Learning Solutions Methods, Operation and Procedures (MOP)

Workflow/Style Guide

1 Work Flow

This section will describe the workflow of new course creation. A general workflow diagram is available at lucid chart.
https://www.lucidchart.com/invitations/accept/1ea7f4b0-2a6c-4896-86af-9ecd59bf9767

1.1 Analysis Phase

Note I have documented these phases for completeness' sake, however at Casa we never actually engage in most of these phases. If you are a developer skip to section 1.6

Once a training needs analysis is complete, and training needs are identified from that analysis, the Learning Solutions Manager (LSM) should meet with product management to discuss the analysis and identify resources. Note, the needs analysis is only required if this is an internal training program.

Are external resources required? If not the LSM will assign the instructor developer to the project, and the developer will enter the workflow described below. If external resources are required, then Product management will identify the subject matter experts for the project. If Product Management does not assign/identify human or equipment resources, then does the project stop? If yes, then note this in the needs assessment (if required) and stop. If no, then it can be decided to continue the project (online material only) without proper resourcing and rely on company technical publications as resource material. At this stage, a schedule of availability for the human resources(s) is determined. The LSM will add this schedule to the scope document.

In addition to the human resources the LSM will determine the equipment required for the training, i.e., customer demonstration or hands-on labs. If new equipment is required, then the LSM will create a BOM as part of the scope document.

If all the necessary resources are approved, then the LSM will create a scope document to include the schedule of human resources and the equipment BOM, as well as the objectives of the course as described by Product Management.

The LSM will post the scope document on the Learning solutions SharePoint and review the scope document with the assigned developer.

After the developer reviews the scope document, they will meet with the LSM for additions and deletions or to express concerns, e.g., a timeline is too short. Make any revisions to the scope document before development begins.

1.2 Design Phase

This section will describe the initial design phase.

1.2.1 Gather Resources

Gather the following resources and if available and post all reference material to Fuji in the proper course folder.

1. Scope document and or needs analysis
2. Email the SE global list & product management to see if any presentations, PowerPoints word docs, etc., exist
3. Get access to engineering wikis if appropriate
4. Gather tech pubs, Features Guides, Release Notes, User guides, etc.
5. If the course is technology only, gather the pertinent standards: DOCSIS specs, RFCs, IEEE docs, etc.
6. Check salesforce for any opportunities on the product. Reach out to the account owners for any customer reqs design document PowerPoints etc. Note if you don’t have a salesforce login send a request to the Salesforce admin to run a report for you.

1.3 Development phase

Using the objectives from the scope document, copy the course objectives into section one and create a references section at the end of the document.

Using the reference material or suggestions from scope document, begin creating an outline by defining the chapter headings and creating objectives for each chapter. Review the outline with SMEs/PM/LSM. Once approved, begin to create the content for Chapter 2 etc.

1.4 Implementation Phase

1. Email Product management SEs Managers and Support Manager to see if there are available resources to beta test the course material. If so, then add these reviewers to the teams group. Confirm a reasonable timeframe with the reviewers. If reviewed internally, then incorporate any feedback/corrections, then make the course generally available to customers. Changes made should be recorded to a text file on Fuji in the main folder of the course. *Note this step can be skipped in ongoing formative evaluations were taking place*.

2. If there are no reviewers available, then make the course generally available to customers.

1.5 Evaluation Phase

Customer training can only be evaluated training at Level 1 and Level 2 (Kirkpatrick, D.D.L. (1998). Evaluating Training Programs: The Four Levels (2nd edition). San Francisco:Berrett-Koehler.) Reference the table below for evaluation tools.

Level	When to measure	What to measure	How to measure
1	End of the program	Reactions • Pace and sequence • Relevance (content) • Instrument strategies • Interaction	Feedback form on LMS

		• Facilitator's style • Level of discussion • Objectives met • Environment • Knowledge of facilitator • Participant interaction • Registration process	
2	Before program (internal only)	Learning and extent of learning	Pre-test on LMS
2	During the program	Learning and extent of learning	Embedded quizzes
2	After the program	Learning and extent of learning	Post-test on LMS

Course certificates will become available for download once the user has completed all quizzes and the feedback form.

