

Web based drawing panel

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Abstract- The horizon of internet is glorified by the rising technology named Rich internet application. This project is to implement the Web based drawing panel which mimics the desktop based drawing software. ‘Drag and drop’ is remarkable feature, enriches the drawing facilities. The prototype construction is based on Ajax and SVG. Ajax imposes the dimension of dynamism in WebPages.SVG is the graphics language to develop high resolution 2D graphics in WebPages. It solves the problem of aliasing effect as SVG shapes are scalable. The project is combination of new technologies, thus significantly supersede the desktop based drawing software.

Index Terms- Ajax, Architecture comparison, Data Island, Prototype, Rich internet application, Scalable vector graphics

I. INTRODUCTION

THE Web based drawing panel can be used for drawing within the browser and saving the drawings in the account which is offered to the registered users, it also supports the sharing of a drawing. Sharing is also possible if one will draw using any drawing software then he needs to upload and other party need to download the same. But this is long process. Better to draw online and save online. The application domain of the drawing project includes logo designing, industrial project designing and to learn basic drawing. Thus wide scope of users is covered. Web based drawing panel provides better facilities than desktop based application. User can draw, colour, save and edit his drawings and he doesn’t need to install any drawing software. Help is provided for users to learn how to use the drawing application. Drawing tutorials and videos are also provided.

II. TECHNICAL WORK PREPARATION

A. Motivation behind web 2.0, Ajax and RIA

Web2.0 transforms the WebPages in such a way, they become livelier and interactive. The web 2.0 based applications are platform independent. Ajax supports natural user interaction.

Mouse movement is sufficient to trigger the event. Partial UI updates means updating the part of a Webpage. The practice of making the client thick leads to the development of the Rich internet application.

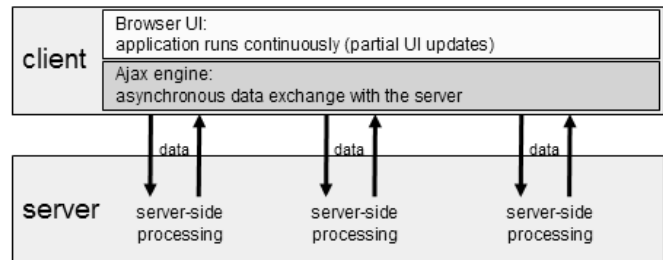


Fig. 1. Client server interaction showing the asynchronous data exchange

B. Brief description

Drawing panel is the workspace for users. He is provided with readymade shapes to draw, that increases the usability of draw panel. We need to disable the refresh button of the browser and F5 key, as the workspace for users is within the browser window. Refreshing the webpage leads to the loss of artwork. Separate JavaScript code is used to disable the refresh key. Versatility of JavaScript is also used to provide drag and drop feature and to deform the shapes. High resolution SVG shapes can be easily scaled, rotated, repositioned and resized as JavaScript can be embedded in SVG document.DOM scripting is used to provide drag and drop feature for SVG shapes.

C. Architecture comparison

Keeping the client data over the client machine is the emerging concept known as **Data Island**. Thick client is rich as his browser runs the business logic which is present on the server. Figure 3 elaborates the power of thick client.

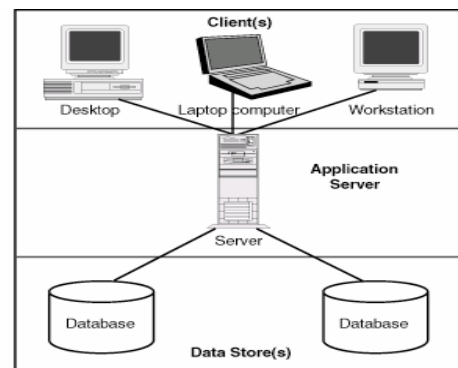


Fig. 2. Three tier architecture showing client, application server and database

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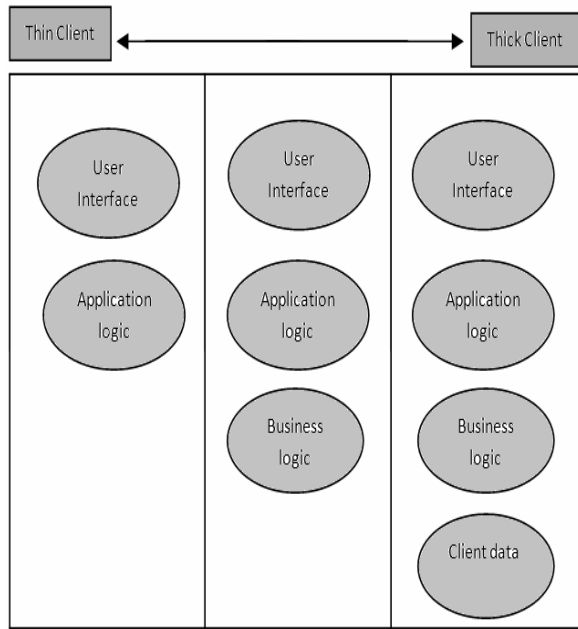


