

## **A Symbiotic Relationship for Reducing Risk to Valuable Content: How a Library Vendor Partners with News Publishers to Preserve Critical Media for Libraries and Researchers Worldwide**

**Jennifer Trammell**

News Division, NewsBank, inc., Naples, Florida, USA.

E-mail address: [jtrammell@newsbank.com](mailto:jtrammell@newsbank.com)



Copyright © 2018 by Jennifer Trammell. This work is made available under the terms of the Creative Commons Attribution 4.0 International License: <http://creativecommons.org/licenses/by/4.0>

---

### **Abstract:**

*When disaster strikes, not only are lives and structures at risk, so too are the histories of our communities. A single flood, earthquake, or wildfire can destroy valuable news content amassed over decades by a library. And today, the threat to content goes far beyond natural disasters to also include aging microfilm, technical obsolescence, and software failures.*

*Libraries around the world are placing increased emphasis on preserving news and information from and for their communities, and they are not alone in this mission. Commercial information providers, including NewsBank, recognize the growing risk and bring an arsenal of resources to the vital task of preserving every community's local news content for posterity. For more than 45 years, NewsBank has partnered with libraries and publishers worldwide to not only protect this critical information, but also to meet our shared goal of providing broad access to researchers.*

*This paper focuses on preserving news—both physical and digital—in an effort to protect and provide access to our shared history for researchers today and tomorrow. By leveraging the power of collaboration, commercial information providers, news publishers, and libraries of all kinds can ensure we preserve the past of the communities we serve for researchers of the future.*

**Keywords:** Collaboration, Digitization, Preservation, Microfilm, Community History

---

Shoulder-to-shoulder, hand-in-hand, young supporters of intellectual openness formed a human chain to surround the recently completed Bibliotheca Alexandrina, as unrest swept Egypt in early 2011. Their mission: To protect this haven of literature and learning as protests turned violent and fire was set to cars and a police station. Across the country, police and protestors clashed, as demand for the overthrow of President Hosni Mubarak, Egypt's ruler for nearly three decades, grew. It was not the first time the library and its priceless holdings were in danger.

As reporter Selena Simons-Duffins noted in a 2011 National Public Radio report, “The ancient library has been destroyed several times by vandals and conquerors — most notably by a fire, several centuries ago.”

This time was different. This building, completed in 2002, “after a long campaign to recreate the lost library of ancient times,” was different (Page 2011). The attitude of the protestors was different.

"This revolution in Egypt was a liberal revolution. People who believe in democracy and freedom of expression, in pluralism, and openness," Library Director Ismail Serageldin said. "And I'm proud and happy that the Library of Alexandria may have contributed in some small way to supporting the kinds of ideas that have found their expression in the young people who led this revolution" (Simmons-Duffin 2011).

But, the potential threat to the library’s collections was the same. When disaster strikes, not only are lives and structures at risk, so too are the histories of our communities. Though, by some measurements we are living in the most peaceful time in human history (Pinker 2011), political turmoil and civil unrest persist. And today, the threat to news and information content goes far beyond human and natural disasters to also include degrading microfilm, technical obsolescence, and software failures. This paper focuses on preserving news—both physical and digital—in an effort to protect and provide access to our shared history for researchers today and tomorrow. The power of cooperation between both public and private entities will enable such endeavours to succeed.

Currently, we are in a whirlwind of change—change for libraries, change for publishers, and change for vendors like NewsBank. The role of the library, in an age where information can be instantly accessed from anywhere, is changing in both public and academic settings. Libraries are re-evaluating their purpose, which often leads to changing the use of physical space. Public libraries are working to increase their relevance to the communities they serve, while academic libraries strive to demonstrate significant value to their colleges and universities. Overall, there is increased emphasis on return on investment.

This challenge to continually adopt new roles in the library world comes amid unprecedented change for publishers. Media consolidation continues at a rapid pace. Major companies like Gatehouse Media and Sinclair Broadcast Group now own hundreds of news outlets—143 daily newspapers and 173 local television stations, respectively. The number of full-time journalists (identified as “reporters and correspondents” by the Bureau of Labor Statistics) working in the United States is down to 38,790, and another 10% decline in this area of employment is expected by 2026.

