

INNOVATING DIGITAL STORYTELLING METHODOLOGIES:
A VIABLE SOLUTION SHAPED BY MILLENNIAL DEMANDS

By

Ashley Tencer

Bachelor of Fine Arts: New Media

Ryerson University

2016

A Major Research Paper
presented to Ryerson University

in partial fulfillment of the
requirements for the degree of
Master of Digital Media
in the program of
Digital Media

Toronto, Ontario, Canada, 2017

© Ashley Tencer, 2017

AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I authorize Ryerson University to lend this thesis to other institutions or individuals for the purpose of scholarly research.

I further authorize Ryerson University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

I understand that my thesis may be made electronically available to the public.

INNOVATING DIGITAL STORYTELLING METHODOLOGIES:
A VIABLE SOLUTION SHAPED BY MILLENNIAL DEMANDS

Master of Digital Media, 2017

Ashley Tencer

Master of Digital Media, Ryerson University

ABSTRACT

Social digital communities have influenced traditional practices of communication by creating gateways to mass self-expression. Sharing video snippets of personal moments online exemplifies this social transformation, forming a new and thriving component of the digital storytelling field. Currently, the social digital storytelling market is faced with challenges that prevent many individuals from easily communicating their story through an edited video format. This paper examines social modern storytelling to better comprehend the needs of users, and identify gaps and opportunities based on currently available tools. A viable solution is suggested in order to meet the demands of modern-day storytellers. Through content analysis of technology companies, storytelling platforms, and pertinent case studies, this paper determines the essential attributes to ensure the proposed solution's viability.

Keywords: social digital storytelling, millennial storytelling demands, video storytelling tools, multi-source footage, user-customization, video collaboration

ACKNOWLEDGMENTS

I would like to acknowledge my appreciation for the guidance and support I received over the course of producing my MRP. My supervisor Ramona Pringle provided me with the strategic advice necessary to address key elements of this paper. Her knowledge and experience were valuable contributions and provided me with a deeper understanding in this field of study. I would also like to thank my second reader, Shamini Sellvaratnam, for providing insightful feedback and positive reinforcement. I am grateful to the Master of Digital Media program for giving me the flexibility to further pursue an area of interest that embraces my passion. And finally, I would like to thank my family and friends for supporting throughout this incredible journey.

DEDICATION

This paper is dedicated to the Master of Digital Media's Program Administrator, Sonya Taccone. She has given me inspiration by sharing her personal stories utilizing digital storytelling tools. Sonya inspires me for not only choosing to take advantage of these opportunities, but more importantly for who she is as a person. Sonya is a prime example of putting others before herself. She takes such an avid interest in the students of the Master of Digital Media program and cares deeply for them. Her commitment and ongoing involvement is an example of her exceptional character. Sonya deserves to be recognized for her genuine nature and unconscious devotion to the students in this program. Thank you for cheering me on every step of the way and enhancing my graduate school experience.

TABLE OF CONTENTS

AUTHOR'S DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGMENTS	iv
DEDICATION	v
TABLE OF CONTENTS	vi
INTRODUCTION	1
RESEARCH OBJECTIVES	3
RESEARCH METHODOLOGY	4
STORYTELLING TRENDS IN THE INFORMATION AGE	5
BACKGROUND INFORMATION	5
COMPETITIVE LANDSCAPE	6
<i>Instagram</i>	7
<i>Snapchat</i>	8
<i>Memories by Apple</i>	10
REVIEW OF CASE STUDIES	11
<i>Automatic Editing of Footage from Multiple Social Cameras</i>	11
<i>Social Practices around Personal Videos using the Web</i>	12
<i>Web-Mediated Communication: In Search of Togetherness</i>	13
ANALYSIS	15
OUTCOMES	18
MULTI-SOURCE FOOTAGE	18
SIMPLICITY FOR END-USERS	19
USER-CUSTOMIZATION	20
CALL-TO-ACTION FOR ONLINE SHARING	21
CONCLUSION	22
REFERENCES	23

INTRODUCTION

Storytelling is an ancient practice that is defined as the act of sharing stories both socially and culturally. Within the present Information Age, digital storytelling continues to grow in popularity, resulting from the development of technological advancements. The Information Age refers to the period of time following the Industrial Revolution and supports innovation of new technologies, user devices, and interactive methods. Technology's breakthroughs have fostered independent storytelling capabilities, making them commonplace in digital-infused cultures. Consequently, the increased usage of social cameras, a term used to describe multimedia documentation by groups of people involved in the same activity, has become a ubiquitous and inescapable act. The rise of social cameras has led to the phenomenon of documenting personal activities for independent modern storytelling, commonly practiced in social environments. Social media platforms are often used as gateways to self-express stories by digitally sharing experiences of content captured by social cameras. The arrival of new outlets, such as Instagram, Snapchat, and Memories by Apple, attempt to cater to individuals in addressing their longing modern demands; however, efforts to date are deemed unsatisfactory, given that they do not meet all areas of independent digital storytelling on a collective basis.

