Use Of Web Technologies In Creating Parallax Effect

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Abstract: this article explores the concept of parallax effects the steps, principles and algothms for creating effects and the possibilities of technology for applying parallax effects.

Key words: web technology, parallax, website, parallax effect.

Today, HTML (Hyper Text Markup Language) and CSS(Cascading Style Sheets) web technology codes form the basic of Internet websites. The development of web pages through these web technologies is becoming more complex. Therefore, web developers are using new technologies to create web pages.

Today, websites use many fonts, buttons, sliders and various effects to attract the attention and attention of users. In addition, the creation pf three- dimensional grpahic elements on webb pages and their visualization is widely practiced. It has been satisfying the interest and attention demands of users to today's modern sites.

This research analysis explores and uses parallax effect technologies in website creation, increasing users interest in using the website and attracts attention, while the products are important tool in advertising interactive services.

The purpose of this study is to analyze the technologies of creating parallax effects on websites to apply CSS styles using Javascript code to bisualize parallax effects and to implement them through other web technologies.

Parallax is an effect where the background content or image in this case is moved at a different speed than the foreground content while scrolling.

Parallax is the visual replacement of an object close to you in the background of a distant object when the observer's point of view(position) changes.

For example, look at the keyboard, and watch,you see your nose blur. Close one eye, close the other, and look from different angles of the nose and look at the keyboard again.

If you put your finger between the keyboard and the eyes, look with the other eye, as if you see a shift relative to the finger. In this case, the finger slides slightly relative to the keyboard.

Web- technology has the concept of parallax effect or parallax scrolling, which is a special way in ehich the background image moves more slowly than the previous elements. This technology is increasingly being used on websites. Because, it will look really effective and graet.

Parallax scrolling is a method of creating a sense of space depth through differences in the animation of several layers of the image on the screen (Figure 1) this allows web users to perceive a variety of audibisual images through simple actions, such as moving the mouse, or dragging and dropping[1].
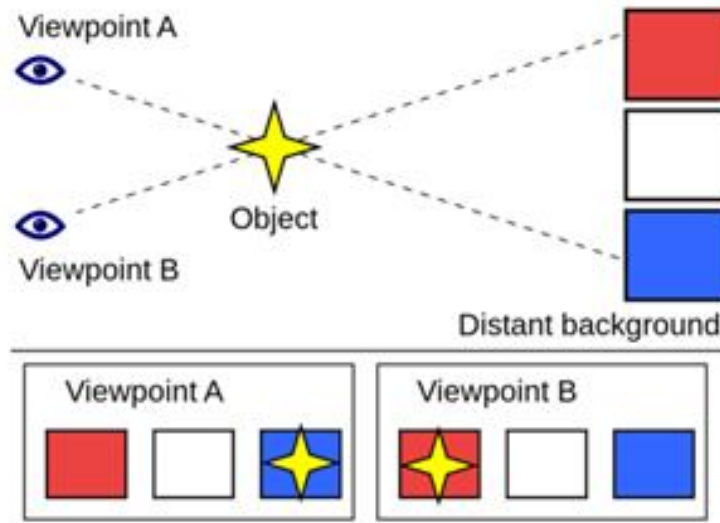
(Figure 1) The principle of operation of the parallax effect

This effect of this three- dimensional sphere is achieved by using several layers placed on top of each other and moving at different speeds during rotation. Using this technology, you can not only create an artificial three- dimensional effect, but also apply it to icons, images and other page elements.
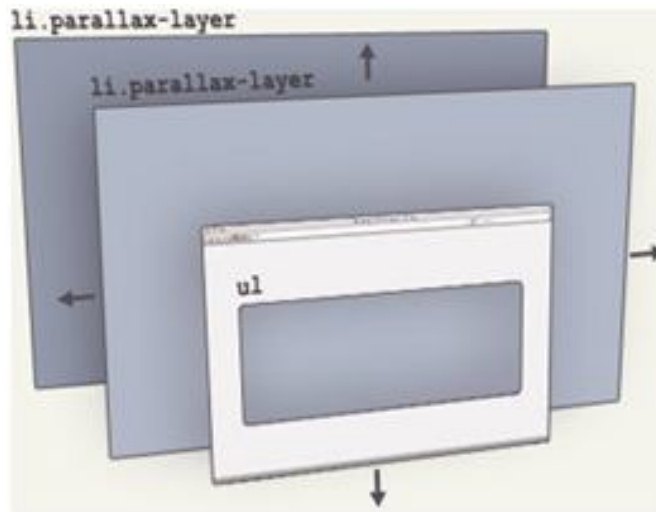

Figure 2. Layers of parallax effect.

