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INFO 655

**Everyone's a Critic:  
An Experiment in and Examination of Preservation Standards for Digitized Film  
(DPX-tended Cut)**

For my digital collection project, I set out to experiment with Digital Picture Exchange (DPX), exploring its parameters and conversion possibilities, evaluating its capacity, and analyzing its posture as a standard in film digitization. DPX stores individual frames as individual files, a bulky system neither economic nor practical for archivists, filmmakers, and the environment alike, and I planned to put it to the test and see it for myself.

Unlike DPX, the world can't be distilled into ones and zeroes, however, it can certainly be uneconomic and impractical, and this project proved to be true to form— my journey was a winding one, one which I fondly refer to as the DPX-tended Cut.

In the interest of conducting the most holistic research possible, I endeavored to see a film through the digitization process and to a final state of both access and preservation files. I began by taking a 16mm film (a college film by my colleague, Melody London, who has since become renowned film editor) to DiJiFi to be digitized. DiJiFi, however, doesn't offer DPX files, and for that, they may be all the wiser. Regardless, I had a job to do— in tandem with the academic goal of conducting this experiment, I was now responsible for the aforementioned deliverables to a respected and dear colleague, and so I pressed on, opting for ProRes, Melody's format of choice for the aforementioned access file. Alas, there would be no more smooth sailing from here.

The kind gentleman at DiJiFi then informed me they had just received a hefty order of 16mm film digitization, expedited, which would delay the processing of my own. Upon further inquiry, I was told that for a modest \$1000, my order, too, could be expedited, but there would be no guarantees on its completion prior to the end of the semester. I'd take my chances, hold onto my \$1000, and hope for the best.

During this time, I did my research, studying DPX, its follies, and alternatives, and effectively nesting in preparation for the DiJiFi delivery. While MOV, MP4, and ProRes are rather compact, they're all lossy to varying degrees, and therefore unacceptable for preservation. Thankfully, New York Public Library had already traversed this landscape, and had developed the solution to the DPX problem in 2018. In partnership with France-based MediaArea, NYPL developed RAWcooked, a software that converts DPX files into Matroska, or MKV files, containing FLAC audio and FFV1 video, reducing file size an average of 33-66%. With my intellectual nesting complete, I began doing so digitally, downloading VLC, FFMpeg, QCTools, MediaInfo, MediaConch, and eventually RAWcooked, so I'd be ready to hit the ground running.

Days turned into weeks, autumn to winter, and DiJiFi never called. Melody would check in from time to time, and so would I unto DiJiFi to no avail. Leaves fell, Jack Frost nipped at my nose, the project's conclusion approached with vigor. Would time ever be on my side? I recalled the way my mother described my birth, four days late, as a tardiness that defined my nature. I waited by the phone— but weren't we always waiting by the phone these days, with iPhones burning holes in our hands and pockets? Maybe I had bitten off more than I could chew. I lamented the naive, ambitious optimism with which I had courted the semester, a tendency I surely should have outgrown by twenty-nine. Nevertheless, I persisted. Ruth Bader Ginsburg's ghost rolled her eyes.

Time waits for no one, Supreme Court Justice or not, and I needed to pivot. I reached out to my professor, who kindly shared ten seconds worth of DPX files depicting a brightly colored Mandelbrot set (a complex visual born out of an even more complex numeric function of which I know better than to butcher in attempt to describe it). I unzipped the Mandelbrot and got to work.

I moved through my MacBook's terminal with precision, teeming with anticipation. Upon harkening RAWcooked to work her magic, tragedy struck once again: "Input is a file so directory will not be handled as a whole. Confirm that this is what you want to do by adding "—file" to the command." I

troubleshooted and double-checked the downloads on my RAWcooked-supporting systems fruitlessly. I called for backup.

One bout of existentialism, a Zoom call with my professor, and single Homebrew command later, I was RAWcooking with gas and had successfully and losslessly converted my sorry 1.59GB stack of DPX files into a mighty little 347.8MB MKV. It played with ease on VLC, I let out a sigh of relief, and poured a hard-earned glass of wine. Victory was mine.

DPX may be impractical and uneconomic, but so is life sometimes. In this case, it led NYPL to innovation; for this archivist, it inspired a series of exercises in resourcefulness and humbleness. At the time of writing this, I'm still waiting on DiJiFi, and still plan on delivering Melody both access and preservation files, although therein lies another welcome challenge: converting ProRes to MKV. Onward and upward.