This paper documents the implementation of the Xerox Finite State Toolkit for morphological analysis of the verb Ekegusii, a Bantu language spoken in the west of Kenya. The transducer created returns a morphological gloss given a surface form and vice versa. In discussing implementation, the paper addresses problems regarding certain widespread Bantu-language phonological processes such as compensatory lengthening, homorganic nasal assimilation, and Dahl’s law, while also discussing methods for incorporating tonal phenomena in the analysis. Finally, the paper discusses future applications for the implementation, focusing on its ultimate use as a component of a tool for future field work in the language.