

ABSTRACT

This short poetic documentary is a cinematic exploration of the daily life Chinatown in Manhattan. In the poetic mode, it reshapes the visual perception space and time in Chinatown. A cinema camera and a set of lenses were used in the production to record footage in various frame rates. The narration in the form of a letter was recorded. The documentary was edited and color graded in Avid Media Composer, sound was recomposed, mixed and mastered in Pro Tools.



Figure 1. screenshot: Mott Street Wide Shot



Figure 2. World Buddhist Center Wide Shot

INTRODUCTION

The poetic mode of documentary, in early cinema, was strengthened by the Soviet montage theory and French Impressionist cinema. The quality of being cinematic partly originates from the subjective interpretation of the observations. Poetic mode seeks for the rhetorical content rather than the narrative. The mood and the tone of a poetic documentary were manipulated through editing and colors.

CALENDAR

- January 28th: script, shot list due
- February 20th: temple footage due
- February 28th: street footage due
- March 8th: 1nd assembly due
- March 22nd: narration due
- April 5th: rough cut due
- April 18th: fine cut due
- April 25th: Picture lock,
- April 28th: Delivery
- May 5th: Poster due



Figure 3. Sony FS100 camera with Carl Zeiss Jena Biometar f2.8 80mm

BUDGET

Quantity	Unit	Material	Unit Cost	Extended Cost
1	ea	Sony FS100U camera	\$599.00	\$ 599.00
1	ea	Benro Adventure 2 Tripod (TAD28A)	\$110.00	\$ 110.00
1	ea	Sony LA-E3 Lens Adapter	\$148.00	\$ 148.00
1	ea	Atomos Ninja Blade Recorder	\$489.28	\$ 489.28
2	ea	120GB SSD	\$20.99	\$ 41.98
1	ea	Sony 55-300mm lens	\$298.00	\$ 298.00
1	ea	Camvate camera cage	\$84.60	\$ 84.60
1	ea	Sigma Art 18-35mm lens	\$858.00	\$ 858.00
1	ea	Rode Ai-1 Audio Interface	\$129.00	\$ 129.00
1	ea	Golden Age Project D2 Dynamic Microphone	\$120.30	\$ 120.30
1	ea	Tascam DR40 Audio Recorder	\$165.96	\$ 165.96
1	ea	Sennheiser MKE600 Microphone	\$329.95	\$ 329.95
		Subtotal:	\$	3,374.07
		Contingency:	\$	337.41
		Total:	\$	3,711.48

METHODS

The imagery was captured using a Sony FS100 camera. The parameters of settings were configured in *Picture Profiles* by adjusting gammas, knee, coloring, and detail. An external recorder Atomos Ninja Blade was used to record the footage in the DNxHD codecs. Sound was recorded using a Sennheiser MKE 600. Music tracks were recomposed and remastered in Pro Tools. The narration (in Chinese) was recorded through a Golden Age Project D2 dynamic microphone and Rode Ai-1 interface, and translated to English. The subtitles were generated and exported using SubtitleEdit. Graphics were created in Adobe After Effects. The sequences were edited and color graded in Avid Media Composer. FilmConvert plugin within Avid Media Composer was used to emulate the look of Fuji film stock by converting color space, adding film grain, and adjusting gamma, hue, saturation, and level. The sequences were exported to files in Quicktime format and in H.264 for streaming.

