1007-20-87   **Richard P. Kubelka*** (`kubelka@math.sjsu.edu`), Department of Mathematics, San Jose State
University, San Jose, CA 95192-0103. *The* 2-*Dog Group.* Preliminary report.

The speaker will discuss the solution of a problem suggested by his two dachshunds, Fritz and Sasha. To wit, in what ways can two dogs entangle themselves and their walker during a stroll around the block? And, furthermore, how much of that entanglement can be resolved by countermoves on the part of the walker?

The answer involves $\mathcal{D}_2$, the 2-*Dog Group*, an infinite, nonabelian, torsion-free group—reminiscent of Artin's Braid Groups—and an index-two subgroup $\mathcal{W}$, the *walker subgroup*. The speaker will give a complete description of these groups in terms of generators and relations; give a minimal presentation of $\mathcal{D}_2$—with two generators and one relation; and show that these groups can actually be interpreted as subgroups of the classical Braid Group B_3. In the process he will show by group-theoretic means that, as far as dog walks are concerned, the right hand doesn't know what the left hand is doing. (Received February 03, 2005)