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Jose Burillo and **Sean Cleary*** (cleary@sci.ccny.cuny.edu), Math Dept R8133, The City College of New York, Convent Ave at 137th, New York, NY 10031. *Metric Properties of Braided Thompson's Groups.*

Thompson's groups F , T and V are finitely-presented groups with an extensive range of pathological properties and a wide variety of descriptions. All of them can be described via tree pair diagrams which can be used to estimate word length with respect to their finite generating sets. Brin and Dehornoy independently discovered braided versions of Thompson's group V which incorporate braids into tree-pair diagrams. These finitely-presented groups contain all braid groups and have properties coming from both their Thompson and braid group constructions. I will discuss some of the metric properties of these groups, where lengths of elements depend upon the size of the trees and complexity of the braids. (Received January 12, 2007)