

Vine:
Preserving Digital Content after Platform Death

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I. The End of Vine

On October 27, 2016, Twitter announced that it would discontinue Vine. Much like Twitter, Vine's hook was brevity. The mobile app allowed users to create six-second videos on their phone that would play in a loop for other users of the social media network to see. In the initial closure announcement on Vine's blog, Twitter reassured users that "**Nothing is happening to the apps, website or your Vines today.** [Bold in original]. We value you, your Vines, and are going to do this the right way."¹ The placating response is likely an attempt to forestall the criticism that has followed the shuttering of other popular online services such as Google Reader. Such closures highlight the fact that, even though people use the Internet to share and create, they typically do not have ownership over the platforms on which they rely. When an insufficiently profitable service closes, users have no choice but to switch to an alternate service, often accepting some loss of functionality, or to abandon the activity it supported altogether. As frustrating as the situation can be for individual users, it can also be disconcerting for those working in memory institutions.

Memory institutions such as archives, libraries, and museums have long collected documents in a variety of media. While in the past this has been analog material such as paper, film, and magnetic tape, institutions are increasingly collecting digital objects. Unlike a book that might live on a shelf long after its publisher has folded, Internet resources only last as long as a company pays to keep its servers running. Content can be lost suddenly without the warning of physical decay. For this reason, preserving Vines is an interesting case study for archivists collecting vulnerable web-based content.

¹ "Important News about Vine." Vine Blog., last modified Oct 27, accessed Dec 12, 2016, <http://blog.vine.co/post/152386882201/important-news-about-vine>.

II. Why Preserve Vines?

Before diving into the technical nitty-gritty of preserving Vines, I would like to argue why the six-second videos are worth the effort of archiving. After all, other similar video platforms exist, from Youtube to Snapchat. With only four years from founding to closing announcement, Vine could be considered a blip in the social media landscape compared to heavy hitters such as Facebook and Twitter. However, both Vine as a platform and the individual videos created through it are worthy of study. The history of Vine is a compelling illustration of the startup industry, and the idiosyncrasies of the platform inspired many amateur videographers.

As ubiquitous and mundane as the Internet now seems, what its final impact will be on society and economics remains to be seen. For historians, Vine provides an illustration of the boom-and-bust lifecycle of an Internet startup. Startups are arguably the most distinctive development of the contemporary economic landscape, and enjoy significant prestige. In the past few years, new Internet businesses have been a source of great wealth for their founders, even as some wring their hands over the sustainability of services frequently offered for free. Commonly, the creators of startups hope to make money by selling their creation rather than continuing to administer it. Vine is an example of this. Dom Hofmann, Rus Yusupov, and Colin Kroll created Vine in 2012. The trio managed to sell the application to Twitter in October, 2012, prior to its launch. At the time, All Things Digital, an online tech magazine, speculated that Twitter's decision to purchase Vine was an "acquire."² The variously spelled neologism of "acquire" and "hire" refers to "an act or instance of buying out a company primarily for

² Kafka, Peter and Isaac, Mike. "Twitter Buys Vine, a Video Clip Company that Never Launched." AllThingsD., last modified Oct. 9, accessed Dec 12, 2016, <http://allthingsd.com/20121009/twitter-buys-vine-a-video-clip-company-that-never-launched/>.

the skills and expertise of its staff, rather than for the products or services it supplies.”³ All Things Digital later updated its article to rule out “a garden-variety acquire” because of reports that Twitter might keep Vine as its own entity.⁴ Twitter later launched Vine in January, 2013.

Release did not finalize the properties of Vine. Like many social media platforms, development continued in order to keep the service fresh and relevant to its users. To chronicle major updates is necessary to understand the history of an app. For example, Vine initially allowed users to shoot with only one of the cameras on a phone, the “rear-facing” camera on the back of the phone. In April 2013, Vine allowed users to access the “front-facing” camera as well.⁵ An article in the New Yorker attributed Vine’s success to the inclusion of the front-facing camera, arguing that “Vine didn’t really take off until April, 2013, when it introduced a front-facing camera for selfies: it turned out that people would rather broadcast themselves than their surroundings.”⁶ April 2013 is also when Vine reached the milestone of being the most downloaded free mobile app in the iOS App Store.