This research paper endeavors to provide insight into a viable solution that overcomes existing barriers to storytelling caused by current market limitations. This approach is intended to be suited for casual storytellers in order to better target the needs of the millennials-turned-producers generation. By conceptually designing an ideal model for independent digital storytellers, boundaries of innovation can be expanded to comply with millennial users to satisfy their needs. Scholarly articles, case studies, and press releases are applied in researching digital

storytelling, as well as understanding technologies impact on the storytelling industry, current storytelling practices, available platforms, and industry gaps.

RESEARCH OBJECTIVES

This research paper analyzes storytelling trends among contemporary millennial users, to better comprehend independent video storytelling in current social settings. The objective is to discover the way people want to use digital storytelling tools and highlight the essential elements necessary to meet millennial user's storytelling demands. Understanding this information will facilitate the development of a potential solution.

Research indicates that many individuals seek digital storytelling tools that allow them to conveniently generate personal stories through collaborative user-generated video content, in order to achieve a successful edited video product. This style of collaborative video storytelling is most often applicable in cases where individuals share overlapping experiences and desire an exchange of multimedia content for personal gain. While applications currently on the market support certain elements of these requirements, available platforms fail to incorporate all aspects in a collective fashion to achieve the user's desired outcome. The research presented in this paper is intended to influence and guide the process of developing a viable storytelling solution by examining and understanding the following:

- Effects that the information technology revolution had in shaping personal storytelling
- The industry's technical gaps that hinder digital storytelling
- Existing platforms with individualized features and functionalities that support customized video storytelling
- The strengths and weaknesses of current methods for video recording, video reviewing, and video editing strategies and practices
- Evidence that verifies and validates the need for creating and implementing better storytelling tools

RESEARCH METHODOLOGY

A variety of methodologies were exercised in an effort to address the stated research objectives. Data and literary sources include scholarly articles, academic journals, research papers, case studies, press releases, blog posts, online marketing domains, non-profit organizations, and technology media properties. The methodologies utilized within these sources consist of case studies, in-person interviews, and questionnaires, in order to gain a better understanding of current storytelling practices and personal desires.

Information from the aforementioned data sets, including charts, graphs, diagrams, and numerical statistics, were applied to formulate concrete evidence through interpretive analysis. A literature review was produced in order to fully comprehend the foundations of digital storytelling. Historical and theoretical frameworks were applied to corroborate evidence for the purpose of qualifying the information and conclusions presented in this paper. Additional research was obtained via first-hand experience with available independent digital storytelling platforms. The information gathered from these storytelling outlets were synthesized and investigated to determine success rates of several storytelling features and functionalities. Grasping a solid understanding of what makes certain features more attractive versus less desirable, influenced the key elements presented in the proposed solution, in order to validate its credibility.

STORYTELLING TRENDS IN THE INFORMATION AGE

Background Information

Sociologist Manuel Castells (2010) indicates that digital networking technologies reinforce the power of networking socially, channelling the “emergence of a new social structure” (p. 14). Castells addresses the substantial effects of technological advancements in the Digital Age, by noting how wireless communication transforms traditional means of communication, thus revolutionizing endless opportunities of self-expression. Communication via peer-to-peer networks (i.e. blogs, vlogs, and podcasts) allows for altering of digital content online. This was a pivotal point as these acts of engagement led to contemporary forms of mass self-communication which stemmed from the innovation of millennials-turned-producers (Castells, 2010).

This can be further illustrated through the examination of YouTube’s revolutionary success. YouTube supports the consumers-turned-producers phenomenon by giving users the freedom to creatively express themselves through independently produced video content. The success of YouTube is also primarily influenced by the type of medium that the platform offers. Videos are considered universal visual literacy, which signifies that information presented in this format provides an effective way for people to easily understand what is intended to be communicated by the sender (Lasquite, 2015). Visual communication (i.e. images, videos, charts, and maps) are said to be the most preferred style for delivering information due to its expediency and brevity (Lasquite, 2015). Video mediums can be highly appealing as they allow for opportunities to deliver meaningful and complete stories in a relatively concise period of time.

