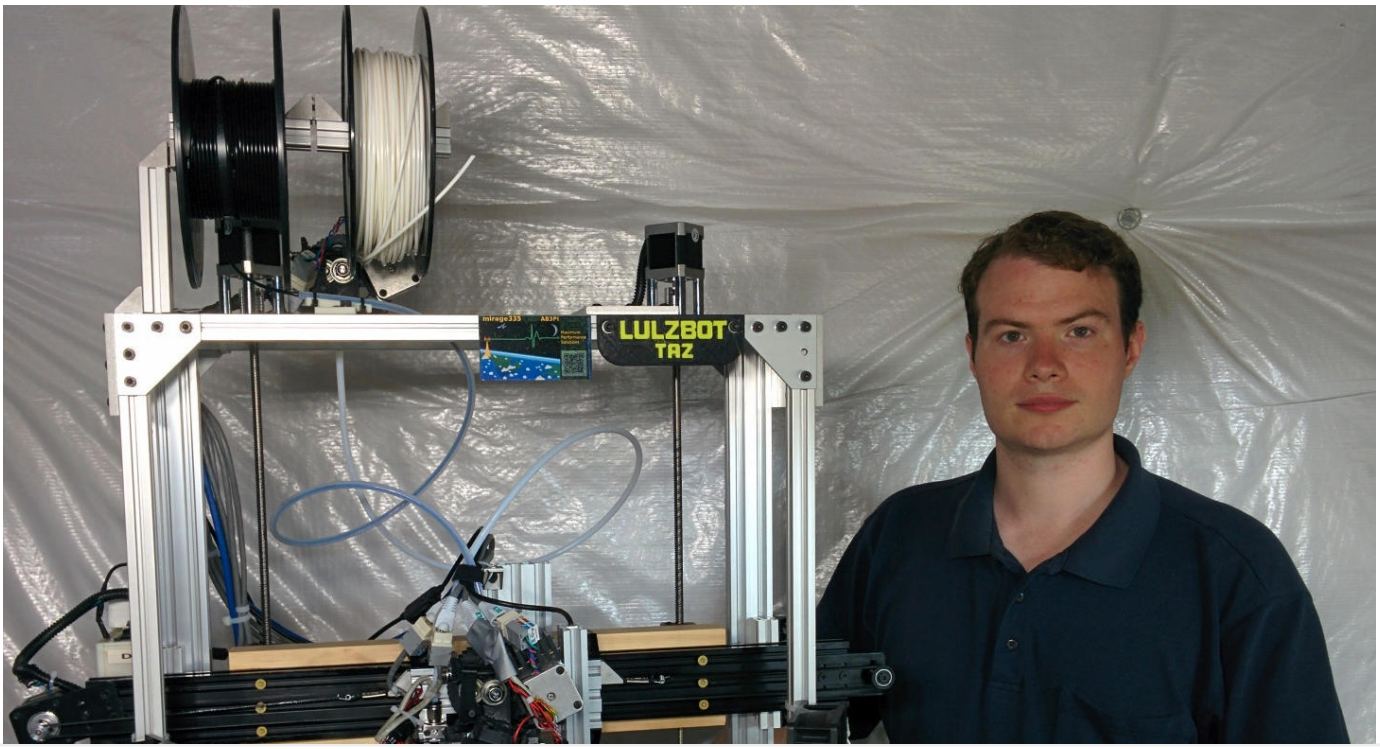


mirage335 autobiography

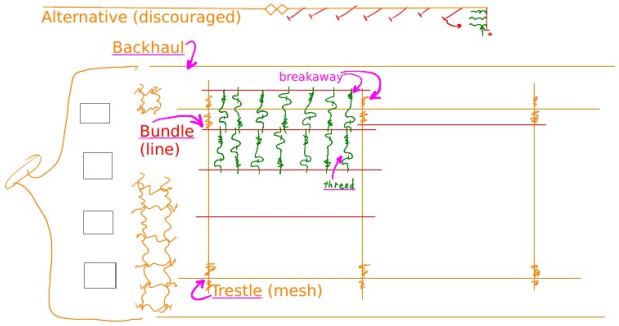
My strong interest is in deploying a self-expanding VR environment throughout uninhabited galaxies and most of the Milky Way, so we can all get the most out of life. Already on the frontier of working and living in VR, with >2k hours in headsets and among the first people in the world to get a prototype Pimax Vision 8kX headset. Have designed much hardware and software emphasizing complete 'out-of-the-box' FLOSS toolchains, and more is always underway. Also have a long track record of non-profit volunteer service, particularly with HacDC, The Capital Hackerspace.