By 2016, however, Vine had lost its luster. Due to declining quarterly growth, Twitter announced it would close Vine as well as lay off 9% of its employees.⁷ Writers have pointed to various reasons for the decline of Vine. In fall of 2015, a group of the

³ "Acquire - Definition of Acquire in English | Oxford Dictionaries." Oxford Dictionaries | English., accessed Dec 12, 2016, <https://en.oxforddictionaries.com/definition/acquire>.

⁴ Kafka, Peter and Isaac, Mike. "Twitter Buys Vine, a Video Clip Company that Never Launched." AllThingsD., last modified Oct. 9, accessed Dec 12, 2016, <http://allthingsd.com/20121009/twitter-buys-vine-a-video-clip-company-that-never-launched/>.

⁵ Business, Author: Mat Honan. "How Vine Climbed to the Top of the Social Media Ladder." WIRED., last modified June 20, accessed Dec 12, 2016, https://www.wired.com/2013/06/qq_vine/.

⁶ Friend, Tad. 2014. "The Stars of YouTube and Vine." *The New Yorker*, Dec. 15., <http://www.newyorker.com/magazine/2014/12/15/hollywood-vine>.

⁷ Guynn, Jessica and Molina, Brett. "Twitter Slashes Jobs, Vine as it Seeks Profits." USA TODAY., last modified Oct. 27, accessed Dec 12, 2016, <http://www.usatoday.com/story/tech/news/2016/10/27/twitter-cuts-third-quarter/92821316/>.

most prominent Vine creators issued the service an ultimatum because of a noticed decline in user interaction with the app. The “Vine stars” offered to commit to making 12 original Vines a month if Vine would “pay all 18 of them \$1.2 million each, roll out several product changes and open up a more direct line of communication.”⁸ Vine did not oblige and they left for other platforms such as Instagram, Snapchat, and Youtube. The Vine stars themselves surmised that the app was losing users because of increased harassment in comments and lack of product updates that would help them create and share better content.⁹

Unlike many other social media platforms, Vine did not try sell ads directly to advertisers. Mediakix, an “influencer marketing agency” asked in a March 2016 blog post if the end of Vine was near. In addition to competition for users between Vine and Youtube, Instagram, Facebook, and Snapchat, the post points to Vine’s “lack of a native advertising platform.”¹⁰ To support the idea that Vine is not popular with marketers, Mediakix referred to a Tubular Labs Survey that concludes, “of 40 major brands investing in social media marketing on the four major social platforms (Vine, Instagram, Facebook, and YouTube) between September 2015 and November 2015, only 4% of all branded content was published on Vine, and only 13 of the 40 brands created content for Vine at all ([Adweek](#)).”¹¹ Advertisers could hire specific Viners to create sponsored posts, but this money did not go to Vine. For Vine, popularity was not a guarantee of profitability.

⁸ Lorenz, Taylor. "Inside the Secret Meeting that Changed the Fate of Vine Forever." Mic., last modified - 10-29T15:58:29.000Z, accessed Dec 12, 2016, <https://mic.com/articles/157977/inside-the-secret-meeting-that-changed-the-fate-of-vine-forever>.

⁹ Ibid.

¹⁰ Mediakix Team. "Have we seen the End of Vine?" Mediakix | Influencer Marketing Agency., last modified -03-21T20:50:27+00:00, accessed Dec 12, 2016, <http://mediakix.com/2016/03/vine-app-losing-popularity/>.

¹¹ Ibid.

Beyond the business history of the platform, Vine is interesting for creating different styles of video than was seen previously on websites like Youtube. The content on Vine is shaped by the restrictions of the six-second format. While the limited duration may seem gimmicky, it was in fact a response to the technical difficulties of sharing videos on mobile phones. In an interview with Wired Magazine, the founders of Vine explained that the app did not initially have a time limit because they were focused on creating editing tools.¹² Dom Hofmann, one of the founders, explained, “It began with unlimited time. But when we saw our friends trying to share their videos over text message, we realized that it needed a social component—and that meant we needed to make it quick to share and view.”¹³ The solution they decided upon was to shrink the file size by adding a maximum duration. In turn, the time limit inspired the looping. Hofmann explained that they created the loop feature because, “As soon as we started limiting the length, we noticed that the videos started to feel anticlimactic.”¹⁴

The strict duration and loop encouraged certain types of content. Long, complex narratives were obviously impossible, but distilled concepts could still make an impact. Vine also made sharing videos easy. A user shot on a phone camera and did not have to worry about encoding for the web. Although it is possible to make complicated videos in Vine, the simple touch editing and six-second time limit made video approachable for a wide range of people. Much like anyone can attempt a haiku, anyone can make a Vine. The constrained brevity is approachable.

