# Plant cyborg able to move itself to a preferred light source

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Credit: Elbert Tiao, MIT Media Lab

A team of researchers at the MIT Media Lab built a cyborg that combines a plant with electronics and ultimately allows the plant to choose when it would like to move to a brighter spot. The cyborg is the

brainchild of team leader Harpreet Sareen, and he has named it Elowan.

Plants have the ability to detect light—if you watch really carefully, for example, you can actually see a sunflower move to face directly into the sun as it moves across the sky. Prior research has shown that plants have many natural sensors and response systems—they respond to humidity and temperature levels, for example, or the amount of water in the soil in which they are planted. In this new effort, the researchers sought to give one plant more autonomy by putting its potted base on wheels fitted with electronics and an electric motor.

The idea is reasonably simple—place sensors that listen to the electrical signals generated by a plant and then convert those signals to commands carried out by the motorized wheels. The result is a plant that can respond to changes in light direction by moving itself closer to the source. The researchers proved this by placing the cyborg between two table lamps and then turned them on or off. The plant moved itself, with no prodding, toward the light that was turned on.

The work was not meant as a project to make plants "happier" by giving them more autonomy. Instead, it was geared toward harnessing the processing power of nature. For example,Elowan could be modified in a way that allows it to move solar panels on a house to make sure they get the most sunlight possible. Or office plants outfitted with sensors and controllers could ensure temperature and humidity levels are optimized not just for the plant, but for the workers sharing its space. The team plans to continue its research, hoping to capture the natural processing power of plants to create hybrid devices that might benefit humans in a variety of ways.

**More information:** www.media.mit.edu/projects/elo … bot-hybrid/overview/