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Promoting Awareness for the Cibachrome Association

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CIBACHROME
ASSOCIATION

Promoting Awareness for the Cibachrome Association

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Abstract

We completed our project on behalf of the Cibachrome Association of Marly, Switzerland to enhance their public awareness and outreach. Due to the technical nature of their materials, we focused on outreach methods that would benefit photographic curators, conservators and other interested members of the public. We created a revised, expanded website and a new Wiki article, using feedback from the Association's target demographics. This will help the Cibachrome Association effectively publicize their information and gather further public awareness.

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Authorship

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Results and Analysis	4.1: Jacqueline Berthiaume 4.2: Clay Oshiro-Leavitt 4.3 Victoria Niedzwiecki	4.2 Nicholas Cheng 4.3: Jacqueline Berthiaume	All
Conclusions and Recommendations	5.1 Clay Oshiro-Leavitt 5.2 Jacqueline Berthiaume	5.1 Victoria Niedzwiecki 5.2 Clay Oshiro-Leavitt	All

All sections listed as "All" were the combined work of all members of the group, with work distributed equally within the group.

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Executive Summary

Photography started as a method of physical image rendering using chemical processes and evolved over the past few decades into a completely digital process. As digital photography became more efficient and cost effective, there was a rapid switch from various photographic films, such as Cibachrome. After the bankruptcy of the photographic manufacturing company Ilford Imaging Switzerland, the Cibachrome Association was founded in 2013 to preserve the history and development of Cibachrome, inkjet and other technologies produced and researched at the site in Marly, Freiburg Canton, Switzerland.

The goal of this project was to determine the most effective methods of preserving knowledge about these technologies as well as to develop methods, such as a website and a Wiki page, to support this process. We worked with the Cibachrome Association to determine how information on Cibachrome and inkjet technologies could be archived and made more accessible.

The main demographic whom we were targeting were photographic conservators, but our project is also relevant to anyone else who may also be interested in the information that the Cibachrome Association has to offer. The Cibachrome Association's archive contains Cibachrome prints, historical materials, and technical research documents from Ilford Imaging Switzerland. Much of the information found in the Cibachrome Association's archive is not yet organized and inaccessible to the public. The Association believes that photographic conservators and others who are interested in these technologies should have access to the technical information that is currently located in the archive and be made aware that this information exists. All of the information contained in this archive needs to be made more reachable and publicized in order to keep this knowledge alive.

Many people may be interested in the information related to history and the technology used by Cibachrome. Through our research we determined the best ways to publicize this information and make it easier to access. Two methods that we researched included developing a comprehensive website prototype and a Wiki page. Both would contain information about both Cibachrome and inkjet's development and technical history. Additionally, we provided recommendations on designing a traveling exhibit, using social media, and digitizing their archive to inform the public about the Cibachrome Association's special resources.

We designed a questionnaire during website prototyping to gain feedback on its functionality, design, and quality of information. We talked with former workers from the Ilford Imaging Switzerland plant in Marly to determine both the technical properties and the cultural impact of Cibachrome and inkjet technologies. Based on this information, as well as considering the recommendations made by a previous WPI research team who worked with the Cibachrome Association in 2018, we identified new methods for the Association to expand its societal outreach.

In conclusion, our project identified and developed methods to enhance outreach and accessibility for the Cibachrome Association and the information contained in its very valuable archive.

1.0 Introduction

Since the camera's creation in the 17th century, the process of creating a print involved development through chemical processes (The Library of Congress, 2010). Prior to the digital era that started in the 1990s, the rate of film innovations allowed ample time to document the evolving technology (Estrin, 2015). However, as new, efficient, and cost-effective technologies were introduced, there was a mass abandonment of film for artistic, commercial, and industrial uses. As a result, many companies discontinued the production of film. One such company, Ilford Imaging Switzerland, stopped producing their film, Cibachrome, in 2013. Following this discontinuation, a nonprofit organization, the Cibachrome Association, was founded in 2013 to preserve the history and development of Cibachrome as well as other technologies developed at the Ilford production site in Marly, Freiburg Canton, Switzerland.

The major concern facing the Cibachrome Association (2014) has been a lack of public awareness and outreach with regard to Cibachrome and related technologies. Additionally, their status as a non-profit combined with their entirely volunteer staff makes it difficult to fund outreach events and preservation efforts. These factors contribute to the Cibachrome Association's lack of publicity and the public's lack of general knowledge about Ilford Imaging Switzerland's products and the site's industrial history.

There are various methods that organizations use to effectively conduct public outreach. Other organizations such as the deCordova Museum in Lincoln, MA, also handles public outreach issues on a regular basis. One way to improve outreach is to maintain an active social media presence (Sarah Montross, personal communication, April 24, 2018). Museum exhibits are also a way to visually display content. Additionally, many organizations use websites for

relevant information about their activities and purpose to make it easily accessible (Scacca, 2017). Organizations or invested users also write Wikipedia articles for enhanced public awareness and information (Hube, 2017). These methods can be used to preserve and publicize disused technologies, as well as promote and publicize companies or organizations.

While other discontinued photographic technologies such as Kodachrome are well remembered, Ilford Imaging Switzerland's inventions, such as Cibachrome, or their research in inkjet technology, are not. The Cibachrome Association (2014) hopes to keep memories alive by making Ciba's research, technologies, and prints publicly available. However, the Association currently does not have a large internet presence, and their website is very limited in information and in localization options. Additionally, the archive containing the information that the Association aims to publish lacks organization and is largely unbeknownst and inaccessible to their target audiences, which include conservators, curators, photographers, and historians. This is especially important as there are other uses of the research behind Cibachrome in chemistry and preservation (Agudelo, Galliath, & Heikoop, 2018). The nanotechnology research conducted can be used in current research being done and the print preservation information can be used by conservators to compare damage done to other prints.

The goal of this project was to identify and implement methods to effectively raise public awareness of Ciba's technologies and legacy, as well as to develop prototypes for promising methods. To complete this goal, we identified best practices for raising public awareness. We identified two methods using online media systems to provide better visibility. Our objectives were to raise awareness for the Association via platforms such as a revamped website and a Wiki page for the Cibachrome Association. Through interviews with professional conservators and curators, as well as photographers who are interested in this technology, we obtained the

necessary information for these objectives. Through our work we prioritized and developed the best methods of outreach for the organization such as the development of an improved website as well as a more detailed Wiki page. By achieving our goal, we believe the Cibachrome Association will be able to raise its profile and extol the benefits of once highly prized technologies.

2.0 Background

As technology progresses, older technologies are often abandoned and forgotten. As a result, some organizations have formed to work towards properly documenting these disused technologies before their information is permanently lost. In this chapter we will discuss the ways in which organizations try to preserve relevant information about technologies that are no longer used, through marketing and public outreach. We will then delve further into the specifics of film photography. Finally, we conclude with a discussion of Cibachrome and the association dedicated to informing the public about this technology

2.1 Marketing Strategies

There are several methods that organizations use in order to promote themselves (Tracy, 2014). Raising awareness of an organization is not easy, and the best way to make information available to the public is through a marketing campaign. The marketing campaign can come in many forms. This section will review important and commonly used marketing techniques.

2.1.1 Marketing Research

When developing a marketing strategy, the first step is to conduct market research (Tracy, 2014). Before beginning a marketing campaign, organizations must understand how they can best market to their intended audience. Organizations should consider several important topics, such as the market size, or number of potential consumers. A common method to assess a target audience is through large-scale surveys. Online surveying platforms, such as Google surveys and Survey Monkey, allow an organization or a firm to quickly disperse survey questionnaires to a large audience. For more detailed and personalized information gathering,

one can use focus groups. Focus groups are small groups of people, in which a moderator directs a discussion about particular topics. This can offer more insight into the subject since members of the focus group can elaborate on open-ended questions and discuss topics in greater depth. Using the information gathered from this research, a marketing campaign can be launched. Marketing is a multi-faceted approach, and one of the many commonly used and relevant approaches is described below.

2.1.2 Social Media Marketing

In the 21st century, an important marketing technique is social media marketing (Gonzalez, 2017). Social media play an increasingly central role in how people communicate and utilizing these platforms can prove extremely useful to enhance outreach. Gonzalez states that "Social media's ability to make cultural institutions more accessible has transformed the way in which these institutions operate" (paragraph 1). Many firms use social media as a form of public outreach. Market research firm GlobalWebIndex states that 40% of people follow their favorite brands on social media (Trifonova, 2019). This widespread usage of social media allows organizations to create significantly higher visibility and value for themselves (Padilla-Meléndez & Rosa del Águila-Obra, 2013). Museums with a higher social media presence get more website visits, and in return, attain higher publicity levels.

In New York City, the world-renowned Museum of Modern Art (MoMA) has an extremely active social media presence (Museum Revolution, 2019). This is essential in maintaining the museum's relevance. According to the former Chief Digital Officer, Sree Sreenivasan, "You want to build an audience before you have the big launch, rather than just sit on something and have it appear. Rather than hoping for an audience, you can build an audience" (Gonzalez, 2017, paragraph 2). MoMA's Chief Communication Officer, Kim Mitchell, further

develops upon this information in an interview where she explains the expansive role of social media in MoMA's outreach (Museum Revolution, 2019).

> MoMA is fortunate to have built a total social footprint of some 7.5 million followers. From the beginning, our strategy has been to speak in conversational tone about our program, but not exclusively so—we share interesting topics in the world of culture at large, and take the time to listen and respond (paragraph 2).

Mitchell stresses that in order to attract followers, the best strategy is to analyze the target audience's interests and provide content relevant to those audiences. By listening and responding to trending topics around the world, MoMA stays relevant on social media. Additionally, MoMA leverages online social media to bring part of the museum experience to the general public.

> We try to give our followers special access to the museum's program and staff, whether through a curator-led live video tour of the galleries or a behind-the-scenes Instagram takeover by an artist. It's like being a good guest at a party—we want to contribute to a lively dialogue in a constantly changing landscape (paragraph 2).

By using social media as a way to provide inside access to museum information, the public may feel more directly involved in the material. This can be used to generate deeper interest from the public in what else the museum has to offer, thus encouraging more visitors and greater public visibility.

The British Museum of London also uses social media to bring museum experiences to the public (Hootsuite, 2019). The British Museum is known for its rare and exotic collection of art and artifacts from around the world. Hootsuite – a social media marketing firm – interviewed Kate Carter, the museum's Senior Digital Marketing Manager about the museum's social media goals.

And so, social is kind of the perfect space really for us to be trying to tell that story. The audience we have across Twitter and Instagram is in the millions. We hope that that will continue to grow. And it's hugely international; it's between 80 to 90 percent overseas. So, what we believe we're doing with social is really fulfilling our mission, which is to bring this world collection to the world (paragraph 5).

With social media marketing, organizations are able to reach a much wider range of audience than they would originally. Using social media, museums can engage otherwise unreachable audiences and generate global interest in their material.

There are other major factors involved in social media marketing in addition to advertising and market research. Museums must contribute to social media platforms with quality content (Gonzalez, 2017). The Metropolitan Museum of Art in New York City (The Met) is one example, whose Facebook page has reached over 92 million people. Their Facebook page contains highlights from sections such as the digital gallery, "One Met. Many Worlds", and the "Heilbrunn Timeline of Art History" on the museum's website. Gonzalez states of the latter that "This feature is an unprecedented educational tool that leads visitors through a chronological tour of the museum's collections with accompanying essays, and it accounts for roughly one-third of the museum's web traffic" (paragraph 7). This kind of promotion allows individuals to learn about and experience museum pieces and exhibits online, which aligns with the Metropolitan Museum's goal of reaching out to those who would otherwise not attend a museum. By using social media to publicize online content, they are able to bring a part of the museum experience to the larger public.

2.2 Digital Outreach and Design

In the digital age, the internet provides a potent tool for outreach and awareness. As of 2018, 51.2% of the global population has internet access, and 80.9% of the developed world has internet access (ITU, 2019). Out of the many ways to raise mass awareness about a subject, the internet certainly has the widest possible reach, whether it be through websites, blogs, social media, or online resources. Both websites and the open source encyclopedia, Wikipedia, are considered strong ways to promote outreach.

2.2.1 Website Design

When developing a website, the design must focus on creating a positive user experience (Scacca, 2017). Websites often serve as the first impression for individuals searching for a specific organization or topic. A well-designed, clear website conveys authority, organization, and professionalism. During the design phase, one must consider the target demographic of the site. To maximize appeal, demographics can be broken down into components such as age, preferred language, and cultural background (Hermeking, 2005).

The targeted age group plays a critical role when designing a website (DeFazzio, 2012). Younger, more tech-savvy (25 years old or younger) age groups find modern, sleeker UI (user interface) designs more appealing (Scacca, 2017). This includes features such as persistent headers, dropdown subsections, and heavy social media integration. As the age of the target user increases, the design of the website must change as well. Typically, users of an older age group prefer simpler, more straightforward designs, often due to a lack of familiarity with the Internet. Strong, clear visual elements and a simple website structure with obvious navigation are all desirable. Straightforward design reduces potential confusion and frustration for the user.

It is also important to consider the culture and language of the user. The user's culture has a profound impact on preferred website design. Different cultures have different expectations for how content and material are delivered (Hermeking, 2005). Depending on the culture, graphics, color palettes, and page layouts can be interpreted in different ways, leading to confusion, misunderstandings, and potential offense (Miraz, Excell, & Ali, 2016). The meaning or intent of certain phrases and metaphors can easily be lost in translation, creating a confusing experience for the user.

Websites must be properly localized depending on the culture of the user (Miraz, Excell, & Ali, 2016). This poses its own problems; the most critical is how the website determines its localization. Localization – the process of adapting a website to a particular location through changing the language, measuring system, date/time format – is vital to creating a positive user experience. There are two primary methods of determining the localization: IP addressing, and user location selection. IP addressing as a means of localization has one major shortcoming. If a user is travelling, the users' IP addresses will reflect their current locations, which may result in the website loading a language other than the one the user desired. There are also issues that arise with user-selected localization. To maximize comprehension, websites often use national flags to represent different languages. However, this can have negative consequences, as languages spoken in many countries may be solely selectable by one representative nation's flag. For example, a Mexican internet user may need to select Spain's flag to have the website display in Spanish, or a German speaking Swiss may need to select a German flag to render the site in German. While the functionality accomplishes localization, it has the potential to offend users.

2.2.2 Prototyping for Testing

Website design can be rapidly developed through the use of prototyping and user testing. Both Binx (2017) and Rettig (1994) argue for the use of low fidelity prototypes when developing and testing potential designs. Low fidelity prototypes are simple mockups that focus on core functionality of a design and are often made of paper or similar materials. The use of low fidelity prototypes allows for rapid iterative development of potential designs, and the quick production allows for continual user feedback. As the prototypes are made out of simple materials (paper, etc.), developers have less attachment to their prototypes, resulting in less resistance to implementing new changes or designs. Similarly, the simple, functionality-focused prototype keeps user feedback focused on core functionality versus aesthetics. Once the core functionality has been properly developed using a low fidelity prototype, developers can move on to medium and high-fidelity prototypes to develop the aesthetic design.

