Animating the Web with jQuery

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Abstract— **World globalization and present day technology increases the web users rapidly. Every website is trying to attract the web users. The web site creators /developers add different kind of animations to their websites. There are many softwares available to create animation. jQuery can be used to create interactive and powerful web pages with animations. JQuery is a JavaScript library intended to make Java Script programming easier and more fun. A JavaScript library is a complex JavaScript program that both simplifies difficult tasks and solves cross-browser problems. With jQuery, we can accomplish tasks in a single line of code. JQuery is used on millions of websites. This paper discuss about the advantages and usage statistics of jQuery on the web. A complete procedure to create a slider and banner plug-ins are also included. They are tested with different browsers.**

Keywords- plug-ins, animation, slider, banner

I. Introduction.

Internet takes an important place in our life. World internet users on June 30- 2012 was **2,405,518,376**(Miniwatts Marketing Group). There are a millions of websites available in the internet. These websites are categorised into Business, Shopping , Technology, News, Entertainment, Education, Travel, Social, Health and other types. Most of the website uses animation. Computer animation may be defined as a technique in which the illusion of movement is created by displaying on a screen, or recording on a recording device a series of individual states of a dynamic scene[1]. Computer animation is widely used in the entertainment industry for producing motion pictures, cartoon movies, and video games. In addition, it is being used in education and training, industrial applications, virtual reality systems, advertising, scientific visualization and many engineering applications. This paper discuss about very effective and most commonly used slider and banner plug-ins. Some other complex animation plug-ins are also available.

II. jQuery

jQuery is an open source JavaScript library that simplifies the interactions between an HTML document, or more precisely the Document Object Model, and JavaScript.

a) Plug-ins

Plug-ins are add-on JavaScript programs that work in conjunction with jQuery to make certain tasks, effects, or features incredibly easy to add to a web page[2]. There are literally thousands of other plug- ins available for jQuery.

b)Advantages of jQuery

• It's open source, and the project is licensed under an MIT and a GNU GPL license. It's free.

• It's small (18 KB minified) and gzipped (114 KB).

• jQuery pages load faster.

• It has a large community of users and a healthy amount of contributors .

• jQuery works with all browsers, and large software platform vendors such as Microsoft and Nokia
are integrating this into their software development toolkits. An added benefit is that JQuery runs
on most mobile and tablet browsers as well.

• jQuery plug-ins are plenty in number and are constantly updated .

• Its API is fully documented, including inline code examples, which in the world of JavaScript
libraries is a luxury.

• It's openly developed, which means anyone can contribute bug fixes, enhancements, and
development help.

• Since it is based on jQuery , it does not have a difficult learning curve for new developers.

• jQuery makes animated applications just like Flash.

• jQuery can be SEO friendly.

c)Usage Statistics of jQuery

The following chart represents jQuery web usage trends over a time period Nov -2011 to Jan-2013 on a large selection of website homepages queried by BuiltWith.com.
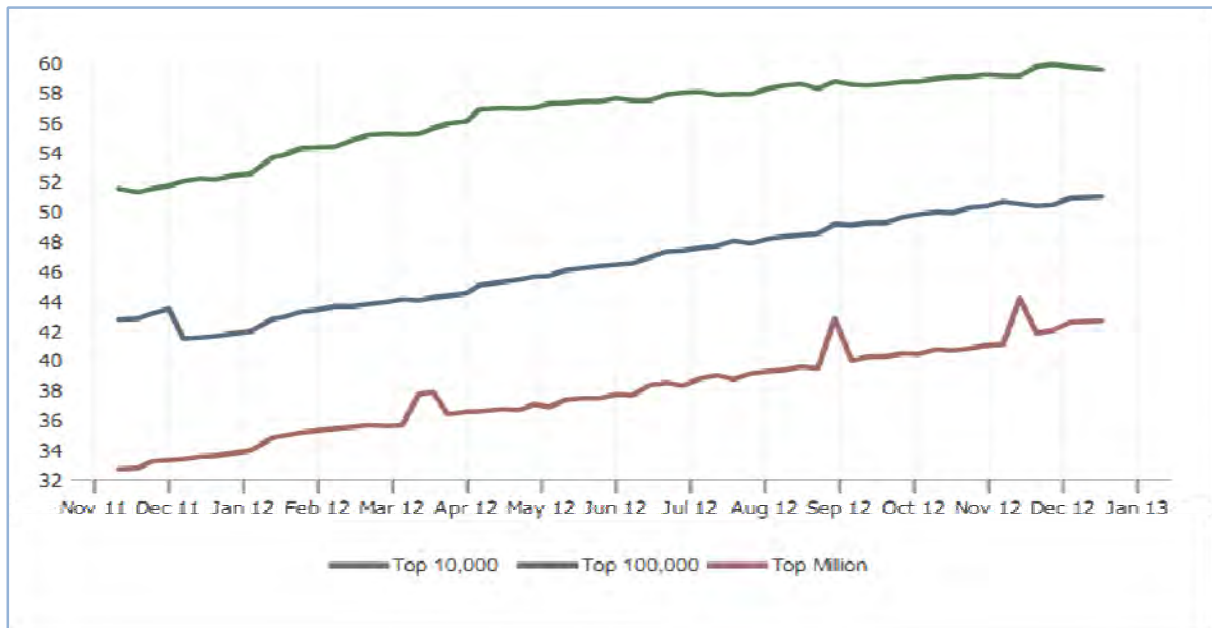