¹² Business, Author: Mat Honan. "How Vine Climbed to the Top of the Social Media Ladder." WIRED., last modified June 20, accessed Dec 12, 2016, https://www.wired.com/2013/06/qq_vine/

¹³ Ibid.

¹⁴ Ibid.

Short videos lend themselves to specific types of videos. The “channels” on Vine’s “Explore” page give an idea of the most popular genres: Animals, Anime, Art, Comedy, Music, OMG, and Sports. Comedy in particular became associated with Vine. Six seconds is enough for a set-up and punch-line. An essay on viral video in the *New Yorker* describes the entry into Vine of one of the most famous users, KingBach: “Bach concluded that Vine’s comedy vertical—by far its most popular format, although the app also inspires lots of music samples, sports clips, news reports, and stop-motion animation—was made for class clowns like him.”¹⁵ Tropes emerged within the different verticals on Vine. “The Beginner’s Guide to Vine” on Mashable identifies four common tropes of Vine, “Be Like” jokes, vocal dubbing, stop-motion, and contests.¹⁶ Humorous Vines are popular enough that they have a second life in “best of” compilations on Youtube.

Mememes are rich territory for cultural analysis. Many have noted the prominence of racial humor in Vines, much of which could be considered offensive. However, at the same time, because Vine is accessible for anyone with a smart phone, there appears to be a wider diversity of creators on Vine than in more professional entertainment industry. Academics have analyzed the impact of comedy Vines on the discourse of race, where #whitepeople and #blackpeople are popular tags.¹⁷ PhD student Jason Tham, in “Vine: Redefining Racial Stereotyping in Six Seconds,” emphasizes the lack of time to create

¹⁵ Friend, Tad. 2014. "The Stars of YouTube and Vine." *The New Yorker*, Dec. 15,.

<http://www.newyorker.com/magazine/2014/12/15/hollywood-vine>.

¹⁶ Knoblauch, Max. "The Beginner's Guide to Vine." Mashable., last modified Dec 11, accessed Dec 12, 2016, <http://mashable.com/2013/12/11/vine-beginners-guide/>

¹⁷ Laguna, Albert Sergio. 2014. *The Comedy of Race on Vine*. Huffington Post.

http://www.huffingtonpost.com/albert-sergio-laguna/the-comedy-of-race-on-vin_b_5509131.html.

Tham, Jason. "Vine: Redefining Racial Stereotyping in Six Seconds." Digital America., last modified -11-13T04:47:45+00:00, accessed Dec 12, 2016, <http://www.digitalamerica.org/vine-redefining-racial-stereotyping-in-six-seconds-jason-tham/>.

context for racial jokes on Vine, leading to the simple reproduction of racist stereotypes.¹⁸ He reflects on the incentives that minority Viners might have in participating in negative stereotypes about their own identities. Yale University Professor Albert Sergio Laguna is similarly concerned, writing that he wants to view the creation of racial comedy Vines as “repackaging harmful stereotypes through the transformative power of comedy. But after watching hundreds of videos by the most popular Vine users, I am pessimistic. There is often little in the way of satire or at the very least, thoughtful representations of race in the most circulated videos.”¹⁹ He does however, point to several Viners whose jokes are “smart, funny commentaries on race.”²⁰ Stereotypes, because they tap into a host of associations, convey a lot of information in a short period of time. This makes them a useful tool when trying to create a six-second joke. There is a reason why Vine is more associated with stereotype-based humor than Youtube. The connection between format and content provides a compelling reason why Vine should be documented and preserved for study as a distinct form from other web videos.