Once a prototype is developed, it is important to solicit user feedback to improve the next design (Rettig, 1994). One of the best ways to do this is with user think-aloud testing. In think-alouds, a user interacts with the prototype and is assigned tasks to execute. While the user is working with the prototype, they vocalize any impressions, thoughts, or questions they have. This allows the developers to gain valuable process data (thoughts, questions a user has while executing a task) so that they may streamline the user processes in further iterations.
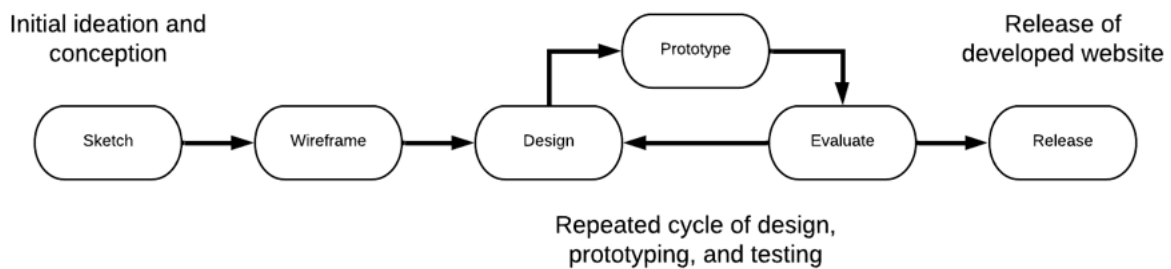
Figure 2.1-0-1 Iterative design process for website creation

2.2.3 Wikipedia

Along with websites, Wikipedia is an increasingly relevant and well-known source of public information in the digital age (De la Calzada & Dekhtyar, 2010). Therefore, establishing a strong Wikipedia presence is critical for public awareness. Wikipedia is an open-source, editable encyclopedia (Wikimedia Foundation, 2019). In an average month, Wikipedia receives over 15 billion visits globally. While Wikipedia lacks traditional peer reviewing, Wikipedia's use of crowd-sourced information and editing can result in articles that rival, if not exceed, what is available in traditional encyclopedias (De la Calzada & Dekhtyar, 2010). However, Wikipedia can fall victim to biased editing. In Hube's (2017) analysis of bias in Wikipedia, he determined that biases are most prevalent in developing, so-called "controversial" articles. Such articles typically involve current events and politics. Meanwhile, Hube (2017) and De la Calzada and Dekhtyar (2010) agree that articles that are "stable" (an article that is mainly edited for grammatical fixes, not content) are very credible and representative of the subject.

While Wikipedia is editable by any user, there are several potential difficulties that may arise while editing and contributing information. To preserve the integrity of Wikipedia, new contributors are prohibited from publishing new pages (Wikimedia Foundation, 2019). In order to publish a page, a contributor must have contributed a minimum of 10 approved edits to other

pages. Once they reach that quota, the contributor may create a page. The page must go through a review and vetting process before it is published. The newly submitted page must adhere to established Wikipedia formatting rules and must follow Wikipedia's rules for citing information.

2.3 Archival and Museum Outreach

In order to assess how items in the Cibachrome Association's archive could potentially be used, we interviewed several people with experience in archive management and museum outreach. First, we interviewed Ms. Amy Smid, access archivist at the Worcester Polytechnic Institute in Worcester, MA (see Appendix B), to gain insight on ways to digitize and publicize archival information. Then, we interviewed Ms. Nancy Burns, curator at Worcester Art Museum in Worcester, MA (see Appendix D). Ms. Burns gave valuable insight into the logistics of designing, transporting, and lending a traveling museum exhibit. Lastly, we interviewed Ms. Sarah Montross, curator at the deCordova Museum in Lincoln, MA (see Appendix E). According the Ms. Montross, when identifying which items to use in an exhibit, we should look for eye-catching items, items that can portray stories, and creative applications of Cibachrome.

2.4 Color Photography

Many companies have made innovative contributions to film photography since the 1800s (The Library of Congress, 2010). Different chemical combinations, development processes and print materials render varying quality. These distinguishing properties made individual types of film gain their own followings amongst artists and amateur photographers alike. Despite the popularity these films obtained in their prime, many are no longer produced. Some of the film technologies used before the widespread use of digital cameras were

Kodachrome, Fujichrome, Ektachrome and Cibachrome. Kodachrome was a film developed by Kodak in 1935 (Time, 2018). Although it was not the first, it soon became the most successful color film used for photography and cinematography. Its popularity peaked in the '60s and '70s embodied by the American musician Paul Simon's 1973 hit single "Kodachrome" (RPM, 1973). In 1961, a faster and more versatile film, Kodachrome II was produced. In this time period, Kodak continued to release upgrades and variants of Kodachrome. By the 1980s, Ektachrome and Fujichrome moved into the market, and the market share of Kodachrome started to decline. Kodachrome's popularity sharply declined and by 2009, Kodachrome had been withdrawn from the market.

2.4.1 Kodachrome

One particularly innovative film company is Eastman Kodak. Kodachrome, a color-reversal film, was first produced in 1935 and was widely used by amateur, professional, and commercial photographers (Suddath, 2009). Kodachrome differed from Cibachrome as it used a different development process that involved the three primary colors. The film itself was black and white, with the dyes added in during development, causing the dyes to eventually fade over time. In 2009, the last roll of Kodachrome was produced after decades of declining demand.

2.4.2 Azochrome

Kodak also developed a silver-dye bleach process print called Azochrome in 1941 that utilized similar processes to Cibachrome (Peres, 2007). However, Kodak never commercialized the film. Development of the film stalled when the United States entered World War II (Wilhelm, 1981). In the postwar years, Kodak focused on the production of Kodachrome instead of continuing Azochrome's development.

2.4.3 Ektachrome

Kodak also introduced a different color-reversal film, Ektachrome, in the 1940s (Morrison, 2018). National Geographic and NASA frequently used Ektachrome to capture images. These organizations preferred Ektachrome over Kodachrome for its faster speed and a more efficient development process. In 2012 Kodak discontinued production of all color reversal film, but continued to make the required development chemicals. However, in 2017, Kodak announced the return of Ektachrome in the coming year. The film is now publicly available once again.

2.4.4 Fujichrome

Fujichrome was another type of film developed by the Japanese company Fujifilm (2019). There are two branches of Fujichrome, Velvia and Provia. Both branches are daylight-balanced color reversal film. Fujifilm had discontinued Provia and one type of Velvia, leaving only Velvia 50 available to consumers. Velvia 50 is still purchasable due to the availability of raw materials, unlike Velvia 100.

2.5 Cibachrome

Cibachrome was a silver-dye bleach film produced from the 1960s until the 2010s as a medium for commercial artists, government agencies, as well as some consumers (Cibachrome Association, 2014). Today former employees of the manufacturer, Ilford Imaging Switzerland GmbH, as well as Cibachrome enthusiasts are interested in the preservation of this photographic process.

2.5.1 Ciba AG and Ilford Printing

In 1879 Alfred Harman founded Britannia Works which would eventually be known as Ilford Printing (Harman Technology, 2018). At its founding Harman solely produced dry plates (a type of photographic plate). After a little more than twenty years, the company was rebranded as Ilford Limited in 1902. By 1912 they began to manufacture roll films, and over the next sixty years they developed the film further with many innovations. Meanwhile, Telko of Switzerland was developing silver-halide color (AgX) photography, and was purchased by Swiss chemical company, Ciba AG, in 1960 (R. Hofmann, personal communication, September 9, 2019). In the same year, Ciba AG purchased a large parcel of land in the Swiss city of Marly located in Freiburg Canton, and began construction of a research and development site (Marly Innovation Center, 2019). In 1961, Ciba acquired a stake in the UK-based Ilford Photo and the site became a center for the research and manufacturing of color photographic materials. One of the initial developments at the site was Cilchrome, with CIL standing for Ciba, Ilford and Light. The product was soon thereafter renamed as Cibachrome. As Ilford already had brand recognition, Ciba began to promote their AgX technology under Ilford's name. This was when Cibachrome was introduced to Ilford Printing as a Swiss subsidiary, Ilford Imaging Switzerland GmbH. For a complete company timeline, see Appendix K.

2.5.2 Cibachrome Specifics

Cibachrome, also known as Ilfochrome, was a Swiss photographic process used to make prints (Cibachrome Association, 2014). It employed a silver-dye bleach process, which insured quality color reproduction and image stability. The process used a chromolytic process to create a color reproduction of an image (Peres, 2007). Through the use of cyan, magenta, and yellow

dyes, the blacks in an image can be achieved. The final step in the silver-dye bleach process is bleaching of the unneeded dyes.

Many artists, as well as several contemporaries, used Cibachrome as the medium for their art (World Wide Arts Resources, 2019). One such artist is American photographer Barbara Kasten (Hewitt, 2015). Kasten has used Cibachrome to capture images of a space she created using various materials. Using sculptures, acrylic panels, fiberglass screens and lighting to make her pieces, she focused mainly on geometry to convey her messages.

Corporations and institutions, as well as artists, enjoyed using Cibachrome for a plethora of reasons. One of these reasons is the film's incredible image stability, a result of the prints being coated on a polyester base (R. Hofmann, personal communication, August 29, 2019). Another reason why Cibachrome was preferred was the color vibrancy. In December of 1974 NASA conducted a test to find the best medium with which to print film (Weinstein, 1974). In their technical report they noted that "The Cibachrome print was in all cases ranked superior to the Kodak Kind 2212 print and at least equal if not superior to the Kodak Ektacolor type 37 print…" (p 7). NASA scientists were very impressed with the color reproduction as well as vibrancy of Cibachrome. Due to these characteristics, institutions such as the SBB (Swiss Federal Railways) and several Cantonal governments used Cibachrome to archive their information (R. Hofmann, personal communication, August 29, 2019).

In 2013 Ilford Imaging Switzerland produced the last batch of Cibachrome (Harman Technology, 2018). There were two main reasons that Cibachrome was discontinued; there was less market demand and the film's difficult, as well as costly, time consuming development process. In today's world most consumers have turned to the more efficient and less expensive digital photography. This resulted in Cibachrome, as well as other analog films, being less

appealing to corporations as well as the average consumer, and this has led to their eventual discontinuation.

2.6 Inkjet

Inkjet is a color print technology that works using an assortment of nozzle heads to spray ink onto a surface (Baumann, E., Hofmann, R., Schaer, M., 1999). There are three main points that affect an inkjet print. These include the type of technology, type of ink, and substrate. These prints began mostly as commercial printing material, until eventually they became an art form, as an easier alternative to most photographic film technologies.

There were several different kinds of inkjet technologies developed in the twentieth century at Ilford Imaging Switzerland (Haigh, 2019). For example, in 1984, drop on demand, or DOD, printing became available. There are two types of DOD printing, thermal and piezo. Thermal uses a heat-based method to vaporize ink while the piezo method flexing occurs in the nozzle due to an electric plate. Another such example is wide format printing, which is still used today. This method only drops ink when required to.

Although inkjet printing was not originally used for creating artistic prints, as it was developed as a medium, it became much more common for use in the art world. This can be attributed to the relative ease of producing an inkjet print in comparison to many other methods of photography and printing.

2.7 The Cibachrome Association

The Cibachrome Association (2014) is a non-profit organization that formed shortly after the production of Cibachrome was stopped and the Marly Ilford Imaging Switzerland site closed in 2013. The organization is comprised entirely of volunteer members, many of whom are former

employees of Ilford Imaging. It is headquartered in Marly, Switzerland on the site of the former plant. The Association was formed with the goal of preserving and publicizing the contents of the Cibachrome collection, ensuring that the history and technology used in the production of Cibachrome is maintained and made available to the general public.

The Association was formed to make certain that the industrial archives filled with historical and technical information about Cibachrome and its production, including research notes, important documents, and other materials, were not lost after the site's closure (Cibachrome Association, 2014). Having started organizing and archiving all of this information, one of the Association's main goals is to make all of this information more available to the public, and to increase overall public awareness of Cibachrome, its history, and the research that was done while it was being produced.

2.7.1 Goals of the Association

The primary goal of the Cibachrome Association (2014) is to preserve and create increased public awareness of the collection of historically and technologically significant artifacts that remained in the archives of Ilford Imaging after its closing. This collection includes historical and technological artifacts, documentation, research notes, and other important items used in the research, development, and production of Cibachrome and inkjet technology.

The Cibachrome Association (2014) hopes to use these archives and the information contained in them to continue preserving this technology and increase public awareness of its existence and applications, as well as increase overall public knowledge of the process and its history. They plan to archive all of their existing material, a process started by a 2018 WPI research team (Agudelo, Galliath, & Heikoop, 2018). Another important goal that they have is to use their archive and its information to increase publicity for Cibachrome in a way that can make

it available to the general public and more easily accessible. Possible methods they would like to implement include increasing their internet presence via a new, informative website and a Wikipedia page, and possibly a traveling exhibit for museums.

When Ilford Imaging Switzerland, Cibachrome's manufacturer, shut down and the product was discontinued, they left a very large and detailed collection of documents and research. This collection contains a great deal of research documentation and lab notebooks (Agudelo, Galliath, & Heikoop, 2018). This informative documentation contains chemical research on polymers and nanoparticles for photography, preservation information, and research and methods for how Cibachrome was developed and manufactured. This research is still applicable today, and it may also be of great personal interest to photographers and others around the world. The quantity and importance of this information moved the Cibachrome Association (2014) to work extraordinarily hard to preserve it, and they now wish to make it accessible to the interested public, to increase awareness of the technology and ensure that its history and research are not lost.

2.8 Current Applications

Despite the discontinuation of Cibachrome, the research and technical information regarding its development still has many uses in both modern science and the arts.

2.8.1 Modern Research

One of the reasons the preservation of research and documentation from the production of Cibachrome is so important is that is that it can be used for modern day research and new applications (Agudelo, Galliath, & Heikoop, 2018). During the development of Cibachrome,

much research was done to improve the technology and the process of creating this product. Therefore, a great deal of carefully recorded chemical research is stored in the Association's archives. While one of the main reasons for the existence of the Cibachrome Association is to preserve the history of Cibachrome and its related technology, another important factor is that this research has the potential to be useful in other fields. One such case is the chemical nanoparticle research Ilford conducted during Cibachrome's development. This research, which was applied to Cibachrome to enhance color and lifespan, is also applicable to modern digital displays. This research could also have possible uses in other fields, such as electronics, modern printing, and even the automotive industry, and some of Ilford's research is currently being used by several companies.

2.8.2 Conservation

The research and information included in Cibachrome's archives can also be applied in the field of conservation (Agudelo, Galliath, & Heikoop, 2018). The research notes contain chemical research in general and specifically on photographic print processes that have applications to many fields of research today, and could have been lost on closing of the site. Ilford collected information on the effects of chemical composition and material properties on degradation of prints that is still pertinent to other companies or institutions with valuable or important products that need to be preserved properly. This is a significant area of modern research, and being aware of and having access to Ilford's research from Cibachrome's production could assist greatly in developing more advanced ways to preserve photographs and other valuable documents.

In addition, a timeline of product releases helps professional conservators properly date and identify materials when attempting to store and conduct restorations (B. Spalinger Zumbühl,

personal communication, August 29, 2019). Similarly, an understanding of chemical and pigment stability is critical to properly store and preserve prints. Unlike other forms of physical media, prints and photography are remarkably difficult to restore or touch up after they begin to degrade. Hence, the majority of film restoration is considered "preventive restoration", which emphasizes proper storage techniques. This encompasses packaging materials, storage temperature, humidity levels, and exposure to light. The potential applications of research done in the production of Cibachrome in modern chemical and preservation fields is one of the major reasons that the Cibachrome Association believes it is so important to preserve and make people aware of their research archives.

