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Assignment 2

An Inquiry to Web Series State of Preservation

For nearly a century, large film production companies controlled the manufacturing and distribution of the films that they themselves created. These company's production processes have been the subject of much scrutiny and research, to the point that some of this information is almost widespread public knowledge. For some time, independent films were not widely accessible for viewing by the public, but due to the rise of festivals like The Sundance Film Festival, even independent cinema has a broader reach in contemporary times and can garner as much critical acclaim and attention as a studio produced film, given that prominent actors and directors are drawn to that half of the industry because of the artistic freedom. Given the rise of the video artist and the DIY ethic that came with that demographic, there has been a steady increase in guerilla filmmaking. Since the widespread use of the web, that DIY mindset has certainly spread tenfold, opening up distribution to all sorts of artists that would have, in the previous industry's structure, lacked the funds to do so and thereby creating a whole new set of people who would benefit from learning digital preservation best practices.

Building on the accessibility of the video format, born digital filmmaking today is becoming more and more accessible to the independent artist without external funding; as technology advances more rapidly, cameras and other production equipment are becoming more and more affordable. Because of this, and the rise of platforms like YouTube and Vimeo, guerilla

web series productions have become increasingly prominent with every passing year. (Cummins) Guerilla filmmaking is defined as "shooting your film in public with no permits and in most cases, no permission from any property owners for that matter." (Kroll) While some large budget productions practice this, it's mostly small, no-budget, passion-driven projects that use whatever props, costumes, or locations that are on hand to avoid spending money. Because the audiences for these web series are usually so niche, only a slim few are distributed in any other way after their initial upload to the web. Given the progressive loss of image and file quality over time when hosted on streaming services like those mentioned above, digital preservation becomes a prudent discussion to have with this type of content creator. This paper explores how some guerilla web series creators are approaching preservation issues, if at all, and what other options these artists may have at their disposal to ensure the longevity of their work.

Web television really started to blossom out of a niche market in the early 2000s. *Red vs Blue* was on the front end of the web series trend, with its first episode airing on April 1, 2003. The production has gained so much popularity that actors such as Elijah Wood have made guest appearances. Joss Whedon used the web to distribute his *Dr. Horrible's Sing-Along Blog* in 2008, to the cost of a cool $200,000 - a very low budget production for a director and actors with such prolific resumes. (Rosen) Netflix saw the advantages of web distribution in 2008 when their in-house production of *House of Cards* premiered, proving popular enough for the company to launch a whole line of *Netflix Original* programming. While the budgets used for these productions are far and above those that will be examined in this paper, they are important to mention as they undoubtedly gave rise to the awareness, and therefore popularity, of other web series. Since 2014 alone, the web series field has seen explosive growth from all sectors of the market, from multi-million dollar budgets down to those with a budget of nothing.

On November 16th, XFR Collective, a preservation group out of New York City, held a workshop entitled *"Archiving & Preserving Your Films for Indie Filmmakers"*. XFR Collective is a "non-profit organization that partners with artists, activists, individuals, and groups to lower the barriers to preserving at-risk audiovisual media – especially unseen, unheard, or marginalized works – by providing low-cost digitization services and fostering a community of support for archiving and access through education, research, and cultural engagement." (XFR Collective)

The attendees ranged widely in age, and the younger artists professed to have a much more thorough understanding of digital files over the older artists, many of whom still had most of their content on tape. Because over half of the attendees were more familiar with physical items over digital, the workshop's content was made to be easily digestible, broken down into very specific tips and facts aimed at enabling the artist to further their own education once they left, and to provide a foundation with which they may start protecting their files right away.

The Collective formatted their workshop like a boot camp, giving tips such as how to care for hard drives, why independent filmmakers shouldn't use file types dependent on specific software to open, the difference between proprietary and open-source software, and even discussed the idea that artists should approach preservation like a series of 'micro tasks' as opposed to one large project, as to not make the sheer amount of work overwhelming.

The demographic at this workshop even needed clarification on what audio files are best practices, even though the same two file types (.wav and .pcm) (Recommended Formats Statement) have been standard for quite some time. The topic touched on the types of software being commonly used by independent filmmakers, noting a migration away from Apple products back to Adobe Premiere and Avid editing tools, due to Final Cut X's unpopularity. For a full list of XFR Collective's tips and recommendations, see Appendix.

If the attendees at the XFR Collective workshop were to be interpreted as a trend for the larger demographic being observed in this research, a very bleak picture would be painted. Most of these artists only had their material in one form without any backups whatsoever and have very little understanding of how digital files behave and should be treated. Even the younger artists were in need of help regarding technical specifications of files (like bitrate and codecs like H.264) and frequently asked questions such as asking whether an external hard drive or cloud storage was better. This type of question informs as to how little most people truly know about digital preservation, approaching the concept from a 'one approach fixes all' as opposed to preservation being an ongoing, never-ending process.