Mass self-communication grants millennials-turned producers with the opportunity to express themselves through videos that live in online social communities. Social media platforms have become increasingly flooded with personal video content, making videos the most popular method to consume digital content online. Facebook is reaching 8 billion video views daily, which translates to 100 million hours of daily video watch time, while Snapchat reports a whopping 10 billion videos consumed daily (Constine, 2016; Karhoff, 2016; Mawhinney, 2017). It is evident that many people are striving to communicate through the use of stories; however, these striking numbers do not necessarily indicate whether their intended message is successfully conveyed.

Pew Research Centre (2012) analyzes big data trends regarding online engagements by comparing edited videos vs. raw footage. The study demonstrates that the majority of users upload raw video footage, yet, over half of the most viewed videos have in fact been edited. This data indicates that there is a stronger preference towards videos in an edited format, yet fewer people are inclined to spend the effort creating an edited version. This is a result of current video editing obstacles, such as lack of time, effort, ease, technical capabilities, and access to editing software, making it difficult to execute independent digital storytelling.

Competitive Landscape

Technology companies recognize the growing desire of consumers to document experiences and memories with ease via digital formats, specifically by means of a video medium. From inception, Instagram, Snapchat, and Apple Inc. [Apple] continue to introduce diverse approaches to improve and enhance storytelling capabilities best suited for their target market. By examining the evolution of Instagram, Snapchat, and Memories by Apple, it is

understood that each company adapts to satisfy digital storytellers by altering past versions to meet new demands of its target market.

The scope of research for this section includes selective information concerning each platform. Related examples are drawn from existing research to demonstrate an overall understanding of each platform's storytelling theme.

Instagram

Instagram's early version was designed for web and mobile as an internet-based photo-sharing application. Founders Kevin Systrom and Mike Krieger, expressed their intention when initiating Instagram, which was to "...change and improve the way the world communicates and shares" (Instagram, 2012, para. 1). Since launching in 2010, the company remains true to these values. Throughout the platform's existence, new features and functionalities continue to be introduced to satisfy Instagram users in socially communicating personal stories.

One of Instagram's earliest and most prominent priorities focused on allowing users to edit images to produce and share quality materials that are personally tailored to the user's preferences. Instagram filters were created for users to easily edit their photographs with a variety of styles. Cole Rise, the creator of many original Instagram filters (i.e. Sierra, Mayfair, Sutro, Amaro and Willow), worked as a commercial photographer with limited time to edit his photographs, leading him to design his own custom-made filters as a quick-fix solution (Johnson, 2017). The Instagram community implemented Rise's unique photo-editing techniques to enhance the user's experience, by providing them with an effective way to change the image dynamic, in order to produce and share their desired outcome.

An ongoing goal for the company involves creating a positive experience for its users by considering effective navigation. The application offers features that make it easy to understand

while also simplifying the browsing process. In 2012, Photo Maps was implemented as a feature to address constrained, inefficient photo browsing. The feature provided users with an organized approach to view photos on a visual map, in order to better display the location in which the photo was captured (Instagram, 2012). Alternatively, Instagram's former approach was for users to tediously scroll through countless pages to find their desired image. Instagram's tagging functionality presents another method for organizing and managing pictures efficiently. Referred to as Photos of You, this feature was adopted in May 2013 and provides a new, simple, and useful strategy of browsing content specific to persons or accounts in an orderly fashion (Instagram, 2013).

Pertinent to the focus of this paper, Instagram extends opportunities to expressively communicate stories by adding a new video element. When compared with Instagram's prior model of static images, Videos on Instagram, released in June 2013, provides users with enhanced dynamic storytelling capabilities. (Instagram, 2013). Additional changes were made with respect to the application's functionality in February 2017, when Instagram introduced a carousel feature. This feature allows users to share up to a total of 10 photos and videos (formerly one photo or video) in a single post, incorporating an enhanced dimensional experience (Instagram, 2017). The press release for this feature explains how the tool can be utilized in the event of a friend's surprise birthday party by sharing various instances captured during the evening.

Snapchat

Founded in 2012, Snapchat (formerly Snapchat Inc.) commenced as a mobile multimedia application supporting image messaging based on its transient scheme. Given Snapchat's short-

lived multimedia assets, the platform promotes sincere and light-hearted material for social interactions. Snapchat's success hugely influences the storytelling market.