2.9 Current Publicity Efforts of the Cibachrome Association

In order to make their information and archive content more available to the public and to photography professionals, the Cibachrome Association (2014) wants to increase their publicity and the ease of access to their information. Currently, the Association has a short Wikipedia page and a website dedicated to this purpose.

The Cibachrome Association's (2014) current website has a number of limitations, however, as it lacks several necessary and important features to make it effective. The website is currently available only in French, which creates a great deal of difficulty for some when trying to access the information, particularly since Switzerland is a multilingual country. The website also has several links to blank pages, and it is not particularly easy to use. Much more of the information that the Association has in its archives have yet to be made available on their website.

There is also currently a Wikipedia page dedicated to Cibachrome, but it too is missing vital information that should be included in order to achieve the Cibachrome Association's (2014) goal. The current Cibachrome Wikipedia page, while easy to find, does not include many details involving the technology of Cibachrome. The page is under the title of Ilfochrome, the trade name for Cibachrome, but when doing a Google search of Cibachrome, it appears in the results. The current page includes a brief overview, 'History', 'Advantages' and 'Use Directly in Camera' sections as well as 'Sources', 'References' and 'External Links'. None of these sections are more than two paragraphs long, most consisting of only one paragraph.

There is a large amount of information not included on the current Wikipedia page, one example of which is a full explanation of the process of producing Cibachrome and developing Cibachrome film. A source is listed that does provide detail regarding the science behind Cibachrome, but not much of that information is found on the page. Also, there are no images whatsoever on the page. There is no mention of the current state of Cibachrome or the Cibachrome Association that is working to preserve the technology.

2.10 Summary

Our research provided us a better understanding of the material and technical information we would be handling throughout our project. This allowed us to more effectively use the Cibachrome Association's resources at the former Ilford Imaging Switzerland plant. Additionally, we were able to identify methods to use to increase outreach for the Cibachrome Association which will be discussed in the next chapter.

3.0 Methodology

The goal of our project was to improve the Cibachrome Association's public outreach and the availability of their archived information. Our first objective was to identify the Cibachrome Association's (CA) current methods of outreach and determine the most effective methods for increasing awareness. Our second objective was to determine how to best redevelop the Association's website for the intended audience, which focused on conservators as well as interested members of the general public. Our final objective was to identify and create a Wiki page dedicated to Ilford Imaging Switzerland's technologies, as a way to provide an overview of information directed at the general public, and to conservators. We developed the following methods for gathering information, each of which detailed in the following sections, along with their individual purposes.

3.1 Determine the Most Effective Ways to Improve Public Accessibility to the Cibachrome Association's Assets

The main problems facing the Cibachrome Association prior to the start of our project were a lack of public awareness of the valuable information contained in their archive and a lack of outreach strategies. Our first objective was to determine the most effective strategies the Association could use to increase their visibility. We completed background research and interviews with relevant persons regarding outreach strategies to determine how to effectively represent the technical information contained in the Association's archive.

We researched marketing strategies for outreach, particularly online methods of increasing visibility, to aid us in deciding which methods would be most beneficial to the

Association. After further investigation of suggestions from a previous project team from WPI who worked with the Association, and proposing some of our own suggestions, we conducted detailed research regarding outreach using websites, a Wiki, traveling exhibits, and social media. From this research, we determined which strategies would be most beneficial for the Association to implement.

3.2 Determine How to Improve the Cibachrome Association's Website

The Cibachrome Association's main target audience for their website are photographic conservators. Originally, information on the Cibachrome Association website is presented solely in French, which limits accessibility. Instead the website should be attractive and useful for all potential users. In this section we explain how we determined what the needs of these audiences are and how we determined how to improve the current website to serve them better. Our process follows an iterative design process as illustrated below in Figure 3.2-0-1.
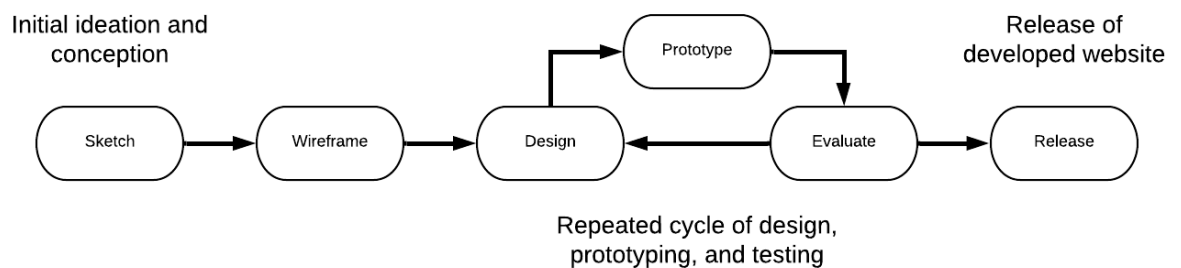
Figure 3.2-0-1 Iterative Design Process

3.2.1 Sketch and Wireframe

To begin, we analyzed the original website for layout, content, and navigation. From this, we visually represented the layout of the original website by constructing a wireframe illustration (Figure H.1-0-1). Next, we had to determine the website design requirements to meet the needs of the target audience. These requirements were gathered from interviews and meetings with our sponsor liaison, Dr. Professor Rita Hofmann. Based on these requirements, we created a new website wireframe diagram (Figure H.1-0-2) illustrating our recommended changes to the site.

3.2.2 Design and Prototype

We reviewed the wireframe diagram with our sponsor and based on feedback, we used our wireframe diagram to create a static, medium-fidelity visual mockup of our potential website. After several meetings with our sponsor liaison, Dr. Professor Rita Hofmann, who worked in research and development for Ciba AG at the Marly site for many years, we iteratively created several medium-fidelity prototypes of webpages for the website. Upon reaching a final design, we implemented the design as an interactive, high-fidelity website prototype. This high-fidelity prototype was constructed using the popular website-building tool WordPress, the same website-building software used by the original Cibachrome Association website. WordPress was selected as it allowed for easy integration of features and pages from the original website. Similarly, as the Cibachrome Association's webmaster is already familiar with WordPress, he can easily use our prototype to enhance the Association's website. This prototype contained sample functionality and allowed a user to navigate through sample portions of the website, and interact with features, such as buttons, links, and timelines in the website.

3.2.3 Evaluate

To evaluate our website prototype, we distributed our website to curators and conservators to gain relevant feedback regarding design and information layout. We sent our material to our sponsor liaison, after which she forwarded it to all of the photographic conservators she knows. In total, she distributed our website material to three conservators (Appendix M). We also emailed 5 different photographic conservators in museums around Switzerland, setting up interviews for additional feedback. We have reached out to the Swiss Camera Museum, Fotomuseum Winterthur, Kunsthaus Aarau, the Musée de l'Elysée , and the Institut Suisse Pour la Conservation de la Photographie. Using the feedback from our evaluation process, our prototype was developed further and refined.

3.2.4 Release

After rigorous design iterations, we presented our WordPress website prototype to the Cibachrome Association. We gave their webmaster administrative access to the website that we had created. The current Cibachrome Association webmaster now has the ability to merge our recommended changes with the old website content using the WordPress website content-management system, their original website hosting service.

3.3 Developing a Wiki Page

To provide the public with more information on Cibachrome and the Cibachrome Association, and based on recommendations from an earlier research team (Agudelo, Galliath, & Heikoop, 2018), we planned, drafted, and created a Wiki page. The detailed content to include on the page was provided to us by the Cibachrome Association. They decided what information

they wanted made available to the public on Wiki, based on our interviews with members of their target audiences.

We conducted several interviews with various individuals including conservators, members of the Association, and photographers. Further details of the interview protocols and corresponding notes are included in the Appendices. Appendix G includes information on the interview with photographer Roland Wirtz. Appendix F includes information on the interview with conservator Barbara Spalinger Zumbühl. Many of these interviews were recommended and coordinated by our sponsor. They also heavily influenced the organization of our Wiki page.

Through our research we found specific factors to include when drafting a Wiki page (see Chapter 2.3.3). In consultations between our team and our liaison in the Cibachrome Association we initially decided to create two separate pages, one detailing the color print technology and the other detailing inkjet technology, to allow more detail on each of the pages. Throughout the duration of drafting our pages our sponsor provided routine and consistent feedback. This feedback proved vital as it drastically changed our approach numerous times, particularly in the aspect of number of pages to create. Through our own research as well as information from our sponsor we were able to finalize the included information.

We began with outlining headings with bullet points of corresponding information collected from our sponsor and interviews with members of the target audience, mainly conservators, to insure an organized piece. Each week we created a new draft, adding information, such as technical inkjet information or company history, as it was made available to us. The content included in the drafts was reviewed by our sponsor to ensure the information was relevant and coincided with the Association's goals. Through a process of editing drafts, we developed a final draft that included relevant images, diagrams, and cohesive information on

each of the technologies that Ciba AG had developed at Marly. The final piece was given to the Cibachrome Association for publication, and to eventually be elevated as a Wikipedia article.

3.4 Summary

This methodology was developed to achieve the three objectives determined in order to assist the Cibachrome Association in their goal to make their information more available to their conservator-based target audience, as well as the general public. We determined the most effective outreach strategies for the Association primarily through interviews. One of these strategies was a redesigned website, which was developed through interviews, iterative review, and a survey of members in the Association's target audience. Our final objective was to create a new and relevant Wiki page, which we proposed a structure for based on interviews with conservators and feedback from our sponsor, and then filled in with information from the Association's archive. The following chapter presents and analyzes the results of our methodology.

4.0 Results and Analysis

Our goal was to help the Cibachrome Association increase public awareness of its assets and help them preserve the technologies that were developed by Ilford Imaging Switzerland at its site in Marly, Switzerland. To achieve this, we determined and implemented the most effective methods of increasing their publicity. We determined that digital platforms such as a redesigned website and a Wiki page would increase visibility for the Association. In this chapter, we will detail and analyze the results that we gathered through our research.

4.1 Effective Outreach Methods

After completing interviews and considering past recommendations, we were able to determine the most effective methods of increasing outreach for the Association. Initially, our findings led us to the decision that a new and improved website, a Wiki entry, a traveling exhibit containing material from the archive, and an increased social media presence were the best ways to publicize the Association and its assets. However, as we began implementing these strategies, it became evident based on the available time we had that it would be more beneficial to focus our attention on just two of these possibilities that best addressed our target demographics.

We then decided that a website was the most effective and comprehensive way to reach the conservator-based target audience the Association wanted to reach. We also determined that a Wiki entry was the best way to provide an overview of information that would be useful to both the general public and their conservator audience. From these results, we clarified and refined our second and third objectives of the project, which were to improve and redesign the Cibachrome Association's website and to design the best possible Wiki page for the information the Association needed to publicize.

4.2 The Cibachrome Association's Website

After working alongside the Cibachrome Association, we were able to develop a suitable framework and prototype a new Association website that benefits photographic conservators. Initially, we diagrammed the original Cibachrome Association website (see Figure H.1-0-1) to determine the best locations and layout for new content. After several design and layout iterations, we were able to develop a new website structure (see Figure H.1-0-2) that effectively organized the information in an intuitive, easy to use manner.

To promote information regarding Ciba AG's products, we replaced the subsection "Les Technologies" under the main section "Patrimoine" with a new section labeled "Guide to Ilford Imaging Switzerland Products 1960-2013". This new section serves as a platform for the Cibachrome Association's vast collection of technical information. To reduce the amount of labor needed for developing the website, materials are added to the website in their original language without translation. New subsections include a guide for differentiating silver-halide (AgX) film products and inkjet products, as well as timelines providing detailed product histories, product codes, releases, and conservation requirements for each product. (Refer to Chapter 2 for Cibachrome and inkjet information.) In addition to providing more detailed information, the new location of the page helps prioritize this information on the website by making it easier to access. Upon our sponsor's approval, we used our design to create a medium-fidelity prototype of possible webpages for the website. The purpose of the medium-fidelity prototypes was to refine the layout of information and to show a rough visual outline of key pages of the proposed website. After several iterations, we decided on a design layout that our sponsor found informative and easily navigable.

Figure H.1-0-3 illustrates some of the features of the website prototype, such as in-depth, reorganized information on types of Ilford Imaging Switzerland products. Another important new feature of the site is the inclusion of an identification guide for film and inkjet, as well as an interactive timeline listing materials and technologies along with their introduction date.

After reviewing the Association's budget and resources for the website, we redesigned the proposed website layout to eliminate features that required higher-tiered WordPress subscriptions while maintaining an intuitive and clean interface. The Association's original website used a WordPress Premium subscription at an annual price of 96 CHF. To stay within this tier, we implemented product timelines as static lists of dates, descriptions and product codes, with each relevant date as a hyperlink (clickable text that redirects the user to another webpage), rather than using expensive commercially available timeline software. When clicking on the hyperlink, it directs the user to a page with detailed information about a particular event or material relevant to that year. We also decided to maintain the user-interface (UI) theme of the Association's existing website. This includes using the top menu bar and nested drop-down menus as the main method of page navigation instead of using additional tabs as Figure H.1-0-4 originally suggested.

We then implemented our proposed layout in WordPress. To maintain consistency and prevent redundant work on sections of the website that would receive no changes, we obtained a copy of the current Cibachrome Association's website and merged several of their current pages into our WordPress prototype. After establishing the site's framework, we created the identification guide and the timeline.

The identification guide assists the user in determining whether a print is a Cibachrome or inkjet print. It lists the defining visual characteristics of Cibachrome and inkjet, helping the

user discern whether a particular print is inkjet or Cibachrome. We then implemented the product and technology timeline for silver halide photography. We authored several complete pages for select elements in the timeline to serve as a framework for categorizing, organizing, and displaying information and related images. Much of the technical information was sourced from Ilford Imaging Switzerland research documents, patents, interviews, and university materials from our sponsor liaison, Dr. Professor Rita Hofmann of the Hochschule der Künste Bern. The layout of pages describing a specific technology is as follows: History, Technology, Conservation, Display, Housing, Storage, and Retouching. All of these topics are intended to cater to conservators. Several other pages from the silver halide photography section were completed using information from the original Association's website to exemplify how existing entries could be reorganized. For this, we translated the existing French entries and reorganized the content to match our WordPress prototype. For in-depth information on the website prototype, please view Appendix H for detailed information and images of the original and revised website.

We emailed a questionnaire and a link to our website with instructions for use to Dr. Professor Rita Hofmann. With that, she forwarded the email to several photographic conservators. As of October 10th, 2019, we received feedback from two photo conservators: Kristina Blaschke-Walther of the Sprengel Museum Hannover in Hannover, Germany and Barbara Spalinger Zumbühl of the StadtMuseum Aarau in Aarau, Switzerland. From Ms. Kristina Blaschke-Walter's questionnaire responses, we determined that she was very pleased with the quality and layout of information on the website prototype (personal communication, September 26, 2019). In her response, she had stated that the website was well structured, with very usual technical information for discerning between types of prints and materials. Ms.

Spalinger Zumbühl was also very pleased with the layout of the website and materials provided. While she didn't answer the questionnaire, she responded in her email that the basic framework for the website is well-built, and that she especially likes the information on the patents for the dyes (personal communication, September 30, 2019). See Appendix I for the questionnaire and Appendix O with both Ms. Blaschke-Walther's and Ms. Spalinger Zumbühl's complete responses.

