BP's experience with open-source software and open datasets,

BP, **Joe Dellinger**

BP has had a long history of sharing the kernels of their in-house processing packages with the wider geophysical community, in particular "FreeUSP" and "FreeDDS" via the website "freeusp.org". These packages have allowed BP to proselytize their approach to how to organize seismic data and process it. That is useful, because BP can more conveniently share algorithms with contractors who have adopted the packages or had their own software methodology influenced by them. These contractors can then use the algorithms to process data to BP's specifications.

FreeDDS supports an extraordinarily flexible and powerful data format, which allows the package to read and write data using almost any commonly used formatting standard. In particular, the DDS program "bridge" can convert data from one format to another, facilitating collaboration between otherwise incompatible processing systems. By using DDS internally, BP can try out algorithms from other packages such as SU or Madagascar relatively painlessly.

BP has also distributed several widely used synthetic datasets, several of which are available for free download from "software.seg.org". These datasets have been widely used and cited in SEG and EAGE talks, familiarizing generations of students with the difficult imaging problems of interest to the oil industry today. BP also benefits more directly as well, because the datasets have helped drive the industry towards working on seismic imaging problems of particular interest to BP.