

UGM Students Develop Smart Home to Help Senior Citizens

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Now E-Phone, a smart home concept to help senior citizens or the blind people to do house chores has been developed by five students of Universitas Gadjah Mada. The E-Phone which is a smart home concept based on smartphones can do monitoring of the home.

The students, Nauval Shafiq, Deva Agus and Ignatius Iwan (Electronics & Instrumentation), also Fawzia R.P (Civil Engineering) and Fathin S. Wismadi (Architecture) expected that the e-Phone prototype can be applied in homes to make the home comfortable and secure.

"Our E-Phone team has developed the smart home concept that can be controlled on the smartphone visually and by voice control to enable the senior people and the blind in their own homes," said Deva Agus at UGM on Tuesday (14/6).

Deva Agus explained the E-Phone used touch input from a smartphone or voice instruction that is received by a microcontroller to carry out a task. This interface is used as such for the users who have limited vision.

The team use their own home designs that support the sensors being installed on the project. The sensors include temperature and ultrasonic sensors or PIR sensor that can detect motion, and aural sensor that can detect sounds.



"From the trigger of the sensors, the Arduino microcontroller will activate home equipment, such as opening the door, turning on the AC, lights, and detecting people. With temperature sensor, when a fire is on, the home owner will receive a warning from the system," said he.

Deva Agus added the E-Phone smart home prototype has excellence that uses renewable solar energy, hence, environmentally friendly.

"Under this concept, the senior citizens and the blind people will feel secure and comfortable in their own homes," he said.

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