Unfortunately, we received no responses from four of the five other museums we contacted. See Section 3.2.3 for the list of museums we emailed. The museum we did receive a response from, the Swiss Camera Museum, due to their lack of focus on photographic conservatism, ended up being non-applicable to our research and we did not set up an interview.

4.3 Wiki

By reviewing source material and interviewing former employees of Ciba AG, we were able to effectively draft and submit a new page on Cibachrome and the Ciba-Ilford company as a Wiki. Through our research on Wikis and looking at existing pages, we found specific factors that made an informative, cohesive entry. Clear, concise headings with corresponding information below proved to be a simple way to contribute to the effectiveness of the page. From the pages we viewed, we determined that diagrams and figures to support information increased the viewer's interest and the visual appeal of the page. Clear citations allow the viewer to validify and locate additional information, if desired. Implementing these designs enhanced our own Wiki page.

We found that many conservators favor the organization of Sylvie Pénichon's *Twentieth-Century Color Photographs Identification and Care* (see Appendix F) (Pénichon, 2013).

Pénichon is a conservator herself, and her work was also recommended to us by Dr. Professor. Rita Hofmann of the Hochschule der Künste Bern. By interviewing photographers, we found that they do not need to look at the film related information the same way conservators do, which resulted in relying more on the input of conservators to format our technical information (see Appendix G). These interviews and examples allowed us to create our piece in a way that best appealed to our target audience.

After investigating the current information available on Wikipedia, we found that there is already a detailed page on general inkjet technology. This led us to decide on only creating one Wiki page instead of the initially proposed two. The final overarching focus of the new page is providing the history of the site and company as well as listing and describing the technologies developed by Ciba AG in Marly, Switzerland.

Additionally, despite our initial intent to create a Wikipedia article, our research led us to realize that the verification process was more extensive than what we could accomplish in our time. In order to create a new Wikipedia article, one must first become a verified editor, making substantial edits on at least ten other unrelated Wikipedia pages (Wikimedia Foundation, 2019). This would not have been feasible or a beneficial use of our time with the Association. As a result, we decided to create a Wiki page instead of a Wikipedia entry, because we were able to publish it more quickly and better fulfill our goals. This Wiki can be turned into a Wikipedia by a verified user very easily in the future, if the Association chooses to do so.

The feedback we received from interviews and from Dr. Professor Rita Hofmann also helped us determine the final structure and content of the page we produced. We began with a brief introduction to the Marly site, its history, and the research that had been done there. From there, we introduced the companies Ciba and Ilford, and described their research history. Then,

our page was broken down into sections dedicated to each of the major technologies developed by Ciba AG, with a section dedicated to Cibachrome/Ilfochrome film technologies, inkjet technologies, and the dye products developed at the site. Within each of these sections, subsections were dedicated to a history of the technology itself, as well as technical information detailing how it worked and was developed. This structure was determined to be the most effective way of presenting all of the necessary information to our target audience while balancing important technical information for conservators with an overview and historical information that could be accessed by the general public. The full draft of the Wiki page can be found in Appendix M.

4.4 Analysis of Other Outreach Methods

In addition to our website and Wiki deliverables, we researched several other methods that could be used to further promote the Association's outreach. These methods include creating a traveling exhibit from material in the archive, increasing the Association's social media presence, and further organizing and digitizing the Association's archive.

4.4.1 Creating a Traveling Exhibit

Due to the extensive collection of materials contained in the Association's archive, our research led us to determine that a traveling exhibit would be an effective method of increasing the visibility of this information in the future. To make a traveling exhibit, one must know what artifacts to construct it with, and therefore spend time determining which materials are most interesting to the public. Unfortunately, almost all the artistic images in the archive are copyright protected, and unless given permission, cannot be viewed by the public or redistributed. To learn

more about exhibit design, see Appendix J for background information regarding traveling exhibit design.

4.4.2 Increasing Social Media Activity

Our research also led us to determine that a greater presence on social media would be another way to continue to increase outreach for the Association going forward. The use of social media for public outreach is a common and relatively simple way to reach broad audiences with a wide range of information (see section 2.1.2). This is also one of the most common ways to reach younger audiences in modern society. Our sponsor expressed interest in the use of this strategy as a part of their initiative to increase public awareness of Ciba AG's technologies. For the purpose of publicizing information about Cibachrome, inkjet, and other technologies of interest to the Association, social media platforms could be an effective way to reach large audiences. Additionally, social media can be a good way to publicize less technical information that may be of greater interest to the general public.

Using social media for advertising and publicity is a widely used method of outreach throughout the world. The only presence that the Association currently has on social media is a Facebook page. While usage and effectiveness of this page seems to be increasing, continuing to add to that page, as well as exploring other social media options, is an important step for the Association to increase publicity. Our research into target audiences and global popularity of various other social media platforms led us to determine that more visually focused platforms would be a good way to reach a broad audience and generate interest in the archive information. Some examples of these types of platforms include Instagram, a platform for sharing photos and short videos, as well as YouTube, a site solely for video sharing.

4.4.3 Digitization of the Archive

The Cibachrome Association has a very large archive filled with valuable information ranging from technical lab notebooks to printed marketing material. This archive is not yet organized or digitized, and both are important steps in ensuring the information is preserved. Linking a digital archive directly to the Association's website would be the most effective and complete way to give their target audiences direct access to their material. Our proposed website is formatted in such a way that it is easy to categorically add new information from the archive into the existing structure. Additionally, for information that cannot be directly digitized due to its nature, an overview of the available information can still be added to the website framework, in order to give conservators a clear look at what else is available to them in physical form if they need it.

In order to best organize a digital archive, different categories and types of information must be determined and outlined in a way that is easy to understand. Based on information acquired on a detailed tour of the archive, we were able to come up with a general list of major categories of information contained in the archive. See Appendix L for our recommended categorization structure for the archive and how it can be included in the Association's website.

4.5 Summary

After completing our research and interviews as well as interpreting our findings we have implemented beneficial and effective methods of public outreach for the Cibachrome Association. We have determined the most effective ways to reach the Association's target audiences, and updated their website and created a Wiki. In the following chapter, we expand

upon the outcomes of our deliverables as well as methods through which the Cibachrome

Association can continue to improve their presence and outreach.

5.0 Conclusions and Recommendations

Upon conclusion of this project, our group offers the following reflections and recommendations for the Cibachrome Association. Our findings are designed to assist the Association immediately with our deliverables as well as aid in future plans.

5.1 Key Findings

We completed a functioning website prototype in WordPress and a final draft of a proposed Wiki article in the seven weeks we worked in Switzerland. These deliverables are intended to be used as tools to gain public awareness and spread knowledge for the Cibachrome Association.

5.1.1 Website

We created a high-fidelity prototype demonstrating key aspects of a new Cibachrome Association website. By working alongside our sponsor, we ascertained and implemented the most effective framework for highlighting key information important to the Association. Additionally, we determined that the most important audience for technical information is photographic conservators.

We did not populate every subsection in the website with its relevant technical information, as our website prototype's purpose was to provide examples as to how the Association's website could be organized and structured. We hope that the sections that we have already completed provide effective examples from which the Cibachrome Association can base further sections. See Section 5.2.1 for further information on how the website could be continually developed.

5.1.2 Wiki

We found that conservators we had interviewed preferred a Wiki page that would follow the structure of Sylvie Pénichon's *Twentieth-Century Color Photographs: Identification and Care* (Pénichon, 2013). While our target audience for Wiki is the general public, we thought the best way to organize the technical information is to follow conservator suggestions. To make the page as a whole more appealing to a bigger demographic, we added information that was broader before the technical information. We also added diagrams and images to aid in explaining the content. This included historical information about the company and the technologies, as well as simplified overviews of the technologies. This draws the reader in and compels them to continue on once the interest is sparked.

We created a Wiki page the used clear headings with each section having a topic sentence and supporting data. Relevant images were also used to add to the information being explained and keep the reader interested. The outcome was a polished final draft that is published as a Wiki, that can be turned into a Wikipedia article in the future.

5.2 Recommendations

Based on our work, we recommend pursuing the following options to further enhance the Cibachrome Association's outreach and visibility. These options were beyond the scope of our project, but we suggest the Association devote more time and effort into them to continue to achieve their current and future goals of increasing awareness.

5.2.1 Future Website Development

There are several ways that the Cibachrome Association can build upon our prototype website to further their influence. As more information is organized and digitized by the Association, the information should be integrated into the proposed framework to ensure a consistent organization across the website. Both the website wireframe in Appendix H.1 and the organization guide in Appendix L will help ensure that information is properly categorized. To enhance visibility for the Cibachrome Association, the website should also be linked with their Facebook page. Currently, the Association's Facebook page contains a link to their website, but there is no link from the web page to the Facebook page. This can easily be achieved through default components of WordPress, and by increasing connectivity, will help the Association announce and showcase its events and material.

5.2.2 Traveling Exhibit

Traveling exhibits are a great way to showcase the Cibachrome Association's archive to the public. The Association has a large archive filled with information that museums may be interested in displaying. In order to make this information available to people in a way that would interest the general public, the Association could in the future create an exhibit made up of information and artifacts from the archive. This would be an effective way to make this information available to large numbers of people and present it in an interesting and engaging way (Agudelo, Galliath, & Heikoop, 2018). See Appendix J for additional information on effective traveling exhibit design.

5.2.3 Social Media

In the future, social media platforms could be used by the Association to continue to increase their public outreach and visibility. One platform that may be particularly beneficial to the Association would be the photo sharing social media platform, Instagram. Because this platform is based on sharing images, it seems to be a logical way to promote awareness of information relating to a photographic print technology. Sharing the impressive visual material and prints that the Association has ownership of on Instagram would generate interest in much of the other information they wish to promote, as it would give people a better sense of the applications of the important technical information, as well as make it more interesting.

Additionally, the video sharing platform YouTube could be another effective method of publicizing information. For example, videos showcasing the development process of a Cibachrome or inkjet print would be an interesting way to introduce a broad and diverse audience to these technologies and possibly generate further interest in the other available information about the technologies. Similarly, the Association has recorded video interviews with members of the Cibachrome Association and former employees of Ilford Imaging Switzerland that would be good material for a potential YouTube account.

5.2.4 Archive Digitization

One of the most effective ways of broadening the availability of information that the Cibachrome Association has to offer would be to digitize as much of their archive as possible. This would make the archived information more accessible and more well known to conservators as well as other technical professionals and interested members of the general public. Digitizing this information and adding it to the provided sections in the framework of our newly designed

website would allow conservators much easier access to information that is not available elsewhere about these technologies. A structured and digitized archive is one of the most essential future steps in publicizing this information and preserving the valuable and unique information the Association possesses.

5.3 Summary

The goal of our project was to make the Cibachrome Association's information more available to the public and more accessible for their primary target audience, which consists mainly of conservators. We researched, proposed, and prototyped methods to help the Association achieve this goal by improving their digital outreach strategies. Our website prototype and Wiki page are designed to make an impact on the Association's outreach and lay the foundation for further development. In addition to what we have accomplished, we also recommend creating a traveling exhibit, increasing their presence on social media, and further organizing a digitized version of their archive. Our project, as well as these future recommendations, will allow the Association to achieve their goal of increasing their public outreach and visibility.

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Appendices

Appendix A: Sponsoring Agency

The Cibachrome Association (2014) is a non-profit organization located in in the Swiss city of Marly. Its mission can be organized into four components:

1) Ensure the preservation of the Telko - Ciba - Ilford museum collection, as well as its photographic and industrial heritage;

2) Enrich the museum collection with documents, objects and photographs having a connection with photography or the heritage of Cibachrome or the Ilford company;

3) Organize events such as site visits, guided tours, conferences, & exhibitions to keep the heritage alive;

4) Ensure proper management of the house on the former Ilford manufacturing site in Marly.

The entirely-volunteer organization is comprised of nine committee members as well as a general body consisting of active and honorary members (Cibachrome Association, 2018). The main divisions of the Association are the committee, the general assembly, and the supervisory body. The general assembly convenes once per year and has voting rights. The general assembly is divided into active and honorary members. Active members are financial contributors to the Association. Honorary members, in addition to contributing financially, have set themselves apart in an extraordinary manner. The organization has an annual budget of $10,000, which is used to cover the organization's rent and utility costs. The Cibachrome Association is partnered with the City of Marly, the Marly Innovation Center, La Nuit des Musées, the Bank of

Raiffeisen, and the Camera Museum of Vevey. Many members of the Cibachrome Association originally worked for Ilford Photo at the Marly development site (Agudelo, Galliath, & Heikoop, 2018). Following the plant's closure, they formed the Association to preserve the history and knowledge of Cibachrome and its development. They have access to the industrial archives of Ilford, which provide ample technical information on the development of Cibachrome.

Appendix B: Interview and Notes: Amy Smid

Interviewee: Amy Smid - WPI Access Archivist
Interview topic covered:
1. Translating an archive into an exhibit

2. Maintenance and organization of archives

3. Access of Archives

4. Effective methods for public outreach/marketing

5. Methods for digitization of archive materials

Prior To Interview:

We are a research team from Worcester Polytechnic Institute completing a research project

regarding increasing public awareness for the Cibachrome Association. We would like to ensure

that you are comfortable with the results of this interview being used in an academic research

project. We would like your consent to use your name in our research and to quote you in our

project. If you would prefer, you may also remain anonymous.

Question 1: What is the best way to frame technical information in an intuitive, easy to

understand way?

Response 1:

- Relying on information of technical things from experts on the subjects

    o Present as much info as one can as well as the research expertise

    o Rather tricky, lack of subject knowledge. Dependence on subject expert

       knowledge

    o Trying to present as much information as you can

    o Reliance on research knowledge

- Exhibits are supposed to tell a story

- It is hard to make an object-orientated exhibit into a digital one

Question 2: Can you describe in some more detail what you do here at WPI?

Response 2:

- Access Archivist

  o Processing material

    ▪ Describing material so that people can find what they need

  o Public Outreach/Marketing

    ▪ Events

    ▪ Website

Question 3: What is the best way to digitize an archive, particularly with respect to prints and film?

Response 3:

- Digitization

  o Difficult to access material once it's been digitized

  o Proper use of metadata is important

Question 4: What ways have you used to gain public interested in archives? How do you do outreach for archives at WPI?

Response 4:

- Outreach (university perspective)

  o Main Audience

    ▪ Student

- - Faculty

    - Alumni

    - Local Community

  - Participates in lectures

  - Integration of material into courses

  - Social Media

    - Facebook

    - Blogs

      - Great way to share information

    - Interactive with community

      - Commenting

Question 5: What are some effective strategies for making archived information publicly available in terms of creating an exhibit?

Response 5:

- Qualities of a Good Exhibit

  - Knowing your audience

  - Amount of information presented

- Archives

  - Who was the original contributors

  - Current archivist looking at how archives in the past had things set up

- Finding Aid - describes the resources

  - Abstract

  - Inventory

Appendix C: Interview and Notes: Erin Solovey

Interviewee: Professor Erin Solovey - WPI Computer Science Professor
Interview topics covered:
1. Presenting technical information digitally

2. Website design for digital archives

3. Designing a website UI for multilingual users

4. UI design for different age demographics

5. Testing UI designs

Prior To Interview:

We are a research team from Worcester Polytechnic Institute completing a research project

regarding increasing public awareness for the Cibachrome Association. We would like to ensure

that you are comfortable with the results of this interview being used in an academic research

project. We would like your consent to use your name in our research and to quote you in our

project. If you would prefer, you may also remain anonymous.

