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## **EMULATORS OF MEASURING DEVICES AS AN INSTRUMENT ICT FOR REALIZATION OF PHYSICS AND MATHEMATICS INTERDISCIPLINARY COMMUNICATION**

The most characteristic feature of education at the modern stage of the development is its computerization. This is due to distributing in educational establishments of modern computer technics and software, using possibilities of the internet; acquisition and accumulation by teachers the experience of using the informational and communicative technologies (ICT) in their work. The effectiveness of teaching with involving computer depends on correctness, propriety and usefulness of using by teacher ICT. That's why, to form the knowledge and skills of using different instruments of ICT is necessary during preparation of future teachers.

In this article we well consider the possibilities of programs-emulators of measuring devices as one of the instrument of ICT for realization of intersubjects connections of physics and mathematics, the forming of stable associations between course of physical processes and its reflection in the form of functional dependencies.

The important role in physics plays a graphic representation of dependences of one physical value from another. This is current-voltage characteristics (CVC), which are graphs of dependence of the current from applied to element of electric circuit voltage or dependence of dropping of voltage on elements from the current which passes through it. These characteristics serve mainly to study the properties of semiconductor devices. To observe the CVC is use twocoordinates oscilloscopes, function of which can also execute programs which emulate them. If the resistance of element isn't independent on current value, the CVC will look like a straight line passing through the origin. This graph of the linear functions interprets Ohm's law and shows the dependence of stress on an element of current passing through it, with factor of proportionality that is equal to the resistance of the element. If the computer's sound card to connect to installation, the main element of which is a variable resistor, it is possible to show the dynamics of this relationship that is expressed in the angle of inclination of the line to the x-axis with the change in resistance.

Dynamical demonstration of physical processes courses with using of programs-emulators of measuring devices together with mathematical interpretation of changes in conditions or, alternatively, explanations of mathematical concepts parallel with illustrating their physical meaning will allow to organize any educational establishment the qualitative integrated lessons, to

fill the traditional classes with inter-subject content with the aim to study phenomena and processes in nature and technology, to overcome the fragmentation of subjects, which is natural for our education system. The use ICT as programa-emulators of measuring devices allows rationally and methodically to use the computer in physics and mathematics lessons.