AutoCart

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Final Design

- Display Screen to see optimized routes
- Separated from the shopping cart
  - Locks to handles
  - Feet to allow it to stand

Navigation
- Beacon Triangulation

Anti-Theft
- Siren Alarm

Self Checkout
- Barcode scanner attached to the cart
Use with ROS

- Current design is simple enough to implement without ROS
- If the platform of the cart were to be scaled to be fully autonomous, then the use of ROS would be necessary
- A URDF file is generated for simulation in Gazebo
- ROS Navigation stack can be used to safely control the cart
Improvements and Recommendations for the Future

Improve current design:

- Include brake to prevent wheels from moving while detached from shopping cart.
- Improve mechanism to help the shopping cart stand on its own (Kick stand).

Recommendations:

- The shopping cart will be motorized and could be able to navigate through the store without human interaction.
- Fully Automated Stores to where shoppers can “drive through” like it is fast food.