Today, the emphasis on digital news creation requires new multimedia agility. Established news providers are seeking new business models that can not only sustain the cost of news collection, creation, and publishing but also stem the haemorrhaging of print advertising revenue that the trickle of digital advertising has failed to backfill.

The changes in the library and publishing worlds also necessitate modifications for vendors, who at the same time are working to stay ahead of changing archival standards that will impact all three parties. Two of these significant changes relate to microfilm. On the supply side, the cost of silver film continues to rise and the only remaining manufacturer of vesicular film, Coveris Advanced Coatings, recently ceased production. This is a monumental shift in

the microfilm industry, requiring vendors to quickly develop alternative solutions for libraries that have used this type of medium for decades. There are also shifts on the demand side, precipitated by changes with the Library of Congress and the United States Copyright Office. As of March 1, 2018, the Copyright Office required materials to be submitted by electronic file. For now, the Library of Congress continues to accept microfilm for mandatory deposit, but this will also be changing to PDF in the near future (Final Rule).

In this symbiotic relationship among libraries, publishers, and vendors, each party plays an important role in ultimately providing critical information to the public. Working together, these three groups enable the creation, collection, preservation, and distribution of the histories of our communities and our world. Let's further explore this symbiotic relationship in an effort to spur discussion on how we can best work together to meet our shared goals.

### **Vendors' unique resources**

Libraries around the world are placing increased emphasis on preserving news and information from and for their communities, and they are not alone in this mission. Just as libraries turn to fellow libraries to share resources and knowledge, library staff should consider vendors to be collaborative partners. For more than 45 years, NewsBank has partnered with libraries and publishers worldwide to not only protect critical news information, but also to meet our shared goal of providing broad access to researchers. NewsBank recognizes the growing risk to content and brings an arsenal of resources to the vital task of preserving, for posterity, local news content from around the world. Those unique resources include equipment and expertise that would be impossible for each individual library or publisher to replicate on their own.

NewsBank's microfilm processing plant, located in El Paso, Texas, exemplifies the type of unique resource that benefits both publishers and libraries. NewsBank acquired Southwest Imaging Services, then known as Southwest Micro Publishing, in 2006. The purchase of a microfilm plant in the Digital Age may seem unusual, but this facility has been critical to NewsBank's mission of preserving news information for publishers, libraries, and researchers around the world.

A core component of the El Paso facility is its microfilm vault. Kept at a cool 65 degrees Fahrenheit, the vault is home to millions of newspaper pages, captured on reels of microfilm. In addition to precise temperature control, humidity levels are also regulated to maximize the life of the reels.

"When you're taking care of the microfilm, you have to be accountable for location, content, and condition," Patrick McGrail, Vice President and General Manager of NewsBank's El Paso operations, said (McGrail 2018).

NewsBank has an entire department focused on maintaining that accountability. For major metropolitan newspapers, or those with "long runs" because they have been publishing for centuries, the archive may contain up to 5 million pages. Usually, publishers don't have the physical facility or assets to properly store that content. The same limitations apply to libraries. Very few have the resources required to be in the business of preservation and accountability. A vendor like NewsBank has that capability and can provide longevity to the physical asset.

According to McGrail, an important balance is being able to provide both that durability, as well as *accessibility*. Again, most libraries and publishers do not have the resources required to transform their physical holdings into easily accessible assets—resources like the equipment and labor hours required to scan film, do image correction, apply indexing values, create digital issues from individual pages and then develop user-friendly interfaces and host the content in a secure manner.

When it comes to the balance between durability and accessibility, as the chart below demonstrates, there is not a perfect solution.

<b>Medium</b>	<b>Durability (Longevity)</b>	<b>Accessibility</b>	<b>Other Considerations</b>
Silver Halide Microfilm	When created and stored properly, life expectancy is up to 500 years.	If accessing the silver film, you run the risk of damaging the archive copy.	Silver film is becoming even more expensive as the costs of raw materials increase.
Vesicular Microfilm	Vesicular microfilm is designed to last 20-30 years, depending on how heavily it is used.	Used to overcome the challenge of accessibility with silver film, vesicular film doesn't scratch as easily and is designed to be used over and over again. For users, locating content is time consuming. Libraries often have only a single copy, limiting use to one person at a time.	The last remaining vendor of vesicular microfilm recently stopped production.
Digital	As technology evolves, there is constant change with digital formats, which will require updates to this content in the future. "Bit rot" – the slow deterioration in the performance and integrity of data – is a concern as the 0s and 1s that make up this content degrade.	Digital content provides excellent accessibility for end users, with 24/7 access from anywhere with an internet connection. This format also allows for multiple users at the same time—sometimes an unlimited number, depending on the license agreement.	