Snapchat's features and functionalities have evolved drastically since inception in 2012. The platform was initially designed to support transient photo sharing directly between users. As time proceeded, Snapchat extended forms of multimedia communication to include text and videos up to 10 seconds in length. In October 2013, the technology company released Snapchat Stories, a new way to broadcast moments with all Snapchat friends at once. This story feature enhanced the user's experience by expressing and viewing narratives through a series of chronological videos, rather than a single video or picture (Snapchat, 2013).

Snapchat continues to evolve by adding new features for users by offering greater practices for freedom of self-expressionism through collaboration. Our Story was introduced for Snapchat users who attend the same occasion, whereby users can contribute content and watch the event unfold from different perspectives within the community (Snapchat, 2014). This demonstrates a shift from a single perspective to a multi-perspective viewpoint, promoting greater engagement which makes for a more synergetic interaction. On May 23, 2017, Snapchat announced its most recent feature called Custom Stories, a new collaborative sharing mechanism designed for big events. Custom Stories enables the individual to create a collection of global and geofenced stories together with a selected group of Snapchat friends or users, while also controlling viewing permissions. This feature also allows stories from a given event to unfold from tailored multiple angles, adding another dimension to the overall app experience (Buxton, 2017; Etherington, 2017; Newton, 2017; Snapchat, 2017).

Unlike Instagram and Snapchat, Apple is not a social media platform, nevertheless, it provides a feature called Memories for personal multimedia storytelling. Memories was introduced on Apple's mobile operating system (iOS 10) in June 2016 as a way to bring memories to life in a personal and meaningful way. Apple News explains that Memories operates by automatically scanning all multimedia content from the user's Photos application, whereby the collection of content is then presented in an orderly fashion. Operating via advanced computer vision technology (i.e. on-device facial, object and scene recognition), Memories automatically generates albums classified by persons, places, and things (Apple, 2016).

Memory Movie is a feature embedded within Memories, which fosters automatically edited summary videos, and includes titles, thematic tunes, and cinematic transitions (Apple, 2017). As well, users are presented with a reasonable degree of control to quickly and easily edit the music, length, and content, from their pre-generated movie (Apple, 2017). Memories is constructed to also satisfy more advanced users who wish to go beyond the surface level tools and edit their Memory Movie in greater detail. While a greater effort is required from users to manage more complex edits, this level of customization allows users to achieve a higher level of satisfaction when evaluating the final product.

Although Memories is not a social media platform like Instagram or Snapchat, the company Apple recognizes the demand for independent storytelling within a digital environment. Subsequent to completing a Memory Movie, users are prompted to share their polished video with friends and family directly via social media platforms. There is also an option for users to export the Memory Movie to their personal device, providing endless gateways where stories can reside.

Review of Case Studies

The preceding Competitive Landscape section discusses digital storytelling tools by examining features and functionalities of widespread storytelling platforms. However, in order to better understand and identify the needs of millennial storytellers, this section shifts the attention from the available tools to the individuals themselves. The following case studies focus on consumer needs and behaviour as documented through research studies.

Automatic Editing of Footage from Multiple Social Cameras

This particular study examines multiple videos that are captured by social cameras at a given event and identifies an approach for delivering a coherent edited video as the final outcome. Social cameras are most commonly used to record group activities, such as special occasions, concerts, sporting events, get-togethers, travel and more. Given that videos can be recorded easily by anyone with access to a cell phone, large amounts of footage are often collected by each camera operator at a given event, capturing overlapping moments that they feel are important. This allows for video footage to be recorded from multiple perspectives of the same event and for a large amount of raw footage to be accumulated collectively (Arev, Park, Sheikh, Hodgins & Shamir, 2014).

The challenge then becomes how to conveniently synthesize and distill the abundance of footage into a produced version. The study proposes the implementation of automatic editing algorithms as a solution to reduce the total time spent editing raw data. While the automated approach saves a significant amount of time, the study notes that the drawback to this system is that the automation does not allow for personal editing enhancements such as replays, close-ups, and flashbacks (Arev, Park, Sheikh, Hodgins & Shamir, 2014). In summary, a relatively coherent

video can be achieved within a limited amount of time through automatic editing algorithms, however, this method limits users by providing them with minimal storytelling flexibility.