Question 1: Please provide some background on your role at WPI

Response 1:

- Researching human-computer interaction at WPI

- Teaches undergraduate and graduate level human-computer interaction courses

Question 2: What needs to be considered when creating a website for multilingual users?

Response 2:

- Complicated process

- Ensure proper translations, preferably using native speakers

- Keep user focused design, have users test languages

- Ensure color, design patterns are appropriate for target population

Question 3: How do different target age demographics influence UI design?

Response 3:

- Usability

  o Font size, color

- Style and Organization

  o Want something familiar

    ▪ More user tests

- Look at other possible populations

- Look at various UI material design guidelines from various Tech (Apple, Google, Microsoft)

Question 4: Have you ever worked on a website or system that's primary goal was to present technical information? If so, what sort of design considerations need to ensure that the information is presented in a clear or intuitive manner?

Response 4:

- Frame technical information in a way that's appealing to technical population -- no walls of text

- Focus on working with target population

  o Find out what they would be interested in

  o How do they want it presented

Question 5: Have you ever worked on designing a digital archive? If so, how did the material influence your design choices?

Response 5:

- Yes, but long time ago

Do you use LinkedIn often?

- Not often

- Like that it's clearly professional

- Facebook is a good idea for outreach

    o Look at local social media usage

Worked with Museum of Science

- Find something engaging – focus on promoting that

- Look at how other organizations make their content interesting

- Created a tangible programming language for children

- Have design goals for an exhibit

Other

- Look at how people are related to this technology - why does it matter?

- Talk to WPI's PR

Appendix D: Interview and Notes: Nancy Burns

Interviewee: Nancy Burns - Curator at Worcester Art Museum (WAM)
Interview topics covered:
1. Photography Exhibits at WAM

2. Designing an Exhibit

3. Traveling Exhibits

Prior To Interview:

We are a research team from Worcester Polytechnic Institute completing a research project

regarding increasing public awareness for the Cibachrome Association. We would like to ensure

that you are comfortable with the results of this interview being used in an academic research

project. We would like your consent to use your name in our research and to quote you in our

project. If you would prefer, you may also remain anonymous.

Question 1: How do you personally go about creating an exhibit? What is important to consider?
Response 1:

- Consider cost and time, especially time

- usually try to build based off of "local" collections, loans are very expensive

- Easier to get loans from private collectors vs. public institutions

    o private collectors often have more lax display, packing requirements

        ▪ also more likely to say "yes"

- Prints, photography, paintings are especially sensitive

    o best practice for display (4 months on, 5 YEARS off)

- Public institutions often require up to 1 year for a request

- o usually require personal visits

- o often easier to do regional requests

- o worldwide expectations

- o smaller museums are often less rigorous, understanding of museum funds, size

- Single sources are preferable

- o lower shipping costs, one loan request

Question 2: Is there a different process specifically for photography exhibits?

Response 2:

- Similar to forming a paper

- o Major topic

- ▪ Works to "support" the "thesis"

- o However, form the topic after you have the art

- Tell a story with the work

- Space is important for displays, can implicitly define sections

- Know the content, don't be overwhelming

- "Let the artwork be the guide"

Question 3: When creating a traveling exhibit are there specific requirements for size or number or pieces?

Response 3:

- Dependent on where you want it to go

- o Small museums don't want large collections

- o "Running wall feet" - useful amount of wall space for displaying works

    - ▪ VERY IMPORTANT

- The type of exhibition dictates the number of objects

- "All about your narrative"

Question 4: What is involved when having a museum host a traveling exhibit?

Response 4:

- Loaner provides spec sheet (number of objects, running wall feet and square footage, insurance and shipping)

- Shipping costs are very high

    - o Loaner usually custom build crates

- Photography can use slot crates

- The objects must be "ready to hang"

- For Cibachrome, everything will likely be under copyright (permissions for any public display)

    - o Do not need to worry about this for purely educational uses

Question 5: Have you ever worked with Cibachrome through personal use or through being a curator?

Reponse 5:

- No

- Personally considers it to have some of the richest color saturation out of any film (only matched by Kodachrome)

- Very slick, emulsive, tantalizing

    o Kodachrome has a very matt finish

    o Lost on digital film

Question 6: Are you involved in the process of promoting exhibits to the public? If so what are strategies you find effective?

Response 6:

- Usually involving a press release

    o Usually dry, then used by other organizations

- Use a program "Issuu" for virtual catalogues

- Aim for a 5 sentence "elevator pitch"

Question 7: Are you involved with WAM's social media accounts i.e. Instagram?

Response 7:

- WAM has 1 staff for social media

- 1 minute talks with curators for blog, Facebook

- Use college students for Instagram, Facebook

Question 8: Any other important information to consider?

Response 8:

- Steven Dorado, Frank Armstrong (at Clark) worked with artists who used Cibachrome

- Big mistakes for first exhibition

    o Usually over-researched

    o 10-14 lines (20x font) is perfect amount of text for visitor

- ▪ Only 1 thing about work
  - o 125 words is usually the maximum amount per label
- Final thoughts
  - o Pay for an art shipper
    - ▪ Loanee would pay for shipping usually
  - o Packing is very important
    - ▪ Dimensions of space, dimensions of art, dimensions of section panels, dimensions of labels, accessibility considerations, benches and chairs are important
  - o Cost of labels is understated
  - o Ask for a list of artists, names in collection
    - ▪ Helps to develop ideas for exhibits, narratives

Appendix E: Interview and Notes: Sarah Montross, Curator at the deCordova Museum

Prior To Interview:

We are a research team from Worcester Polytechnic Institute completing a research project regarding increasing public awareness for the Cibachrome Association. We would like to ensure that you are comfortable with the results of this interview being used in an academic research project. We would like your consent to use your name in our research and to quote you in our project. If you would prefer, you may also remain anonymous.

Interview:

Question 1: Please describe your job as a curator

Response 1:

- Organize temporary exhibitions (art and sculpture).

- Outdoor exhibits

- Communicates with artists

- Manage acquisitions of artwork

Question 2: How do traveling exhibits work and how do you approach museums about them?

Response 2:

- Creating a summary packet of information including descriptions of the exhibit and logistical information (such as space and installation considerations).

- Create a budget, cost of shipping and crating.

- Display requirements for individual objects.

- Look for museums that have similar interests and a reason.

Question 3: What are the factors that go into good exhibit design?

Response 3:

- A checklist of items that go into the exhibit. Every item must be inventoried.

- Layouts of a gallery space and think about where different objects would go.

- Do you need display items like cases?

- Different layers of text and information. Start with introductory panel, that summarizes the exhibit and labels throughout the exhibit that addresses specific themes and details.

- About giving the audience a choreographed experience of image, text, and movement.

- Visitors don't always read everything in the exhibit or do everything in order, so anticipate that.

Question 4: How to use images and photos to promote Cibachrome?

Response 4:

- Look for eye-catching images

- Find a story within the archive, like an interesting person, or an interesting nugget.

- Part of the display could be a visual explanation of the steps of how Cibachrome works.

- Find examples of creative applications of Cibachrome.

- Explaining why Cibachrome is special

- A general suggestion is when writing labels, is to keep them short and concise. Too much detail will lose your audience.

- Pay attention to color choice, font, and overall brand of the presentation.

- Match the presentation and framing of the images with the theme of the images.

Question 5: How does the museum market itself and generate public interest?

Response 5:

- Active social media presence with Instagram, Facebook and Twitter

- Posts on social media are image heavy, with a little blurb about what is exciting about it.

- Link on social media to other interesting, related stories, fun facts. Ex. (did you know that Cibachrome…?). Try to generate more likes and energy.

- Draft a press release before every major exhibit or project

- Send the press release to news organizations in the area (with crucial information)

- Program the exhibits with speakers and artists

- Workshops for visitors

Appendix F: Interview and Notes: Barbara Spalinger Zumbühl

Prior To Interview:

We would like to ensure that you are comfortable with the results of this interview being used in an academic research project. We would like your consent to use your name in our research.

Questions:

Question 1: What Information is Important for Photo Conservation?

Response 1:

- Basic knowledge of materials used, and how they age/deteriorate

    o used for display, storage requirements

- Identification of Processes is critical

    o allows determination of proper storage and display methods

    o allows knowledge of proper restoration

Question 2: What is useful in Preservation?

Response 2:

- Useful Reference Book: Twentieth-Century Color Photographs: Identification and Care, By Sylvie Pénichon

    o Process of film development and degradation

    o Examination under visual, UV light

    o Display/housing guidelines

- Graphicsatlas.org

- Timeline of product introductions

- Film Manufacturing Terms Glossary

- Samples of film from storage

- Aging and Stability is very important

- Only care about what made it to market

Question 3: What can be done to restore photography, especially color film?

Response 3:

- Preventive Restoration

    o packing, storage (cold vs. standard), humidity

    o Climate, Light Control, Storage Materials are most important

- Archival Storage Research was done for Color Micrographic Film

    o Permanence data

- Other printing material have little/no data for long term storage

Appendix G: Interview and Notes: Roland Wirtz

Prior To Interview:

We would like to ensure that you are comfortable with the results of this interview being used in an academic research project. We would like your consent to use your name in our research.

Questions:

Question 1: How long have you been working with Cibachrome?

Response 1:

- Print vs. direct exposition

    o Direct exposition: using it similar to a camera film, nothing between the subject and the Cibachrome

- Using from 2004

Question 2: How does Cibachrome compare to other color films you have used, is it preferred over the others?

Response 2:

- When starting in photography/art career (1993-2003)

    o Experimented with silver plate direct exposures

        ▪ Used negatives to create "soft" prints

    o Taking a 90 minute exposure of a football game to create one image

- Tried to find a digital solution

- Bought a large lens, didn't know what to with it

- Remembered that he had used Cibachrome before 1993, so he tried to find it again

- Used in large format Cibachrome direct exposures for 90 minutes

    o Was the only possible option for this style of image capture

- "Cibachrome is really the best material for what I do"

If you were looking for more information on Cibachrome where would you look, what type of information would you be looking for?

- Not particularly, the problem is that Cibachrome doesn't exist anymore so it may not be relevant in today's photography

- He already knew everything he needed to know about Cibachrome when he used it

Are you aware of the Cibachrome Association and what they are doing?

- Yes, but not entirely sure what and why they do what they do

What process do you take when working with Cibachrome?

- Start with the Cibachrome paper stored in cutting machine

  o Cut to size

- Put into cassette of camera

- Make test exposure

- Mount proper color filter

- Keep testing until the proper correction is found

- Always develop the film in the same place (at Marly site)

  o Know the process already, with the other person (Jean Noël)

- Development is the most exciting process

  o Get to see what is the final result is

Appendix H: Website Design

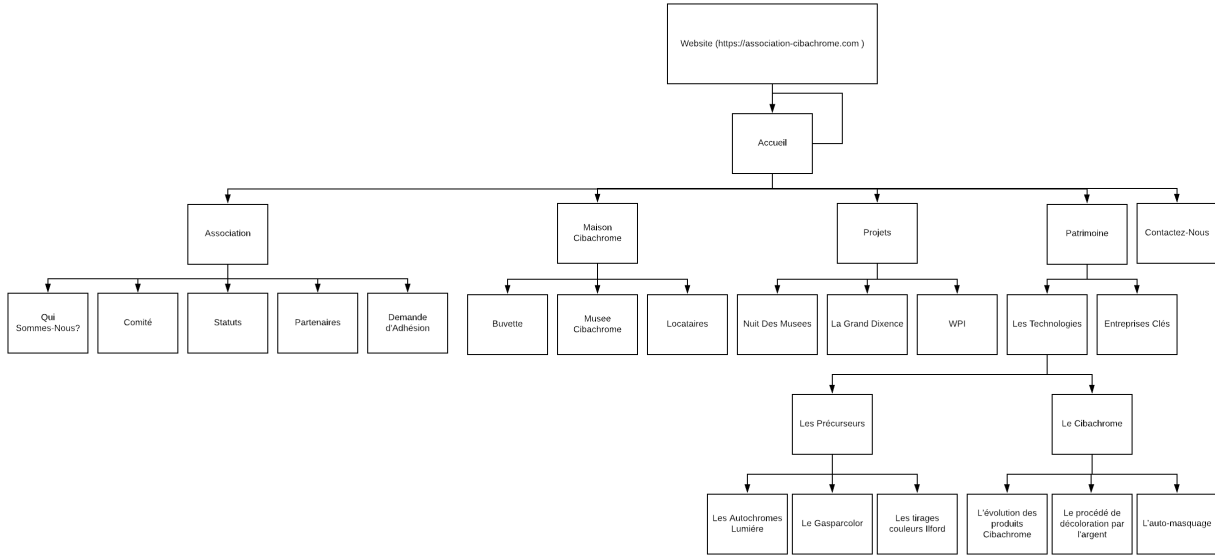## Section 1: Website Diagrams

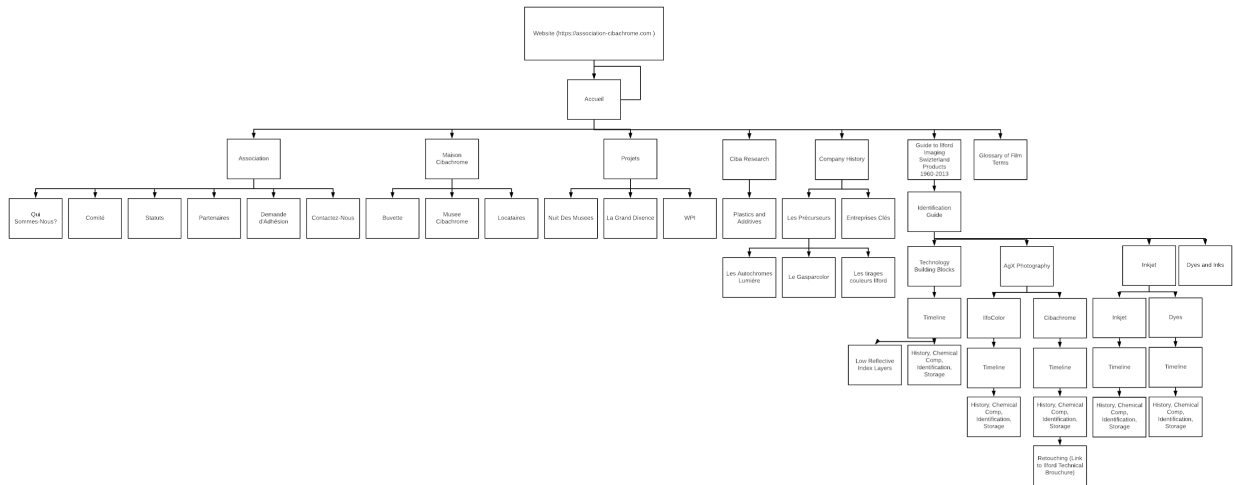*Figure H.1-0-1 Original Cibachrome Association Website Layout*