The NewsBank team works to turn the longevity of microfilm into easily accessible digital content for libraries and their users. This process begins with carefully monitoring the condition of all microfilm in NewsBank’s care. For microfilm created with an acetate base, there is the potential for “vinegar syndrome,” which occurs when the chemistry of the film breaks down. This breakdown causes acetic acid, which produces the noticeable aroma of vinegar, hence the name *vinegar syndrome*. When the smell of vinegar is even *faintly* detectable, the rate of deterioration precipitously increases (3. Microform Terminology 2013). NewsBank conducts vinegar syndrome testing at least every 24 months. For film displaying a high level of vinegar syndrome, the reel is immediately duplicated to non-acetate film. When it comes to protecting other reels from becoming infected with vinegar syndrome, NewsBank seals contaminated film reels and keeps them in cold storage where they cannot harm other microfilm.

In addition to secure, carefully maintained storage facilities for microfilm and equipment for digital conversion, NewsBank employs a team of trained technicians and experts in their respective areas. John Martin is an expert on the life expectancy of film. As a hobby, Martin builds his own telescopes, furthering his incredible knowledge of optics, which he applies to his work at NewsBank, serving as an expert on image capture and required reduction rates. Additionally, Martin has knowledge of the imaging industry that goes back to when digitizing content began. The actual creation of film requires its own expertise. NewsBank’s El Paso facility is a Fuji Certified processor, and processing technicians there have more than 30 years’ combined experience producing, duplicating, and preserving film.

Patrick McGrail is another valuable human resource. McGrail honed advanced leadership skills as a Major in the United States Army and created his own digital records management service. McGrail applies that experience at NewsBank, bringing incredible focus to the company’s operations that enables the team to achieve strong production rates with extremely low error rates. Pulling together a team of subject matter experts, along with an experienced leader with operations and process knowledge, allows NewsBank to create a system that not only provides a high-quality service today, but also one that can be agile and adapt to change.

Investing in this type of operation is expensive, and now with further budget cuts and consolidation, few libraries and publishers can do this work completely on their own.

### **Emphasis on high-quality, complete archives**

NewsBank works with publishers around the world to create the most complete archive of their publication as possible—content that may otherwise be lost. Acquiring and archiving this content allows NewsBank to then make this important information available to libraries and, ultimately, the public.

Word for word, page for page, NewsBank takes on the responsibility to create a digital version of what’s on the film, creating an “historical archive.” That careful process includes no less than four visual inspections of every page. When first received at NewsBank’s El Paso facility, every roll of film is logged in a detailed inventory system and reviewed for quality (1). When the film is brought out for digitization, each image is reviewed as it rolls from the film to the screen (2). NewsBank’s metadata department also reviews every page as they add valuable information to the digital file that helps researchers quickly and easily navigate digitized newspaper pages, including the newspaper title, page number, and date of publication (3). All digitized images then go through a final “100% QC” (quality control)

process (4). When images are transferred to NewsBank’s processing plant in Chester, Vermont, they are run through Optical Character Recognition (OCR) scanning, where an operator again sees the page, providing an additional level of quality assurance.

NewsBank’s goal is to create the most complete archive possible, and the Title Authority team is an important part of achieving that goal. This team works to build a “family tree” of the newspaper’s “ancestors.” For example, the newspaper we know today as *The Advocate*, published in Baton Rouge, Louisiana, has gone through many transformations:

- In the mid-19<sup>th</sup> century, the paper was published as *The Daily Advocate*.
- It went on to be published as the *Tri-Weekly Advocate* for a short time, before using the *Baton Rouge Times* as its masthead.
- Through most of the 20<sup>th</sup> century, the paper was known as the *Morning Advocate*.

The Title Authority team identifies not only obvious preceding titles, but also the small daily and weekly newspapers back in the 19<sup>th</sup> century that built the foundation for what has become *The Advocate*. NewsBank then works to locate that original material from publishers and other repositories, such as historical societies and libraries. The NewsBank team, guided by Title Authority, ultimately compiles printed copies and microfilm that will become part of the digital historical archive.

