Overview
Cargo handling is often accomplished by humans pushing objects that ride on a ball transfer surface, which is a surface comprised of an array of rollers that allows very low friction manipulation. The purpose of this invention is to automate object manipulation on ball transfer arrays by:

1. adding electronically controllable brakes to the ball transfer units that comprise the array
2. adding a lift that creates a gravitational potential difference between loading and destination areas on the array.

Description
This invention provides a means of automating the cargo handling operation by adding electronically controllable brakes to the rollers, such that the friction between the object and the surface can be varied by a controller both spatially and temporally. In addition, a lift is added to create a height difference between the loading area and final destination area, which allows the cargo to move under the force of gravity. Thus, by controlling the brakes on the rollers independently, the cargo may be positioned and oriented to their desired locations.

Advantages
The primary advantage is automation of a currently manual process. Ball transfer arrays are used to allow manual, human powered / controlled manipulation of heavy objects. This will allow objects to be moved more precisely and at lower labor cost than the current system.