Alternative Designs Report

All-Terrain Power Chair

Team 10

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Project for Nathan Lamb

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Design Two

Design two will contain a headphone jack that has headphones, which will connect to an iPod for music playback. This is will allow the client to be more comfortable, and he already uses headphones. His right ear is sensitive so this will limit any discomfort. Also, this will allow him to enjoy music, without disturbing anyone else around him.

The seat will be able to move if the client encounters an incline going up or down, so that he will remain in the upright position, to prevent any back damage. The seat must provide a safe, comfortable, secure fit. If the client were to climb an incline it will feel as though he is on level ground. For extra security, it will contain anti-tip wheels. This will be accomplished with a type of gyroscopic seat. Also, the adjustable seat will allow for the client to be easily placed into the seat with minimum strain on the person helping. The seat will also be made to fold down to make it easier to be placed in the transport vehicle.

As an extra safety precaution, the wheel chair will contain small headlights if the client were to ever be in a dark area or as a way to signal for help. Reverse lights will be used to help warn others around when the wheel chair is in reverse. A horn sound may also be added for the client to warn others if they are in the path of the wheel chair.

The joystick will be a VR2 joystick and module, which will allow for easy replacement if needed. The joystick will allow to easy programming of lights and other wheel chair functions.

Other minor additions to the wheel chair will include an ability to attach umbrella to block the sun at the beach or rain. Cup holders and a detachable trap for eating or reading, while in the chair, will also be added.

Figure four: VR2 joystick and control.