The Florida Digital Newspaper Library : Overview
Erich Kesse.  2005 November.

The Florida Digital Newspaper Library is a project funded in part by Florida’s Library Services and Technology Act (LSTA) Grants Program. It is also funded by the University of Florida and with the assistance of digital library endowment from the Estate of the late Governor and Mrs. C. Farris Bryant.

When launched to the public in 2006, the Florida Digital Newspaper Library (FDNL) will join a select group of freely-available, Internet-accessible and fully text-searchable newspaper libraries. As it grows, it will endeavor to become comprehensive in its on-line holdings of Florida newspapers. While the library will be developed by work now on-going at the University of Florida, it will be built from the holdings and effort of the archives, libraries and historical societies around the state. And, as a publicly funded resource, it will be available to the citizens of Florida through the Florida Electronic Library, just a PALMM collections are now available through that Library’s interface.

These remarks, today, assume that you have established understanding of the reasons one might have to digitize newspapers. If nothing else, we understand that newspapers hold the history of the state as amber might encapsulate an insect, eons old. Those of you who have worked a reference desk or served in any capacity at an archives or historical society also know that newspapers hold news of the dead, fresh from the day that they walked the very cities we now inhabit. Florida’s newspapers are the genealogist’s best friend. In the world of newspapers, yesterday’s news is already history, with genealogists, historians, sociologists, statisticians, medical researchers, agriculturalists. I could go on. Simply put, newspapers touch every Floridian.
The Florida Digital Newspaper Library has three long term programmatic goals, one for each major tense: past, present and future.

Its first goal is to digitize yesterday’s news. Before old information became a commodity, newspaper information became old quickly. Researchers and librarians, however, always knew that newspaper use – both in requests and persons requesting microfilm, for example – increases over time.

But, we also know that people hate microfilm. Five years ago, I was being told that no common person would prefer to read anything online. Have you tried cuddling up in bed with a computer? they’d ask. The answer, of course, was yes … and my PDA even warmed the bed. But, that’s an aside. – Only Boy Scouts take flashlights to bed.

Given the choice, and given text search functions, no one prefers microfilm.

We expect use of the digital product – like the use of commercial digital newspaper product – to exceed even microfilm use over time.

So, this first, backward looking goal, is to give the old new vitality in the expectation that new utility will follow.
Florida’s newspaper microfilming program is one of the oldest, if not the oldest established newspaper microfilming program in the country. By some accounts, Florida was microfilming its newspapers before the Library of Congress launched its newspaper microfilming program.

Florida’s newspaper microfilming program is actually several programs. I think that I’ve correctly listed them in order of age: the University of Florida, the State Library and Archives, the University of West Florida, the University of South Florida, and the U.S. Newspaper Program (USNP) in Florida. The UF, SLA and USF programs built and continue to maintain in-house microfilming facilities.

The product of its microfilming program was tens of thousands of reels of microfilm. Even today, staff are hard at work cranking out frames of preservation microfilm. The UF program alone generates thousands of reels of microfilm annually. And, that film is purchased for local use by public libraries, archives, historical societies, and individuals around the State.

We have no statistics to state how heavily used this film is, but we do know that its availability generates intense emotion. With microfilm duplication vendors ever fewer in number and increasingly backlogged, lag in the UF Newspaper Microfilm Sales Program can flood the UF President’s Office with angry letters together with phone calls to our offices from public librarians threatening to make us yesterday’s news.

One public library director, when asked to write a letter of support for our grant application, wrote simply: *Just … get … me … my … newspaper!* And, there you have it: the imperative for this project.
This goal is being met through several programs. One of these is the National Digital Newspaper Program (NDNP). Florida is one of only six states participating in this pilot project with funding from the National Endowment for the Humanities. Over the next two years, the NDNP in Florida will have converted at least 120 reels of newspaper microfilm and generated a minimum of 120,000 digital newspaper pages.

