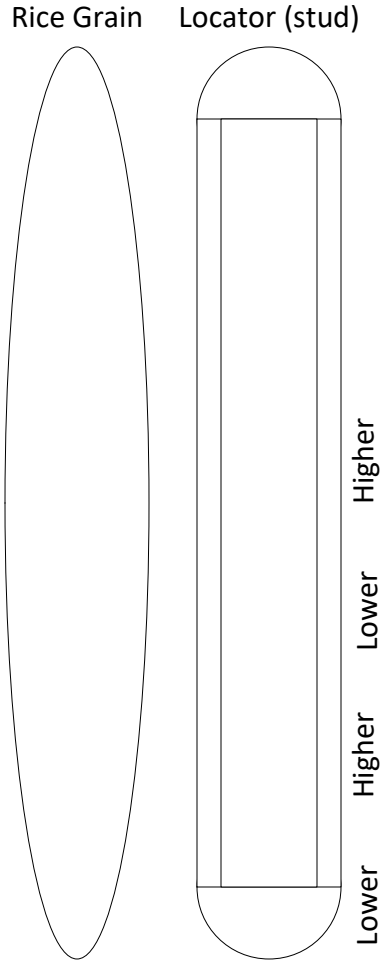
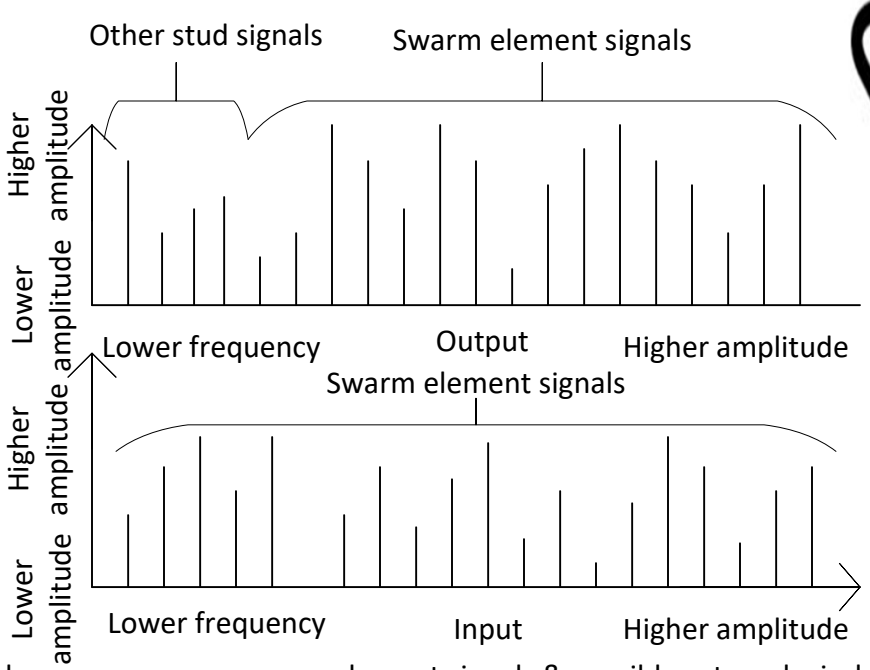
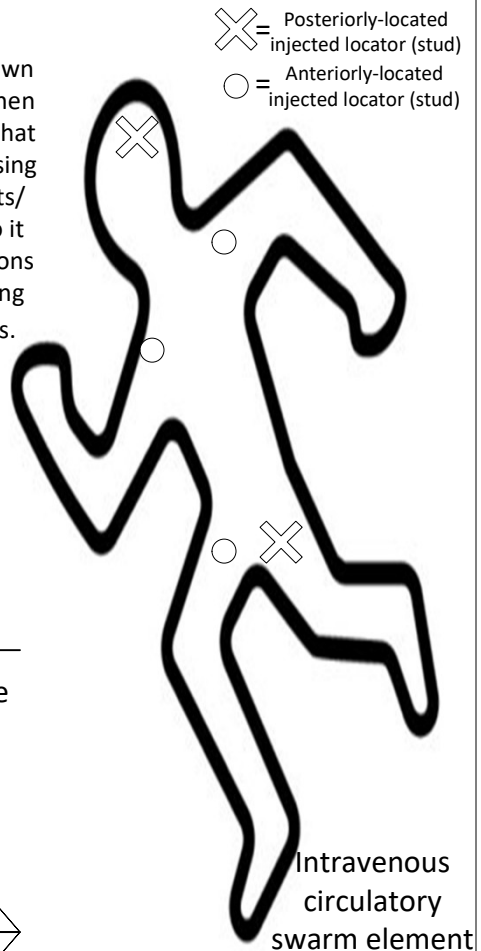
Circulatory-Swarm (Blood-Swarm) Body-Computer Interface (CS/BS-BCI) Tiered Multilateration Platform (TMP) Locator Element



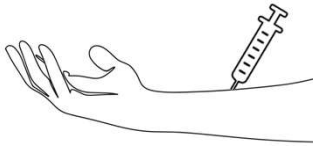
Approximate Size Comparison

Locators collect other-stud/swarm-element input throughout body at known locations and regularly and cyclically dump collected, equal-amplitude (when emitted) signals at 5 non-coplanar locations, dumping amplitude spectra that unique-frequency-possessing (or perhaps unique-digital-signature-possessing (or perhaps unique-frequency-and-digital-signature-possessing)) elements/ studs have through connected wireless network (ether wifi or cellular) so it may reach computer where it is used performing multilateration calculations locating circulating elements as they traverse circulatory system so reading may be spatially mapped and stimulation may reliably affect target areas.





