

## “Children Ride Robots

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There are many crippling diseases and conditions that effect small children’s movement. Diseases like cerebral palsy, and autism can prevent children from walking or crawling. Researchers at the University of Delaware are trying to get these children mobile.

So how are these children moving around? The same way older people do who don’t have the use of their legs, wheelchairs. These are not like other wheelchairs however, since some children have severe mobility issues and may not have the coordination to work a regular wheelchair; this device is equipped with robotics. This robotics are also useful since children who are only 7 months old can operate them opposed to other wheelchairs where children begin to operate them at 3 years old. Not only is it great to see these children mobile, but also it helps with social environment and learning.

Children learn by exploration. This wheelchair enables them to move on there own so they have the freedom to explore a classroom, or even travel down a street with a parent. This also enables social activity. “With the robot, they become the center of attention because their classmates want to try it. We predict that this increased social interaction alone will provide an important boost in their cognitive development.”



So it is clear that this technology has many upsides, but would a parent feel safe letting an infant drive a robot powered wheelchair? The developers figured they don’t want children bumping into things and hurting themselves, so the lined it with

sensors. These look around the room and determine where the child can go. It may allow the child to hit an obstacle or the chair will take over and move around it. The next step is to enable parent or teacher control, which will be enabled in the next prototype.

How are these children able to drive this wheelchair? The chair is controlled with a simple joystick, so the learning curve is extremely low. This was a necessity for children with Down syndrome as well as children



as young as 7 months.

The funding for this has been provided by a 2 year \$324,910 grant by the National Science foundation and they have now teamed up with Permobil, which makes powered wheelchairs. It is clear that these devices are important. It enables a child to explore and learn at a critical time in their life.

<http://www.udel.edu/research/media/babiesrobots.html>

<http://www.medicalnewstoday.com/articles/137932.php>

[http://www.rehabpub.com/news/2009-02-05\\_03.asp](http://www.rehabpub.com/news/2009-02-05_03.asp)

<http://www.permobilusa.com/USA/Products/Pediatric/K450/>

<http://www.udel.edu/udaily/2009/oct/robots100708.html>