NewsBank’s mission is to digitally recreate the newspaper’s *entire* run—from the first issue of an ancestor publication through today—for its publisher and library partners. Now that the last remaining manufacturer of vesicular film has ceased production, such digital solutions will be critical for library users to access this important information.

### **Archiving systems for news publishers**

Throughout the 20<sup>th</sup> century, only the largest newspapers had built-in archiving systems and professional news librarians. News librarians were expert researchers who maintained the newspaper’s “morgue” and pulled background information for reporters from the newspaper’s own archive. By the 1980s, news librarians were also responsible for sending feeds of the paper’s current content to vendors like NewsBank for distribution and archiving; however, there were many newspapers with no such capability. NewsBank and other vendors developed tools to create feeding and archiving systems for smaller publishers, too. These systems became integral to later sharing this content with libraries and their users.

Preparing content to feed to vendors was a significant task for news publishers. At the larger papers, news librarians would pull individual files from the paper’s content management system and bring all of that day’s articles into a single file. The librarian would then go through the electronic file to double check each article’s headline, ensure no words were missing, and remove paragraph markers. This manual clean-up work was time consuming and slowed down the feeding of content to vendors. According to Chuck Palsho, President of NewsBank Media Services, this cumbersome process often created a backlog of 2-3 days’ worth of content. As technology evolved, NewsBank developed new ways to “harvest” content—from deconstructing Word documents and PDFs, to digitizing microfilm, and collecting stories from publishers’ websites—which eliminated the need for manual review and feeding, and sped up the process. These improvements ultimately put content into libraries’ resources and end-users’ hands faster.

## Shift to online publishing

Since the dawn of the 21<sup>st</sup> century, online news content has become increasingly important to publishers and consumers. Initially, in most newsrooms, print operations and online operations were distinct entities. Stories were written for print and some were later posted to the newspaper's website. Today, the model has flipped, as most news publishers employ a "digital first" strategy—writing first for the web, then curating some of that content for the next day's print edition. Early online content was not kept in a systematic way, if at all. New archiving systems had to be developed to capture what was becoming increasingly important content.

NewsBank now works with news publishers to capture and archive all formats of the content they create, both in print and online. This addition to the archive process is particularly important for researchers who may require information that was included in one format but not the other, or those who are interested in comparing coverage across media formats. In a recent review of daily metropolitan publications conducted by NewsBank's content analysis team, nearly 38% of content published online never appeared in print. Without specific attention to archiving online content, that information, which may be critical to future research, is lost. Additionally, 85% of the time, the same online and print article runs in its respective medium with a *different* headline. Print headlines, where space is at a premium, tend to be short and pithy, while online headlines are optimized for search engines to maximize exposure.

This attention to archiving a wide variety of content formats continues today, as NewsBank collaborates with publishers to determine how to capture new types of information they create, and libraries to understand the different types of information their users' seek.

## A back-up to the back up

Even well-maintained systems can fail, as some news publisher partners have experienced. Most publishers maintain private archives in parallel with their vendor partner. And, that archive almost always includes private data: wire stories that aren't sent to aggregators such as NewsBank, stories that were written but not published or unpublished alternate versions of stories, as well as the publisher's photo archive, including those pictures that were never published.

NewsBank encourages publishers to maintain their own private archive and even helps publishers to do so with the *SAVE Multimedia Archiving System*. *SAVE* "enables news media organizations to make current and archived text, photos, graphics, PDFs and other news elements easily available to their entire organizations, the public and vendors" (SAVE 2014).

One publisher partner, the *Akron Beacon-Journal* in northeast Ohio, had a system failure of their own archive in 2015. A hard drive malfunctioned and could not be revived, and this was the *only* copy of the content the paper had. But, there was an external solution to recovering the lost data. By partnering with an aggregator, the publisher had been sending feeds of content to NewsBank's servers, going back to 1984. NewsBank was able to fill in the 12 years of archived articles that were wiped out in the hard drive failure.

In another instance, in 2013, the *Sylva Herald & Ruralite*, based in Jackson, North Carolina, moved to a different private archiving system. In the transition, content from 1999-2012 was lost. But, the publisher had been sending their content to NewsBank since 1999. NewsBank was able to provide the missing data back to the publisher, to once again complete their private archive.