The main disadvantage of parallax is that the page will have a beautiful and modern look. When using Javascript language and jQuery, the parallax effects

males the page feel more complicated and significantly reduces download speeds. The reason for this is based on complex calculations: Javascript must control the position of a pixel in a line on the screen.

In some cases the situation is complicated by problems with the browser and crossplatform. Many developers have recommended using the parallax effect for two page elements. Although the user can view or skip videos, the parallax scrolling method repeats some images interactively. Which signicantly improves information perception.

Figure 3.An example of the process of activating a parallax effect

The interactivity of this method guarantees the involvement of the user in the process of processing the parallax effect. And fasters thinking and provides feedback. On the other hand, the parallax effect can cause, descomfort during physical contact with users. Impedes data assimilation due to imperfection of the execution mechanism.

In this regard, further reearch will be needed on ways to improve and develop optimized methods of shift. The step of creating a parallax effect using jQuery parallax:

1. jQuery parallaks.

The general algorithm for implementing the parallax effect when using jQuery is as follows: one or more external objects as a background, each with its own personal and personal identification. Then it is necessary to wrute the processing function and, when extracted, calculate the coodinates of the rotation line and based on this data, the background elements shift by a certain amount by multiplying the corresponding coefficents. This processing function must be attached to the transition event and thus a parallax effect is achieved. This can look like a processing tool:

Function parallaxScroll○ {

Var scrolled= $ (window).scrollTop○;

$('# parallax- bg1').css('top',(0-(scrolled*.25))+'px);

$('#parallax- bg2').css('top',(0-(scrolled*.5))+'px');

$('#parallax- bg3').css ('top',(0-(scrolled*.75))+'px');

}

2.   CSS3

a)   Position+ top,left

There are two main ways to control the coordinates of elements on a web page:

The firs is a combination of postion+ top/left. The translete(x, y) property is responsible for changing the position of the element relative to its original position. It is responsible for how the item is placed on the page.

The secind is ysed to move the element. How this shift is made depends on the value of the postion.

b)   Transform

In general, despite the similarity of its function with the use of a combination of lacation: there are a number of importantt differences with the relative + top/ left feature[1].

The main advanteg of this approach is the declarative method of depiction. The translete feature works better in the browser(figure4)
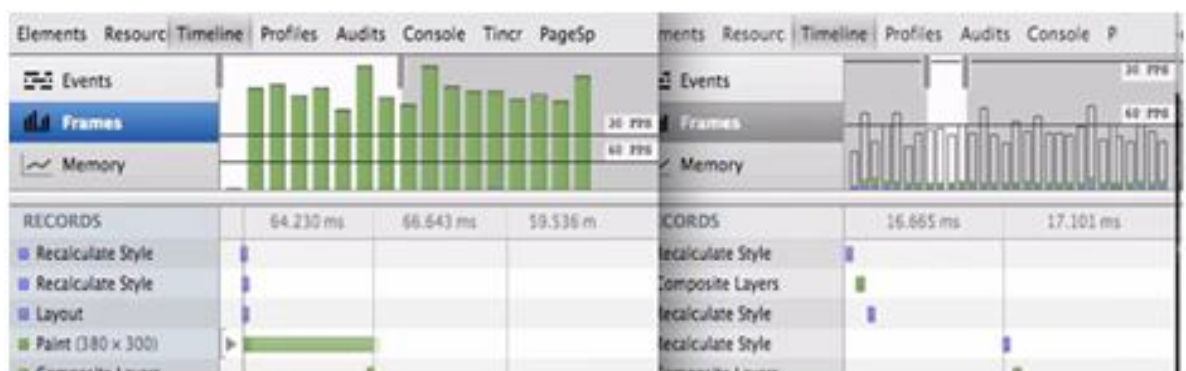

Figure 4.Compare frame time using top/ left and translete

In short, as an analog - you can create a parallax effect using CSS. So you can use more animations at the same time. However, in some cases there may be shortcomings in its use. Good performance of CSS effects in the browser inficates

the advantage of this method. The downside of CSS for creating parallax is that it lacks direct control over the process of moving elements, which makes it impossible to create really complex scenes.[2]

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