Social Practices around Personal Videos using the Web

A small scale analysis examined participant's video recording and editing habits, in which content that was collected and shared to produce an edited video product. The model case study focused on an Amsterdam high-school band concert, where parents gathered to watch their children perform. Although each parent was predominantly focused on documenting their own child, they were also interested in fellow parent's content because they believed it may have captured other interesting perspectives of the band and their child's performance (Guimarães, Cesar, Bulterman, Kegel & Ljungstrand, 2011).

Modern smartphone video cameras permit a vast degree of creative control to its users in terms of capturing video. These advanced properties ultimately enhance the overall appearance of the user's footage, with minimal effort or skills required. Despite providing a practical method for video recording, the available review and editing practices fail to meet the user's demands. Specifically, users possess high expectations for production content, yet are unwilling to laboriously search through recorded metadata in attempts to locate their desired footage, thereby lessening the user's experience (Guimarães, Cesar, Bulterman, Kegel & Ljungstrand, 2011).

Data from surveys found that most participants rarely looked at their recorded videos following the event taking place (Guimarães, Cesar, Bulterman, Kegel & Ljungstrand, 2011). A large number of media assets were collected during the one hour and 35 minutes high-school band concert, generating a surplus of video footage. Exploring the entirety of this data becomes challenging as the process demands an exorbitant amount of time and effort. Almost all of the participants surveyed indicated they would like to have better tools to edit videos. 100 percent of

participants surveyed, agreed they would like to know in which videos their friends or relatives are tagged, and also stated their preference for obtaining access to other people's footage. The majority of the participants believed that the video content they personally captured would be insufficient when creating a video production (Guimarães, Cesar, Bulterman, Kegel & Ljungstrand, 2011). During the interview process, participants expressed a strong desire to obtain the content captured by other participants who attended the same event, however, they were reluctant to make a request during the performance. The participants surveyed were keen on the idea of sharing their personal media with other parents in attendance, yet were not prepared to edit their videos for the reason that it would be too time-consuming and cumbersome. The study concludes that better annotation methods are needed to make it easier for people to search for subjects of interest in support of easier editing capabilities (Guimarães, Cesar, Bulterman, Kegel & Ljungstrand, 2011).

Web-Mediated Communication: In Search of Togetherness

This study examined particular groups of social communities and analyzed the participants to determine how relationships among its members can be strengthened. The case study used focus groups and web-based environments to examine complex interpersonal relationships and social contexts, within a specific community of diverse users. The study surmises the importance for members of a community to feel a sense of belonging pertaining to given social groups (Cesar, Bulterman, Guimaraes & Kegel, 2010).

Based on the observations outlined in this paper, a proposed solution titled MyVideos was introduced, a community-based video editing tool that is intended to improve relationships and form stronger bonds within a community (Cesar, Bulterman, Guimaraes & Kegel, 2010). The group experienced a sharing network and due to the reciprocal nature of exchanging

information, this lent itself well to developing closer ties with member participants. The extent and level of sharing digital content was directly correlated with the emotional intensity and interpersonal relationships (Cesar, Bulterman, Guimaraes & Kegel, 2010).

ANALYSIS

Instagram, Snapchat, and Memories by Apple all offer creative methods to express personal experiences, however, none of them collectively address all outstanding issues, including independent customizations, multi-source collaboration, multimedia surplus, and quick, simple editing practices. These issues in conjunction with pertinent case studies present a foundation for the analysis of research, reflecting the essential elements needed to facilitate a viable storytelling solution that meets digital demand.

Research supports that the act of editing video footage is an unappealing and unpleasant event for casual users, due to its intensive time-consuming process, acting as a primary disincentive for casual users. The paper titled “Automatic Editing of Footage from Multiple Social Cameras” proposes automatic algorithms as a solution to reduce the overall time spent editing video footage. Essentially, this system saves the users time but compromises their ability to control video edits. As a consequence of automatic algorithms, individuals are unable to achieve their desired production thereby devaluing the overall video outcome. The takeaway from this is that a personal touch is required in order to properly satisfy the user’s demand. Memories by Apple attempts to address this issue by providing users with control and power to personally curate the final outcome of their Memory Movie through independent customizations.

