

Case Study:**ESSPL e-Learning: Taking User-Interactivity to the Next Level****Overview:**

One of the world's leading Logistics major wanted to develop a cost effective e-learning solution to train its Electronic Data Exchange (EDI) team spread over more than 100 countries. ESSPL offered the client an e-learning solution that was cost effective, user friendly and was able to keep the learner's attention till the end of the course. Using super rich user interface of Flash®, ESSPL developed some innovative concepts such as **GuidedTask®**, **TrueSim®** and **VirtualGuide®** to make the learning more interactive as well as the training interface that keep track of the User's training status, printing of certificate, book marking and switch between textual content to the audio-visual simulation and tasks related to it.

The Client

The client is one of the world's leading Logistics major.

What the Client Needed:

The client was looking for a new e-learning solution to train its employees across the globe. Previously the training was mostly done via classroom training sessions. In this method the instructors or trainees have to travel to the training locations. Apart from cost of such training sessions, a good amount of planning was needed to cover all the intended audience which caused disruption to their normal work schedule. This also delayed the training for people as minimum numbers of trainees were needed for any classroom course.

The primary objective of making the e-learning tool was to have a better alternative to the current system of class room training and to provide its employees with a cost effective training in a more efficient manner. The client wanted this e-learning solution to replace its instructor-led training program. So the client requested it to be as interactive as possible for the users, so that the training will be interesting and attention grabber for the users. Moreover, the client wanted to make sure that the training tool can be run from a server as well as a standalone application, so that even a learner on the move can also take his/her learning at his / her own pace.

The Challenge and the Solution:

The client wanted the e-learning tool in such a way that it can run and function well, both in standalone mode on the user's desktop and over the intranet where the EDI team could access the course online. More over, the client wanted the solution to have both textual (Manual Mode) and its related demonstration in interactive section (Auto Mode). The client also wanted the user to be able to switch between the textual content to its demonstration part and vice versa, at any point of time. The client also wanted the training content to be more interactive than any commonly available e-learning course that supports only some fill in the blanks, multiple choice and drag and drop kind of interactivity. For this, ESSPL conceptualized TrueSim®, where the user witnesses a real life scenario (more like a case presentation), followed by the demonstration of the solution, and ended after a GuidedTask of a similar situation.