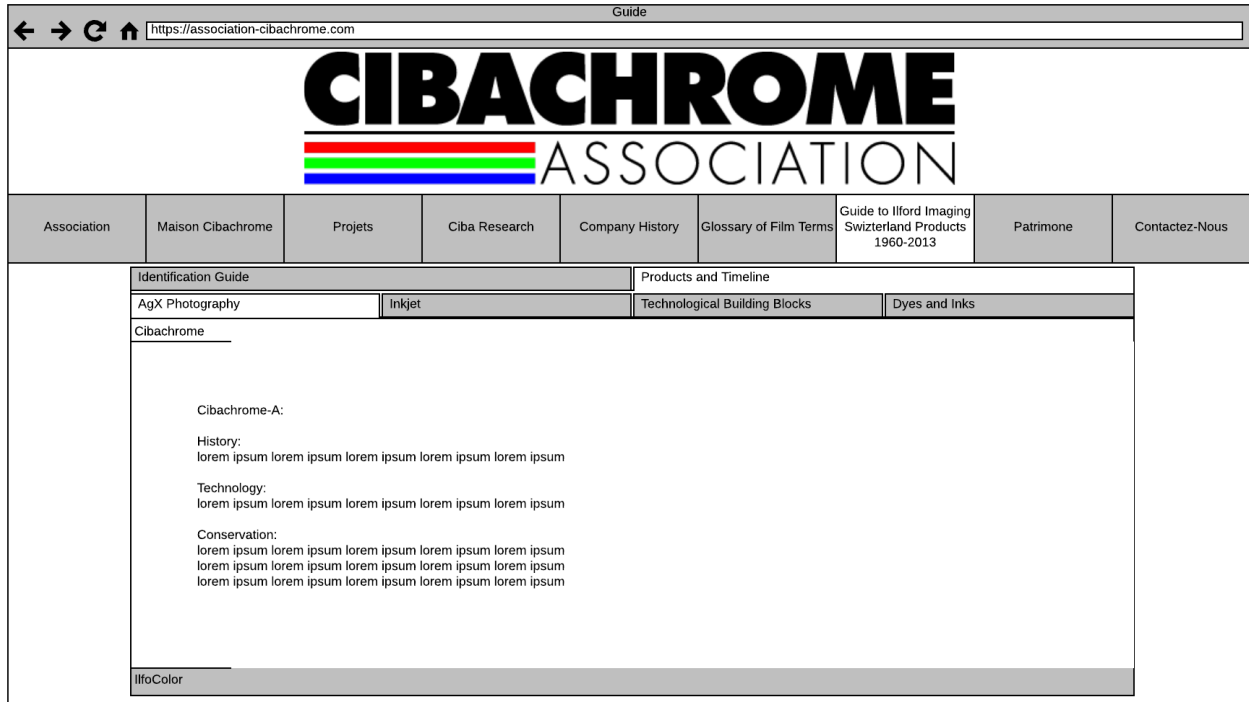*Figure H.1-0-2 New Cibachrome Association Website Layout*

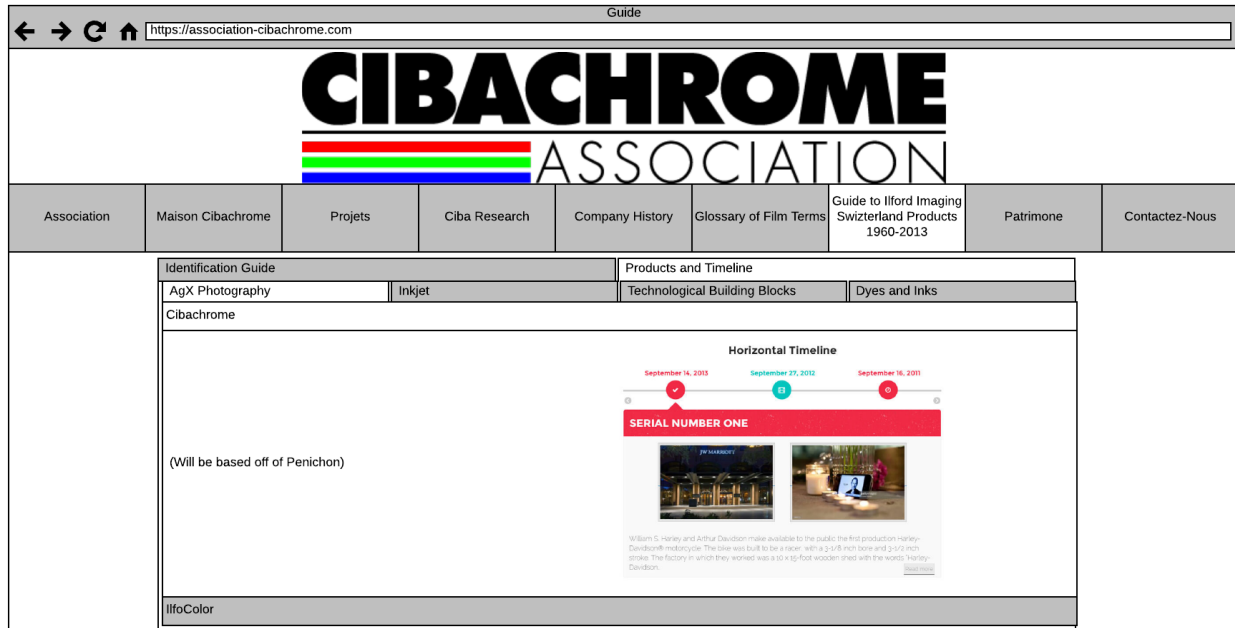*Figure H.1-0-3 Proposed Web Page Illustrating Organization for Cibachrome*

Figure H.1-0-4 Original Proposed Timeline Page using a 3rd-Party Timeline Plugin (a website component developed by another company)

Figure H.1-0-5 Revised Timeline Page without a Timeline Plugin

Section 2: Website Comparison

The following Section shows several key sections of the website that have been changed. The complete websites can be accessed at the following URLs.

Original Cibachrome Association Website: https://association-cibachrome.com

Revised Cibachrome Association Website Prototype: https://cibachromeconcept.wordpress.com

Technologie Cibachrome

Les produits Cibachrome ont été en constante évolution depuis le premier tirage effectué en laboratoire en 1959 jusqu'à l'introduction des supports pour tirage numérique.

Principales étapes de l'évolution Cibachrome :

- 1959 : premier tirage Cibachrome *Détails*
- 1963 : présentation de Cibachrome Print à la Photokina *Détails*
- 1964 : mise en place en Suisse d'un marché-test – Procédé P-7A *Détails*
- 1967 : commercialisation et introduction du support triacétate blanc *Détails*
- 1969 : premier Cibachrome transparent *Détails*
- 1973 : Cibachrome Print « Nouvelle génération » – Procédé P-10 *Détails*
- 1975 : introduction du Cibachrome A aux Etats-Unis
- 1975 : Procédé P-12
- 1976 : introduction du Cibachrome A en Europe
- 1978 : introduction du Cibachrome Copy – Procédé P-18 *Détails*
- 1979 : introduction du Cibachrome A RC destiné aux amateurs
- 1980 : introduction du Cibachrome II avec masque – Procédé P-3 *Détails*
- 1987 : Cibachrome CF.1K pour tirage automatique *Détails*
- Années 80': introduction du Cibachrome Micrographic Film *Détails*
- 1990 : Procédé P-3X *Détails*
- 1991 : Cibachrome devient ILFOCHROME
- Fin des années 90' : introduction des produits ILFOCHROME Digital Media *Détails*

- Rechercher -

Recherche…

La Maison Cibachrome

Association Cibachrome
Route de l'Ancienne Papeterie
CH - 1723 Marly

Figure H.2-0-6 Original Cibachrome Association Timeline Page

Silver Halide Photography

Cibachrome

Cibachrome Timeline:

Follow •••

1959 : premier tirage Cibachrome (Product Code)

1963 : présentation de Cibachrome Print à la Photokina (Product Code)

1964 : mise en place en Suisse d'un marché-test – Procédé P-7A (Product Code)

1967 : commercialisation et introduction du support triacétate blanc (Product Code)

1969 : premier Cibachrome transparent (Product Code)

1973 : Cibachrome Print « Nouvelle génération » – Procédé P-10 (Product Code)

1975 : introduction du Cibachrome A aux Etats-Unis (Product Code)

1975 : Procédé P-12

1976 : introduction du Cibachrome A en Europe (Product Code)

1978 : introduction du Cibachrome Copy – Procédé P-18 (Product Code)

1979 : introduction du Cibachrome A RC destiné aux amateurs

1980 : introduction du Cibachrome II avec masque – Procédé P-3 (Product Code)

1987 : Cibachrome CF.1K pour tirage automatique (Product Code)

Années 80': introduction du Cibachrome Micrographic Film (Product Code)

1990 : Procédé P-3X (Product Code)

1991 : Cibachrome devient ILFOCHROMEF

in des années 90' : introduction des produits ILFOCHROME Digital Media (Product Code)

IlfoColor

IlfoColor Timeline

Patents

Spectral Sensitisation of Silver Halide Emulsions: US Patents No. 5077190, 5141845

Method and Preparation for Processing of Silver Dye Bleach Materials: European Patent Application No. 00810614.8

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★ Like

Be the first to like this.

Figure H.2-0-7 Revised Timeline

CIBACHROME ASSOCIATION

PRODUITS CIBACHROME

Cibachrome Micrographic

Les films Color Micrographic étaient disponibles en deux versions (Master Film et Print Film) conditionnés en rouleaux 35mm et en feuilles de formats variés.

Les produits Micrographic étaient traités grâce au procédé de décoloration par l'argent (SDB) P-5.

Caractéristiques principales des films Micrographic:

- résolution extrêmement élevée
- haute stabilité à la lumière
- excellentes propriétés d'archivage

Partager :

[🐦 Twitter] [📘 Facebook]

[★ J'aime]

Soyez le premier à aimer cet article.

Sur le même thème

Premier tirage Cibachrome	Caméras film	Marché-test Cibachrome en Suisse
Dans "Produits Cibachrome"	Dans "Musée"	Dans "Produits Cibachrome"

ARTICLE PRÉCÉDENT
Cibachrome Print

ARTICLE SUIVANT
Appareils photographiques Lumière

– Rechercher –

Recherche…

La Maison Cibachrome

Association Cibachrome
Route de l'Ancienne Papeterie
CH - 1723 Marly

Figure H.2-0-8 Original Webpage on Cibachrome Micrographic Film

Cibachrome Micrographic Film

History

Introduced in the 1980s, Cibachrome Micrographic film was available in two different versions: Master Film and Print Film. Released in both 35mm and sheet format, this film was known for its incredibly high resolution, high light stability, and excellent archival properties.

Technology

P-5 Silver Decolorization Process (SDB)

Size of Emulsion Grains

During the bleaching process, a colorless halo forms around each silver grain. The size of each halo depends on the grain size, and naturally, the larger the grain size, the more the sharpness of the image will degrade.

Diffusion of Azo Dyes

The dyes used are water soluble. In gelatin layers, molecules tend to aggregate into bigger sizes so the ability to diffuse is reduced. Good dyes fulfill the properties of good color, fast bleachability, and high stability.

Layer Structure

For silver dye bleach film, the top layer is always yellow, the middle layer is magenta, and the lowest layer is cyan. The layer structure has a large impact on the sharpness of the color, specifically, the thickness of the layers. Thinner layers of gelatin between the dyes will increase the sharpness of the image, but if too thin, the weight imbalance between them may degrade the quality of the protective coating.

Permanence and Light Fading

The permanence of the final image is dependent on the chemical properties and the application method of the dyes. The yellow dye tends to be the least stable and will fade first under unfavorable conditions. Despite this, SDB film holds strong in face of extreme conditions. In two tests of high humidity and temperature, with one test having a Relative Humidity of 40% and a temperature of 90 degrees C, and a second test having a RH of 60% in a temperature range of 60 – 85 degrees C, SDB films showed almost no deterioration. On the other hand, chromogenic films deteriorated badly.

Further Reading

Related Patents

Yellow Dyes: Swiss Patent, U.S Patent

Magenta Dyes: Swiss Patent, U.S Patent

Cyan Dyes: Swiss Patent, U.S Patent

Processing Method: Swiss Patent, U.S Patent

Full Research

Meyer, A. (August 1983). Silver Dye-Bleach Color Microfilm. *Journal of Applied Photographic Engineering*, 9(4).

Conservation

Display

Silver dye-bleach prints are stable, but should be kept out of strong lighting and high humidity, as the combination of such can cause dye fading.

Housing

Prints should always be handled with gloves, as the high-gloss surface of polyester-based prints is vulnerable to fingerprints and other abrasions. Creases, dings, and other damages cannot be repaired due to the nature of the material. When cleaning, do not use demineralized water as the low pH can discolor cyan dye.

Storage

High humidity and high temperatures enhance the rate of light-fading, but it is strongly dependent on the substrate and the state of dispersion of the dyes. Wool and gelatin substrates are more likely to lead to more light-fading. With regards to light exposure, Cibachrome is relatively stable, especially those coated in a polyester base. Laminating the Cibachrome in a foil with low permeability for water, like polypropylene, will improve the light stability by a factor of 3. Despite that, it is still advisable to store Cibachrome in a dark area due to a weakness to UV. The worst that one can do is to store Cibachrome in a humid area with exposure to natural light. (add citation/link to original document, stability)

Interleaving with a soft material such as Tyvek or a nonwoven polyester web is important to prevent particle deposition and surface damage during storage. When removing dust or other particulates, use compressed air or an air duster.

Recommended dark storage conditions are as follows: 20 degrees C with a relative humidity between 30-50%.

Retouching

View the following Retouching section.

Figure H.2-0-9 Revised Technical Page on Cibachrome Micrographic Film

Appendix I: Website Questions for Conservators

Introduction:

We are a research team from Worcester Polytechnic Institute completing a research project regarding increasing public awareness for the Cibachrome Association. This research will be published by WPI. Participation in this questionnaire is voluntary. If there is a question that you would not like to answer, you are not required to do so. We would like your consent to use your name in our research, but in the case that you wish to remain anonymous, you are not required to state your name. Our team contact is gr-cibachromeiqp@wpi.edu should you need to reach us for any reason.

Questions:

When presented with a print or photograph, what steps do you take to determine the type of print or photograph? What information helps you with this process?

As a conservator, what kind of information will aid you in your work?

Where would you typically look to find this information?

Attached is our prototype for a new website for the Cibachrome Association (https://cibachromeconcept.wordpress.com)

Instructions: Navigate over to the "Guide to Ilford Imaging Switzerland 1960-2013" tab, hover over and you'll see "Product Timeline" and "Identification Guide". Note: the prototype is designed to illustrate potential layouts and content for the website. Not all sections are completed. Navigate to "Product Timeline" and look for the links: **1976 : introduction du**

Cibachrome A en Europe (Product Code) and **Années 80′: introduction du Cibachrome Micrographic Film (Product Code)**.

Please rank the website's organization (1: very poor - 5: very good):

      a. Please write any specific comments or recommendations here regarding the organization:

Please rank the website features (1: very poor - 5: very good):

      b. Please write any specific comments or recommendations here regarding the features:

Is information easy to find on the website? Please rank (1: very poor - 5: very good):

      c. Please write any specific comments or recommendations here regarding the availability of information:

How relevant is the information on the website? Please rank (1: very poor - 5: very good):

      d. Please write any specific comments or recommendations here regarding the availability of information:

Write any other comments or suggestions you have here:

Appendix J: Traveling Museum Exhibits

Especially for smaller museums, traveling exhibits are a great way for them to raise awareness (Agudelo, Galliath & Heikoop, 2018). This is done through partnerships and collaborations with bigger museums or organizations that can display an outside exhibit. This can benefit both parties involved. A traveling exhibition is an exhibition that goes to several different institutions displaying a collection. The institutions involved range from museums, libraries, or universities.

