HBOT & TBI,
What if you could see?
3D sLORETA Brain Imaging:
From baseline to outcome.

William Mrklas LMT
BrainMaster Tech Inc.
What if you could see?

Thus analyze your Clients brain pre, post and possibly during HBOT treatment, Live in 3D, in your office.
What if you could see?

Thus analyze your Clients brain pre, post and possibly during HBOT treatment,
Live in 3D, in your office.

Not a FMRI
Not a PET Scan
Not a SPECT Scan
How? What is it? Is this real?

3D Brain Imaging using Live sLORETA

Standardized low resolution brain electromagnetic tomography (sLORETA)
sLORETA

- Created and developed by:
  R.D. Pascual-Marqui

  The KEY Institute for Brain-Mind Research, University Hospital of Psychiatry

  Lenggstr. 31, CH-8029 Zurich, Switzerland

A link to the original paper:

http://www.uzh.ch/keyinst/NewLORETA/sLORETA/sLORETA.htm
sLORETA

“In the present study a new tomographic method for electric neuronal activity is introduced, where localization inference is based on images of standardized current density. The method is denoted as standardized low resolution brain electromagnetic tomography (sLORETA).

Unlike the method recently introduced by Dale et al. (6), which has systematic non-zero localization error,

**sLORETA has zero localization error**”

A link to the original paper:

http://www.uzh.ch/keyinst/NewLORETA/sLORETA/sLORETA.htm
BrainAvatar 4.0 LLP

- Live sLORETA Projector (3D Head Display)
- Image all 6239 voxels in real time
BrainAvatar 4.0 LLP

• Ability to image current source density of source localization in raw values or compare to a database in real time or averaged over time.

• N=1 database building tool (Z Builder) baselining tool ideal for front line brain monitoring. i.e. creating N=1 of each player on a sports team prior to contact. Having a target to compare and detect brain change.
What if you could see?

Cerebral Cortex
What if you could see?

Cingulate Gyrus
What if you could see?

Brodmann Areas

Brodmann Area 6 (shown)
What if you could see?

Networks and Hubs

Default Mode Network (shown)
Track the Brain as it heals

HBOT works, qEEG & sLORETA may help prove it

BrainAvatar can help validate HBOT and other modalities your clinic offers. Give your clients the objective data their Brain is improving.
From Baseline to Outcome

Injury → BrainAvatar & qEEG → HBOT Treatments → BrainAvatar & qEEG

Outcome
- Simple
- Scientific
- Successful
I like what I see but is that it?

• No, qEEG and sLORETA information has more to offer.
• Printable reports/brain maps for comparison.
• Raw numeric output of each metric/frequency at each voxel, ROI, Hub and Network.
• Real time or Live use of the information for therapeutic applications, such as neurofeedback.
• N=1 templates used to track change.
• N=1 templates used to target pre-conditions.
Is there any research?

PubMed articles referencing qEEG = 879
PubMed articles referencing sLORETA = 349
PubMed articles referencing neurofeedback = 1152
PubMed articles referencing HBOT = 9678

Thank you