

COMPUTER / TABLET with RAW EEG

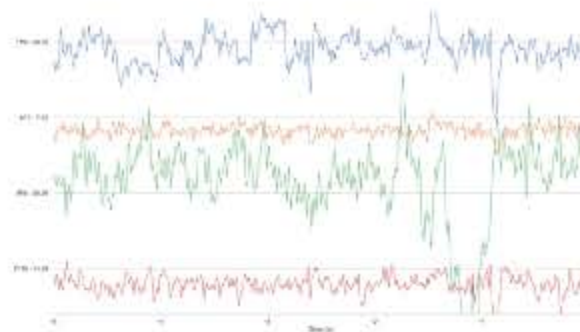


to **EEGLAB  
MATLAB** suite

Independent  
Component Analysis  
(ICA)  
+  
Artifact Rejection

Output

**CORRECTED EEG**



Output

**POWER SPECTRAL DENSITY  
(PSD)**  
**FRONTAL ALPHA ASYMMETRY  
(FAA)**  
**EEG ACTIVITY TOPOPLOT**

Signal Transmission  
via bluetooth to Data  
Acquisition  
Computer / Tablet



to **Muse Monitor**  
Software  
Package

Independent  
Component Analysis  
(ICA)  
+  
Artifact Rejection

FFT  
Fast  
Fourier  
Transform

32 - 100 Hz  
13 - 32 Hz  
8 - 13 Hz  
4 - 8 Hz  
0.5 - 4 Hz

$\gamma$   
 $\beta$   
 $\alpha$   
 $\theta$   
 $\delta$   
Preprocessed  
Normalised  
Brainwave Average  
Values

**Feature Extraction:**  
Restoration / Stress  
Approach / Neglect Behavior  
Cognitive Load



Participant wearing  
**MUSE EEG** headset

Computer / Tablet running  
**Cognitive Tests**

**Perceived Restorativeness (PRS-11)**  
**NASA Task Load Index (TLX)**

Arousal



Valence

Emotion

Experiment Cutoff

**COGNITIVE TESTS**

Benton Visual Retention Test  
Digit Symbol Substitution Test  
Digit Span Backward Test  
Stroop Test

Attention, Memory, Perception,  
Executive Function

**PRS - 11**  
+  
**NASA TLX**

Perceived Restorativeness of the  
Built Environment  
+  
Perceived Work Load / Mental  
Demand of the Cognitive Task