As previously mentioned, one way NewsBank helps to create an archive of publishers' work is by digitizing paper and microfilm content into digital images to create "historical archives." In turn, NewsBank partners with libraries to make historical archives available to their users, whether they are small town libraries across the United States or major research institutions around the world. Historical archives are often among the most frequently searched and viewed content in libraries. By providing an exact replica of the paper that is keyword searchable, a wide variety of library users can access information pertinent to their needs:

- Genealogists uncover unique facts on family history
- Business owners research corporations and prospective employees
- Students conduct research to complete assignments
- Real-estate agents search details on specific properties
- History buffs gain insight unavailable in any other resource
- Attorneys and legal aids access facts to support cases

Government organizations, members of preservationist/historical societies, community groups, and churches also have instant access to their community's unique history, with a digitized historical newspaper archive. Historical archives are just one way libraries can position themselves at the "center" of their communities. Providing such valuable information bolsters the library's relevance in the community and further demonstrates the need for such important institutions in our world today.

### **Preserving history for future generations**

In 2007, the opportunity to create a particularly challenging historical archive arose with *The California Courier*, a weekly English-language Armenian newspaper continuously published in the United States since 1958. Harut Sassounian, publisher of *The California Courier* since 1983 and former President of the United Armenian Fund, had been in discussions with NewsBank about licensing the *Courier's* content to include in NewsBank's library resources. When Sassounian learned NewsBank also provided digitization and archive services to publishers, it spurred the idea to create an historical archive of the *Courier* to commemorate the paper's 50<sup>th</sup> anniversary.

Throughout these conversations, Sassounian revealed his office held printed copies of every edition published over the last five years. The real treasure trove, however, was in the garage of his Glendale home, which was overflowing with decades-old editions, back to the paper's inception in the mid-20<sup>th</sup> century.

A NewsBank staffer flew out to California to evaluate the situation and secure a copy of each edition for filming at the El Paso facility. There, she discovered a two-car garage full of 50 years of newspapers—stored in cabinets, piled on shelves or even the floor, and paper bags full of printed copies. There were about three copies of the early issues and up to 40 copies of the more recent editions, all of which had to be sorted and separated before boxing and

shipping. Many of the copies were folded once or twice—an additional challenge for filming. The staffer spent two days in the garage and Sassounian’s office, organizing the newspapers and selecting the best copy of each edition to send to El Paso.

While challenging, this historical archive was particularly important because without NewsBank’s unique preservation capabilities, the content would be lost forever. Diane Schulman, Vice President of NewsBank Media Services, oversaw the project. “Truly, the whole archive would have been lost. The oldest papers were already brittle, yellow, and falling apart,” Schulman said. “Without exaggerating, we really did rescue this archive.” By rescuing that archive, and many others, NewsBank is in a position to provide this content to libraries and researchers.

Utilizing the same technology that preserved *The California Courier* for future generations, NewsBank’s historical division, Readex, created the single most comprehensive online resource for searching and browsing early American newspapers. This digital collection, *Early American Newspapers*, now features more than 6,000 titles from all 50 states and Washington, D.C. Such a collection required collaboration with the repositories who meticulously care for this valuable content, including the American Antiquarian Society, the Library of Congress, the Wisconsin Historical Society, and more than 90 other institutions. This partnership led to the preservation of critical information, including eyewitness reporting, editorials, legislative updates, letters, poetry, advertisements, election returns, matrimony and death notices, maps, cartoons, illustrations and more. These historical newspapers offer researchers essential local and national perspectives on American history, culture, and daily life across three centuries.

Such an undertaking would not have been possible without a successful symbiotic relationship between:

- News publishers who create the content
- Repositories who have safeguarded this material for decades
- A commercial vendor with the resources and expertise to digitize physical pages and microfilm
- Libraries who provide this critical information to the public

### **Texas A&M University – Kingsville**

As some of NewsBank’s library partners have experienced, their collections face some of the same risks as publishers’ own archives. In recent years, a portion of the microfilm collection at Texas A&M University – Kingsville became infected with vinegar syndrome. The film was beginning to deteriorate, giving off that tell-tale “vinegar” smell, according to Christine Radcliff, Associate Librarian and Head of Technical Services at the university.

