1060-20-174 **Dmytro M Savchuk*** (dmytro.savchuk@gmail.com), Department of Mathematical Sciences, Binghamton University, Binghamton, NY 13902. *Schreier graphs of the action of Thompson's group F on the Cantor set.* Preliminary report.

Perhaps, the most intriguing currently open question about Thompson's group F is whether or not it is amenable. We try to approach this question by constructing the Schreier graphs of F.

Thompson's group F acts naturally on the Cantor set C. One can describe orbits of the elements of C under this action by corresponding Schreier graphs that show how generators of F act on these elements. We explicitly construct all these Schreier graphs with respect to the standard generating set $\{x_0, x_1\}$, and show that these graphs are amenable.

Unfortunately, this approach does not give the answer to the question about the amenability of F, but it sheds some light on the structure of the group itself. (Received March 29, 2010)