III. How to Preserve Vines

Now that the case has been made for the archival interest in Vines, all that remains is instruction on how to go about the digital preservation of Vines. Unfortunately, no one tool exists that will capture all of the information required for archival best practices. In an update to the Vine blog, Twitter announced that it is

¹⁸ Tham, Jason. "Vine: Redefining Racial Stereotyping in Six Seconds." Digital America., last modified - 11-13T04:47:45+00:00, accessed Dec 12, 2016, <http://www.digitalamerica.org/vine-redefining-racial-stereotyping-in-six-seconds-jason-tham/>.

¹⁹ Laguna, Albert Sergio. 2014. *The Comedy of Race on Vine*. Huffington Post. http://www.huffingtonpost.com/albert-sergio-laguna/the-comedy-of-race-on-vin_b_5509131.html.

²⁰ Ibid.

“working on building an export tool to make it easier to download your Vines.”²¹

However, there is not a stated timeline for the tool’s development or details on what it will provide. For the present, archivists need to rely on third-party tools or create their own in order to preserve Vines.

Vine is not primarily a video format technology, like a U-Matic or VHS tape. It relies on digital video formats that are available elsewhere. Its uniqueness lies in the technical restrictions imposed by the mobile app and the social media interactions it creates. For this reason, it is insufficient from an archival perspective to merely download Vines and handle them as discrete entities. Archivists will be interested in capturing the context of Vines as well. Ideally, archivists would preserve or document information in all of these areas: how Vines were shot, their technical specification, individual videos, the looping aspect, the social media metadata associated with a video, what the Vine platform looks like, and the provenance of individual Vines. By combining different documentation and preservation strategies, all of these areas can be at least partially captured.

The following sections reflect my experience using some of the available tools for preserving Vine. While some did not work as anticipated, interested readers are encouraged to do their own testing in case functionality differs for different computing environments. For my tests, I worked on a 2011 MacBook Pro running, at different points, OSX 10.9.5 and 10.10.5. For web browsing I used Firefox, Chrome, and Safari.

A. How Vines Are Shot

²¹ "Discontinuing the Vine App: FAQs." vinehelpcenter., accessed Dec 12, 2016, <http://help.vine.co/post/152688513385/discontinuing-the-vine-app-faqs>.

Although users can log-in and watch Vines through a computer or Xbox, Vines can only be created through mobile devices. Users shoot Vines by pressing with a finger within the viewable image on the mobile screen. Releasing the finger before the six seconds are up creates a cut. Users start a new shot by again touching the screen. Vine includes several optional tools in order to improve shot quality and make more complicated edits possible. For more stable shots, there is a grid and a level to help the user see if the camera is steady. The “ghost” tool shows a semi-opaque image of the previous shot as a reference for the next. It is frequently used for stop-motion editing. Users can also turn on the mobile flashlight for a little bit of lighting. Vine has a draft feature so users can work on multiple Vines at the same time or take breaks.

While Twitter has said that it will continue to support the Vine.co website for viewing, the mobile platform for creating and uploading videos is going away. Although the announcement was made in October 2016, the mobile app is still, as of this writing in December 2016, functional. One way to document the experience of shooting a Vine would be to interview Vine users and create a video to show how they interact with the app on their phone. Such a video could be embedded in a digital finding aid to help researchers. Understanding how Vines were created is important for interpreting to content of Vines.

B. Technical Specifications

The technical specifications of Vine were chosen to prioritize quick loading on mobile phone. Videos made through Vine are inherently compressed. According to Vine co-founder and engineer Colin Kroll, videos encode to H.264 as a Vine is recorded, with

a variable frame rate usually between 22-30 FPS.²² Once the video is uploaded to a Vine server, additional transcodes are created at different bit rates “for different connectivity scenarios.”²³ Initially, Vine’s resolution was limited to 480x480 pixels but, in March 2015, Vine increased the possible resolution to 720x720.²⁴ Shortly after, in July 2015, Vine added an HD option in its user settings. Whether or not the HD setting is greater than 720p is “unclear.”²⁵ I was not able to find documentation about the HD setting. I also was unable to find a source confirming which wrapper Vine uses for their initial transcodes. I believe it may be .MP4 because inspecting the video element on the page of an individual Vine reveals, among other things, “

poster=https://v.cdn.vine.co/r/thumbs/8042DC45511417589000788709376_54c7dbc96e4.41.0.97D37151-E301-4140-97DC-

[E72A2E6A7BC6.mp4.jpg?versionId=4v.LQsi3ajw5iNW0p1898a6vxHFADK4m](https://v.cdn.vine.co/r/thumbs/8042DC45511417589000788709376_54c7dbc96e4.41.0.97D37151-E301-4140-97DC-E72A2E6A7BC6.mp4.jpg?versionId=4v.LQsi3ajw5iNW0p1898a6vxHFADK4m).” This appears to be a thumbnail, in which case, “.Mp4.jpg” might refer to a still .JPG created from an .MP4 video. Without knowing the original container format, it is impossible to verify that a video has not been transcoded as a part of the download process.