Fig. 3. Architecture diagram for thick client application

D. Why SVG???

The SVG stands for scalable vector graphics is open source web development language based on XML. Scalable means the size of the graphic element can be changed without losing the fidelity. It delivers high end 2D graphics using XML tags. CSS can be used for styling. The source code can be easily edited. It supports real-time Photoshop-like effects (e.g. drop shadow, spotlight, embossing, blurs, etc.) to the artwork. It creates graphics on-the-fly using scripts. It supports rich typography by embedding entire typefaces or just selected character outlines. It uses "zero-tolerance" XML; that can pinpoint line and column number for SVG errors. It mixes easily with Web Services; send SVG diagrams or animations via SOAP messages or create rich graphical user interfaces for Web Services. Animation with SMIL uses SVG docs in multimedia SMIL presentations to mix vector graphics with audio and video.

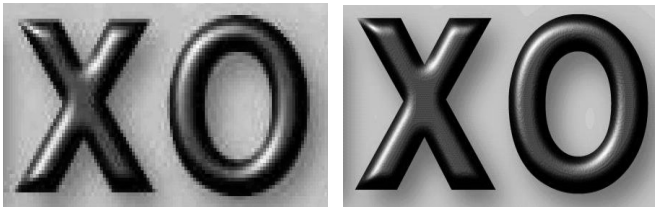


Fig.4.Comparison of Raster Graphics and SVG

E. Prototype

The web based draw project has wide application domain in industrial design. Here we are illustrating Car designing using following screenshots.

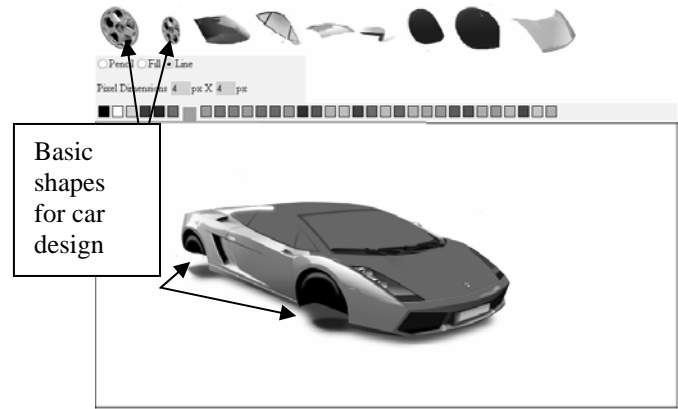


Fig. 4. Prototype showing car designing, the readymade shapes are dragged to the drawing panel to build the car model.

The topmost pane in the prototype shows the inbuilt shapes of car provided for car designing.



Fig. 5. Prototype showing completed car design. Amazing artwork can be made in less time.

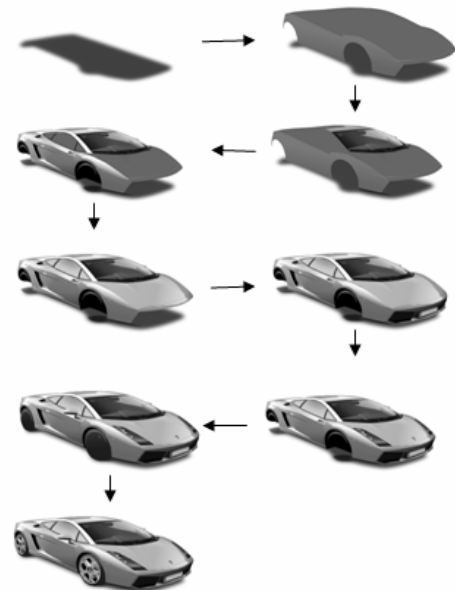


Fig.6.This is the Workflow of car design using our prototype. All steps are shown in detail.

III. ACKNOWLEDGMENT

We gratefully acknowledge the guidance of professor Deven Shah of Information Technology department.

IV. CONCLUSION

The Rich internet application allows the user to work within the browser. RIA is bringing the trend of replacing the desktop software with their browser based version.

V. REFERENCES

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VI. BIOGRAPHIES



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