1.6 Course Content Workflow

1. Reach out to Product Manager and ask for any source material and or Lead Eng, SMEs. Reach out to the account owners for any customer reqs design document PowerPoints etc.

Example source material should include any or all the below:

Access to engineering wikis

- Tech pubs, Features Guides, Release Notes, User guides, etc.
- If the course is technology only, gather the pertinent standards: DOCSIS specs, RFCs, IEEE docs, IETF, ITU, IEEE Cable Labs SCTE etc.
- Casa Web site, product spec sheets, white papers etc.

These and any other sources should be included in the bibliography. Do not use information from any source or document that is not open source and or public domain. If you are unsure, try to contact the author if possible and receive permission to use if not do not use it.

1.6.1 Folder and File Management

1. Create a folder on your local drive in the following structure called course#_product

   participant_user_guide (holds final word document & final PDF) outline

   pptx_mp4 folder it contains a folder for each section in the outline e.g. 2.1.3.pptx 2.1.3.w_audio and 2.1.3.mp4

   quizzes it contains text file questions and answers for copying into LMS e.g. 2.1.3_recall.txt and or 2.1.3_apply

   audio folder it contains the audio files 2.1.3.mp3 and the pg text for the section e.g. 2.1.3.docx

   source_material this folder will contain all the source material as documented in the bibliography

   graphics this folder will contain any screenshots, pics of products or created graphics

camproj/tscproj- IOS and Windows respectively this folder is optional. There may times when Camtasia recordings are necessary depending on the content

admin – in here put outlines, syllabi, project plans, etc.

virtual_labs – this folder has two subfolders, **lms** (published Captivates to be uploaded to the LMS) and **cptx** (individual .cptx files with heading numbers from the Participant Guide).

2. Move all the resources into source material folder.
3. Create a template participant guide with the title bibliography and TOC. Fill in the bibliography to include all the source material gathered so far. If additional course material is added as you develop the course be sure to put it in the

bibliography.

To Create Bibliography

1. Go to the end of the participant guide content and create a blank page titled Bibliography. (heading 2)
2. Create a table with these headings for all sources and fill in.

Author	Year	Name of Source	Publisher City	Publisher

Fill in this Bibliography with the current sources you have gathered if additional source material is used as the course is developed keep the bibliography updated.

4. Backup Content

Keep a local copy of all the above. At the end of the day, upload the files that you've worked on that day to OneDrive so that we have two copies at any given time.

5. Create the outline from Tech Pubs or other sources as to what we think the main headings will be. We will use the navigation pane in the PG as the outline. This outline should include heading ones and twos with a brief description of the topics.
6. Create TOC remember to periodically update TOC
7. Create the objectives based on the outline. The objectives may change as you learn the material.

All objectives should be mapped to an evaluation task at level 1: feedback form. Level 2; knowledge checks created in PowerPoint and mapped if appropriate to the LMS. Objectives should be based on SMART:

- Specific
- Measurable
- Achievable
- Realistic/Relevant
- Time-bound

Once approved move to detailed course creation workflow.

1.1 Detailed course creation workflow

1.7 Participant Guide

Use the default styles for the word doc on casafs /Training/development_material/word_front_back_page.docx

1.7.1 PG Style Guide

The general guidelines for style for participant guide are:

- No hanging headers. Headings should always have text underneath them.
- Heading two should try to incorporate the nouns OAM operation administration and management into the header for example, geo redundancy operations
- If there is already a document that contains procedures for example how to upgrade the software rather than cutting and pasting the material simple reference the guide and make a note that the technical guides are available to customers.
- Do not allow text to flow over into next page insert a page break when this happens

1.1.1.1.Face-to-Face Workflow

1. Create PG content for X section. This includes text in the Participant Guide, lab steps if applicable and quizzes (Can You Recall only). STOP submit to edit.
2. Update TOC
3. Create PowerPoint slides for X section STOP (see style guide for PowerPoint) STOP Submit to edit. Maintain a single PPT deck for each participant guide.
4. After edits from step 3 add PowerPoints as graphics to participant guide.
5. If Can You Apply is applicable for X section, create Can You Apply labs in Captivate. Copy individual .cptx from Can You Apply into Course <name> admin>Virtual Labs>cptx folder. Include heading numbers in the name of the .cptx. STOP Submit to edit.
6. Upon final edit, publish file and place published folder into Course <name> Virtual Labs>LMS. Include heading numbers in the name of the folder.

1.1.1.2. Online Workflow

1. Record the PPT presentation in Camtasia. Generate the audio to the presentation in Camtasia as you move through the presentation.
2. Review for minor edits to timing, extend silence etc. using Camtasia for edits if edits are required. Export as MP4 from Camtasia as review product.
3. Upload video to Vimeo in the review folder for editor review and add test page at the end of the video (see instructions below) STOP submit to edit

1.8 PowerPoint

Use the template in Training/development_material/ppt_template/presetation_template.pptx

1.8.1 PowerPoint style guide

- Only corporate colors should be used. Different shades may be used to add variety to the slides.
- When diagraming use libre office draw icons.
- Create quizzes in the slide deck into appropriate section from the quizzes folder.

1.8.2 Creating Audio and adding to slides

1. Using the sound booth in the training room using an audio editor, generate individual audio files for each slide in the section. Save these as .WAV files to the correct folder in the course folder on your local machine.
2. Edit these files, if necessary, using Audacity.
3. Add audio to the slides for timing and animations for X section.
   a) Select the portion of the audio file that corresponds to the beginning of the slide up to the first animation. Export the selection as a separate .WAV by clicking File>Export>Export Selected Audio. Name the file “slide#a”.
   b) Select the portion of the audio file that corresponds to the first animation. Export the selection as a separate WAV file. Name the file “slide#b.”
   c) Continue until you have a separate audio file for each animation on the slide.
   d) In PPT, add your audio to the slide by clicking Insert > Audio > From my PC. Navigate to your audio files and choose slide#a. Click Open. Repeat the insert process for each audio file for the slide.
   e) Inserting the audio places a speaker icon in the center of the slide. Grab each icon and move it below the slide.
   f) In the Animation pane, move “slide#a” to the top of the animation tree. If this is the first slide in your presentation, leave its setting as “On mouse click.” If this is a subsequent slide in your presentation, set it to “With previous.”
   g) Position your other audio files directly below their respective animations. Set them to begin “With previous.”
   h) View your Slide Show from your current slide to check your work. Make any necessary corrections.

1.8.3 Editing Audio with Audacity

Audacity provides several tools for manipulating recorded audio.

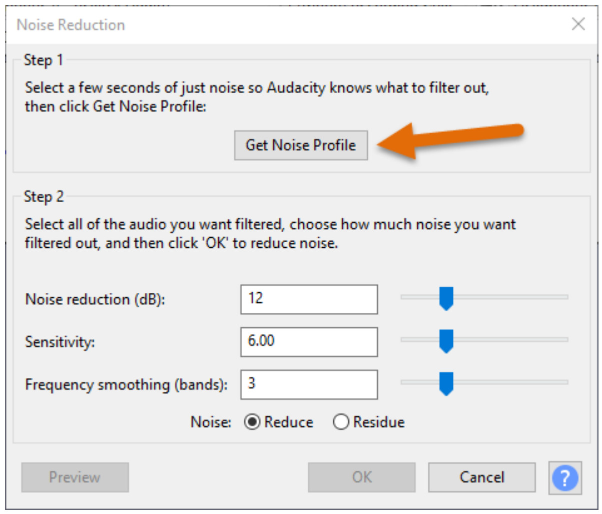
1.1.1.3.Reducing Noise

Start your recording with at least 20 seconds of silence

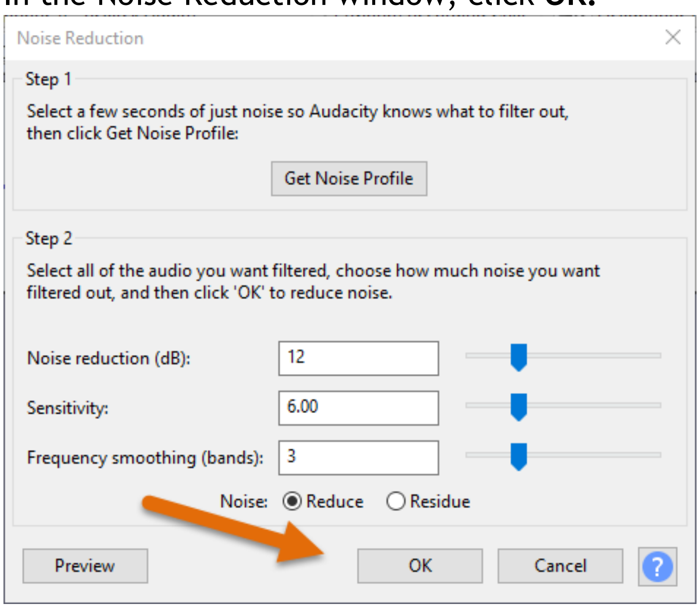
Audacity can remove any constant noise from your audio, such as the background hum of the server room. To use Noise Reduction:

1. Select the silence at beginning of the audio

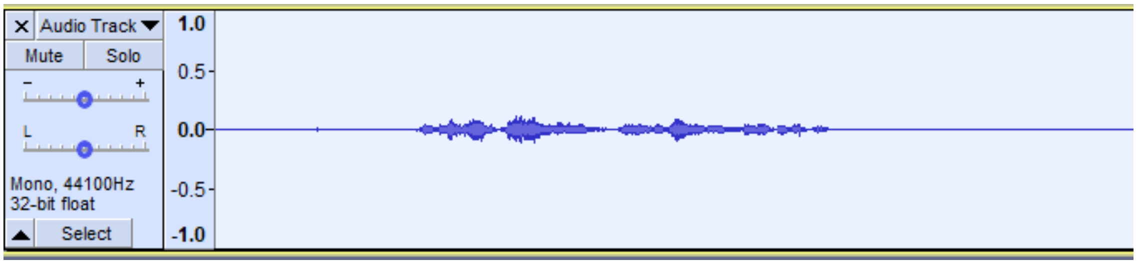
2. In the menu, click **Effect > Noise Reduction.**
3. In the Noise Reduction window, click **Get Noise Profile**.



4. Select your entire audio file.
5. In the menu, click **Effect > Noise Reduction.**
6. In the Noise Reduction window, click **OK.**



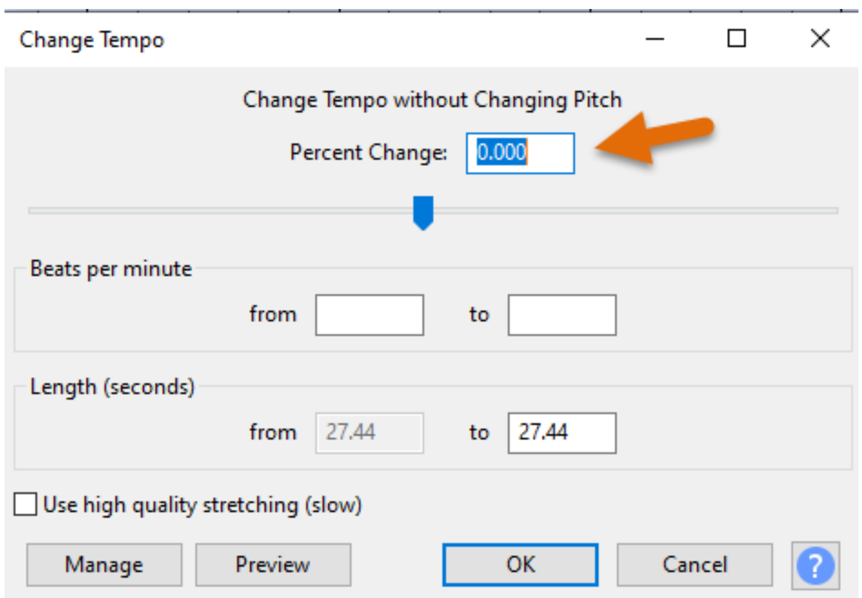
7. Audacity removes the noise pattern from the entire file.