In hopes to find a more robust range of artists producing for consumption on the web, a survey was drafted and sent out to individual productions that appeared to be small enough to fit the criteria. Out of over 30 separate web series content creators that were contacted, only three responded to inquiries about how they handled their files during filming and post-production. The questions that all three artists responded to were the same, and are as follows:

1) What type of file types (wrappers and codecs) do you work with at what points in your workflow? (ex: from camera to the types of editing programs you use, to the final export file type; do you do any transcoding or file type changes?)
2) Do you save your production files?
3)Where do you store the files, if so? (examples: your computer? external hard drives? Removable storage media? or even RAID drives? etc)
4) Do you rename your files? Put them in a folder? Reorganize them in any way?
5) Have you ever heard the term 'digital preservation'?
6) Do you keep any backups of your files, and if so, how many?
7) Any other thoughts you have not covered by the above questions

Out of all initially contacted, the three respondents were all guerilla artists - any project that appeared as if it had a budget failed to return a reply. All respondents were creatives in their 20s, and of the three, two responded directly about one project (*Argyle Dragon* and *Kill Me Now*,

separately) they had helped to develop. The third respondent, Morgan Stewart, answered as an

independent creative rather than for a specific production.

Argyle Dragon is a web series that is currently on its second season. Its creators describe

its' plot as such: "Three friends live together and decide to film their experiences. Hijinks

ensue!" This project is personally driven by actors and as such, technical specifications are not

the focus of the creators. This is exemplified by the answers to the survey questions:

> *Do you save your files?* **Yes**
> *What file types do you use?* **.mov? I think?**
> *Storage?* **External harddrive**
> *Renaming? Relocation?* **I put them into folders for each specific episode, and then had folders for each specific scene.**
> *Are you or your team familiar with the term 'digital preservation?* **No and no**
> *Do you back up your files?* **I do not. They're on YouTube though? Does that count as a backup?**

While the series will benefit on an internal level from saving files and from beginning to

add metadata to at least groups of files by way of folder organization, this level of understanding

of digital preservation was expected. The usage of external harddrives is also expected, as it is

the most common form of prosumer digital file storage. The use of the .mov codec is somewhat

concerning, given its proprietary nature. It is likely to be in fairly widespread use for the short

term, and the UCLA Library (*Standards for Audiovisual Preservation*) and Michigan Libraries

(*How to Preserve Your Own Digital Materials)* both use and recommend them for preservation

masters. These two institutions operate under the assumption that Apple will operate as a

company and support the file type for some discernable time to come. This is most likely the

case, even if the format isn't considered to be in the 'best practices' amongst professional

archivists. At the guerrilla level of production, the best types of production master files will be

those that are in extremely common, lossless formats. While .mov (a QuickTime filename for

movies, produced by Apple) is extremely common, it is a file type that is compressed, and the

.mp4 container is nearly identical and has more international support, making it slightly more preferable. However, it is safe to assume a good amount of guerrilla filmmakers will produce .mov files, given frequent use of Apple products in that demographic.

Kill Me Now is a web series comedy now in its second season about two girls, Blythe and Julia, navigating the self-induced chaos that can be a person's twenties. This production is also a guerrilla project with skeleton technical and acting crews. Their responses track fairly similar to *Argyle Dragon*'s, and support the conjecture that the a prevalence of .mov will persist due to the consumer artist's use of Apple products.

Kill Me Now's editor responded to the following questions:

> *What files types do you use? Do you transcode?* **I import MOV files from camera to Premiere Pro and then export completed episode as an MP4 file.**
> *Do you save your files?* **Yes**
> *How do you store your files?* **External Hard Drive**
> *Do you rename or reorganize your files in any way?* **I rename video and audio files during post-production to correspond with the shot and take number. I rename the mp4 file to correspond with its episode title.**
> *Have you ever heard the term 'digital preservation'?* **Yes**
> *Do you keep any backups?* **Not really. I upload the file to Youtube and keep the mp4 file on my external hard drive, but I delete the video and audio files to free up space for more projects.**

Both *Argyle Dragon* and *Kill Me Now* are using .mov at some point in their workflow, but *Kill Me Now*'s use of the .mp4 file type is encouraging, especially when considering that information on best practices has filtered down to the consumer or prosumer levels. While not exactly preservation standard, for the same compression reasons as the .mov file format, it does adhere to international standards and thus has a wider range for support. Both productions lack backups, which is probably a response to the monetary expense of storage. Guerrilla filmmakers can barely afford to produce a film, let alone find storage space in multiple places. At this level of production, redundancy is in such cases far fetched, but at best a very hard choice to make

over a new piece of equipment for each artist. Further, their recognition of the term 'digital preservation' is encouraging, even for the simple awareness of the issue.

