

## Toyota technology has brain waves move wheelchair

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(AP) -- Toyota Motor Corp. says it has developed a way of steering a wheelchair by just detecting brain waves, without the person having to move a muscle or shout a command.

Toyota's system, developed in a collaboration with researchers in Japan, is among the fastest in the world in analyzing brain waves, it said in a release Monday.

Past systems required several seconds to read brain waves, but the new technology requires only 125 milliseconds - or 125 thousandths of a second.

The person in the <u>wheelchair</u> wears a cap that can read brain signals, which are relayed to a brain scan electroencephalograph, or EEG, on the



electrically powered wheelchair, and then analyzed in a computer program.

Research into mobility is part of Toyota's larger strategy to go beyond automobiles in helping people get around in new ways.

The new system allows the person on the wheelchair to turn left or right and go forward, almost instantly, according to researchers.

Coming to a stop still requires more than a thought. The person in the wheelchair must puff up a cheek, which is picked up in a detector worn on the face.

Japanese rival Honda Motor Co. is also working on a system to connect the monitoring of <u>brain waves</u> with mechanical moves.

Earlier this year, Honda showed a video that had a person wearing a helmet sitting still but thinking about moving his right hand. The thought was picked up by cords attached to his head inside the helmet. After several seconds, Honda's boy-shaped robot Asimo, programmed to respond to brain signals, lifted its right arm.

Neither Honda nor Toyota said it had any plans to turn the technology into a product for commercial sale as each said they are still developing the research.

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