

RESEARCH ON THE ARDUINO PLATFORM FOR PROTOTYPING AND CREATING SINGLE INSTANCES OF NARROW DEVICES

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Arduino is an electronic designer and convenient platform for the rapid development of electronic devices for beginners and professionals. The platform is very popular all over the world due to the convenience and simplicity of a programming language, as well as an open architecture and program code.

Currently, one of the problems of any speaker is the need to be able to control the performance schedule. To solve this problem, continuous monitoring of time by wristwatch or verbally informing the speaker by those responsible for the event is used. Both methods have disadvantages. Constant monitoring of time by a wristwatch creates an impression among listeners in the speaker's uncertainty. Oral information about the performance schedule interrupts the presentation of the speaker and affects the holistic perception of the material by the audience.

Relevance

Nowadays there are many young and ambitious people who know how to create software that cannot find use for their capabilities in the physical world, and the Arduino platform gives them that opportunity.

Hypothesis: in a short time, a special purpose device can be created on the Arduino platform: a timer indicating the light of the time.

The purpose of the research work is to study the capabilities of the Arduino platform for creating autonomous specialized devices and the creation of a timer indicating the light of time that does not require additional training of speakers.

My hypothesis was confirmed during the practical part of the work. In a short time, we were able to create a prototype of a narrowly focused device - a timer indicating the light of time, which works properly and is beneficial in its field. The greatest efficiency is achieved under the following conditions: it is out of the listener's field of view, when the speaker looks at the device, it seems that he is looking at the audience. During its use, an alternative application was identified, namely, effective assistance for adherence to the time limit for the speech.

It can be concluded that the Arduino platform is best suited for prototyping and creating single instances of stand-alone devices for special purposes, as it has a low cost, convenient development environment and the ability to expand its projects to incredible sizes.

References:

1. <https://playground.arduino.cc/Code/Bounce>
2. <https://www.arduino.cc/Reference/Wire>