Memories succeeds in providing its users with the freedom of expression by offering a simple video editing solution that does not require a professional skill set, however, the platform fails to meet the demands of modern digital storytellers in other areas. Memories compiles footage by scanning multimedia content from Photos, which is generally single sourced media. Given the prevalence of social cameras, it is likely that more footage was captured by other members in attendance from the same event, yet this material is excluded from the final Memory

Movie's outcome. Since Memories does not incorporate collaborative features or multi-perspective viewpoints, the final production suffers due to a lack of content quantity and quality. In contrast, Snapchat's Custom Stories overlook editing tools that enhance the overall end result given the ephemeral aspect of the Snapchat model. Rather, the cornerstone of Custom Stories emphasizes collaborative social media expressionism. The paper titled "Social Practices around Personal Videos using the Web" concurs with Snapchat's multi-source functionality given the positive effects which it espouses. Not only does multi-source video footage provide complementary viewpoints creating an exciting and collaborative video, it also helps to eliminate missed opportunities by capturing essential moments.

While both editing tools and footage collaboration are essential components in making a successful final video, the process in which this outcome is achieved is of equal importance. Participants from the high-school band concert study, indicated that available tools do not offer simple practices for reviewing and editing purposes. Therefore, it can be deduced that the user's experience holds as much value as the end product. Instagram recognizes the significance of user experience design by allowing users to achieve their desired result quickly and easily. This is demonstrated through a number of innovative features that Instagram chooses to integrate within its platform. Filters widen the scope of the user's capabilities by providing an effective technique to edit their images as desired, without the need to possess professional editing knowledge or skills. Though filters are a great solution for photo editing, videos require a more complex editing method to drive the user's time and effort downwards. Moreover, features such as Photos of You and Photo Maps are used to effectively locate specific multimedia content. Although these methods are successful in decreasing the browsing process time, the search is limited to

accounts and locations. More detailed search methodologies are needed to locate specific content with greater ease in order to conveniently achieve their objective.

The points highlighted in this section can inform the required elements in search of a viable storytelling solution. This comprehensive analysis suggests that the best model should integrate quick and simple practices that encourage collaborative contributions, without compromising powerful editing tools, in order to deliver a polished video product.

OUTCOMES

The information presented in this research paper validates the demand for a viable digital storytelling solution which addresses the existing market gaps when involved in social gatherings. The resolution is to develop a community-based platform that aids in the transformation of multi-source user-generated video footage into concise video compilations, that effectively communicates personal stories in an innovative and authentic manner.

Based on data provided above, this paper establishes the essential elements required for developing a viable solution that meets the demands of today's millennial storytellers. The solution should include, (a) multi-source footage, (b) simplicity for end-users, (c) user-customization, and finally, (d) a call-to-action for online sharing purposes. Big data trends indicate a continuous demand for these offerings.

It is noteworthy to state that the aforementioned elements are all required to be accessible on a single platform in order for the solution to operate successfully. Each element is explained individually for the purpose of this paper.

Multi-Source Footage

Multi-source videos provide a unique approach to expressing personal stories. This technique integrates content captured from several people who experience the same event, in order to generate a condensed edited video which incorporates multi-perspective camera angles. The reason this can be achieved eventuates from the fact that cameras are ubiquitous in our daily lives, which permit activities to often be captured by many people from a variety of viewpoints. This results in a sizable collection of digital content from a given event, which can be utilized to produce a desired collaborative video outcome. Additionally, user-generated footage recorded by

social cameras often reflects a more intimate and personalized view, capturing material that the camera operator considers to be of great importance. Collaborating material captured by social cameras is a mechanism for collectively creating compelling and multi-perspective experiential stories.

The functionality of the multi-source footage feature operates as an open source initiative. This particular style refers to a pool of multimedia content whereby all participating users can access, view, contribute, and withdraw footage. By embedding multi-source functionalities within the ideal platform, it permits the same pool of footage to have countless video outcomes, as independent storytellers can each personally curate the final video to their particular liking without the obligation to compromise with others. This utilitarian feature stimulates a more dynamic end product by encouraging greater practices of collaboration due to its multi-perspective approach.

Simplicity for End-Users

While the considerable sum of footage provides a variety of opportunities for its users, it also generates a problematic surplus of data, making it difficult and frustrating to search through video material during the review process. Therefore, there must be a simple way for users to browse through footage in a way that does not discourage users from achieving their desired end-video. Tagging is a strategy that helps mitigate navigation challenges during the review process for a more enjoyable and effortless experience. As a common practice, tagging organizes multimedia categorically by people, accounts, location, and places, however, this strategy could be improved upon if all footage is tagged thematically according to the type of visual being displayed in movie formats. Adopting this detailed tagging technique would permit the surplus footage to become more easily searchable.

