Recently there has been growing interest in music theory to develop and study advanced geometrical models for the analysis of both pitch space and isomorphic rhythmic structures. Toussaint recently discovered ways of generating several well-known cyclical rhythms that have defined the rhythmic structure of many traditional musics of West Africa, Cuba, Brazil and beyond. By generating rhythms from a binary format described by Bjorklund using the Euclidean algorithm, Toussaint has described a combinatorial classification for these rhythms by representing their unique interval vectors on a two-dimensional circular lattice. This visual representation can be useful for both the analysis and algorithmic generation of cyclical rhythms. To encourage further research and to find rhythmic/visual applications within algorithmic music composition, the authors find a relationship between the generative process of Euclidean rhythms and their connection to geometrical representations unique to tangle theory. We will demonstrate both directions of the correspondence by first generating the representative rational tangle associated with the African Bembé rhythm and then derive other various rhythms from similar yet different rational tangles. (Received August 29, 2013)