TrueSim® v.1.0

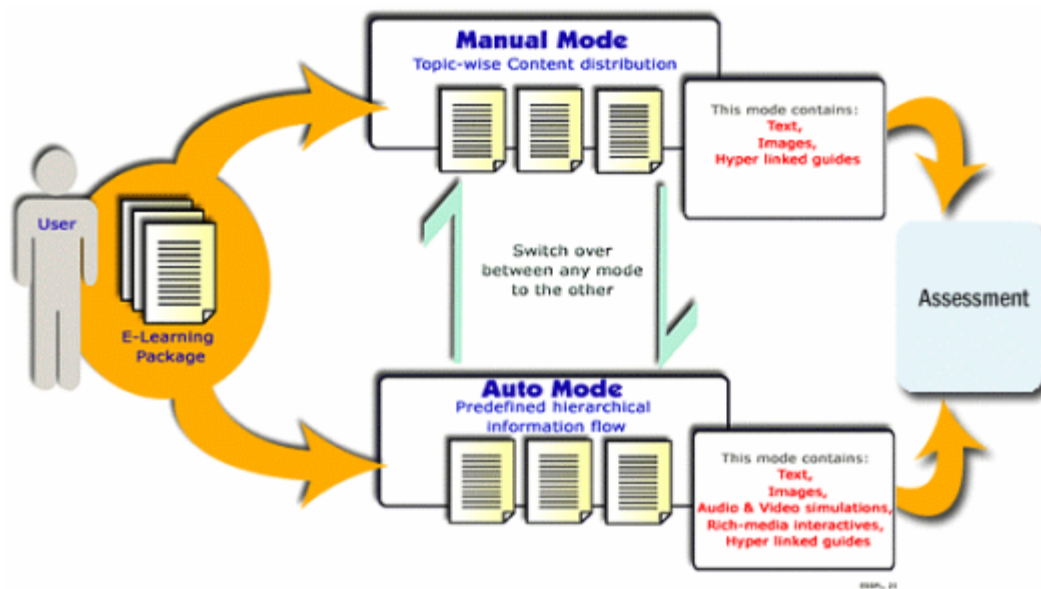


This whole concept used animation with audio and stunning vector images/ info-graphs along with mouse and key board induced interactivity. The client wanted the e-learning tool to be self sufficient in such a way that no more class room session would be needed to assist the learners. To compensate the absence of the instructor, the Virtual Guide – an interactive character was introduced to assist the learner and guide him through the task. Flash helped a lot in creating VirtualGuide and made it possible to make it responsive to User's mouse clicks and moves. At the end the certificate of score of the learner was to be printed. From creating a beautiful Glossy interface to create interactive quizzes, assessment and Guided Task, Flash provided an easy, but robust and stable option for ESSPL.

This project was one of the challenging ones, as it required high level of user-interactivity with the course, at the same time it required sophisticated usage of audio, animation and that too in a short period, so as to cut short the cost of production of the tool. Looking at The scope in usage of multimedia blended with interactivity, we, at ESSPL, opted to use Flash for this purpose. Flash helped the development team, to dream and innovate, so as to cater to the client's requirement to provide them with one of the best available elearning tool.

The developers created a very beautiful glossy looking state-of-the art user interface using Flash® and Action Script. The complete tool, including the buttons, menus, navigation bars and all were hand drawn in Flash environment. Even in vector the VirtualGuides looked more eye catching. These Virtual Guides --George and Rosie Robo tutors, and characters like Bob, Tina and Tracy – have become iconic symbols of the new-age training among the EDI team of the client! Using different layers of vector shapes, it became easy for us to create Virtual Characters who turn their heads, eyelids as per mouse movements, which made them appear more closer to life! One of the learner of the tool has even written in her feedback -- *"As for thoughts, I found this to be a great learning tool! Particularly with detailed technical training this automated version was particularly attention-grabbing especially with the intervals divided by Robo-George zooming across the screen. Very entertaining!"* This statement shows how Flash vector imaging feature helped to create a friendly row of Virtual Trainers who could be able to keep the interest of the learners till the last moment.

One of the challenge of the project was to create the user friendly navigation, using which the user can switch from Manual Mode (the part of the e-learning tool containing Textual data) to the Auto Mode (Demonstration mode containing animation, audio, interactive Guided Task) and vice versa at any point of time.



Using Shared Object technology of Flash developers created the save bookmark feature in the e-learning tool, so that the user whether he is in any particular page of the text mode or he is in any particular point of the simulation of the system in the Auto Mode can come back to the point if he wishes to, in the subsequent logins. But implementation of such a bookmark posed a challenge as using screen capturing of the system interface (i.e. WTT) for creation of simulation would mean, that proper bookmarking the exact point of a video file would not be possible. In this case, the problem was that if a user bookmarks in the middle of simulation, the movie will not start from the same point when the user returns to the bookmarked position – in fact there was no easy way through which we could have achieved it. But this challenge was cleverly dealt with, using image sequence of the system screen which was brought into Flash development environment to create a more controlled simulation. This resulted in more flexibility in creating a more reliable bookmark feature in such a training tool, where there are diverse types of training contents, from text page to simulated movie – and whatever the content type may be the bookmark feature performed alike, and let the user reach the exact point they wish to move.

One of the most lovable and appreciated features of the tool by the client was its creative use of Flash to build interactivity through Guided Task®. In GuidedTask®, the user is assigned a task, based on the previous simulation, which they need to complete by interacting with the interface created in Flash. The user is provided with a simulated interface of the actual system on which the training is based. This is something similar to aircraft simulators used for pilots where the pilot feels they are flying a real plane whereas they are actually flying in a simulator. The drop downs, combo boxes, radio buttons, checkboxes in it were created as different movie clips, and integrated together using simple Action Script commands to behave as an integrated interface, where the user has to fill in / select the required data. While entering the data if the user commits a mistake, the Robo-Tutors (the Virtual Guide®s) would provide them with necessary assistance/ hints to help them in completing the task.