Individual contributors are responsible for thematically tagging their corresponding footage. The platform would organize this data by encouraging users to select a time range of footage and tagging it accordingly. Users can assign multiple tags to the same portion of footage and there are no restrictions as to what the tag can entail. Tags are to be selected from a pre-generated list embedded within the platform and users also have the option to add their own tags if it is not included, such as, in the case of names or tags containing multiple words. Individuals would then be given a total list of the tags contributed by all participating members, in which users can select any tag, bringing them directly to its appropriate range of footage. Therefore, the browsing process becomes simplified as the workload is dispersed among many participating members. This detailed tagging technique has a direct outcome on the user's experience by constructing a more manageable system, thereby reducing the current laborious browsing process. Thematic tagging will satisfy users by allowing them to discover their desired footage with minimal effort.

User-Customization

The desire for personal editing contributions remains an ongoing theme in this paper, suggesting that available video editing systems are too laborious. Individuals desire this freedom of ability and without it, there is intensive work needed to be put-forth, generating discouraging obstacles in achieving the desired outcome. The solution is to create a hybrid system that satisfies both objectives, minimal effort while maintaining maximum control over video edits. Founded on the premise that individuals record moments they deemed significant, it becomes possible to create an algorithm that constructs pre-generated videos in a linear fashion.

The solution's algorithm is based on the individual's preferences expressed through its detailed tagging methodology. Users indicate which tagging keywords they wish to be most

prominent in their end-video, and the platform will create a pre-generated video automatically based on these likings. Alas, systems that are entirely automatically generated are proven to be unsuccessful in pinpointing proper footage yearned for by users, thus it is necessary for more personal contributions to be made. Therefore, pre-generated videos would be used as a personalized starting-point, in which individuals could then add or remove footage, reorder content, create titles, adjust sound, integrate music, and incorporate cinematic transitions. These personalized editing contributions operate in the style of a drag-and-drop formation, whereby users can browse through the platform's given options (regarding editing style variations) and drop the selected item into the timeframe for implementation.

Call-To-Action for Online Sharing

The proposed viable storytelling platform recognizes and accounts for the demand of sharing personally-edited videos by embedding a call-to-action feature for online sharing. Upon completion of producing a video story, users are prompted with the universal icon for sharing. This symbolizes that the end-product can be shared via multiple distribution channels. The final video production can then be exported to the editor's device or distributed through social media outlets. This feature reinforces Castells' theory of mass self-expressionism by allowing users to communicate their story within their social circle. The call-to-action feature contributes to the solution by supporting communication via peer-to-peer networks.

The word storytelling is comprised of two words, story, and telling. Whereas multi-source footage, simplicity for end-users, and user-customization are all designed to facilitate the development of a successful video story, the call-to-action completes the *telling* process. It is important to distinguish the call-to-action feature from all other key elements since sharing the story is the final step of successful storytelling.

CONCLUSION

As a result of analyzing widespread storytelling platforms and reviewing germane case studies, this paper comes to understand society's latest desires, shaped by the millennials-turned-producers generation. To summarize, individuals are searching for a video storytelling solution that overcomes existing challenges and meets contemporary demands. According to the research presented in this paper, the four essential elements for the viable storytelling solution are, (a) multi-source footage, (b) simplicity for end-users, (c) user-customization, and (d) a call-to-action for online sharing.

The goal is to try and make it simpler for users to tell compelling stories while still addressing their need for digital self-expression. Many platforms provide outlets that make it easy for users to share personal stories, however, they lack the tools to tell a complete and expressive story in an edited video format. Unlike Snapchat, Instagram, and Memories by Apple, there must be a platform initially designed and constructed to offer a solution that delivers a complete story rather than adding new features as an attempt to satisfy modern-day digital storytelling demands.

A successful storytelling platform is one that provides people with the tools to create multi-perspective user-generated videos from social gatherings, in which users can conveniently navigate and control video edits. In order to personally curate an edited video, the four key elements must all succinctly co-exist within the proposed platform, whereby the final produced video can be distributed online.