Name is Matthew "mirage335" Hines, also findable as "m335" (Discord servers, etc) and "AB3PI" (Amateur Radio).

http://mirage335.member.hacdc.org

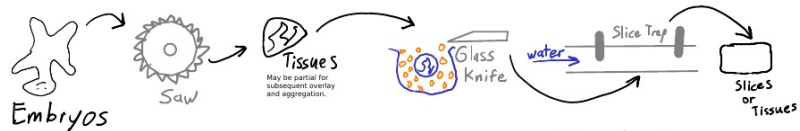


Thin threads are punched at breakway points by needle, then pushed (or injected).

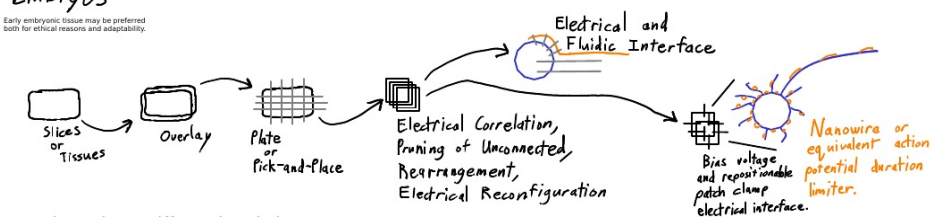


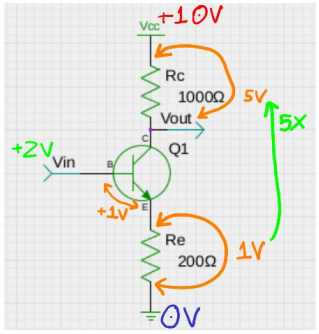
One piece only. Single sliced polyamide (or similar material) substrate for CMOS fab.

Automated, Fast - Extraction, Slicing, Dicing (of brain tissue)



Each step may be optional, chosen and configured according to desired tissue, shape, and efficiency.



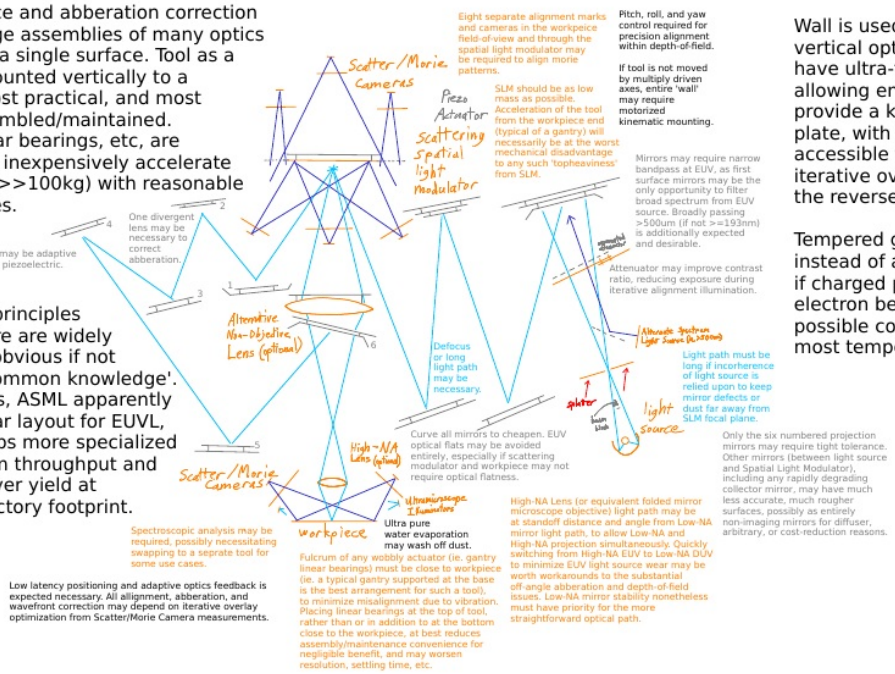


flatTool

Accelerating Wall of Large Heavy Optics

Mirror bounce and abberation correction imposes large assemblies of many optics mounted to a single surface. Tool as a flat table mounted vertically to a gantry is most practical, and most quickly assembled/maintained. Modern linear bearings, etc, are adequate to inexpensively accelerate such loads (>>100kg) with reasonable settling times.