Technologies Used:

Client Side	Flash 8, Action Script, HTML, ASP, JavaScript, CSS, XML
Platform/ OS	IIS, Windows 2000

Value addition to the Client

For client, this e-learning tool became a strategic enabler of change — an indispensable tool that contributed new initiatives to train the WTT users in an innovative manner, reskilled the EDI workforce and prepared them to address real life issues. This e-learning tool helped client to provide meaningful learning opportunities for its employees.

Previously, through instructor led training sessions, a considerable amount of employee's time was wasted in planning for training, and traveling. Now the scenario has changed after the implementation of this e-learning tool, as learning anywhere, anytime was possible, with the help of un-compromised user interactivity.

Value addition to ESSPL

This project was one of the major Flash based e-Learning development projects undertaken by ESSPL. Looking at the growing usage of Flash in software development field for web, it is worth a point to note that through this project, ESSPL added a lot to its knowledge base in interactive design and development multiple browser platforms (from Desktop to PDA and Mobile applications).

ESSPL created scroll bar for the tool and this led to development of *Macromedia Approved* Flash components "*MC Navigation Control V4*" and *swf Sequencer*. This helped to project the image of ESSPL as a major Flash® based interactive producer in the region. The tool is currently available at *Macromedia Exchange at the following link*:

http://www.adobe.com/cfusion/exchange/index.cfm?view=sn111&extID=1031892#loc=en_us&view=sn111&extID=1031892&viewName=Flash%20Extension&avm=1

Feedback:

The response of the client was overwhelming.

"You have come very far and deliver a very impressive product to us"

"... We are very impressed with the elearning tool for Web Tracking especially on time and with quality. We appreciate your great work and patience."

The response of the e-learning tool users was also inspiring:

"... Personally I feel the training is excellent – I even recommend this internally as a provider of e-learning. It is entertaining, concise and at the right level for everyone. ..."

"...I have completed the CBT and printed a copy of the certificate ..."

As for thoughts, I found this to be a great learning tool! Particularly with detailed technical training this automated version was particularly attention-grabbing especially with the intervals divided by *Robo George* zooming across the screen. Very entertaining! If all of our e-learning was set up the same way I would be lining up all my certificates”

Contact:

Shailendra Upadhyay, Managing Consultant

Enterprise System Solutions Pvt. Ltd.
Infocity, Bhubaneswar, Orissa , India – 751024
sales@esspl.com

Move Forward:

ESSPL offers a wide range of e-learning and interactive solutions, from animation, interface design, multimedia assessment need analysis, customized courseware design, simulations, interactive kiosks, online design solutions, Flash based mobile content designing and development, to suit the wide range of client needs ranging from elearning, m-learning to sales promotional campaign and presentation needs. For more details on ESSPL's offerings in e-Learning and interactive design, refer to ESSPL website at www.esspl.com

About ESSPL:

We at ESSPL offer a collaborative approach to software solutions, which helps its customers in building the solution that really fits their need. In every engagement, we bring in the years of our expertise to make sure that it is completed within the business guidelines. The success of ESSPL is measured by high degree of customer satisfaction and is well reflected in extremely high number of referrals from all its existing customers.

One of the key aspects of building right solution is selecting the right technical platform. We let "Technology Selection" driven by your business needs, rather than anything else. And this is what our solution delivery team keeps as highest priority while working for you in every steps of solution building.

To know more about the company and the solution it provides, please feel free to visit www.esspl.com

Disclaimer:

® Flash is the registered trademark of Macromedia (Now Adobe)

All content/ information presented here is the exclusive property of Enterprise system solutions Pvt. Ltd. (ESSPL). The content/ information contained here is correct at the time of its publishing. No material from here may be copied, modified, reproduced, republished, uploaded, transmitted, posted or distributed in any form without prior written permission from ESSPL.

© 2005-06 Enterprise System Solutions Pvt. Ltd. For more information visit www.esspl.com

Enterprise System Solutions (P) Limited, Infocity, Bhubaneswar, India 751024.

Phone: +91 - 674 - 6606000, Fax: +91 - 674 - 6606050, E-mail: ess@esspl.com,

URL: www.esspl.com.