Smart Wheel Chair

Automated control:
The wheel chair shall go around the different rooms inside the house on the press of the buttons. Each button shall be corresponding to a certain room. Each room shall have certain co-ordinates which the wheel chair shall have to achieve. And at any particular instant the wheel chair shall know it's current co-ordinates and hence shall be able to go from one room to another when the button for the next room is pressed and hence it shall start following the algorithm to change its co-ordinates in the most efficient manner in order to achieve its new target.

Obstacle detection:
The obstacle detection would be done by a range sensor which will tell us when the obstacle is within the 15 cm range. When an obstacle is encountered the wheel chair shall stop and turn and find an alternate path to its target.

Colour detection:
The colour of tin packs of food would be determined by using an LDR and respective coloured lights. The threshold output voltage values of the LDR shall give different values for different colours and hence the colour could be detected.

Brail LCD for the blind:
Based on the different colours the brail LCD which is controlled by a servo motor shall turn different angles representing to represent a small board with brail characters on it. This shall be placed in the arm of the wheel chair.

Wireless control of the wheel chair:
A GUI for controlling the wheel chair wirelessly through the computer shall be made. The computer shall serially communicate with the transmitter which will send the controlling data to the receiver that is on the wheel chair. And hence the wheel chair could be controlled wirelessly when stuck at a certain location.