Fig-1 jQuery web usage trends over a time period Nov -2011 to Jan-2013

jQuery Website Industries

jQuery is most likely to be found in use on Business, Shopping, Education, Technology and other types of websites. The following chart shows the typical type of websites jQuery can be found on by distribution.

Fig.2 jQuery Top Ten Website Industry Distribution in the Top 100,000 Sites

III. jQuery animation Examples.

Using jQuery we can create different kinds of animations. This paper discuss about only two types of animations namely *slider* and *banner*. These animations have been used in most of the websites. There are hundreds of animation related plugins available   and can be used to create animations. Some other types of plugins are also equally important. jQuery can be used to create eye-catching and complex types of animations.

(i)Slider. It is an excellent way to display information such as images in an organized and compact manner. Slider galleries are excellent for organizing content into a nice clean module. They are very usable and convenient for any user, and they can be used almost anywhere. Sliders are very popular on home pages of

corporate websites. They are very useful for showing important information about a company. Generally, corporations will include an explanation of what the company does, a brief preview of the products, an explanation of what sets their products apart, and many further user options.

To create a slider do the following steps.

(i)   Put any four images , a background image and a slider-control in a separate folder and name it as *images..*

1.jpg

2.png

3.png

4.png

Bg.png

slider-control.png

(ii)   Type the following in a Notepad and save it as style.css. Put style.css in a separate folder and name it as **css**

```
@CHARSET "UTF-8";
html, body, div, h1, h2, h3, h4, h5, h6, ul, ol, p, form, fieldset, table, th, td, input, textarea, a {
        margin: 0;
        padding: 0;
        font: 14px/1.2em Georgia, serif, sans-serif;
        color: #6a6a6a;
}

body {background: #e0e3ec url(../images/bg.png) repeat top
}

a {
        text-decoration: none;
```

```
        color: blue;
}
a img {
        border: none;
}
hr {
        display: block;
        width: 880px;
        margin: 0 auto;
        height: 1px;
        border: none;
        border-top:none;
}

#page {
        width: 1080px;
        margin: 0 auto;
}

/* Easy JQ Slider */

#slider{
        width: 100%;
        min-width: 520px;
        height: 800px;
        position: relative;
        margin: 30px auto;
        overflow: hidden;
        background:url(../images/ waves.gif) repeat 0% 0%;
        border-top: 6px solid #333333;
        border-bottom: 8px solid #333333;
        box-shadow: 0px 1px 1px rgba(0,0,0,0.2), 0px -2px 1px #fff;
        -webkit-transition: background-position 1s ease-out 0.3s;
        -moz-transition: background-position 1s ease-out 0.3s;
        -o-transition: background-position 1s ease-out 0.3s;
        -ms-transition: background-position 1s ease-out 0.3s;
        transition: background-position 1s ease-out 0.3s;
}

#slider #controls a.active {
        background-position: 0 -16px;
}
#slider #controls {
        position: absolute;
        z-index: 9998;
        bottom: 0;
        display: block;
        margin-left: -40px;
}
#slider h2 {
        text-decoration: none;
        color: #643C91;
```

```
                    font: 32px/2em Platino Linotype;
                    margin-bottom: 10px;
            }
            #slider li {
                    list-style: none;
                    display: block;
                    height: 285px;
                    overflow: hidden;
            }
            #slider li > a {
                    display: block;
                    float: left;
                    width: 50%;
            }
            #slider li > img.left-image-slider {
                    max-height: 220px;
            }
            #slider li > div {
                    float: right;
                    width: 48%;
                    margin-right: 2%;
            }
            #slider li > div p {
                    font: 16px/1.5em Georgia, serif;
                    line-height: 1.8em;
            }
            /* CSS3 Button */

            .coolbtn {
               background: #FF9E01;
                    padding: 6px 10px 6px 10px;
                    color: #fff;
                    border: none;
                    margin: 15px 10px 15px 0;
                    font-size: 16px;
            }
            .coolbtn:hover {
               background: #FFBB4D;
            }
            .coolbtn:active  {
               background: #E68E00;
            }
            /* Common CSS styles */
            .clear {
                    display: block;
                    height: 0;
                    line-height: 0;
                    font-size: 0;
                    clear: both;
            }
```