Morgan Stewart is an independent artist, working full-time in a separate career field outside of the arts. He creates web series and other short films, and of all the respondents, his answers are the most encouraging for the future of these types of artistic works:

Do you save your files? **I save everything. I save hard copies, redundant copies, backups, I am a data hoarder. No one will ever need it but I will always have it.**
Storage methods: **"Ext. Drives, my own hard drive, high density SD cards."**
Do you rename or reorganize your files? **I don't typically do anything to the raw files. I keep all footage for every project isolated in their own folders or drive partitions, and every single thing I use in that project goes there. I do this, because otherwise I'll inevitably lose title art or a clip or something.**

What file types do you use? **Avi is malleable, I can render both a lossless quality and a compressed file at the same time and for that it would be what I would use again in the future. As for workflow, I imported my footage to Vegas Pro 13, and did the majority of my work in that, Paint Shop, and after effects.**

Do you transcode? **For my last project, I imported and rendered as .avi. I formerly used .mp4 due to its highly compressed format being ideal for web work. Shooting for an exclusively online series in a high quality format is a waste of time, in my opinion. Most people according to the metrics I garnered from my advertising were watching on the lowest quality on mobile anyway. In fact, only 13% of people watched both on a non-mobile platform (desktop, laptop) and on high quality. In short: No one cares if you have a $60,000 camera if all you're shooting for is the internet.**

Familiar with digital preservation? **Yes, and I think it is extremely important. I think we'll lose whole sectors of our collective electronic culture, much as we lost Geocities, certain unobtainable download only video games, etc etc. unless people like archive.org are around to keep it for us. I don't necessarily believe it is the most important thing in the world, but preservation is important, and digital preservation is difficult and can be quite expensive.**

Stewart's responses are not only extremely thorough, but also are promising for the future. This niche demographic will ultimately survive if each individual artist takes preservation responsibility for their own work, and if one out of three respondents knows as much as Stewart does, it paints an optimistic picture for the future of this type of filmmaking. Certainly the response field is also small, and far too premature to be able to truly judge what percentage actually is this informed, but this type of response is also more than expected. While Stewart isn't adhering to strict preservation best practices, he is certainly choosing to inform himself and

make educated decisions rooted in the logic of his audience demographic and of his economic means.

There are some online databases for web series and independent films that exist, such as WebSeriesChannel, an online web series database, and IndieFlix a subscription based streaming service that hosts only independent films and series. The former is no longer an actively updated site, and is losing relevance quickly. The latter does not disclose its file type conventions on its website, but when contacted they answered these four questions with incredible promptness:

1) Does your service require a specific file format and/or compression specifications out of your filmmaker's submissions? (like bit rate, or any specific codecs even?)

2) Does your company do any transcoding to the files you receive to standardize things for streaming?

3) Do you backup all your files besides what you have on your servers? If so, what type of storage is that? LTO? a SAN? An external service provider?

4) Is there any difference between your streaming files and the files you keep? (Like a Master versus access copy?)

The Production Coordinator for IndieFlix replied with optimistic answers:

1) **We essentially ask for the highest quality version of the film file we can get but we do have requirements for the assets we receive.**

2) **Right now we use a third party to transcode our film files after we encode/export them to our standards. In the future we will do everything in house. We encode/export all films to our internal standards for streaming on our platform.**

3) **We have multiple file back ups. Both internally and on cloud servers.**

4) **We keep and archive all versions of the film. This includes all images, subtitle files, and film files both in the master form received from the filmmaker and in the final encoded form set to our specifics.**

IndieFlix's file specifications are encouraging, only allowing an aspect ratio of 1080 or

720p for HD files and SD files of 720x480 in NTSC and PAL. They require the files to be

progressive, have a square pixel aspect ratio, be H.264 either in the form of ProRes 422 or Avid

DNxHD with a minimum data rate of 20mpbs, and accept either .mov or .mp4 file extensions.

Their audio requirements are more restrictive, requiring the bit rate to be at 320 (Stereo) or 448

(6 Channel/5.1) kpbs, be 2 Channel Stereo, and for the sample rate to not change from the file's

origin. Even more exciting is that the organization has subtitle specifications, with a preference

of .srt and .xml file extensions. IndieFlix also archives the title cards, director headshots and

movie posters that are submitted, all with preferred sizes with a preferred file type of .psd,

though .jpg and .png are acceptable. (IndieFlix)

 While they both examples provide a modicum of access (outdated for

WebSeriesChannel, and by subscription for IndieFlix, even paying their filmmakers), IndieFlix

could also be considered a backdoor to preservation for independent artists. Because IndieFlix

archives all versions of their films and all ephemera submitted with it in multiple locations,

submitting one's work to IndieFlix can only be a good idea for the longevity of the independent

and guerilla artist's files. Not only does the platform for distribution reach a wide audience, pay

the artist, but also has a built in infrastructure that can properly maintain and support the needs of

their content.