Intravenous circulatory swarm element injection



Studs serve as means swarm element signals & possibly external wireless and cellular signals get collected and amplified communicating swarm state and stimulation instructions thus linking computer and interface (if external wireless can't stimulate swarm elements itself)

Circulatory-Swarm (Blood-Swarm) Body-Computer Interface (CS/BS-BCI) Tiered Multilateration Platform (TMP) Blood Swarm Element

Printed silicon circuit comprising circulatory swarm element part (other part is biological battery) has four functions primarily: sending studs signals (using large transmission coil), receiving stud signals (or external wireless signals if possible bypassing stud) (using large receiver coil), inducing local tissue activity through induction (using non-coplanar coil array arrangements given current through voltage controller) and monitoring local tissue activity through reverse induction (using aforementioned non-coplanar coil array arrangement feeding current readings through signal amplifiers).

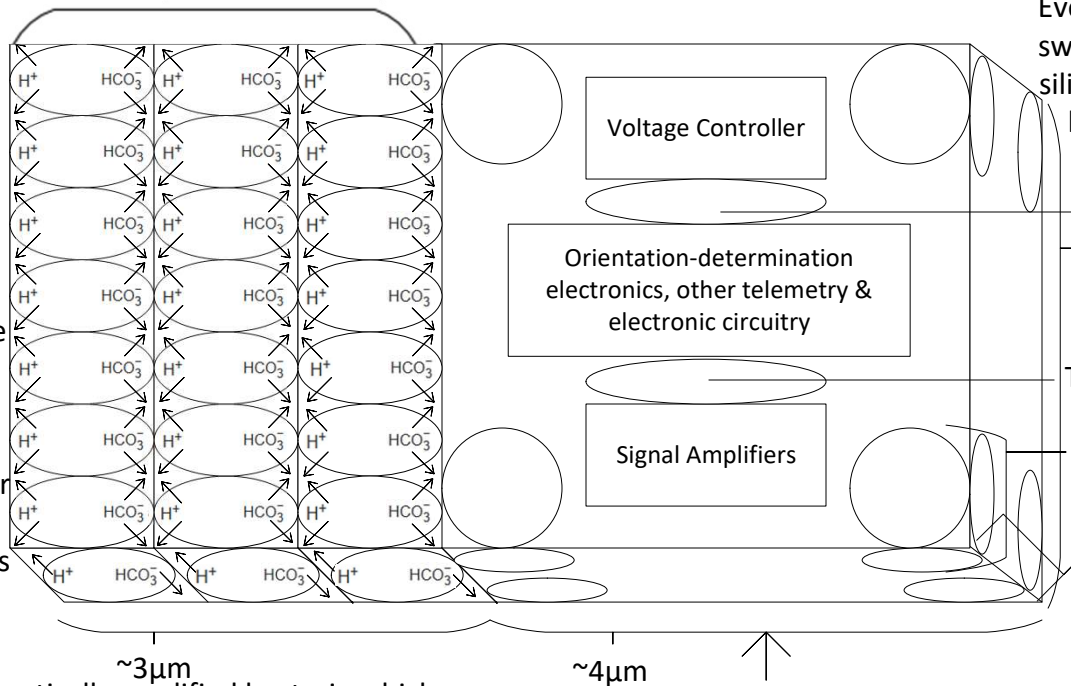
High current flux through coils (which may also passively gather ambient electromagnetic flux readings) may induce action potentials inside nearby tissue (assuming may be electrically active)

Biological battery (US20220059858A1, US12249745B2)

Proton/bicarbonate neutralization crossing bipolar membrane plus electrical contacts at both sides generates powerful current that powers coil induction

Ultrafiltration membrane encapsulating polarized cell layers offers only power source capable generating enough power required operating such circuitry-based inductions

Manufacturing involves directing cell layer polarization such that all cell layers are oriented unidirectionally thus enabling significant power provision



Every silicon circulatory swarm element printed silicon rectangle corner has three-axis coils

Receiver Antenna

As thin as provides greatest read/write fidelity (while also fitting through capillaries)

Transmission Antenna

Every corner has coil arrangement that looks like this (non-coplanar coil arrays)

Three axis coil arrangements may be used gathering orientation data if studs are used sending known-amplitude signals and responding reporting amplified reverse induction

Genetically-modified bacteria which are unidirectionally self-polarizing H+/K+ ATPase-expressing, bicarbonate-exchanger-expressing cell layers

Biocompatible-plastic-coated printed silicon Ultrafiltration-encapsulated biological battery enables flexibility and circulatory swarm element size enable capillary transit

Red blood cell (erythrocyte) (thickness not drawn to scale)