1014-06-203   **Zoran Sunik***, sunik@math.tamu.edu. *Thompson monoids and Tamari lattices.* Preliminary
                                report.

A connection is exhibited between Thompson monoids and Tamari lattices. In the most basic case, it relates the positive monoid P of Thomspon group F to Tamari lattices on finite Coxeter groups of type A regarded as lattices under the weak Bruhat order. The Tamari congruence classes correspond to classes of equivalent elements in P. The two well known normal forms in P correspond to endpoints of intervals in the weak Bruhat order that determine the Tamari classes. In the monoid P these correspond to lexicographically largest and lexicographically smallest form, while on the level of permutations they correspond to 132-avoiding and 231-avoiding permutations. (Received August 18, 2005)