REFERENCES

- Apple. (2016). *Apple previews iOS 10, the biggest iOS release ever*. Retrieved from <https://www.apple.com/newsroom/2016/06/apple-previews-ios-10-biggest-ios-release-ever/>
- Apple. (2017). *Enjoy your Memories in Photos*. Retrieved 3 July 2017, from <https://support.apple.com/en-ca/HT207023>
- Apple. (2017). *Photos for iOS*. Retrieved 3 July 2017, from <https://www.apple.com/ca/ios/photos/>
- Arev, I., Park, H., Sheikh, Y., Hodgins, J., & Shamir, A. (2014). *Automatic Editing of Footage from Multiple Social Cameras*. New York: ACM Transactions on Graphics. Retrieved from <http://www.cs.cmu.edu/~hyunsoop/SocialCamera.pdf>
- Buxton, M. (2017). Snapchat Is Letting You Create Custom, Personalized Stories. *Refinery29*. Retrieved 3 June 2017, from <http://www.refinery29.com/2017/05/155677/snapchat-custom-stories-collaborate-friends>
- Castells, M. (2010). *The Rise of the Network Society* (2nd ed.). Chichester: Wiley-Blackwell.
- Cesar, P., Bulterman, D., Guimaraes, R., & Kegel, I. (2010). *Web-Mediated Communication: in Search of Togetherness*. Raleigh. Retrieved from <http://homepages.cwi.nl/~garcia/material/webscience2010.pdf>
- Constine, J. (2016). *Facebook Hits 100M Hours Of Video Watched A Day, 1B Users On Groups, 80M On Fb Lite*. *TechCrunch*. Retrieved 3 May 2017, from <https://techcrunch.com/2016/01/27/facebook-grows/>

- Etherington, D. (2017). *Snapchat now lets you create custom stories for groups of friends and family*. *TechCrunch*. Retrieved 3 June 2017, from <https://techcrunch.com/2017/05/23/snapchat-now-lets-you-create-custom-stories-for-groups-of-friends-and-family/>
- Guimarães, R., Cesar, P., Bulterman, D., Kegel, I., & Ljungstrand, P. (2011). *Social Practices around Personal Videos using the Web*. Retrieved from http://journal.webscience.org/437/1/193_paper.pdf
- Instagram. (2012). *Instagram 3.0 – Photo Maps & More*. Retrieved from <https://instagram-press.com/blog/2012/08/16/instagram-3-0-photo-maps-more/>
- Instagram. (2012). *Instagram + Facebook*. Retrieved from <https://instagram-press.com/blog/2012/04/09/instagram-facebook/>
- Instagram. (2013). *Introducing Photos of You*. Retrieved from <https://instagram-press.com/blog/2013/05/02/introducing-photos-of-you/>
- Instagram. (2013). *Introducing Video on Instagram*. Retrieved from <https://instagram-press.com/blog/2013/06/20/introducing-video-on-instagram/>
- Instagram. (2017). *Share Up to 10 Photos and Videos in One Post*. Retrieved from <https://instagram-press.com/blog/2017/02/22/share-up-to-10-photos-and-videos-in-one-post/>
- Johnson, L. (2017). *Filter focus*. *TechRadar*. Retrieved 13 May 2017, from <http://www.techradar.com/news/filter-focus-the-story-behind-the-original-instagram-filters>

- Karhoff, A. (2016). *Social Media Video Content is About to Explode*. *Ama.org*. Retrieved 11 July 2017, from <https://www.ama.org/publications/MarketingNews/Pages/video-content-about-to-explode.aspx>
- Lasquite, M. (2015). *Visual Literacy and Visual Communication: Their Role in Today's Content Marketing*. *Visual Learning Center by Visme*. Retrieved 3 June 2017, from <http://blog.visme.co/visual-literacy-visual-communication-content-marketing/>
- Mawhinney, J. (2017). 42 Visual Content Marketing Statistics You Should Know in 2017. *Hubspot*. Retrieved from <https://blog.hubspot.com/marketing/visual-content-marketing-strategy>
- Newton, C. (2017). *Snapchat introduces custom Stories for capturing group moments with friends*. *The Verge*. Retrieved 3 August 2017, from <https://www.theverge.com/2017/5/23/15677712/snapchat-custom-stories-launch>
- Pew Research Centre. (2012). *Edited Footage vs. Raw Footage*. Retrieved 4 June 2017, from <http://www.journalism.org/2012/07/16/edited-footage-vs-raw-footage/>
- Snapchat. (2013). *Surprise*. Retrieved from <https://www.snap.com/en-US/news/page/5/>
- Snapchat. (2014). *Our Campus Story*. Retrieved from <https://www.snap.com/en-US/news/page/4/>
- Snapchat. (2017). *A Whole New Story*. Retrieved from <https://www.snap.com/en-US/news/>