(iii)Download (a)jquery.easy-jq-slider.js (b) query-1.7.2.js files from jquery.com and put it in a   separate folder and name it **js.**

(iv)Type the following in a notepad and save it as **index.html**

```
<!DOCTYPE    html    PUBLIC    "-//W3C//DTD    HTML    4.01    Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Insert title here</title>

        <style type="text/css">
        <!--
                @import url(css/style.css);
        //-->
        </style>

        <script type="text/javascript" src="js/jquery-1.7.2.js"></script>
        <script type="text/javascript" src="js/jquery.easy-jq-slider.js"></script>

        <script type="text/javascript">
        <!--
        $(document).ready(function(){
                $("#slider").slider();
        });
        //-->
        </script>
</head>
<body>
        <div id="page">

                <div id="slider" >
                        <ul>
                                <li>
                                        <img src="images/1.png" alt="" class="left-image-slider" />
                                        <div>
                                                <h2>Warm welcome</h2>
                                                <p>jQuery is a fast and concise JavaScript Library that
simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web
development. jQuery is designed to change the way that you write JavaScript
</p>
                                                <p><a href="#"><input type="button" value="Read More
&rarr;" class="coolbtn" /></a></p>
                                        </div>
                                        <span class="clear"></span>
                                </li>
                                <li>
                                        <img src="images/2.png" alt="" class="left-image-slider" />
                                        <div>
                                                <h2>Easy management</h2>
                                                <p>
There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration in
some form, by
                                                injected humour. </p>
                                                <p><a href="#"><input type="button" value="Read More
&rarr;" class="coolbtn" /></a></p>
                                        </div>
                                        <span class="clear"></span>
                                </li>
                                <li>
                                        <img src="images/3.png" alt="" class="left-image-slider" />
                                        <div>
```

```
                                        <h2>Revolution</h2>
                                        <p>There are many variations of passages of Lorem
Ipsum available, but the majority have suffered alteration in some form, by
                                        injected humour. </p>
                                        <p><a href="#"><input type="button" value="Read More
&rarr;" class="coolbtn" /></a></p>
                            </div>
                            <span class="clear"></span>
                    </li>
                    <li>
                            <img src="images/4.png" alt="" class="left-image-slider" />
                            <div>
                                    <h2>Quality Control</h2>
                                    <p>There are many variations of passages of Lorem
Ipsum available, but the majority have suffered alteration in some form, by      injected humour. </p>
                                    <p><a href="#"><input type="button" value="Read More
&rarr;" class="coolbtn" /></a></p>
                            </div>
                            <span class="clear"></span>
                    </li>
            </ul>
        </div>

        <hr />


    </body>
    </html>
```

(v)Put all the three folders and the index. html in a new folder and name it **easyslider**.

 (vi) Open the **easyslider** folder and Double click on the index.html file . Now we can see the easy- slider in our default browser.

 (ii)Banner. It is a long, rectangular image that can be placed just about anywhere on a Web page and is linked to the advertiser's own Web site. Most banners are 468 pixels wide by 60 pixels high (468x60). They may contain text, animated graphics and sound.

   To create a banner do the following.

 (i)Create/Collect the following buttons: btn_next, btn_prev, btn_stop btn_play

(ii)Create/Collect any three image files that we wish to rotate.