Exhibit Design

Good exhibit design is needed in order to draw and maintain viewers (Perry 2012). There are six main elements that an exhibit maker must consider: communication, curiosity, confidence, challenge, control and play.

All museum visitors share the need for meaningful communication. Meaningful communication from exhibits will trigger thought and engagement with the visitor to the topic. (Perry, 2012). Meaningful communication to visitors is when they feel information has been adequately conveyed to them and as a result, they feels satisfied with the communication process. To a museum, meaningful communication is when the museum is satisfied with what the visitors have learned. There is a mutual satisfaction. One way to achieve this is through collaboration. Museums are natural places for social interaction due to the fact that many visitors do not come alone. Museums can take advantage of that through collaborative exhibits. This is especially important for children. Learning for children involves more of a collaboration between the child and adult as opposed to between the child and the exhibit. Meaningful communication to visitors can also be achieved through the use of technology (Salazar, 2016). In 2016, the Mind

Museum launched a smartphone application for visitors to use while in the museum. In the museum, the smartphone application will walk through each exhibit and will provide additional information beyond the scope of what is displayed physically. This ultimately enriches the knowledge that the museum aims to communicate to visitors. More about the use of smartphone applications with exhibits is presented in the next section. Communication in a museum is not limited to permanent, stationary exhibits; communication can also be verbal. With the Spanning the Years project, The National Archives in London brought World War 1 veterans aged 101 to 110 with young children (National Museum Directors' Conference, 2004). This gave the children an invaluable opportunity to learn about World War 1 and a great way to promote thought and discussion from primary sources. Effective exhibit design will beget thoughtful discussion among groups of museum visitors.

In order to stimulate the interest of learning within visitors, exhibits must invoke curiosity in them. This can be done through appealing to the visitor's perceived senses (Perry, 2012). "For an effective learning experience to take place, knowledge must be turned into information while working in tandem with successful visual communication, using the principles of graphic and exhibition design" (Zajaczkowski, 2014, p. 1). For example, moving objects, blinking lights, enticing smells, interesting sounds and bright colors are known to stimulate curiosity (Perry, 2012). The Danish Academy of Sciences and Letters (2015) states that "...objects such as stuffed animals, tools, weapons, clothes even figures are placed against a scenic backdrop, with little or no explanation beyond name labels, has been shown to provoke a high degree of visitor discussion" (p. 10).

Stimulating perceptual curiosity is not limited to visual appeal (Perry, 2012). It can also be stimulated by audio effects. For example, the Coal Mine exhibit in the Museum of Science

and Industry in Chicago uses a loud screech to capture people's attention. The museum's Boeing 727 exhibit uses music while simulating a jet's landing. Hands-on activity is also a great way to stimulate appeal, and may be just as important as sensory stimulation (Smithsonian Museum, 2002). According to a participant in an exhibit workshop hosted by the Smithsonian Museum, "an interactive is an exhibition feature that encourages physical participation on the part of visitors. I don't consider audio or video devices to be interactive unless they are played on demand by visitor action" (p. 9). However, museums must be careful with this technique as multiple simultaneous visitors interacting with a single exhibit can cause disruptions in the learning process (Allen and Gutwill, 2004). For example, the Spinning Blackboard exhibit in the San Francisco Exploratorium allows visitors to draw patterns in sand on top of a spinning disk. Unfortunately, due to the usual presence of multiple visitors, it is difficult to create more complex or intricate patterns. The contributing factors are multiple user access to the exhibit all at the same time and the multiple elements that the exhibit contains.

Instilling confidence in museum goers is very important. In order for visitors to have a satisfying experience, museum exhibits must leave visitors feeling confident and competent with the information (Perry, 2012). Allowing visitors to feel successful at learning will increase their engagement with the material. To achieve this, museums must present information in a simple, straightforward, and intuitive method. It is never good to leave the visitor feeling overwhelmed or intimidated with information. This is especially important if the museum deals with complex technical or abstract ideas. Dr. Emily Gossman (2015) states that when presenting complex and technical details to an audience, it is best to include as little technical information as possible. The speaker should avoid technical terms, and if they must be used, the speaker must explain each of them clearly. Metaphors and imagery are also very useful. Good, descriptive and

memorable metaphors will help the audience retain information and will instill in them confidence in their ability to understand the subject. These important concepts can also apply to museums when considering that the exhibit becomes the speaker, and the audience becomes the visitor.

The next element is control. It is important that visitors have control over their learning process in the museum (Perry, 2012). This means that visitors should be able to control what they do, and when they do it. Allowing visitors to have personal control increases engagement with the museum as it allows them to think about the material and their learning outcome. To achieve this, the placement of exhibits must be streamlined in a way as to not overwhelm the visitor. Perry states that "It is not uncommon for visitors - especially novice visitors - to become easily weighed down by the sheer number of choices they make, sometimes as soon they enter a museum or exhibition gallery" (p. 130). To ensure that visitors make the right choices for themselves on what exhibits to see, information such as exhibit labels and titles will help visitors make informed decisions. Museum websites are helpful too, as they can contain information and summaries on exhibits. This may include information on how long a visitor can expect to spend on a particular exhibit, whether an exhibit is hands-on, or whether an exhibit has a particular activity. Exhibit placement is also very important (Nubani, 2018). It is so important that Nubani argues that exhibit placement may actually be more important than the visual saliency of an exhibit. Visual saliency refers to the visual noticeability or attractiveness of an exhibit. Museums must be aware of both visitor movement and the visual saliency of the exhibits. Using this premise, she hypothesized that exhibits with higher saliency will attract more visitors to areas that are frequently less visited in museums. In her study, she analyzed visitor movement in the Eli and Edythe Broad Art Museum with respect to exhibit saliency and exhibit placement. The

goal was to establish a possible correlation between the visual attractiveness of an exhibit and the attendance at an exhibit, even in the face of poor placement of the exhibit. What she found was that salience was not significant. Visual salience could not compensate for a poorly or obscurely placed exhibit. That is not to say that visual appeal is not important at all in a museum. She noted that visitors tend to make their decisions based on the location of the exhibit, and the amount of space surrounding the exhibit. Just as hands-on and interactive exhibits are great at stimulating curiosity, they allow individualized control over the learning outcome, but with this, the museum must be careful (Allen & Gutwill, 2004). The Spinning Blackboard exhibit in the San Francisco Exploratorium, mentioned previously, violates the concept of control as it allows multiple visitors to access the exhibit at once, therefore possibly restricting complete control from one visitor at a time.

The last element of an effective exhibit is play. Playful exhibits can appear goofy or lighthearted (Perry, 2012). San Jose Children's Discovery Museum achieves this using their WaterWays exhibition. The exhibition room is crammed with "troughs, pools, pipes, wheels and chutes" (Ulaby, 2008). Children use this exhibit to learn more about the flow of rain and water. Marilee Jennings, the executive director of the museum, states that "Kids in California don't get exposed to the rain very much" (para. 5). Museum exhibits do not have to be limited to goofiness, as goofiness is usually geared more towards children; they can also involve serious matters. In fact, Perry argues that most scientists and researchers are actually engaged in play (Perry, 2012). He states that too often, play is pitted against learning as mutually exclusive activities, but, in fact, play and learning are intimately intertwined, with both activities being meaningful motivators of one another.
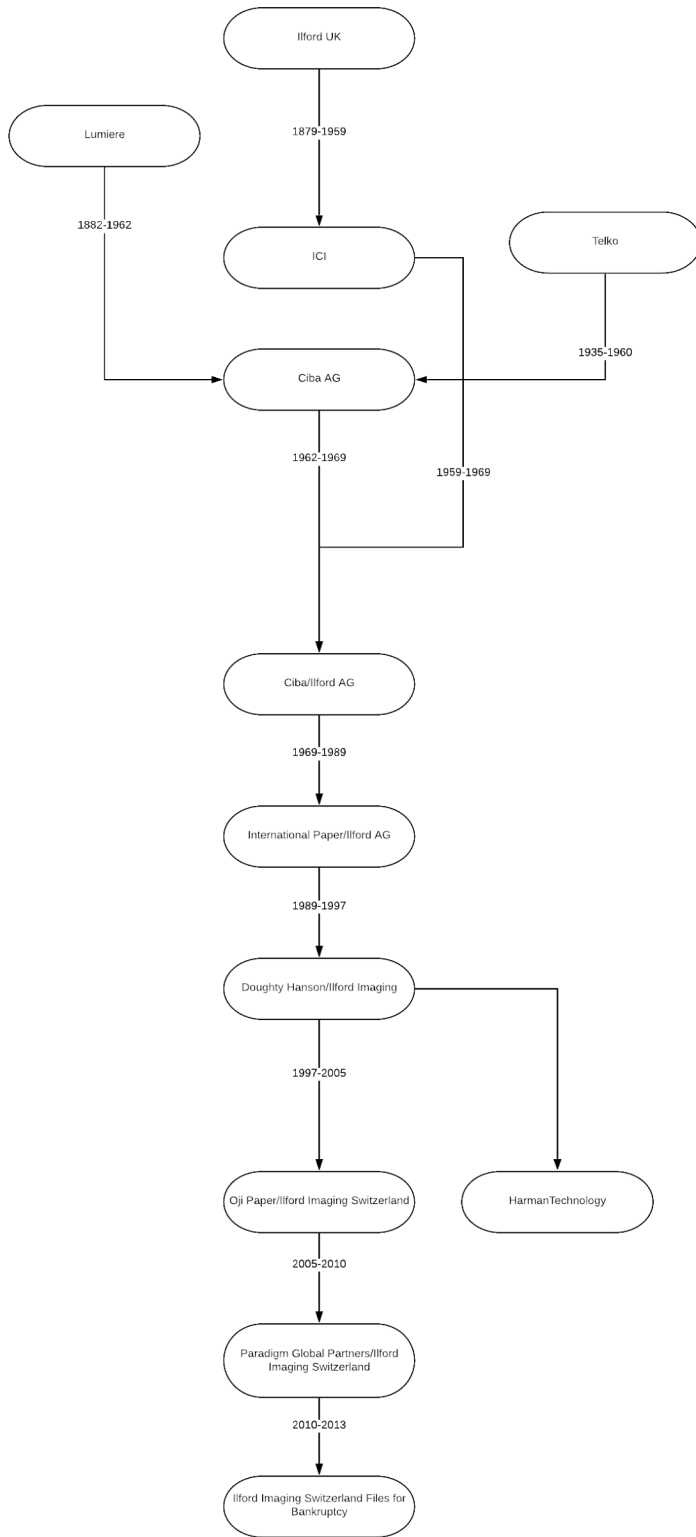
Appendix K: Company Lineage Diagram

Figure K-0-1 Timeline of Ilford Imaging Switzerland

Appendix L: Overview of Materials in the Cibachrome Association's Archive

Not all of the information in this list is applicable to be listed on the website

1) Electron microscopy slides of light sensitive silver halide crystals - hundreds of thousands of these in archive
    a) These materials should be located under their corresponding film type
        i) If there is no corresponding film type, will go into a general category in "Silver Halide Photography"
2) Prints - all with copyright issues
    a) Will not appear on the website until it is known that the photographer has been dead for 70 years
3) Technical drawings/graphics used to show cross cuts of silver halide crystals
    a) These materials should be located under their corresponding film type
        i) If there is no corresponding film type, will go into a general category in "Silver Halide Photography"
4) Digital media from shows
5) Scanned versions of micrographic film brochures with uses of materials and technical information included
    a) These materials should be located under their corresponding film type
        i) If there is no corresponding film type, will go into a general category in "Silver Halide Photography"
6) Marketing brochures
    a) These materials should be located under their corresponding film type under a section named "Marketing"
        i) If there is no corresponding film type, will go into a general category in "Silver Halide Photography"
7) Brochures containing materials used to characterize paper, storage conditions for paper, etc - these contain both prints and technical information, the prints may have copyright issues, but the technical information can be used
8) Ciba company history documents
    a) These materials should be located under the "Company History" page of the website
9) Technical reports: keys to translation, including some glossaries on how terms were used, research reports, manufacturing recipes/how things were manufactured, chemistry and dye information - could be used to manufacture dyes again (magentas, yellows, and cyans)
    a) Material relevant to Cibachrome can go into the Cibachrome timeline under its respective link.

b) Material relevant to Inkjet can go under inkjet

c) Dye chemistry and manufacturing information can go under "Dyes and Inks"

d) Any other material can be located under "Ciba Research". This will most likely require further organization therewithin.

10) Promotional videos - possible copyright issues with these

11) Lab notebooks - organize by date for those interested, include details of processes

a) These will probably not be made public. The notebooks are handwritten and would have to be transcribed, which due to the amount of material, would not be feasible for the Cibachrome Association. The books could be inventoried and listed on the website and if anyone chooses to read them, and then he/she could request to visit the Association's archive in person and read the physical copy.

12) Slides of Ilford company presentation images for marketing/history - include images of people working with materials/products, NOT artwork

a) These materials should be located under the "Company History" page of the website

13) Translation codes for dyes

14) Company brochures

a) These materials should be located under the "Company History" page of the website

15) Equipment

Appendix M: Final Draft of Wiki Page

Our Wiki Page can be found through this link

https://ilford-imaging-switzerland.fandom.com/wiki/Ilford_Imaging_Switzerland_Wiki

Note: The images included in this appendix are components of the Wiki page. Consequently, they will not appear in this paper's table of figures.