Unfortunately, this pilot is limited to newspapers published between 1900 and 1910 and on preserved on microfilm to standards largely adopted in Florida after 1987. While the Florida microfilming program holds thousands of reels for this period, barely 120 reels meet the specific microfilm requirement. Worse, because early microfilming effort attempted to preserve the short-run newspapers of southern Florida first, these newspapers were by virtue of now substandard film unqualified for conversion with NDNP funding.

Titles being digitized include titles such as the Florida Agriculturist (Deland, FL); Florida Farmer (Jacksonville, FL); and Florida's Financial and Industrial Record (Jacksonville, FL). There are more than 30 titles total. And, nearly all, regardless the geography of their publication carries the weight of not simply the news of Jacksonville’s wide-spread destruction by fire. The event was the equivalent of the decimation of New Orleans today. Jacksonville was then Florida’s economic and industrial capital. No produce left Florida without passing through it. And, no Yankee came into Florida without wearing the smell of its smoldering ruins.
Another grant project, the Ephemeral Cities project, funded by the Institute for Museum and Library Services, also makes digitization of yesterday’s news possible. This joint project of Florida International University, the University of Florida, and the University of South Florida and their partners, has digitized newspaper titles from Gainesville, Tampa and Key West without regard to the quality of the source microfilm.

A problem with almost all U.S. newspaper microfilming programs is that they rarely have the source newspaper to go back to. Trash-in may result in Trash-out, but as my college roommate used to say, *If dinner doesn’t come on a plate, you dumpster-dive.*

Titles representative of those digitized under the Ephemeral Cities project include the Gainesville Daily Sun (Gainesville, FL), Key West Citizen (Key West, FL); and Tampa Tribune (Tampa, FL).

Like the NDNP, however, Ephemeral Cities restricts content that can be digitized. Only limited runs of newspaper from the three cities between 1880 and 1920 qualifies.
Early effort digitizing Florida newspapers as page-images is found in the PALMM Florida Heritage Collection. We anticipate that PALMM institutions will commit their digital newspaper holdings to the Florida Digital Newspaper Library.

I draw your attention to the University of North Florida’s Florida Heritage Project contribution of the *Illustrated hotel news* (Jacksonville, FL) and the University of South Florida’s *Florida dispatch* (Jacksonville, FL).

These titles require retrospective processing, specifically the production of searchable text versions, for full incorporation into the Florida Digital Newspaper Library.
Already available in searchable text and selected for contribution to the FDNL are the University of Florida’s Goza and Mickler newspaper collections. Unlike other Florida newspaper collections, these were published outside of Florida but with the economic and tourist news of Florida prior to and during the Florida Boom. Some of my northerly colleagues refer to these as fly-paper rather than newspaper collections for their single-minded pro-Florida propaganda.

And recently selected, the University of North Florida’s Florida Republican (Jacksonville, FL) and Jacksonville Courier (Jacksonville, FL) will augment the core of titles selected for the National Digital Newspaper Program.
Like the University of North Florida, the University of Central Florida is also targeting Florida newspapers.

Selected to fulfill the requirements of the IMLS-funded Central Florida Memory project, the Orlando area newspaper in its cross-hairs should augment the historic record, filling the gap between the state’s newspaper holdings and the restrictive criteria of the National Digital Newspaper Project. I am hopeful that its selection will also be contributed to the Florida Digital Newspaper Library.
I am belaboring this list of who is digitizing Florida newspapers for one very simple reason: to illustrate that newspaper digitization is the work of more than one institution . . . You can help.

One of the criticisms that we heard in applying for the National Digital Newspaper Program was that it would not cover my part of the state. While we believe that the project funds infrastructure creation that will serve every Floridian, this criticism of NDNP selection criteria certainly was and remains valid. But, in order to move beyond the NDNP’s current restrictions, Florida institutions have to turn every rock for funding.