Once a Vine is downloaded, however, its file properties can be determined through the use of MediaInfo or a similar program. Since Vines are inherently compressed, archives can store several copies of the original file without using tiered file sizes for preservation masters, mezzanine files, and access copies.

²² Pavlus, John. "How Vine Satisfies its Need for Speed." MIT Technology Review., last modified Jan 30, accessed Dec 12, 2016, <https://www.technologyreview.com/s/510511/how-vine-satisfies-its-need-for-speed/>.

²³ Ibid.

²⁴ Newman, Jared. "Vine's Video Quality Jumps to 720p." PCWorld., last modified -03-30, accessed Dec 12, 2016, <http://www.pcworld.com/article/2903656/vines-video-quality-jumps-to-720p.html>.

²⁵ Haselton, Todd. "Vine for iOS Update Adds HD Setting, Discovery Feature." TechnoBuffalo., last modified July 10, accessed Dec 12, 2016, <http://www.technobuffalo.com/2015/07/10/vine-ios-hd-video/>.

C. Individual Videos

Separating Vines from their platform to save as individual videos may be the easiest part of preserving Vine. Many services exist for downloading videos; some are specific to Vine and others can also be used for other sites like Youtube. They allow users to download both their own Vines as those of others. Both mobile application and web-based services exist. Examples of apps for downloading Vines include SaveDrive, VineTV, and VineGrab for iOS and VinVid Downloader and vDownloadr for Android. Most of the apps cost a few dollars or have in-app purchase options for additional features. Mobile downloaders work by having someone log into their Vine account, then tap on videos to download to their phone's camera roll. From there, the videos can be transferred from the phone to a computer. The user typically does not have control over file format or size. Since the mobile apps often require logging-in to a Vine account, they may not be usable after the Vine app disappears. It depends on if they are pulling from the Vine website or the app itself.

Examples of computer-based downloaders include Vine Deck and Clip Converter. Clip Converter allows some control over the file format and size of the download. Unlike the mobile apps, computer-based downloaders typically do not require a user to log into Vine. Users download a video by inputting a video's unique link, then waiting for the video to download to the computer. On a computer, finding the link to a Vine can be a little more complicated than it appears.²⁶ One has to navigate to a Vine's unique page. This can be done by clicking on the three dots to the top right of a Vine, next to the

²⁶ Do not try getting the link by clicking the link icon that appears when you click on the arrow share button. I tried this several times and nothing happened.

creator's username. Select "View Post Page" from the menu. The URL can then be copied from the address bar.

An area of concern when selecting a video downloader is whether or not the service transcodes the Vine, changing it from the original. I will not make a recommendation of which particular service to use because I only tried a selection. However, it seems likely that most of the services handle the source videos similarly. I downloaded the same Vine with three different services: SaveDrive for iOS and Vine Downloader and Vine Video Downloader on my laptop. I then compared the files in MediaInfo. All three created .MP4s with the same technical specifications. However, in the case of the video downloaded from SaveDrive, I had to make sure to save the file without opening it in QuickTime. Saving the video while previewing in QuickTime converted the file to QuickTime .MOV. The QuickTime video had several differences from the .MP4, including a different codec, larger file size and bit rate.

Since Vine downloaders extract video from the Vine platform, they do not maintain the context. Vines stop looping and lose the metadata found in their description and comment sections. Vine download services can be an important tool for preserving individual videos, but are insufficient for documenting the Vine context.

D. Loops

Like animated gifs, part of the appeal of Vines is that they loop. However, unlike gifs that can be set to loop within the file, Vine loops are created through the platform. Without intervention, a downloaded Vine only plays once. Archives might consider keeping the downloaded file as is for the preservation master, but then creating a looped access copy through editing software.