Rotate.gif

Learn.gif

download.gif

Put all these image files in a separate folder named *img.*

(iii)Type the following in a Notepad an save it as style.css. Put style.css in a separate folder and name it as **css**.

```
#jqb_object img{
        border: none;
}

#jqb_object {
        position:relative;
        width:700px; height:250px;
        overflow:hidden;
}
#jqb_object .jqb_bar{
        position:absolute;
        width:700px; height: 30px;
        left:0px;
        bottom:0px;
        background:#000000;
        opacity:0.7;
        filter:alpha(opacity=70);

        color: #ffffff;
        font-family: Arial, Verdana, Sans-Serif;
        font-weight: bold;
        font-size: 18px;
        letter-spacing: -1px;
}

#jqb_object .jqb_slide{
        position:absolute;
        width:700px; height:250px;
        font-family: Arial, Verdana, Sans-Serif;
        font-weight: bold;
        font-size: 18px;
        letter-spacing: -1px;
```

```
          text-align: left;
}


#jqb_object .jqb_info{
          position:absolute;
          padding: 2px 10px 2px 10px;
          float: left;
}


#jqb_object .jqb_btn{
          width: 15px; height: 14px;
          margin: 10px 5px 2px 2px;
          float: right;
}
#jqb_object .jqb_btn_next{
          background-image:url(img/btn_next.gif);
}
#jqb_object .jqb_btn_prev{
          background-image:url(img/btn_prev.gif);
}
#jqb_object .jqb_btn_pause{
          background-image:url(img/btn_stop.gif);
}
#jqb_object .jqb_btn_play{
          background-image:url(img/btn_play.gif);
}
```

(iv) Download jqbanner.js file from jquery.com and put it in a   Separate folder and name it **js**

 v) Type the following in a notepad and save it as jqbanner.html

```
<!DOCTYPE    html    PUBLIC    "-//W3C//DTD    XHTML    1.0    Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<title>Simple JavaScript Rotating Banner Using jQuery</title>
<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.8.0/jquery.min.js" type="text/javascript"></script>
<script src="jqbanner.js" type="text/javascript"></script>
<link rel="stylesheet" type="text/css" media="screen" href="jqbanner.css" />
 <style type="text/css">
body {
          font-size:11px;
          font-family: Verdana, Arial, Sans-Serif;
          background: #ffffff;
          color: #333;
          text-align: left;
          }
a:link { text-decoration : none; color: #15ae39; font-weight:bold;}
a:active { text-decoration : underline; color: #15ae39; font-weight:bold;}
a:visited { text-decoration : none; color: #15ae39; font-weight:bold; }
a:hover { text-decoration : underline; color: #15ae39; font-weight:bold;}
 </style>
</head>

<body>
<center>
<div id="jqb_object">
```

```
            <div class="jqb_slides">
                    <div        class="jqb_slide"      title="jquery      rotating      banner"      ><a
href="http://www.jquery.com/"><img src="img/rotate.gif" title="" alt=""/></a></div>
                    <div   class="jqb_slide"   title="Learn   !"   ><a   href="http://www.jquery.com/"><img
src="img/learn.gif" title="" alt=""/></a></div>
                    <div    class="jqb_slide"    title="Download!"><a    href="http://www.jquery.com/"><img
src="img/download.gif" title="" alt=""/></a></div>

            </div>

            <div class="jqb_bar">
                    <div class="jqb_info"></div>
                    <div id="btn_next" class="jqb_btn jqb_btn_next"></div>
                    <div id="btn_pauseplay" class="jqb_btn jqb_btn_pause"></div>
                    <div id="btn_prev" class="jqb_btn jqb_btn_prev"></div>
            </div>

</div>

</body>
</html>
```

(vi)Put all the three folders and the index. html in a new folder and name it **jqbanner** and double click on the jqbanner.html file . Now we can see the banner in our default browser.

There are some other plug-ins for banner and more than fifty plugins for sliders are freely available. The parallax slider is used in most of the jQuery websites. The Parallax slider requires js files, css , images and index.html files like the slider explained in this paper. The .css file for the Parallax slider takes fourteen pages. Due to the limit in number of pages, it is not included in this paper. This paper suggest the educators of Computer Science / Computer Applications / Information Technology to include **jQuery** as part of their curriculum.

IV. Conclusion

Through this paper animating the web with jQuery has been presented. The number of users on the internet in the world, advantage of jQuery and percentage of jQuery websites has been discussed. Some details about implementation of slider and banner animation in jQuery and css have been described. The animation and the interactivity have been well tested and works well. The "write less do more" jQuery has several features that make it an appropriate choice to include as part of our curriculum.

REFERENCES

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