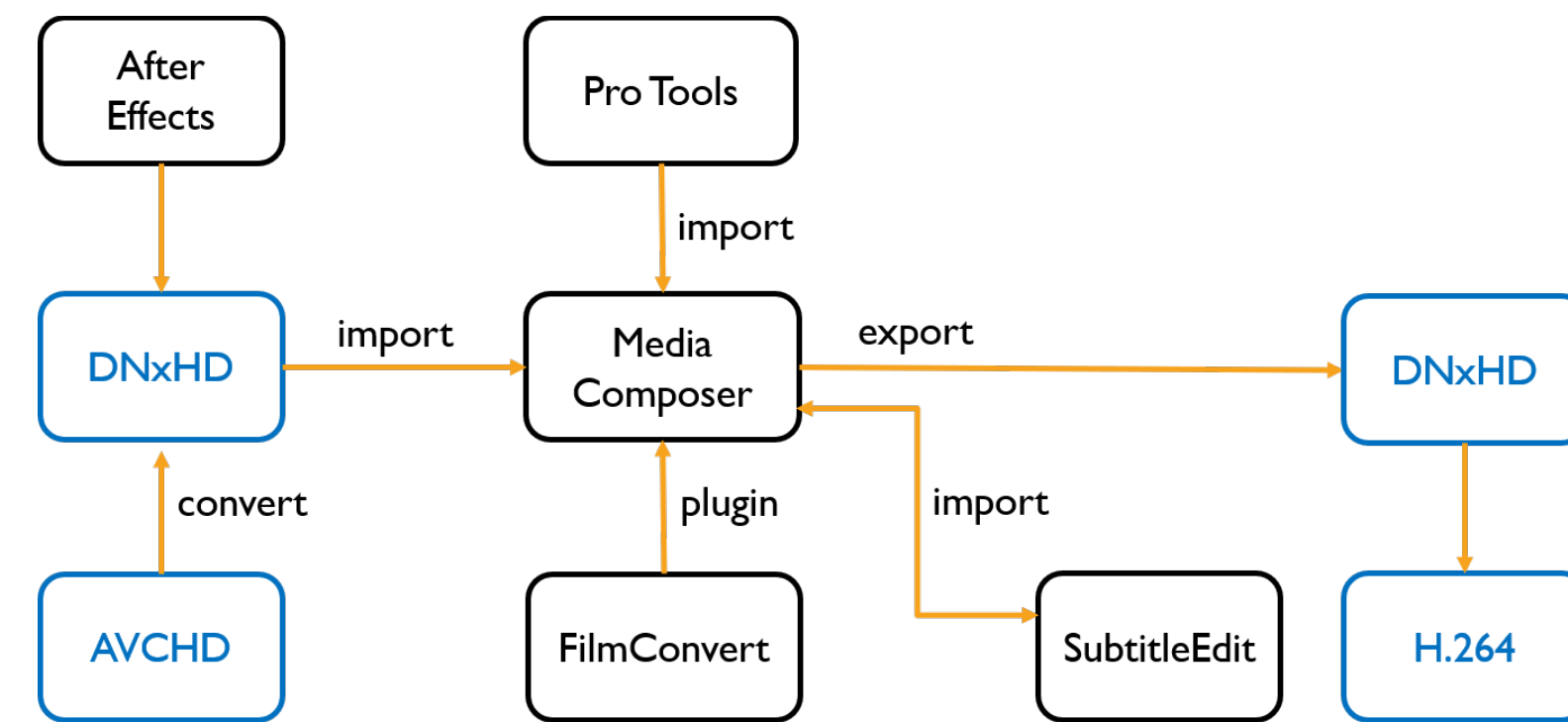


Figure 4. The Post-production Workflow



Figure 5. Screenshot: Avid Media Composer Editing Windows

RESULT AND DISCUSSION

Camera and Codecs:

Sony FS100 camera is an above-average camera for documentary purpose. Its internal recording capacity is restricted to 8-bit AVCHD, which compressed footage to a maximum rate of 28Mbps. Footage in AVCHD is vulnerable to artifacts when an object is moving with a high speed. The Atomos Ninja Blade recorder captures the source through the camera's 8-bit HDMI output and stores in the editing-friendly DNxHD 145, which has a rate of 145 Mbps. DNxHD is an intra-frame format and it is a native format for Avid Media Composer. Intra-frame codecs like DNxHD reduces the consumption of CPU workload during editing but it increases the amount data. It requires more storage space during documentary production to record over a long time than AVCHD.

The slow motion clips were recorded in AVCHD because the camera does not output 1080p 60fps through HDMI. The difference in dynamic range and color is not obvious between AVCHD clips and DNxHD clips but artifacts appear on quick-moving objects in AVCHD. To hide the artifacts, some extra film grain was added in the post-production to those clips.

