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УДК 004.388=111

CHALLENGES AND BENEFITS OF GRAPHIC INPUT DEVICES (AT THE EXAMPLE OF GRAPHICS TABLETS)

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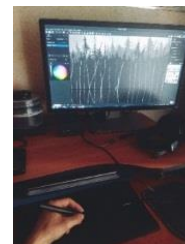
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Computer technologies have drastically changed the life of modern society and, of course, had its impact on the art. Nowadays the internet is full of concept art, desktop wallpapers and different kinds of images that have been drawn by professional artists and ordinary users. Therefore, it is unsurprising that digital art has become a common thing and graphic input devices has gained their popularity.

In fact, the first graphics tablet was introduced in 1957, but mainly it was used for handwriting recognition. Today, there are lots of graphics tablets created for different purposes. Thus, they are widely used not only by artists, photographers and people of creative professions, but also by engineers, economists, managers and even teachers. Nevertheless, in our article we will focus on graphics tablet as on a device created for making digital illustrations.

According to the data taken from the statistics portal <https://www.statista.com>, in 2014 around 840 million people across the globe used a tablet at least once per month. In 2017 the number of tablet users has increased to 1.2 billion people [2]. Most technology companies like Apple, Wacom, FiftyThree have invested billions of dollars in digital drawing continuing to design innovative hardware and apps.

A graphics tablet is a computer input device that enables a user to hand-draw images and graphics, similar to the way a person draws images with a pencil and paper. The graphics tablet consists of a flat surface and a stylus, which can be used to produce free hand drawings or trace around shapes. When the stylus touches the surface of the graphics tablet, data about its position is sent to the computer. This data is used to produce on the screen an exact copy of what is being drawn on the surface of tablet [4, p. 40].



The main reason of its popularity and high demand is a more ergonomic method of input that can reduce the repetitive strain injury and enable to place lines more accurately. Moreover, stylus produces smoother curves and makes small, complex shapes more easily than the mouse does.

In traditional artwork, the artists have to draw every single thing, but using graphics tablets, they are not constrained by physical tools [1, p. 763]. With the help of various filters and brushes, the similar effect can be achieved by a few strokes of the digital pen or stylus. Therefore, with the help of graphics tablets artists have the opportunity to recreate their personal art styles more faithfully than they could with the mouse or the touchscreen system.



A USB Graphics Tablet is totally application independent. It is not just tied to being used within specific programs like Adobe Photoshop or Corel Draw.

Having analyzed numerous reviews and blogs written by well-known illustrators and taking into account personal experience as a digital artist, we decide to point out the main advantages and disadvantages of graphics tablets.

The main benefits of using graphic tablets for making digital illustrations are:

- The graphics tablet is lightweight and comparable in size to the laptop.
- You can easily draw or edit your project on the tablet by using the stylus.
- With a stylus, you can move your hand and wrist into a natural drawing position. This allows you to have much more control over the strokes that you make and you can literally sketch with your computer [3].

- A USB Graphics Tablet can be used in all applications.

Among the most significant disadvantages, we can point out the following ones:

- The graphics tablets are rather expensive and their cost may be prohibitive. Although their prices are slowly coming down.

- Most interfaces on the desktop and the laptop computers are designed with the mouse and the keyboard in mind, making their operation somewhat clumsy with what is essentially the sophisticated stylus.

During the work on this article, we collected a lot of theoretical data and deepened our experience of using such tablets for creating illustrations as well as improved our knowledge of the main working aspects and peculiarities of working on graphic tablets. Summing it all up, if we look at all aspects of using graphics tablets, taking into account all their advantages and disadvantages, we can stress that they are ultimately useful and must be used for work, study and art.

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УДК [378.147+336.7]=111

COMMON FINANCIAL PROBLEMS FOR UNIVERSITY STUDENTS AND WAYS OF THEIR REDUCTION

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According to the latest research made by the State Statistics Service of Ukraine, macro-indicators of Ukraine showed positive results, most sectors were reformed. Unfortunately, not everything is as perfect as it seems. At the end of the year, inflation significantly deviated from the targets of the National Bank of Ukraine at 8% and reached about 13-14%. This affected the mood of foreign

