Infineon E-Learning Case Study

In May 2010, Infineon Technologies (M) Sdn Bhd, Melaka had decided to implement E-Learning for their more than 4000 workforce across the plant. This E-Learning was targeted to cover 10 General Topics and 19 Basic Machine Operation Topics. Appstronic was selected and awarded the contract to be the sole E-Learning's Learning Object developer.

This E-Learning project was officially kicked off in Aug 2010. This article is to give an overview of the projects development stages on how to successfully develop and deploy the E-Learning program for Infineon.

Why E-Learning

Organizations, especially semiconductor industry, are now facing the challenges to meet the training needs to train the staffs in a standardised process and consistent in the delivery of the learning content, but in fast changing technology environment. As a result, training has to be more sophisticated, flexible, or easily accessible. Organization has looked into E-Learning as an effective way to address these requirements.

Note: Traditional Learning required good and all-the-time good trainers. Required costly setup for classroom and facilities.

Note: E-Learning deliver standardised and consistent learning contents to big pool of workforce. Build Once and use all the time.

E-Learning Development Stages

In general, E-Learning Development stages covers gather information, prepare storyboard, obtain endorsement of storyboard, development and production, which including professional photo-taking, video-shooting, voice-over, animation, video editing and effect, management review and finally delivery i.e. Upload Learning objective to learning management system LMS.
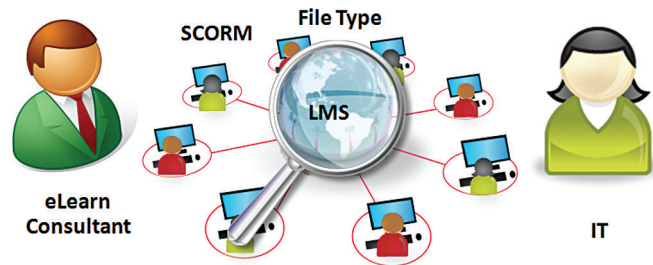

Project Schedule

The key factor for managing E-Learning project is to have a well planned Project Management Schedule. Start with a Project Management tool such as Microsoft Project to create tasks that clearly identify Client's Topic Leader as well as subject matter experts, task description, start and finish dates. Once you have determined all the tasks, deadline, responsible party, you should send the project management schedule to the topic leader to buy off the plan.

LMS and Bandwidth Limitation

Discuss the technical specification with the Client's IT personnel, to determine the Learning Management System used by the client, and discuss the constraints of the project such as bandwidth limitation, format allowed to use eg. SCORM, FLV, SWF, etc.

Stage 1: Content Gathering

The next step is to begin the Content Gathering. In this stage, you need to gather the existing content, analyze the content provided, determine content gap and additional content to be developed. If the E-Learning is a machine operation training, you need to Interview the experienced machine operator, write down the instructional procedures steps, take photo during the interview being carried out, verify the steps with client's production and Quality engineers.

Note: For machine operation, interview experienced operators and engineers are required.

Creating Artwork

"A Picture Worth a Thousand Words". You need artwork designer to illustrate the content with artwork. The popular tool for illustration is Adobe Illustrator. These artwork shall be layered for the convenience of animation at the later stage. These artworks will be put into storyboard for approval and buy off by the client.

Note: Artwork Designers draw artworks using Adobe Illustrator.

Stage 2: Prepare Storyboard and/or Video Storyboard

With the gathered content and additional content from various sources, you have to lay down the content into layout or design template which is commonly called storyboards. For E-Learning in video format, you need to have video storyboard. In this storyboard, it define the look and feel, voice over text for each scene of animation and video. There are many ways you can store storyboards, PowerPoint, Word etc. These storyboards and video storyboards will be handed over to topic leader for endorsement.

Note: Storyboards in PowerPoint format, lay down the content into layout and design template. Video storyboards in Word format describes the scenes of video.

Storyboard

Video Storyboard

Stage 3: Storyboards Endorsement

Do not begin any work until you have obtained the endorsement from the topic leaders. This will help you to deliver the project on time and avoid any misunderstanding with your client.

Stage 4: Photo Shooting

Based on the approved storyboard, you can arrange professional photographer to take photos of the learning objects, such as tools, material, end products, dress code etc.

Note: Small studio for taking photos at client place.

Stage 5: Video Shooting

For E-Learning in video, based on the endorsed video storyboard, you can engage professional video cameraman to video shoot the demonstration of machine operation, role play etc. For the machine operation video, you need an experienced machine operator to be the the model.

Chromakey

To make the E-Learning more interesting and fun, you can have chromakey with video effect inside the content. Chromakey is an editing technique in which two images are composited together to create a single, finished image. This editing technique is sometimes referred to as Green Screen.

Stage 6: Voice Over

Pass the scripts to the voice over talent to record the narration.

Stage 7: Animation

The next stage is the heaviest task to do. With the endorsed storyboard, created artworks, recorded voice over, photos, you are ready to create animation in SWF format, using Adobe Flash. For flexibility to upload the content to any LMS, we have designed the training content in SCORM zip file.

Note: Animator creates simulation and animates the learning content using Adobe Flash, followed by uploading the learning content in SCORM zip to LMS.

SCORM Standard

Assessment

Training always ends with assessments. We use Adobe Captivate to create a SCORM compatible assessment.

Note: Animator creates interactive assessment using Adobe Captivate, followed by uploading the assessment in SCORM zip to LMS.

SCORM Standard

Stage 8: Video Editing / Effect

Your video editor team need to edit the captured scene clips and put them into a final video with effects, captions, and voice over etc.

Note: Video Editor uses Adobe After Effects to create video effects and flashing captions to attract the audience.

Stage 9: Management Review

Finally, the E-Learning content is ready for both Topic Leader and Management to review.

Stage 10: Upload Learning Objective to LMS

In the final stage, you can upload the SCORM zip file into learning management system. Users can attend and learn the E-Learning training via LMS. Results, progress, and certification can be managed and processed via LMS.

Infineon has good IT infrastructure for the E-Learning and has successfully trained thousand workforce using E-Learning.