Scott Carter and Seiichi Kamada* (skamada@sci.osaka-cu.ac.jp), Department of Mathematics, Osaka City University, 3-3-138, Sugimoto, Sumiyoshi, Osaka, Osaka 558-8585, Japan. Charts for 3-dimensional braids.

We introduce the notion of a 3-dimensional braid and its chart description. A 3-dimensional braid is a compact oriented 3-manifold embedded or immersed in the 5-disk, which is a generalization of a classical braid and a 2-dimensional braid. A higher dimensional braid can be also defined. We show how to describe a 3-dimensional braid by using a 1-parameter family of charts. Furthermore, a 2-parameter family of charts can describe a 4-dimensional braid. (Received August 25, 2013)