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Jin Hyup Hong* (hb2283@gmail.com), 43 Rowe Place, New Hyde Park, NY 11040. *On the Euclidean Dimension of Graphs.*

The Euclidean dimension of a graph G is defined to be the smallest integer d such that the vertices of G can be located in \mathbb{R}^d in such a way that the two vertices are unit distance apart if and only if they are adjacent to G . In this paper we determine the Euclidean dimension for twelve well-known graphs. Five of these graphs, Durer, Franklin, Desargues, Heawood and Tietze can be embedded in the plane, while the remaining graphs, Chvatal, Goldner-Harrary, Herschel, Fritschr, Grotzsch, Hoffman and Soifer have Euclidean dimension 3. We also present explicit embeddings for all these graphs. (Received December 26, 2014)