THESIS TITLE	AUTOMATED GUIDED VEHICLE CONTROLLED BY NEURAL NETWORK
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ABSTRACT

This thesis presents the design and construction of an automatic guided vehicle(AGV), which is controlled by neural networks containing the data under algorithm. This AGV is 1 meter long,60 centimeters wide, 50 centimeters high and consists of 4 wheels. It can carry a load up to 200 kilograms. The AGV has 2 DC motors, which can be driven independently and its horizontal speed is 15 meters per minute. The 40 sensors are used to detect the change of external environment and consist of 2 sets of matrix sensors having a size of 4 x 4 to detect the guide path. The AGV has 4 sensors which can capture the separate directions of AGV,10 sensors for site-detecting and 5 sets of infrared and ultrasonic sensors for obstacle-detecting . All sensors can give the output which can be both analog and digital. In addition there is a remote system to control the AGV and a system to protect the AGV's various movments. The bumper when touched has a light and sound alarm system indicating movments. A microprocessor 80386 DX-40 which is of 16 bits operated by a 40 MHz clock signal is the CPU. The reason for using the Neural Network is to control the AGV. because the multiple input and output can be controlled for good performance by the neural network , while other controllers can't do it or have difficulty to control it.