All working principles depicted here are widely known and obvious if not definitely 'common knowledge'. Nevertheless, ASML apparently uses a similar layout for EUVL, albeit perhaps more specialized for maximum throughput and complete layer yield at minimum factory footprint.

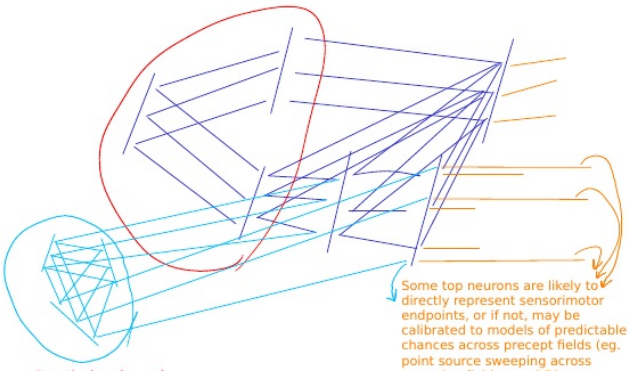


Wall is used as a dedicated vertical optical table, and may have ultra-fine-thread bushings allowing entire surface to directly provide a kinematic adjustment plate, with the adjustable screws accessible to stepper motors (for iterative overlay optimization) at the reverse side.

Tempered glass may be used instead of aluminum or invar alloy if charged particle deflection (ie. electron beam distortion) is a possible concern. Apparently most tempered glass is float glass.

Topographic Mapping from RPT Correlation

Software Algorithm Flow



Some top neurons are likely to directly represent sensorimotor endpoints, or if not, may be calibrated to models of predictable chances across precept fields (eg. point source sweeping across receptive fields, mechDive measured force/position motor outputs) (aka. 'neural decoder').

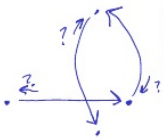
Iteratively solve red.

Find sensorimotor I/O (PNS) entry.

From orange. Action potentials may overlap with only small spike phase or duration differences.

Read only! Algorithm must NOT require arbitrary stimulation, which should only supplement recording data.

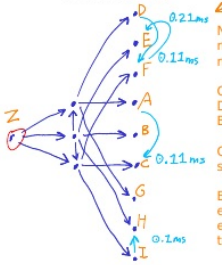
High temporal resolution and oversampled spatial resolution may be required and are feasible, constrained by SerDes bandwidth.



Low temporal resolution correlations may reveal topographic mappings, but without clearly defining the typical directionality, or possibility of bidirectional feedback, only showing both topographic maps were simultaneously activated.

Deep topographic mapping may require high temporal resolution (telodendria ~50kHz?), neuroanatomical overlay (spatial position of electrode), and/or tracing the order of RPT events by RPT correlation of RPT events themselves.

Absence of any spatial position and temporal resolution less than 10x sample rate of minimum temporal difference may increase risk of requiring more solving by more computationally expensive genetic/ANN model iteration.

