

## **THE ROLE OF THE BEREITSCHAFT POTENTIAL AS AN INTERFACE FOR BRAIN-COMPUTER ACTIVATED PROTHESIS IN SPINAL CORD INJURY**

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To characterize the relative contributions to voluntary movements of a network which includes the Supplementary Motor Area (SMA), Primary Motor Area (M1), Primary and Secondary Sensory Areas, and Premotor Areas. We have compared the SMA activation with the Bereitschaft Potential (BP) and discovered interesting temporal and anatomic similarities between the two. The ultimate goal is to relate the BP (or the SMA) to external devices. This entails tapping the BP at various points with conversion of potentials to a "language" understood by the receiving devices. Prior to this it is necessary to have greater insight into the relationships between the BP and the SMA. Once accomplished, it may then be possible to convert activations of either or both to use neuroprosthetic devices (see Wessberg et al, 2000).