E. Vine Platform Appearance

It is impossible to know how Vine looked and the kinds of interactions it invited just by watching isolated videos. For this reason, archivists can employ web archiving tools such as Rhizome's Webrecorder.io to document. Web archiving tools attempt to capture the look and functionality of an entire webpage by creating a .WARC file. Unfortunately, web archiving tools are relatively new and still have a hard time capturing more dynamic content such as video. When I tried creating .WARCs of Vine pages with Wget, a command-line application, the resulting pages were blank. I had better luck with Webrecorder. Webrecorder is designed to capture dynamic content by recording any activation on a page during a recording session. However, while testing Webrecorder, I was not able to capture all of the videos I tried to activate by mousing over or clicking on them. Initially I thought I was not able to capture any video, because none of the videos appeared to load during the recording session. However, when replaying the .WARCS in Webrecorder, I did see that the banner video at the top of the Vine.co homepage and "Essentials" playlist were able to be played back, if only for how long I was on that page while recording. By accident, I also discovered that one of the videos on my personal page had recorded when I heard it after leaving the Webrecorder playback session open for ten minutes. However, the loop stopped and would not play again when I moused over it. For these reasons, it is very difficult to tell whether or not a video has been captured. As a result of the kinks in Webrecorder, it is not a sufficient tool for capturing Vines. However, it does give a sense of the website's layout. The videos just look like photographs.

F. Social Media Metadata

As a social media platform, Vines contain user assigned descriptive metadata meant to contextualize videos and aid discovery. The description section appears next to the video. In addition to telling a story about the video or making a joke, users often add hashtags, which function as both description and link to other videos with the same hashtag. Since Webrecorder shows the way a webpage looks, it is possible to see the descriptions. Also, hashtags that are clicked on during a recording session can later be followed during replay to give a sense of the connection made between Vines.

Another part of the social media environment is the comments by other users on Vines that they did not make. Webrecorder was partially able to capture comments. I found that when I clicked on the link for comments during a recording, I could get the last three to load. However, when I clicked the link to load older comments, nothing would happen. I do not have a solution for how to capture comments. However, it is not a pedantic question only of interest to archivists. One of the Frequently Asked Questions from Vine's page about the app closure is, "Will I be able to download my captions and comments too?"²⁷ For now there is no answer other than, "We're still working out the details of what metadata will be included in the download but we totally hear you on this one! More news here as we get this work done."²⁸ Maybe Twitter will pull through, but it seems like a large expense for something already deemed unprofitable.

G. Provenance

Archives care about provenance, the custodial history of the objects in their collection. For moving images, this has typically included the "generation" of the image.

²⁷ "Discontinuing the Vine App: FAQs." vinehelpcenter., accessed Dec 12, 2016, <http://help.vine.co/post/152688513385/discontinuing-the-vine-app-faqs>.

²⁸ Ibid.

Generation refers to the relationship between an object and other objects created in the production and distribution of a moving image. Archivists differentiate between masters and duplicates, in large part because of the degradation of an analog image after copying. This distinction of generations is less important for digital objects because files are replicable without any loss in quality. However, archivists still care about provenance, because they want to know the originator of a file and whether or not it has been altered in subsequent iterations.

Tracing provenance is difficult for Vines because the structure of the social media network encourages the proliferation of videos. If a user likes a Vine, they can repost it (revine) to their own feed. An archivist looking for Vines to collect may not first encounter it on the creator's page. Additionally, Vines can be found on other platforms. From the Vine app, users can post to Twitter, Facebook, and Tumblr. People also create compilations of Vines. There are many Youtube channels that regularly publish "best of" Vine compilations. While the Vines that have been pushed off platform are the most likely to survive the end of Vine, they are more stripped of context. In order to preserve Vines, archivists should try to find the original posters of Vines.

Final Thoughts

Archives are perpetually under-funded, under-staffed, and buried beneath massive processing backlogs. As a result, it is unlikely that archivists will make a concerted effort to preserve Vines now while the platform is still running. Much information about the platform will be lost, though echoes of it will continue through the Vines that were pushed off platform. The technology that would make web archiving efficient and reliable is still being created. However, contemplating how Vines might be preserved is

still worthwhile. It gives us ideas for how to approach the end of video platforms to come.

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