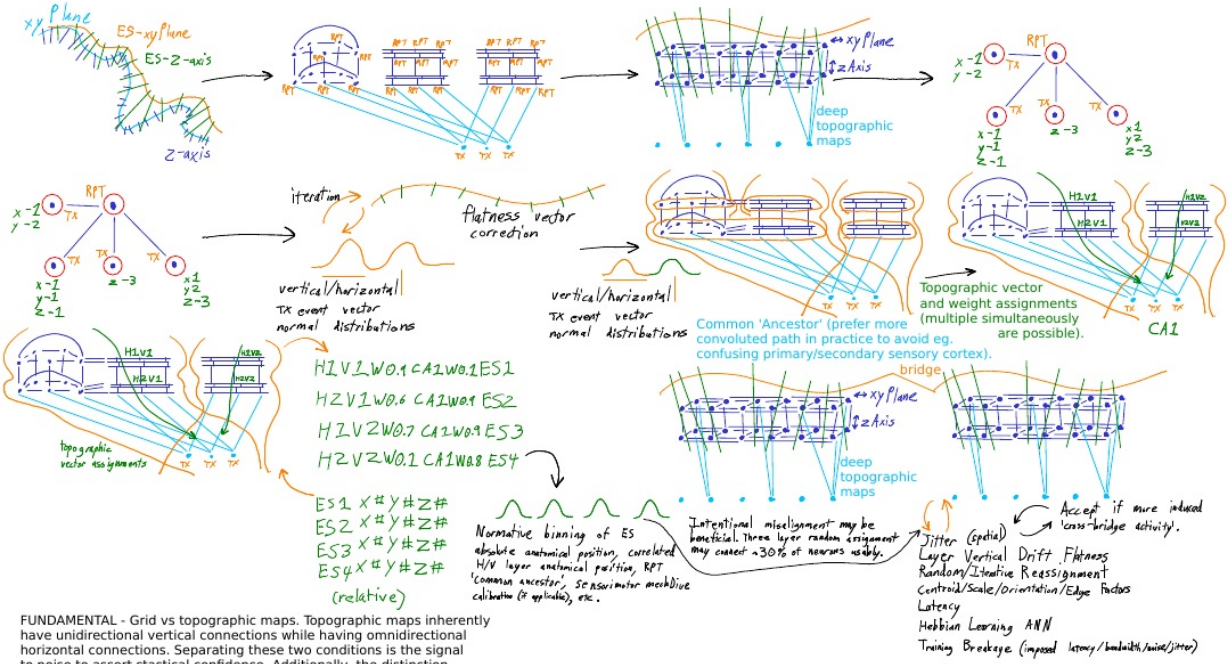


Neurons which RPT from a common vertical TX may be distinguished by their RPT of other neurons in a specific horizontal topographic map.

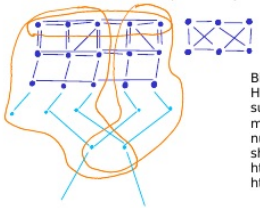
Only the RPT event F-->E, which occurs after D-->F, distinguishes E (of D,E,F horizontal) from B (of A,B,C horizontal).

Center of all topographic maps - E,B,H - will RPT simultaneously from the same vertical TX at Z.

Both B and E will RPT from the same vertical TX event. Only E will RPT of horizontal TX events from processing within that horizontal topographic map.



FUNDAMENTAL - Grid vs topographic maps. Topographic maps inherently have unidirectional vertical connections while having omnidirectional horizontal connections. Separating these two conditions is the signal to noise to assert stastical confidence. Additionally, the distinction between a grid and completely omnidirectional synapses is not relevant as neither of those cases permit any computed overlay (ie. alginment).



FUNDAMENTAL - In practice even substantial misalignment may be tolerable. Minor scaling or layer mismatch, may be adequately accommodated simply by randomizing geometric overlay (ie. alignment) slightly, allowing at least some of the neurons to send precise - if not accurate - data to some of the other neurons. With adequate precision, VR retraining or outright plasticity is expected to be sufficient to adjust sensory perceptions. Moreover, mere VR sensorimotor connection can be achieved by PNS connection which is drastically simpler to align and to supplement by a variety of calibration techniques (aka. 'neural decoder') and mechDive itself.

Biological neural network (ie. 'brain') complexity may be less than tens of thousands of topographic maps. Human Connectome and Human Proteonome projects seem to support such conclusion. Should not be surprising considering the seeming absence of complexity in other tissues derived from similar genetic mechanisms. Much complexity of biological neural networks below horizontal topographic maps (eg. large numbers of distinctly different processing structures, large numbers of distinct neuron morphologies, etc) should not be expected either.
https://www.proteinatlas.org/humanproteome/brain/human+brain
https://humanconnectomeproject.org

Usage

```
./_consolidate_documents.bat
```

Some larger binary replacement documents (ie. some PDF files) may be written to '_bundle/' to avoid unintentionally adding large binary object output to git history. Move these files to the root of the repository when appropriate.

Design

Mostly uses 'scriptedIllustrator' . Some files may use resources from other files, using path variables defined by './zzLib_800-documents/consolidateVariables.sh' .

Reference

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