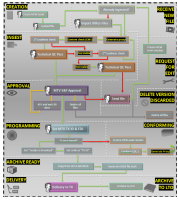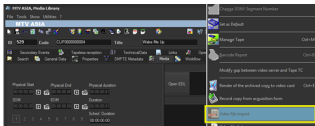# VIACOM SINGAPORE - A Step-by-Step Guide to the Management of Music Clips

VIACOM Inc., short for "Video & Audio Communications", is an American global mass media company, the world's fourth-largest. The current company owns Viacom International, which is the formal owner of copyrights of Viacom's corporate website and its cable networks.

Music Clip Workflow

Media Library

Comprising BET Networks, MTV Networks, and Paramount Pictures, VIACOM operates approximately 170 networks reaching more than 600 million subscribers in 160 countries. VIACOM has a strong focus on its own in-house productions which is made for its various networks including Comedy Central, Logo, BET, Spike, TV Land, Nick at Nite, Nickelodeon, TeenNick, Nicktoons., Nick Jr., MTV, VH1, MTV2, Tr3s, CMT, Palladia.

ETERE provides VIACOM with an Etere MERP solution able to manage the entire media activity of the company -from initial acquisition to the final delivery- under a centralized and integrated workflow. A set of tailored workflows will permit operators to track every single step of the media management process while giving them the tools and functions required to reach the maximum of efficiency and reliability.

A centralized and comprehensive digital archiving system based on ETERE will be used to convert and manage VIACOM's digital content and distribute to its Asian networks. The use of MERP workflow-based technology will permit VIACOM to significantly improve its media management by introducing on it the use of a series of enterprise capabilities including:

MERP capabilities
- Intelligent and tailored workflows which faithfully reflects company activities
- Clear abstraction of tasks with custom actions, results, roles and rights
- Detailed logging and monitoring of all manual and automatic tasks
- Scalability for including more custom workflows and tasks at any time

This paper is aimed to provide VIACOM departments with the guidelines required to start using the new media management workflow and all the features seamlessly integrated on it, thus permitting them to leverage the improvements performed on the overall management by including key operations such as task assignments, operations tracking, email notifications, automatic transfers, accurate conversions.

The content management, from acquisition to delivery, stands on a set of file-based workflows accurately designed to perform automatic operations and take operators through their assigned tasks. VIACOM Singapore is in charge of acquiring and localizing media content for all VIACOM channels in the Asian market, the media management takes place in the VIACOM's Singapore office whereas media playout is externally performed by ENCOMPASS which also archive videotapes and pre-archive transmission files.

The system will manage content stored in the archived with the following characteristics:
The VIACOM system comprehends different sections with very similar requirements; special needs of each channel will be analyzed to fully meet their requirements. The workflow management approach allows processing assets according to their related department.

Following chapters will describe the workflows that will allow departments to manage their related content, from acquisition to delivery, through approval, editing

and production:

Music Clip Creation
■ 1.1. The NetOps user launches the Etere MAM application clicking on the shortcut available in the Start menu, under All programs > Etere > Etere MAM.
■ 1.2. The NetOps user selects the station on which to start working: MTV ASIA
■ 1.3. The NetOps user makes double-click on the Media Library module
■ 1.4. The Media Library will be opened focusing on the Search tab, where the user can search for existing assets (using multiple filters) or creating a new one
■ 1.5. A new asset can be created either clicking on the new asset button positioned in the top left or going to the File menu and clicking on the "New" function:
A pop-up window will prompt the user to select the type of material (CLIP), and the title of asset (code is automatically generated):
■ 1.6. A new asset is created featuring all entered information
■ 1.7. Users can manually insert more asset metadata including stations, title, Tx ID (if available), etc.:
■ 1.8. In order to upload a file for the asset the user needs to move to the Media tab, right-click on "Media list" area and select the "Video file import" function
■ 1.9. A selection window will be opened to allow the user selecting the file to be uploaded, once selected, press the [Ok] button
■ 1.10. A form showing possible destinations is prompted to allow the user to select the one on which to upload the file, in this case, the IN metadevice
■ 1.11. After then, another form is displayed to allow selecting the codec to be assigned to the uploaded video file, in this case, select the UNK codec:
■ 1.12. The upload will start and the file will be copied to the selected destination, after which, the Receive new file workflow will be automatically started.

2.RECEIVE NEW FILE
The "Receive new file" workflow allows NetOps users to accomplish the following tasks:
■ Make media suitable (e.g. after a file import)
■ Acquire new media (e.g. after a request for edit)
This workflow includes a series of automatic actions (e.g. normalization) and operator tasks (e.g. technical QC) sequentially ordered as following described:

2.1. Automatically mark the asset as active (i.e. not expired)

2.2. Automatically check if the asset already has a master video file

2.3. Automatically check if the asset already has a master audio file

2.4. The NetOps users will find the "Import HiRes Files" task in their Agenda View to import the received file (from either External Vendor or internal Edius) into the new asset version, they need to take the task (click on the green flag) and then click on the Media Library button

Import the file into the Media Library using the "Video file import" function as previously explained in the Creation > Upload asset step.