Vinegar syndrome is unique to microfilm made with a cellulose acetate base. The film actually begins to decompose when not properly stored—typically in too hot or too humid conditions. Just like refrigeration can slow the process of mold growth on food, the breakdown caused by vinegar syndrome can be slowed by keeping the film in a “cool” storage vault of 65 degrees Fahrenheit and below. Elevated levels of vinegar syndrome require “cold” storage at 45 degrees Fahrenheit or less. Freezing film is also an option, which stops the deterioration while a plan for duplicating or digitizing the content is formed. At

Texas A&M University – Kingsville, staff moved the microfilm to the temperature-controlled vault of the South Texas Archives department.

While the deterioration was originally found in the microfilm of a single newspaper, Texas A&M University – Kingsville staff began seeing signs of vinegar syndrome in additional titles. Vinegar syndrome is contagious. “We ran the risk of it spreading to our entire microfilm collection,” Radcliff said.

Maintaining access to that primary source information was critical for the library to meet the research needs of students and faculty. In order to do that, Texas A&M University – Kingsville partnered with NewsBank to provide digital access to the historical archives of several Texas newspapers. According to Radcliff, the benefits of these fully-searchable digital archives include access 24 hours a day, 7 days a week. Students can tap into these collections and get information, even without being on campus. This expanded access is especially important now that the microfilm is housed in the Archives, where hours are limited.

And, the digital collections are being used significantly more than the microfilm ever was. That’s true for staff, in addition to students. “Even for ourselves, if we need information, it’s a lot easier for us to find things,” Radcliff said. By partnering with NewsBank for a digital solution, the library was able to enhance its critical role at the university by: providing important news information students and faculty required for research; expanding access to this content beyond the library’s walls and to users at any time of day; and streamlining the research process with keyword capabilities.

## **Lamar University**

Over her 30-year library career, Sarah D. Tusa, Interim Director of Library Services and Coordinator of Collection Development at Lamar University in Beaumont, Texas, has seen substantial risk to physically held content.

With Hurricane Harvey in 2017, most of the damage to the library was the result of water running down from a higher floor. While the library lost ceiling tiles on almost every floor, luckily, there was not much book damage as the water didn’t hit that part of the building. Hurricane Rita in September 2005 was another story. The library lost materials when the walls on the eighth floor of the library were blown in. Experiences like that were just one factor for moving to digital content. “We’re [also] trying to modernize our library in general,” Tusa said. A key piece of the project is to remove materials that take up physical space in the library, for a variety of reasons. “We don’t need them anymore, or because there is an electronic version available that has better usability than microfilm or print ever had,” Tusa said.

Modernizing the library also required repurposing space. Special Collections were consolidated to one floor as physical materials, including bound volumes and microfilm, were replaced with digital content. Like Texas A&M University – Kingsville, Lamar University has partnered with NewsBank to provide digital historical archives to its users. Tusa cited accessibility as a key benefit of the digital content, which enables users to work from anywhere, with authentication. Based on three decades of serving libraries, Tusa said there is another benefit of digital content: It can’t walk out the back door.

## **Safety measures**

Just as with physical materials, there are vulnerabilities to digital content as well. Vendors and news publishers are now taking additional safety measures to protect their data.

From a vendor perspective, NewsBank works only with trusted technology providers to utilize highly secure, off-site commercial data farms. Additionally, content is never all in one place. While an end user has a seamless experience searching any of NewsBank's resources, the individual components are coming from separate databases. The content, metadata, and indexing all come together so the user sees a single article, but it is really made up of different pieces, stored in different places. As another security measure, NewsBank constantly monitors usage to identify infractions, whether they are violations of license agreements or unauthorized use. These are just some of the security factors that protect content for NewsBank, news publishers, and ultimately library users.

## **Preserving the complete story for researchers**

Today, news takes many forms. In an effort to provide the most complete collection possible to researchers, NewsBank works with publishers to capture as much of this information, and going as far back, as possible. This includes converting microfilm to digital images, compiling complete feeds of published articles, and capturing publishers' website content to preserve born-digital information. NewsBank has the expertise to harvest, store, and deliver this information to libraries, ultimately enabling researchers around the world to seamlessly search all of these formats together.

As the needs of the news industry and researchers have changed, NewsBank's research collections have evolved to now include digital images of historical newspaper pages, ASCII text, online-only content, full-color PDFs of current newspapers, video, and audio files. What formats will the researchers of tomorrow need?

