Scratchable Devices

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Giving Everyone A Reason To Program

We are seeking to create useful devices that will serve as motivation for people to gain familiarity with programming. We took everyday household appliances and connected them to BYOB, an extension of Scratch, so that they can do much more than originally intended.

Our programming-based interface allows end users to do MORE than they can with a standard button-style interface.

End users should be able to accomplish the same tasks with the traditional interface, only FASTER.

People will be able to learn to do new tasks SOONER because the programming interface is the same across devices.

How Is This Possible?

We are using an Arduino, a microcontroller, to communicate between BYOB and the physical devices. From BYOB, a command is interpreted in Processing and shuttled to the Arduino. The instruction then controls the Scratchable Device by sending electrical signals to specific ports to which the devices are connected.

Arduino Code

Transform any ordinary lamp into a clapper!

Conclusion and Future Plans

In daily life, there is no need for programming knowledge. Our project helps provide new motivation for people to use programming. To evaluate whether our interface allows people to do more, faster and sooner with devices, we will conduct a user study that compares our approach with traditional styles. Subjects will program simple tasks using both Scratchable Devices and normal devices. The feedback from this study will help us target future interface designs.