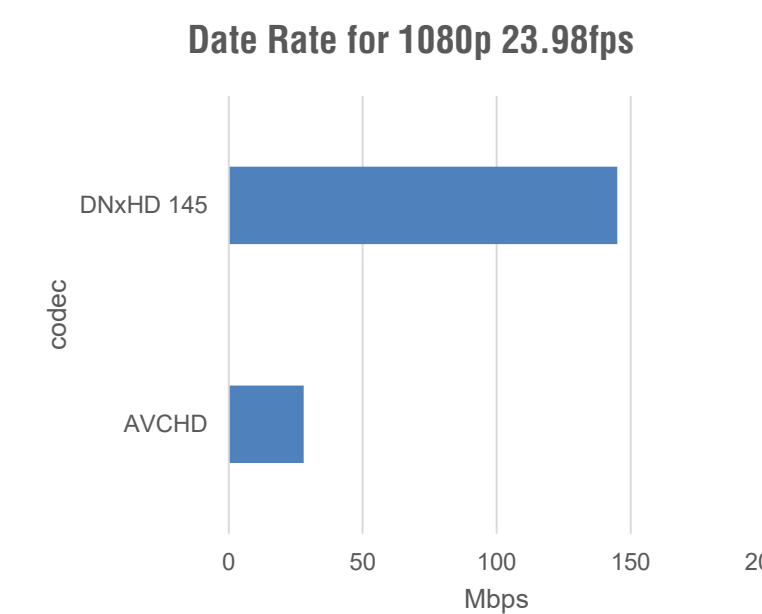


Figure 6. Data rate: AVCHD vs DNxHD

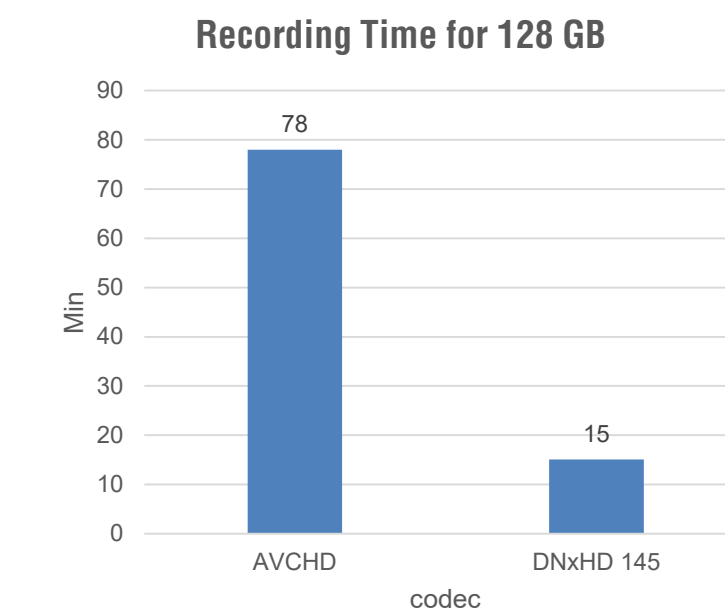


Figure 7. Continuous Recording Time using 128 GB SSD

Color Grading:

FilmConvert is an AVX plugin in Avid Media Composer and it aims to create the looks of film stocks from digital footage. The camera profiles of Sony FS100 camera was downloaded from the FilmConvert website, and target was set to Fuji ETERNAL 250 35mm-type 8553 film stock. The maximum dynamic range of FS100 was tested to be 11.8 stops, which is below the dynamic range of Fuji 8553 ET (above 12 stops). The highlight area is prone to slight clipping after grading, so every clips needs manual adjustments on curves to restore the highlight area. The dark areas usually displays good details and graduation transition.



Figure 8. Screenshot: before color grading



Figure 9. Screenshot: after color grading

Sound:

The narration was first recorded with a Tascam TM-280 large-diaphragm condenser microphone, which can deliver airy and warm vocal sound with minimal coloration. However, it also captures some environmental sound without a sound booth. Golden Age Project D2, a dynamic microphone, then became the ideal choice for voiceover narration. Apart from its quality as being accurate and bright, its isolation and proximity effect also make it a better choice than a condenser microphone. An Auray reflection filter was also chosen to help isolation reflected ambient noise when the narration was recorded.

A short track of ambient sound of Chinatown streets was recorded using a Sennheiser MKE600 "shotgun" microphone into a Tascam DR40 portable recorder. The Sennheiser MKE600 is highly directional and it renders great details of sound that is far away.

Three music tracks, which are in the public domain are chosen in the film. The length of the music tracks was modified through re-composition in Pro Tools. The original tracks were digitalized from 1930s Chinese vinyl records, and they have noise and clicks. Mastering plugins in Pro Tools, such as Ozone 8 and De-click, can help restore the quality of the tracks and remove a certain amount of noise.



Figure 10. Screenshot: Pro Tools Ozone 8 mastering EQ



Figure 11. Golden Age Project D2 and Auray Reflection Filter

Subtitling:

Since the voiceover narration was in Chinese, the video needs to be subtitled in English. The narration was first translated from Chinese into English. Each line was synchronized in SubtitleEdit. The punctuation, typography, line break and timing were not precise and accurate at the first attempt, but they were adjusted according to the BBC Subtitling Guide. The subtitle file was exported in Avid DS subtitle format, it's imported to Media Composer through *Subcap*. The parameters of *Subcap* were set to fulfill the subtitling standards and provide the best viewing experience.