Once the file is imported, set a result for the task:
■ Uploaded: Move the workflow forward
■ Abort: Send alert to Singapore IT. The Receive new file workflow ends

2.5. Automatically start the Ingest workflow

3. INGEST
The Ingest workflow allows making acquired media suitable for the archive, this, through the execution of the following automatic actions (e.g. normalization) and operator tasks (e.g. technical QC):

3.1. Automatically set the asset as not ok to broadcast

3.2. Automatically check if the asset has a master video file in IN

3.3. Automatically execute a FileInfo action to set the master video file as the one to be processed by the workflow

3.4. Automatically attach and start the Create Proxy workflow

3.5. Automatically verify the existence of the PROXY file

3.6. Automatically reset the "content check" value of the asset

3.7. Automatically attach and start the CMS workflow

3.8. Automatically check (for the first time) the loudness compliance, that is, if the detected loudness value is within the range of acceptance (from -24 to -19 dB)
■ Out of range: Move the workflow forward to step 3.10 (Normalize workflow)
■ Within range: Move the workflow forward

3.9. In case a positive result was returned from the first loudness check, the NetOps user is required to complete a Technical QC Pass task, this, by opening the Agenda View module

The Agenda View is opened displaying all tasks assigned to the current user, who can make double-click on a "Technical QC Pass" task line to open it:

A form will be opened displaying all task information:
Make click on the green flag to take in charge the task, the flag will become yellow to indicate that it can be now completed, in this case, clicking on the Media Library button ( ) to access the asset metadata:

Once the Media Library is opened and asset information is loaded, NetOps users need to check in the SMPTE Metadata tab the loudness value located under the CMS tab:

Under the Media tab, double-click on the Proxy video file and preview the video content, in case of media with multiple audio tracks you can select them as follows:

The Media tab also allows selecting the HiRes video file, right-click on it and selects the "SMPTE metadata" function to add the LCD metadata:

Under the Properties tab, they need to specify the Aspect Ratio Conversion of the previewed hires video file, this, selecting it from the ARC combo box:

Once all required asset data is set, the Media Library can be closed. Back in the Task View interface, the clip can be previewed before setting one of the following results:

3.10. In case either the first loudness check or technical qc was negative, the Normalize workflow will be automatically attached and started

3.11. Automatically check the existence of a NORMALIZE file:
■ Exists: Move the workflow forward
■ Doesn't exist: Send alert to Singapore IT department. Move the workflow forward

3.12. Automatically attach and start the Create Proxy workflow

3.13. Automatically verify the existence of the PROXY file

3.14. Automatically reset the "content check" value of the asset

3.15. Automatically attach and start the CMS workflow

3.16. Automatically check (for a second time) the loudness compliance, that is, if the detected loudness value is within the range of acceptance (from -24 to -19 dB)

3.17. Automatically delete the master video file from IN

3.18. Automatically move the file from Normalize to IN

3.19. After the second loudness check, the NetOps user is required to complete a Technical QC Pass task as explained in step 3.9 (technical qc pass), and setting one of the following results

3.20. Automatically attach and start the SIG-PC workflow

4. CREATE PROXY
The Create Proxy workflow is intended to automatically create a proxy file from a master video file, this, through the following automatic operations

4.1. Automatically check if the asset's master file already has a proxy
■ Yes: The Create Proxy workflow is ended
■ No: The workflow is moved forward

4.2. Automatically set the asset's "aspect ratio" metadata (SD 4:3, SD 16:9 or HD) according to the master file storage location

4.3. Automatically generate a proxy file (from IN into PROXY) using a Rhozet transcoding action

CMS
The Create Proxy workflow is intended to automatically check the content of a media proxy and regenerate its thumbnails, this, through the following automatic operations:

5.1. Automatically check if the asset's master file already has a proxy:
Yes: The workflow is moved forward.
No: Send alert to the Singapore IT department. The CMS workflow is ended.

5.2. Automatically check the loudness compliance, that is, if the detected loudness value is within the range of acceptance (from -24 to -19 dB)

Within range: Move the workflow forward
Out of range: Automatically reset the "content check" value and perform a "content check" action. Then, move the workflow forward.