History

Since the 1500s the site now referred to as the Marly Innovation Center has had a rich industrial history. From the original paper mill, to the presence of the company Ciba AG, and now the Innovation Center, the site has contributed many important developments, many focused on color prints. Among the most impressive and well known technologies developed there by Ciba AG are Cibachrome film and its associated dyes, and inkjet technologies.
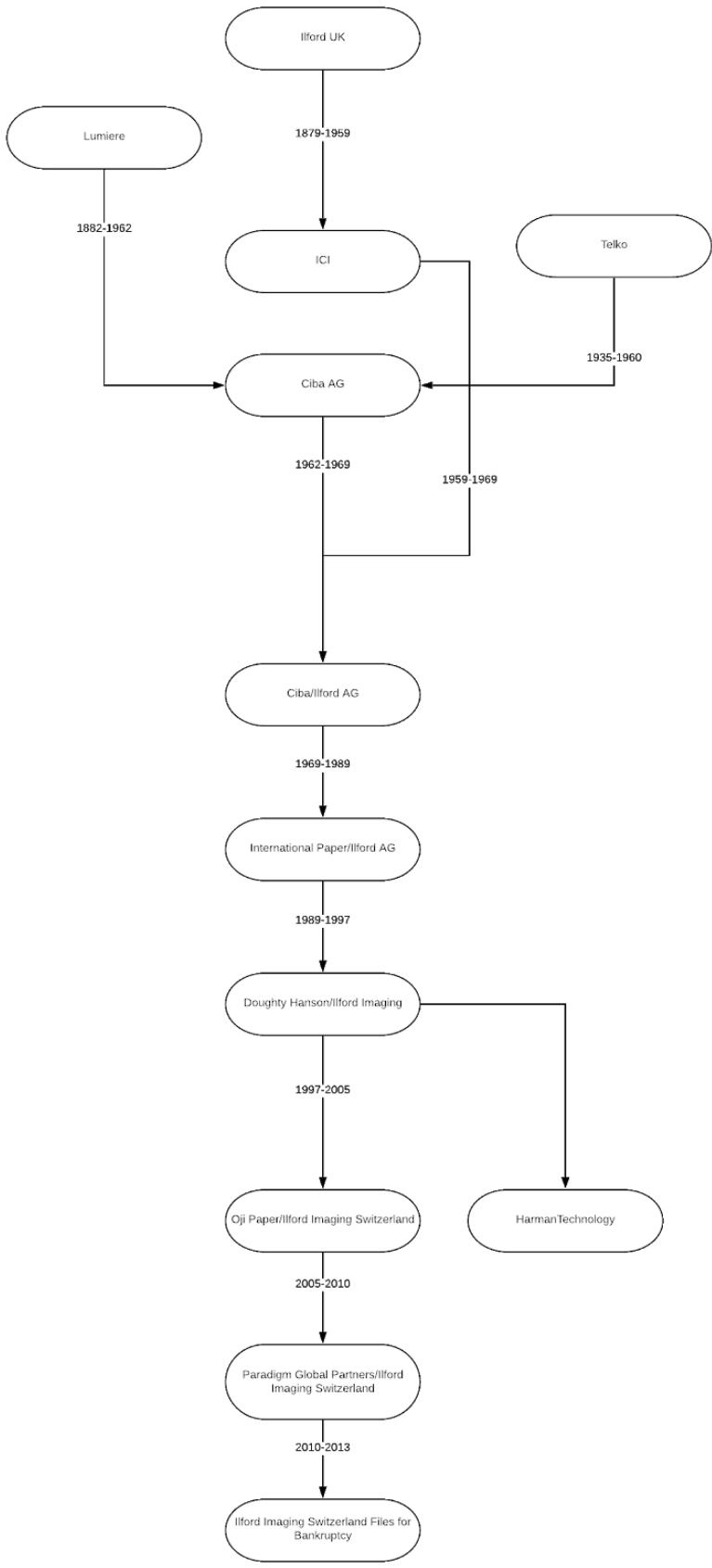
Research at the Marly Site

Ciba AG first began researching in Marly in 1960, when they constructed a large research and development site there. They became involved with Ilford Photo in 1961, which was the start of research in photographic film that led to the production of Cibachrome, a color positive technology for developing film. This technology evolved over many years, and became renowned for its rich color and unique process. Production of Cibachrome stopped in 2013, when Ilford Imaging Switzerland went bankrupt and shut down their production site. The site still exists as the Marly Innovation Center, and many other companies continue to carry out research and other processes there.

Ciba/Ilford Company Histories

In 1960 Ciba AG established itself in Marly focusing on research in color photography. By 1969 Ciba AG became the sole shareholder of Ilford. This however was not the first company to be acquired by Ciba AG. Both Telko, a Swiss company, and Lumiere, a French company, both came into Ciba AG. Ciba AG itself went through a few rebranding stages that involved new names. In 1989 the International Paper/Ilford AG was used. In 1992, Cibachrome was renamed Ilfochrome. Both names are accurate to describe the exact same technology, and the name changes only occurred for legal reasons. When closing in 2013, it was known as Ilford Imaging Switzerland, and was considered a branch of Ilford Imaging, a larger company based in the United Kingdom. Ilford Switzerland developed only color photography technologies, like Cibachrome, making unique from the rest of the Ilford company, which was mainly focused on black and white film development. The following diagram details the evolution of the company and the changes in name that it experienced:

Ilford UK

Lumiere

1879-1959

1882-1962

ICI

Telko

Ciba AG

1935-1960

1962-1969

1959-1969

Ciba/Ilford AG

1969-1989

International Paper/Ilford AG

1989-1997

Doughty Hanson/Ilford Imaging

1997-2005

Oji Paper/Ilford Imaging Switzerland

HarmanTechnology

2005-2010

Paradigm Global Partners/Ilford Imaging Switzerland

2010-2013

Ilford Imaging Switzerland Files for Bankruptcy

Brief History of Technologies

Before the invention of the silver dye bleach image developing process known as Cibachrome, research and development of color printing technologies in Switzerland can be traced back to as early as 1906. The first of these silver dye based processes to be successfully developed was in the 1930s, by Dr. Bela Gaspar. The final product that was developed years later became known as Gasparcolor, and had a very similar process to the one that Cibachrome would have in the future. Ilford Imaging Switzerland continued research into similar chemical processes during the second half of the twentieth century, which led to the development of Cibachrome film.

Technical Information and Details

Cibachrome

Cibachrome was a silver dye bleach film development process created in Marly by Ilford Photo Switzerland. This product worked by using three layers of different color dyes within the material, these three layers containing yellow, magenta, or cyan dye. Each layer incorporated a dye that was the opposite color of the light sensitivity of that layer. Cibachrome was a unique technology in this regard, as it is the only color print technology that was manufactured with the color dyes as a part of the printing paper.

Cibachrome, unlike many other photographic print technologies, produced color images using positives, meaning that all of the colors were already incorporated in the material, and unnecessary color was removed in the development process. This happens by destroying color in places where silver is developed in the development process. Most other color print technologies worked the opposite way, starting with negatives and adding color in the development process.

These unique features made Cibachrome an incredibly stable film medium, and enhanced the sharpness of the images that were created using it.

One of the Cibachrome's most notable qualities was its extremely vibrant and bright reds in the images it produced. Because of the way that the color positive technology developed photographs that were taken, the reds came out brighter than with other film technologies at the time. This is showcased in the images on the right, which were used in marketing by Ilford Imaging Switzerland to demonstrate the uniqueness of the color production in their films.

Inkjet and Dyes

Despite the fame and familiarity surrounding Cibachrome technologies, this film only accounted for about 5% of the products developed by Ciba AG at the Marly site. The majority of the research and production completed at this site was in technologies such as inkjet printing and dyes. Inkjet technology was developed in the 1950s and in the 1970s could reproduce images generated by computers. Starting in 1989 Ciba AG began developing their inkjet technology.

Technology History

There are three main points that affect an inkjet piece, those three things being the technology, the type of ink and the substrate. The first technology develop in this field was the Iris print made by Iris Graphics. These prints were mostly used for commercial printing until finally moving into fine art printing and used a continuous stream of ink. In 1984, drop on demand, otherwise known as DOD, printing became available. This, as well as wide format printing, is still used today. This technology only drops ink when required to.

Although inkjet printing was not originally used for creating artistic prints, as it became developed as a medium, it became much more common for use in the art world. This can be attributed to the relative ease of producing an inkjet print in comparison to many other methods of photography and printing. The color options as well as the simplicity of the process made it an increasingly popular art form throughout its development. It created prints with vibrant and varied colors, as is demonstrated in the image on the right, which was used to promote inkjet by Ilford Imaging Switzerland.

Technical Information and Details

Inkjet technologies create prints through a process that involves dispensing ink from print heads directly onto paper that was specially designed to hold this ink well. Most of these processes had four main print heads, however some more complex inkjet processes involved more. The four major colors of most inkjet technology print heads are magenta, yellow, cyan, and black. The image on the right shows the four main print heads and how they work with the layers of the paper to create an inkjet print.

Some advantages of using inkjet technologies to produce a print are a wider array of choices for colors and for the media on which the print is produced. Many photographic print processes require very specific papers, but this is not the case for inkjet. A variety of options, as well as much more simplicity of use compared to other color print technologies that existed when inkjet was developed, made it a popular choice for printing.

PROTECTIVE LAYER
COLOUR FIXING LAYER
ABSORBING LAYER
WHITE RESIN LAYER
CORE PAPER
BACK RESIN LAYER
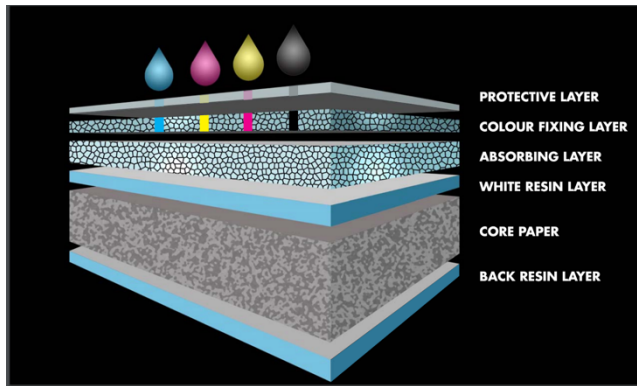
List of Relating Links and Sources

- https://www.photomemorabilia.co.uk/Ilford/Cibachrome.html

- https://association-cibachrome.com/maison-cibachrome/

- http://www.graphicsatlas.org/identification/?process_id=43

- Hofmann, R., Baumann, E., and Shaer, M. (1999). Print Performance Evaluation of Ink-jet Media: Gamut, Drying, Permanence

Appendix N: Interview and Notes: Milo Genasci

Prior To Interview:

We would like to ensure that you are comfortable with the results of this interview being used in an academic research project. We would like your consent to use your name in our research.

Questions:

Question 1: What is your role in the Cibachrome Association?

Response 1:

- Current Association for the webmaster
    - Also maintains other WordPress website for another company
        - Multilingual
        - Hosted by the company
- Facebook page is managed by President of the Association
    - Communicate with her regarding content

Question 2: Do you have the analytics for the current Association's website?

Response 2:

- Not currently, not many people in the association
    - Limited in both human and financial resources
    - Mostly people that were known during the Ilford closure
    - Mostly local people

Question 3: What is the current WordPress plan that the Association uses?

Response 3:

- Using WordPress, Premium version

- - The CA would like to keep using the premium plan as the upkeep for the business plan may be too expensive

  - Only allows for single language

  - More options available with more expensive plans

- Will have a mixed language website, note that material is available only in that language

- Known that it is not logical for a website, but a product of limited man and financial power

- Has Jetpack

Question 4: What is the available budget for the Cibachrome Association's website?

Response 4:

- Budget is unknown year to year

- Something that needs to be discussed by the Association

Question 5: What content would you personally want to see on the website that we have not addressed?

Response 5:

- Missing visual parts

  - Easier to add/modify text

  - Time consuming the add visuals

- Website needs to be simple, but more visual

Question 6: Is there a specific vision that you have for the Association's website?

Response 6:

- Add material specific for conservators

- Make the website more present, linked to Facebook, more updates

- o   Can be difficult to find the information to post, cannot be misleading

- o   Can be difficult to get the content

    - ▪   People are busy with other commitments

- Very flexible to changing theme, layout, design

    - o   Do not want to make too many changes without other input

    - o   Want to make sure that the website is supported for the future and future webmasters

Question 7: Based on the presented page mockups, how would you implement these features on the website?

Response 7:

- Due to pricing plan limitations, timelines might just be navigated through a menu, or may be a bullet point list with links

- Milo will export and email the website to u

Appendix O: Responses from Kristina Blaschke-Walther and Barbara Spalinger Zumbühl

Introduction:

We are a research team from Worcester Polytechnic Institute completing a research project regarding increasing public awareness for the Cibachrome Association. This research will be published by WPI. Participation in this questionnaire is voluntary. If there is a question that you would not like to answer, you are not required to do so. We would like your consent to use your name in our research, but in the case that you wish to remain anonymous, you are not required to state your name. Our team contact is gr-cibachromeiqp@wpi.edu should you need to reach us for any reason.

Response from Kristina Blaschke-Walter

Questionnaire Questions:

Please enter your name:

- Kristina Blaschke-Walther

When presented with a print or photograph, what steps do you take to determine the type of print or photograph? What information helps you with this process?

- I am using my eyes and my stereoscope, looking for characteristics. We do have a photographic Information record (AIC) to get as much information as possible as long as the artist or printer is still alive. Special characteristics like available paper sizes and labelling, production dates, surface gloss, used dyes, colour measurement values (also

with aging) etc. could be very helpful. But I think your website contains this already to a big part.

As a conservator, what kind of information will aid you in your work?

- The before mentioned characteristics. Aging behaviour.

Where would you typically look to find this information?

- At the moment in Sylvie Penichons "Twentieth Century Colour Photographs" or http://www.graphicsatlas.org/identification/ or http://the-eye.nl/ or http://www.dp3project.org/ or Marjen Schmidts "Fotografien erkennen, bewahren, ausstellen"

Attached is our prototype for a new website for the Cibachrome Association (https://cibachromeconcept.wordpress.com)

Instructions: Navigate over to the "Guide to Ilford Imaging Switzerland 1960-2013" tab, hover over and you'll see "Product Timeline" and "Identification Guide". Note: the prototype is designed to illustrate potential layouts and content for the website. Not all sections are completed. Navigate to "Product Timeline" and look for the links: **1976 : introduction du Cibachrome A en Europe (Product Code)** and **Années 80′: introduction du Cibachrome Micrographic Film (Product Code)**.

Please rank the website's organization (1: very poor - 5: very good): **5**

a.   Please write any specific comments or recommendations here regarding the organization: **None**

Please rank the website features (1: very poor - 5: very good): **4**

b. Please write any specific comments or recommendations here regarding the features: **None**

Is information easy to find on the website? Please rank (1: very poor - 5: very good): **5**

c. Please write any specific comments or recommendations here regarding the availability of information: **None**

How relevant is the information on the website? Please rank (1: very poor - 5: very good): **5**

d. Please write any specific comments or recommendations here regarding the availability of information: **None**

Write any other comments or suggestions you have here:

- In case of further questions contact me please.

Remarks Via Email (Forwarded from Professor Rita Hofmann)

Liebe Rita,

Wow, ich finde es fantastisch, was Ihr hier zusammengetragen habt! Wenn dies vollständig vorliegt, ist es unglaublich nützlich. Strukturell finde ich es sehr gut aufgebaut und auch verständlich. Es wäre toll, wenn man wichtige Publikationen oder Alterungsstudien zu den einzelnen Prozessen ggf. noch anfügen könnte. Aber das wäre dann die „Kür" am Ende. Ich bin einzig über diesen Satz am Beginn gestolpert:

"Are there visible dots in the print? Silver halide has no visible dotting, while inkjet does have visible dots." Vielleicht sollte man hier noch einfügen "under magnification"? Von bloßem Auge sehe ich hier bei mir oft nämlich keinen Unterschied ☺.

Wir haben ja hier bei uns auch den Fotoblog (siehe meine Mailsignatur). Wenn Ihr dann

vielleicht noch etwas weiter seid, würde ich über Eure tolle Webseite auch einen Beitrag

schreiben wollen. Wäre dies okay für Euch? Vielleicht gebt Ihr mir dann noch mal ein Zeichen.

Fülle die Umfrage gleich noch aus.

Mit herzlichen Grüßen

Kristina

Response from Barbara Spalinger Zumbühl

Remarks Via Email (Forwarded from Professor Rita Hofmann)

Liebe Rita

Den Fragebogen werde ich diese Woche noch beantworten.

Die Grundstruktur der Webseite ist sehr verständlich aufgebaut und über den technischen Zusatz,

besonders über die Patentschriften zu den Farbstoffen, habe ich mich sehr gefreut.

Liebe Grüsse,

Barbara