- Will researchers be looking to libraries as the source for embedded media in news articles, such as infographics and tweets?
- Will they need access to news outlets' unedited video footage of events?
- Will researchers in the future need to view digital ads, just as researchers today find value in print advertisements for social and cultural research?

NewsBank is exploring these questions with both publishers and librarians, to continue creating resources that meet publishers' archival needs and libraries' research needs. Each party in this symbiotic relationship brings unique resources, knowledge, and expertise to the table—and each party plays a significant and necessary role in preserving critical news media. By working together, commercial information providers, news publishers, and libraries of all kinds can ensure we preserve the past of the communities we serve for researchers of the future.

## Acknowledgments

For more than 45 years, NewsBank has been proud to work alongside publishers who entrust us with their most valuable asset and libraries who share the mission of making this information available to the world. Together, we are doing important work, and we thank you for choosing to partner with NewsBank.

Thank you to Tim Russell and Jay Jordan for introducing me to IFLA. Bringing together all of us with a shared mission ensures we can learn from each other and continue to meet the world's information needs.

Thank you to my NewsBank team members for sharing their expertise and for their unyielding commitment to providing secure archival services for publishers and high-quality research products for libraries and their end users. Thank you to librarians Sarah Tusa and Christine Radcliff for sharing their experiences with risk to content and how digital solutions are helping their libraries' users.

## References

3. Microform Terminology, American Library Association (2013, August 20). Retrieved April 06, 2018, from <http://www.ala.org/alcts/resources/collect/serials/microforms03>
- About The California Courier. (n.d.). Retrieved March 29, 2018, from <http://www.thecaliforniacourier.com/about-page/>
- About The Union-Tribune. (n.d.). Retrieved March 30, 2018, from <http://legacy.sandiegouniontribune.com/about/ut/index.html>
- Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Reporters, Correspondents, and Broadcast News Analysts. Retrieved April 04, 2018, from <https://www.bls.gov/ooh/media-and-communication/reporters-correspondents-and-broadcast-news-analysts.htm>
- Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment and Wages May 2017, Reporters and Correspondents. Retrieved April 04, 2018, from <https://www.bls.gov/oes/current/oes273022.htm>
- Carr, Q. (2018, March 22). Phone interview with J. Trammell.
- Cowan, C. (2018 March 15). Personal interview with J. Trammell.
- Early American Newspapers, 1690-1922. (2018, January 12). Retrieved April 06, 2018, from <http://www.readex.com/content/early-american-newspapers-1690-1922>
- Final Rule Relating to Group Registration of Newspapers. (n.d.). Retrieved March 24, 2018, from <https://www.copyright.gov/rulemaking/group-newspapers/>
- McGrail, P. (2018, March 22). Phone interview with J. Trammell.

- Page, B. (2011, February 01). Alexandria youth 'protecting library from looters'. Retrieved March 30, 2018, from <https://www.theguardian.com/books/2011/feb/01/alexandria-youth-protecting-library>
- Palsho, E. (2018, March 22). Phone interview with J. Trammell.
- Pinker, S. (2011). *The better angels of our nature: The decline of violence in history and its causes*. London: Allen Lane.
- Radcliff, C. (2018, March 13). Phone interview with J. Blauvelt and J. Trammell.
- SAVE Multimedia Archiving System. (2014, July 11). Retrieved March 30, 2018, from <http://www.newsbank.com/publishers/solutions/archiving/save-multimedia-archiving-system>
- Schulman, D. (2018, March 23). Phone interview with J. Trammell.
- Simmons-Duffin, S. (2011, February 24). Egypt's Jewel Of A Library Reopens, Thanks To Demonstrators. Retrieved March 30, 2018, from <https://www.npr.org/sections/thetwo-way/2011/02/24/134009161/egypts-jewel-of-a-library-reopens-thanks-to-demonstrators>
- Tusa, S. (2018, March 13). Phone interview with J. Blauvelt and J. Trammell.
- United Armenian Fund to End Operations. (2015, November 30). Retrieved March 29, 2018, from <http://asbarez.com/142311/united-armenian-fund-to-end-operations/>
- USC Launches the Armenian Institute. (2012, April 04). Retrieved March 29, 2018, from <https://news.usc.edu/23467/USC-Launches-the-Armenian-Institute/>