An unfortunate side effect of using streaming websites as a form of distribution is the

natural image degradation that moving image files suffer after multiple uploads. (Simpson)

While uploading a file acquired from Youtube is probably not a common practice for most

people, it is certainly a process that could take place if the original Master file is lost. While even

though humans may not be able to discern a difference between versions on the first several

uploads, the file still has undoubtedly been changed at least to some degree. Some streaming sites even re-encode the uploaded file, changing the file before it is ever distributed. For reasons like this, it would be recommended to use streaming sites just as a mezzanine level of access, hopefully keeping a Master file that would be far above the technical specifications that would be recommended for sites like Youtube or Vimeo. At current, because the average consumer's screen is relatively small, lower image quality is less of an issue on streaming services than it will be in the future, as the average consumer's screens continue to grow in size and resolution.

Forming any sort of recommendations for this guerrilla artist niche is difficult, given the monetary constraints these artists operate under. While in the production and post-production workflow, it would be highly recommended for every artist to develop a modicum of consistency so that all of their work is standardized in the most commonly used file types and a standardized way of personal organization, while also saving as many of their raw files in more than one location. It would be recommended to invest in two separate forms of storage, rather than two of the same - one cloud backup and one external hard drive backup will be far more effective than two hard drive backups or two cloud backups. A filmmaker's files should always be available for offline usage, but also not necessarily rely solely on a spinning disk to keep their data safe.

Initial responses along this line of inquiry are more promising than expected, but far too limited to truly indicate any trends when thinking about the overall preservation preparedness of the guerilla artist demographic. If the trends presented here are any indication, artists are on the right track as far as rudimentary file organization is concerned, and all seem to use widely accepted file formats. The lack of backups is a concerning trend, however, and this demographic is certainly lucky that organizations like XFR Collective exist, as they are supplying incredibly important and little known information for no expense at all. Ideally, a wider net would be cast

so that more independent artists would have access to this type of information with relative ease. It is true that most of the information on XFR Collective and other preservation best practices are researchable, however without prior knowledge of the preservation industry as it stands today putting together all of the information that is scattered in different sources can be incredibly challenging. While another DIY artist movement may truly emerge in the near future, one centralized location for information on 'guerrilla preservation best practices' is something that is still waiting to be created.

APPENDIX

List of Collected XFR Collective Tips on Personal Preservation

- Archiving takes time: there is no overnight fix.

- Break up preservation plan into attainable micro goals.

- Digitization recommended as a preservation method of analog materials.

- Establish a workflow - the same programs, file types, etc for all of your media and throughout all of your work.

- Be aware if your file type is an open source file format or a proprietary file format.

- Adobe Premiere and Avid are experiencing a resurgence of use after Apple's release of Final Cut X

- Even though .mov and ProRes are proprietary (Apple), they are in such widespread use that they are considered stable

- Stay away from files dependent on software to be read.

- Independent filmmakers must educate themselves of the differences between codecs and wrappers.

- H.264 is the codec used for BluRay.

- Audio has two file formats that fall into 'best practices': .wav and .pcm

- Assume that you will need 1GB of storage for every 5 minutes of video.

- Archiving requires constant maintenance.

- It is advisable to change the Camera Original file names to one that fits your workflow.

- Start best practices immediately upon ingest into correct folder, at least, for some sort of organization.

- Independent filmmakers at this stage will benefit from developing their own plans for their own needs, rather than copying from someone or something else's plans.

- Don't keep all of your files on one drive for any significant length of time.

- Think about drives (and all storage) in terms of 'what if I lose this?'

- Don't give up on crashed disks - there is always a chance it could be recovered.

- External hard drive life spans are 3-5 years.

- Physical care of external hard drives is important - it is a mechanical tool with spinning parts. It is especially important to keep the drive's dust exposure low, especially when the drive is powered down.

- If the drive fails, make sure it isn't the port or the connective cable, rather than the drive itself.

- Adobe Bridge is a program that will allow you to make batch or single edits to files, so you may apply metadata to all of your work.

- At least have 1 text file per folder to identify the context of the moving image or audio files in the folder.

- Ideally artists should have 3 backups, comprised of 2 different types of storage, with 1 of them being geographically located elsewhere.

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