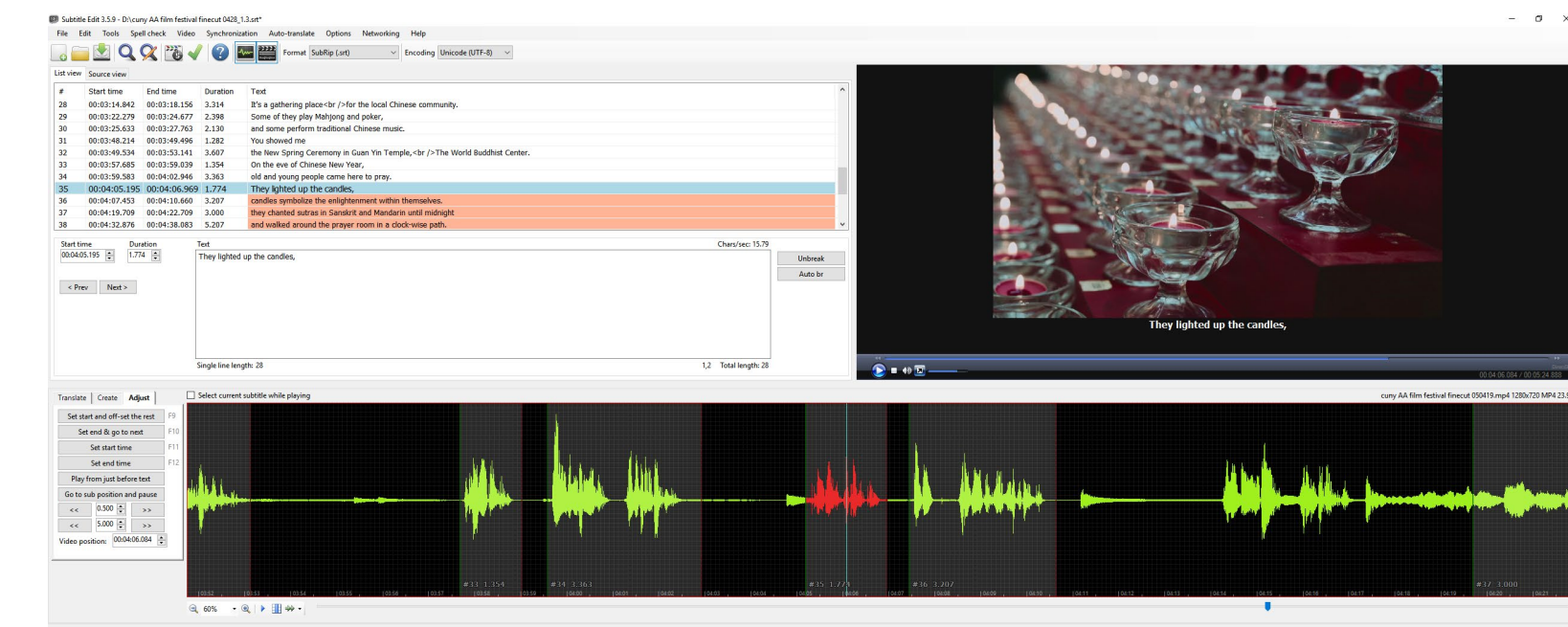


Figure 12. Screenshot: Synchronization in SubtitleEdit

SUMMARY

The Picture Lock is 5-minute-and-21-second long. The H.264 delivery of the film has the size of 440 Mb. The film, along with a 30-second trailer, was submitted for the documentary section of 2019 CUNY Asian American Film Festival.

About being poetic, this narration's form in a letter is not clear to the audience and some of the lines are too literal about the visual images, but the pacing and imagery show a good quality of a poem film. It is less informational or educational than other modes of documentary.

REFERENCE

Brown, Blain. *Cinematography: Theory and Practice: Imagemaking for Cinematographers and Directors*. New York: Routledge, 2016.

Hullfish, Steve. *Avid Uncut: Workflows, Tips, and Techniques from Hollywood Pros*. CRC Press, 2017.

Hurkman, Alexis Van. *Color Correction Handbook: Professional Techniques for Video and Cinema*. San Francisco, CA: Peachpit Press, 2014.

"Bbc.co.uk Online Subtitling Editorial Guidelines V1." Accessed May 6, 2019. http://www.bbc.co.uk/guidelines/futuremedia/accessibility/subtitling_guides/online_sub_editorial_guidelines_vs1_1.pdf.

ACKNOWLEDGEMENTS

Professor Steven Olswang
 Professor Ryoya Terao
 Professor Mario Trevino
 Ron Hatcher
 Xin Yuan, World Buddhist Center