

SAMMArobot



SAMMArobot is an automated multi-stream implementation of the patented migration process designed to provide archive-quality migration of videotape content to multiple file formats in one single pass. Either with a Four Stream SAMMArobot or a Seven Stream SAMMArobot, this automated method of migrating videotape to digital files preserves the legacy of archives and brings content out of retirement.





Leveraging the power of the SAMMASolo, SAMMArobot offers an ease of use which flows seamlessly from accessioning your content with SAMMAprep, to cleaning your content with SAMMAclean, followed by migrating your content with the SAMMArobot. Front Porch Digital's SAMMA solution offers a polished workflow which considers every aspect of a migration and consistently meets each archive's needs with a specialized solution.

PREPARE

The initial step in SAMMA's total workflow solution is SAMMAprep, a unique accessioning workflow which includes assigning a specific barcode to each asset, and selecting migration templates which can be applied in batches or per asset. Database ingest of previously existing library catalogs may also be ingested during the prep phase. SAMMAprep supports 1D and 2D barcode formats. Accessioning content prior to migration increases the speed and success of the migration workflow.

CLEAN

Tapes of unknown origin and storage conditions may cause migration problems. Cleaning the tapes can mitigate and improve migration success. SAMMAclean, available in U-Matic, Betacam, and VHS formats, gently removes particulate deposits, corrects abnormal tension and packing issues, while collecting metadata related to cleanliness, reflectivity, and tensioning. Customizable quality thresholds can be set to determine the pass/fail criteria for the tapes. As an optional second step in the total workflow solution, SAMMAclean provides archival-quality cleaning at 1/10th the typical VTR tension, while simultaneously collecting videotape health related metadata to an open XML format, all at faster than real time speeds.

MIGRATE

SAMMASolo is the heart of the migration process, and the SAMMArobot utilizes four or seven SAMMASolos to migrate your content in a completely automated environment. The robot is loaded with a library of tapes which are then migrated in batches. The system offers a unique solution which not only reduces the need for technical operators, but also combines multiple migration steps in one single migration pass. Each SAMMASolo simultaneously creates multiple digital files, including proxy, for quick review; mezzanine, variations for most editing and playout applications; and a lossless preservation quality archive in JPEG2000. There is broad flexibility in creating output migration templates, selecting the specific formats that address the workflows in that specific environment, or specifically for a particular library of tapes. An unlimited number of templates can be created and used for migration projects.

Output files are stored locally, and can be passed through using the FTP gateway to any destination, or can be transferred to DIVArchive for storage, access and repurposing.

ANALYZE

During migration, each SAMMASolo captures crucial metadata related to migration success through an analysis engine which measures an array of critical signal parameters. The thresholds on these parameters are set by the user and determine the pass/fail standards for the library. The output data can then be analyzed using the SAMMAmetadata viewer. Operators can quickly identify any migration errors and make a determination about further required actions.



AUTOMATE

The SAMMArobot solution now includes an advanced shot detection function which assesses video tape-based content in real-time during a single migration pass to generate timecode marks for defined intra-field segment types. The shotlist detection parameters can be defined based on audio-visual parameters, including the ability to detect black segments, freeze frame, color bars, and much more at a frame accurate level. This data is stored as metadata that can be exported for future editing needs.

VIEW

As part of the migration solution, each SAMMArobot migration can include a lossless preservation quality JPEG2000 file. Front Porch Digital offers a robust JPEG2000 Player, SAMMAplayer, which is included as a software player on SAMMASolo and publically available as a free player on the Front Porch Digital website. Optionally offered is a hardware version PCI codec for a Windows PC (XP or better) for broadcast-quality output with embedded multichannel audio.

MONITOR

SAMMArobot includes a multi-screen monitor, so that migrations on all SAMMASolos can be observed. As well, an LED monitoring system allows you to easily see how far along the library has progressed and monitor the operations of the robot.

SCALE

Either with a Four Stream SAMMArobot or a Seven Stream SAMMArobot, each robot is available in multiple VTR formats and can be configured to simultaneously handle large and small cassettes or mixed NTSC, PAL, or SECAM formats. SAMMArobot can be easily reconfigured to handle other form-factor cassettes during the migration process so a single robot can be used effectively to migrate entire multi-format collections. SAMMArobot is capable of meeting the specific migration need with rapid interchangeability and a proven and polished workflow.



SERVICE AND SUPPORT

The team at Front Porch Digital not only provides thorough pre-sales support in assisting with designing workflow solutions. Customer Service from Front Porch Digital is top-rated by customers. 24 x 7 support is provided and our remote access diagnosis helps quickly identify issues and provide the necessary solution.



TECHNICAL SPECS

INPUT – VIDEOTAPE FORMATS

U-Matic

Up to 4 VTRs, up to 48 cassettes
Sony VO-9800 series VTRs NTSC or PAL
Total capacity of 4, 12-cassette loading bins.
8 bins provided (4 lg. cassettes, 4 sm. cassettes)

Betacam

Up to 7 VTRs, up to 60 cassettes
Sony J-30 SDI Players
Betacam, SP, IMX, SX, Digital Betacam
NTSC or PAL
Total capacity of 4, 15-cassette loading bins.
8 bins provided (4 lg. cassettes, 4 sm. cassettes)

VHS

Up to 4 VTRs, up to 60 standard cassettes, 4 bins
VHS, S-VHS

DVCAM/DVCPPro

Up to 7 VTRs and 76 standard size cassettes
Sony HVR-M35U NTSC and PAL
Total capacity of 4, 19-cassette loading bins
8 bins provided (4 lg. cassettes, 4 sm. cassettes)

SIGNAL PROCESSING & ANALYSIS

RF Dropout Compensator (U-matic only)
Full Frame Synchronizer
Time Code Generator
Signal Analyzer
Digital Comb Filter
Automatic Gain Control—AGC
Automatic Chroma Control—ACC
Chroma Transition Improvement—CTI
Digital Noise Reduction

OUTPUT FILE FORMATS (others available)

JPEG2000—8/10 bit J2K encoding in MXF container
Reversible 5x3, Irreversible 5x3 / 9x7, lossless or lossy
SDI output (CCIR 601) with embedded audio, plus 4 AES outputs
MPEG 1, MPEG 2, MPEG 4/H.264
Adobe Flash, Windows Media WMV, AVI, MXF, IMX D10 MXF, Quicktime®

OUTPUT – METADATA

XML—generated metadata file with system configuration (encoder settings etc.), ingest/migration results (logs, video file names and locations etc.), and observations from the SAMMA Analysis Engine™ for every frame of video

OUTPUT

2—10/100/1000BASE-T Gigabit Ethernet
VGA monitor / Keyboard / Mouse

MONITOR OUTPUT

Touch screen controlled video out monitoring

TIME CODE INPUTS—OTHER

SDI, LTC, VITC, Reference (blackburst)

STORAGE

2 TB per ingest/migration channel; RAID 0

OPERATING SYSTEM

Windows XP, Windows 7

SAMMAprep

Barcode Scanner, Barcode Printer, Software, Laptop

DIMENSIONS

Robotic Handler - Weight = 450 lbs. (approx.),
Height = 74", Width = 28", Depth = 36" (access 36" doorway)
84" Enclosed Equipment Rack, Keyboard, Video and Mouse

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