5.3. Automatically regenerate the icons (EDL thumbnails) of the asset

6. NORMALIZE
The Normalize workflow is intended to fix audio issues (loudness out of acceptable range) encountered during the media preparation process:

6.1. Automatically check if the file is stored in IN (SD 4:3, SD:16:9 or HD)
No: Move the workflow forward
Yes: Move the workflow forward to step 6.4 (normalize file)

6.2. Automatically execute a FileInfo action to gather information on the master video file

6.3. Automatically check the height (480/486/576/1080) of the master video file to determine the corresponding Rhozet profile

6.4. Automatically execute a Rhozet profile consisting of an audio filter (to normalize) and a video filter (to set the timecode to zero).

7.REQUEST FOR EDIT

The Request for Edit workflow is performed only when an editing action is required (e.g. from a Technical QC task or MTV S&P Approval task).

7.1. The HiRes file is automatically copied to the "Surreal" folder.

7.2. The **NetOps users** get a "Send file" task to send the file for Editing; they need to take the task (click on the green flag), manually drop the file in a user-selected destination and request the vendor (e.g. via email) the file editing.

Close the Media Library and set a result for the task:
■**EDIUS:** The user needs to manually copy the file from the "Surreal" cache folder to Edius (which will internally edit the file based on the EDL marks).
■**Download for external**
■**Edit new version (different duration)**
■**TBD 1-6**

7.3. A new asset version (to hold the new edited media) is automatically created and a Receive new file workflow is automatically started for the new asset.

7.4. Automatically attach and start the Delete Version Discarded workflow to the original asset version (discarded)

8. DELETE VERSION DISCARDED
The Request new file workflow allows importing a media once its editing has been completed.

8.1. Automatically set the original asset as "not ok to be broadcasted"

8.2. Automatically set the original asset as "expired"

8.3. Automatically schedules the automatic deletion (after 90 days) of original files from IN, PROXY and NORMALIZE

9. SIG-PC
The SIG-PC workflow (Singapore Processing Center) is intended to allows users to perform quality controls through the following actions

9.1. Automatically check if the asset is already in the "Archive":
No: Move the workflow forward to the next step
Yes: Move the workflow forward to step 9.4 (Check S&P approval)
TBD: Reset all flags (Technical QC, Content approval, S&P approval and Ok to broadcast) then and move file back from ARCHIVE to IN and restart the SIG-PC workflow.

9.2. Automatically check if a "Technical QC" has been already performed:
No: Move the workflow forward to next step
Yes: Move the workflow forward to step 9.4 (Check S&P approval)

9.3. In case the Technical QC" has not been performed; NetOps users will automatically get a "Technical QC Pass" task on their Agenda View, allowing them to decide what to do with the asset.
The task must be undertaken pressing the green flag and completed selecting one of the following actions:
Yes: Move the workflow forward
No: Automatically attach and start the request for edit workflow. The SIG-PC workflow ends.

9.4. Automatically check the "S&P Approval" metadata to determine if the Approval workflow has been already performed
■ No: Move the workflow forward to the next step
■ Yes: Move the workflow forward to step 9.6 (Programming workflow)

9.5. Automatically attach and start the Approval workflow

9.6. Automatically check the "TX External" metadata to determine if the Programming workflow has been already performed
■ No: Move the workflow forward to next step
■ Yes: Move the workflow forward to step 9.8 (expiry data check)

9.7. Automatically attach and start the Programming workflow

9.8. Automatically check the asset's "Expiry date" to determine if the Approval and Programming workflows have been correctly completed

9.9. Automatically set the asset code as "TX External"

9.10. Automatically set the asset as "Ok to broadcast" (i.e. ready for use)

9.11. Automatically attach and start the Archive Ready for Broadcast workflow

10. APPROVAL
Once the "ingest workflow" of content is completed (i.e. has made ingested media suitable for the archive), an "approval workflow" is automatically executed to check assets and editing them if required to make them suitable to VIACOM specifications:

10.1. MTV Programming users will find a "MTV S&P Approval" task in their Agenda View to verify the content compliance/censorship of the program; they need to take the task (click on the green flag) and then click on the Preview button

The Preview area will be expanded to allow the operator setting the marks of the asset media and manage the EDL (insert/delete segments considered as "to be edited").

11. PROGRAMMING
The Programming workflow is automatically started after a successful approval workflow, this workflow request the following tasks to be completed:

11.1. MTV Programming users will find a "Set MTV TX ID & EDL" task in their Agenda View to set the TX ID (transmission code) and EDL marks of the program. They need to take the task (click on the green flag) and then click on the Media Library button:

MTV Programming users will be allowed to set under the SMPTE Metadata tab the TX External:

MTV Programming users will be allowed to preview and mark the EDL under the Media tab, in the left part (EDL1), right-click -> Add visible segment or just set the SOM and EOM values:

Once set, the Media Library can be closed, a task result can be set and the [Save] button can be pressed: