

1086-20-286

Lihua Huang* (lihua.huang12@gmail.com), Buell Apartments 0368B, Rutgers, The State University of New Jersey, 55 Bevier Rd, Piscataway, NJ 08854, and **Ron Evans** (revans@ucsd.edu), Department of Mathematics, University of California, San Diego, La Jolla, CA 92093-0112. *The Stargate Switch*.

An episode of *Stargate SG-1* features a two-body mind-switching machine which will not work more than once on the same pair of bodies. (This is the same limitation suffered by the mind-switching machine in *Futurama*'s 2010 episode "The Prisoner of Benda".) The plot centers around two disjoint pairs of individuals who swap minds but subsequently wish the process could be reversed. The drama ends with a day-saving sequence of four mind swaps that returns everyone back to normal. We consider the more general situation where an *arbitrary* number of disjoint pairs swap minds. Using group theory, we present an algorithm for restoring all minds to their original bodies and prove it is optimal. (Received August 15, 2012)