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Claire W Wladis* (cwwladis@gmail.com) and **Jose Burillo**. *Finite presentability for subgroups of the Thompson-Stein groups*. Preliminary report.

In a set of unpublished notes, Bieri and Strebel gave criteria for finite presentability for a large class of groups of piecewise-linear homeomorphisms of the real line which are subgroups of the Thompson-Stein groups $F(n_1, \dots, n_k)$. However, some groups failed to meet any of these criteria, and therefore it is not known whether or not they are finitely presentable; one example of such a group is $F(2/3)$. The group $F(2/3)$ is the subgroup of the Thompson-Stein group $F(2, 3)$ consisting only of elements for which all slopes are of the form $(\frac{2}{3})^n$ for some $n \in \mathbb{Z}$.

We have developed a non-trivial generating set for $F(2/3)$ which contains all elements whose tree-pair diagrams have trees which consist solely of a long string of tertiary carets terminating in one of three basic subtree type pairs (each of depth 2). It seems intuitively likely that such a generating set cannot be finitely generated, but since certain subtree equivalences in the Thompson-Stein groups $F(n_1, \dots, n_k)$ produce complex behavior and non-obvious equivalent tree-pair diagrams, writing a formal proof of this will require further exploration of how this generating set behaves; this is currently work in progress. (Received February 22, 2010)