**BRAIN DX qEEG REPORT GENERATOR**

*Features Available for BDx qRG Version 1.0:*

I. Access to norming (z-scores) relative to Normative Databases:

   a. Eyes closed – Children – ages 6-17.99
   b. Eyes closed – Adults- ages 18-80
   c. Eyes open – Adults- ages 18-80
   c. Basic Demographic, Patient ID, Clinical History

II. Summary Maps and Tables for Monopolar and Bipolar derivations in the following bands: Total, Delta, Theta, Alpha, Beta, Beta2: (raw values and Z-scores), for:

   a. Absolute Power
   b. Relative Power
   c. Mean frequency
   d. Inter-hemispheric Power Asymmetry
   e. Intra-hemispheric Power Gradients (Tables only)
   f. Interhemispheric Coherence
   g. Intra-hemispheric Coherence (Tables only)
   h. Phase
   i. Multivariate features for regions and bands for each of the above

III. Bivariate Spectral Maps and Tables in the following bands: Total, Delta, Theta, Alpha, Beta, Beta2 for raw values and Z-score:

   a. Bipolar Absolute Power
   b. Bipolar Relative Power
   c. Frequency
   d. Asymmetry
   e. Coherence
   f. Phase
IV. High Resolution Narrow Band (.39 Hz) Surface Mapping and values for 19 channels 1.56 -35.0 Hz), for Amplitude and Z-score for Absolute power (including normative values) and Relative Power:
   a. Total (only absolute power)
   b. Delta
   c. Theta
   d. Alpha
   e. Beta
   f. Beta2

V. sLORETA Z-values: both 3D Volumetrics and Key Institute “Slice” Views using High Resolution Narrow Band (.39 Hz) increments. Automatically shows source localization for maximum and minimum Z-value sources in the spectra for hyperactivity and hypoactivity, (subjectwise, whole head normalized)
   a. Allows for user selected values for any point in the spectra (there are 87 0.39 Hz points)
   b. Allows for user to view by ROI (BA and Anatomical)

VI. Discriminant Functions Probability Statements:

<table>
<thead>
<tr>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal vs Abnormal</td>
<td>Normal vs Abnormal</td>
</tr>
<tr>
<td>Normal vs Major Affective Disorder</td>
<td>Normal vs ASD</td>
</tr>
<tr>
<td>Subclassification of Unipolar vs Bipolar</td>
<td>Normal vs ADHD</td>
</tr>
<tr>
<td>with Flag for Alcohol abuse</td>
<td></td>
</tr>
<tr>
<td>Normal vs Dementia</td>
<td>Normal vs LD</td>
</tr>
<tr>
<td>Subclassification of Primary Degenerative vs Vascular</td>
<td>Autism vs ADHD</td>
</tr>
</tbody>
</table>

VII. Discriminant Probability Thermometer: Displays graphically Multivariate Discriminant values relative to cutoff points of certainty

VIII. User selects outputs into report format in Microsoft Word file

IX. Export Options (options to export of calculated values for database/research applications)
Anticipated for updates in 2015:

Eyes open – children 6– age 17

T-test maps and trending for comparisons of time 1- time 2 or pre-post interventions

PMS Disorders Discriminants

Schizophrenia Discriminants

Post Concussive Syndrome (Mild Head Injury) Discriminants

OCD Clusters

Human Performance Correlates/Algorithms – using surface and sLORETA measures