1.1.1.4.Change Tempo (optional)

Change Tempo allows you to speed up or slow down your audio without changing its pitch. To use Change Tempo:

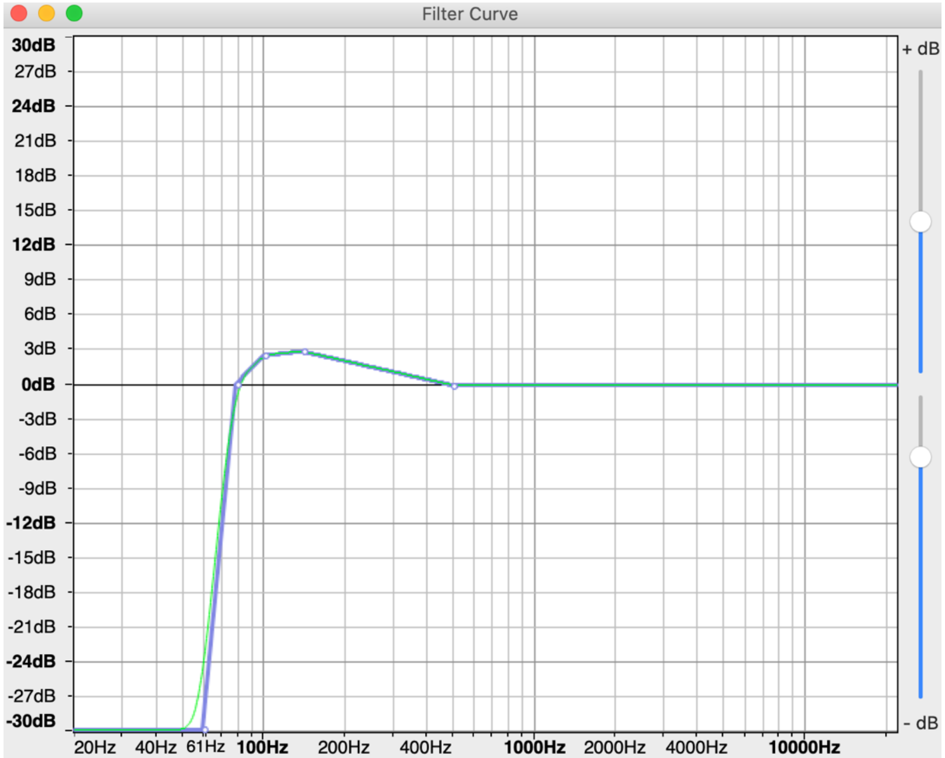
1. Select the audio you wish to alter.
2. Click **Effect** in the menu and select **Change Tempo**.
3. Set the **Percent Change** you wish to make and click **OK**.



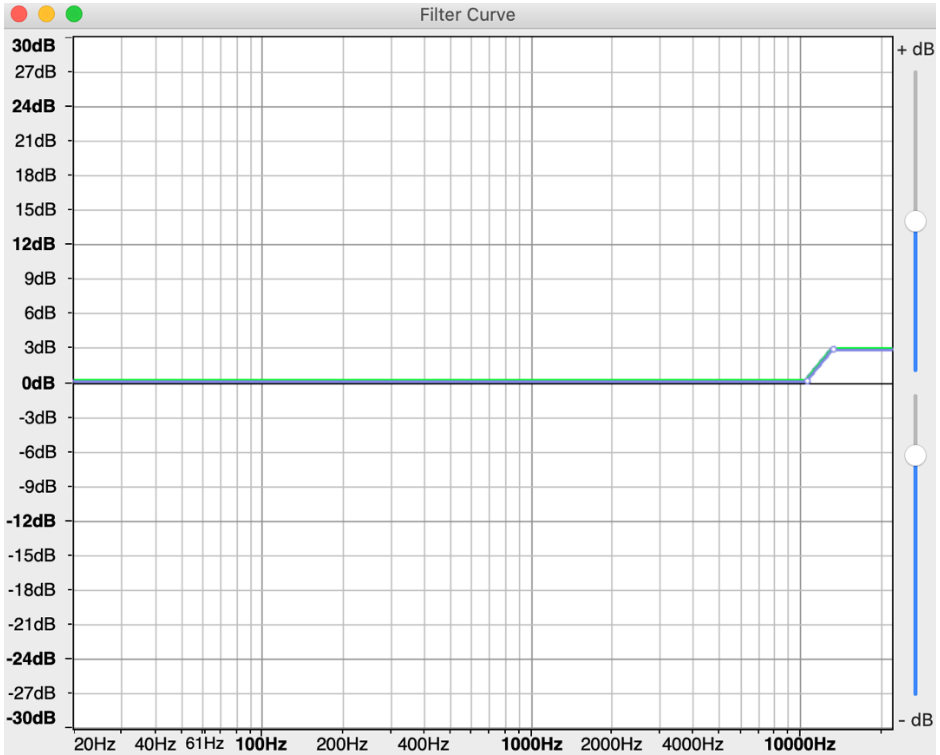
Equalize audio

1. Select entire audio
2. Select filter curve effect
3. Click manage
4. User presets. Note a user preset for both bass and treble boost should be created if not create user preset using the graphics below:

Bass Boost


Filter Curve
30dB
27dB
24dB
21dB
18dB
15dB
12dB
9dB
6dB
3dB
0dB
-3dB
-6dB
-9dB
-12dB
-15dB
-18dB
-21dB
-24dB
-27dB
-30dB
20Hz
40Hz
61Hz
100Hz
200Hz
400Hz
1000Hz
2000Hz
4000Hz
10000Hz
+ dB
- dB

Treble Boost



5. Apply bass boost preset click OK
6. Apply treble boost preset click OK
7. Click effect and normalize. Note normalize should be used if the waveform exceeds db scale at any point
8. Normalize should be set to -2 dB
9. Click OK
10. Click Effect bass and treble
11. Set Bass to +10 and treble to -10

1.9 Uploading to Vimeo

All finished videos should be uploaded to Vimeo in the review folder the editor will review the video and make corrections/suggestions directly on the Vimeo videos and send the link to share the edits to the developer.

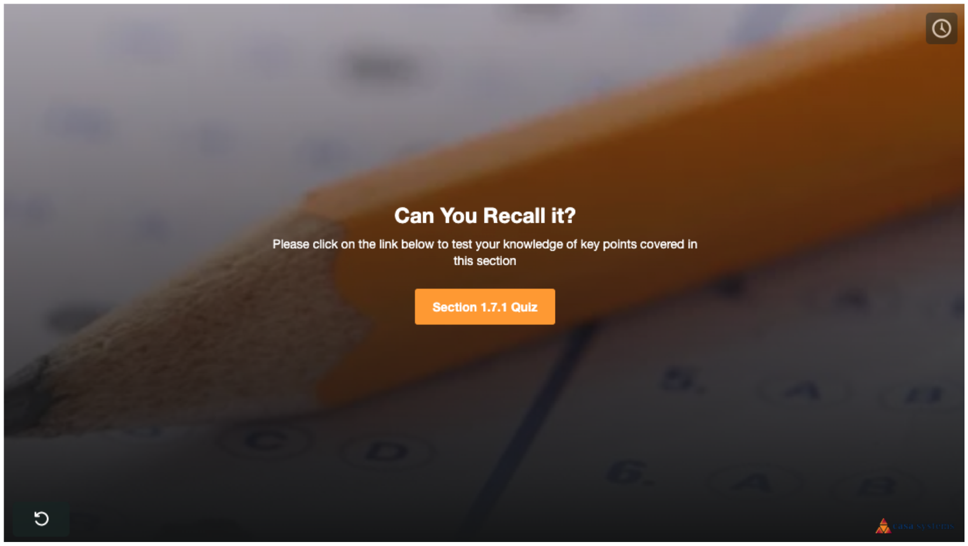
1.9.1 How to create Quiz slide at end of finished MP4

1. Select Video
2. Select Interaction Tools
3. Select After Video
4. In the After-Video Dialog Box select pencil
5. Change the End Screen from Text Call to Action
6. In the Title box type Can you Recall it?
7. In the Description box type

Please click on the link below to test your knowledge of key points covered in this section.

8. In the button box enter https://train.casa-systems.com/ as a placeholder if necessary or the link from the LMS to the actual quiz.
9. In the next box enter Section x.x.x Quiz
10. Click Radio button next to Background Image
11. Navigate to pencil.jpg
12. Click add
13. Click Save
14. Move the Video into the course folder on Vimeo and delete any videos in the review folder.

It should look like this:



Once the final version of the of the course is course is posted casafs1:

1. Add the videos to the LMS course
2. Add the quizzes to the LMS
3. Add the link in the student guide
4. Copy the final version of the PG to the course folder
5. Create a pdf copy
6. Copy the pptx and pdf copy to SharePoint in the correct folder

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