A pillar of the LSTA grant that funded establishment of the Florida Digital Newspaper Library is the creation of a manual for newspaper digitization projects. Guidelines will provide libraries with contacts for grant writing and understanding the technology, for digitization, and for contribution to the FDNL. Based on NDNP specifications, if not selection criteria, compliance ensures compatibility with national standards and, more importantly, extended research through an alliance of NDNP libraries in every state.

In preparation of the LSTA grant, we consulted with institutions that had tried and failed to procure funding previously. While nearly all failed for lack of technical sophistication or for weakness of long term planning or failure to observe copyright, it was another commonality that caught our eye. Nearly all of the microfilm that these institutions had sought to convert was microfilm produced by the University of Florida or the State Library. None of them had asked us for access to the master negatives, which would have ensured an optimal quality product. It was clear that there were several grounds for collaborative collections building.

An initial draft of guidelines is due out for review in late November / early December. UCF has already reviewed NDNP specifications, available on-line, and is navigating them without assistance.
The demands of newspaper microfilm digitization are exacting. The equipment required to meet resolution requirements can only be met by high-end equipment beginning at $80,000. This goal will be met through outsourcing.

The University of Florida is in the process of working with vendors who can meet requirements. At present, only one – iArchives – is proven to have met those requirements.
The FDNL’s second goal is to replace old technology. At the University of Florida, we see this goal as removing the beam from our eye and hold it primary to other goals.

If people hate microfilm and prefer a searchable digital product, why should we continue to produce microfilm?

Until only recently, the answer could be summed in a word: *viability*.

Digital systems lacked the optical resolution and the speed to replace microfilming equipment. Newspaper digitization generates absolutely huge files. If the storage costs didn’t break the bank, file size could fell networks. And, why were files so large? Size wasn’t a problem for the commercial providers. Libraries, unlike commercial providers, couldn’t afford the technologies: 20 Filipino fingers, typing. They were wed to the delivery of page images.

Today, advances in digital technologies and the decline of analog technologies have reached parity. Raw microfilm is increasing in price and becoming more difficult to procure, while digital file storage costs are declining. Equipment is reaching parity as well. The $75,000 that purchases a new microfilm camera buys three digital cameras of sufficiently high resolution and speed to image equal numbers of newspaper pages. The $25,000 that purchase a new microfilm processor buys advanced optical character recognition systems that produce searchable text are nearly one-hundred percent accurate. The value of searchable text? Well, that – as the bank card commercials say – is priceless! Patrons who ask, *I can read it, how come the computer can’t?* are no longer willing to accept and, indeed, seem deeply puzzled by the response, *Oh, well, that’s a picture of text.*
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Now, it just so happens that the microfilming and microfilm processing equipment used by Florida’s newspaper microfilming programs is failing with age. Of UF’s microfilming cameras, for example, half are usually operational while the other half are down for repairs. This is true, even, of new cameras – sophistication, not age, is their Achilles heal. If a good reel of film can be produced, there remains the hazards of film processing. UF’s microfilm processing systems have equally good and bad days. And, a bad processing day compels several days of refilming.

At the same time, vendors of preservation microfilming services have also declined. There is now, in the United States, only one commercial – well, not-for-profit agency – capable of meeting preservation standards for microfilming and microfilm processing. Consider that that one agency, Preservation Resources, an OCLC company, microfilms the foreign newspapers in the Center for Research Libraries holdings: a vast collection; and that filming queues – the last time I visited the facility anyway – were desperately full. Now consider that the Library of Congress, which formerly maintained more than thirty cameras, has just outsourced to Preservation Resources as well.

The capacity of the national preservation microfilming infrastructure has both diminished and is full. The imperative to replace analog with digital technology is both economic and user driven demand.
The UF Florida Newspaper Microfilming Queue holds 50 titles – one independent newspaper for nearly each county in Florida. The LSTA grant matches UF funding to migrate half of this queue toward digitization. And, UF continues to seek the funds necessary to migrate the remaining half.

Assuming that we maintain our development schedules, these titles will begin to come online at the beginning of 2006’s second quarter. The public libraries that have been purchasing microfilm will see immediate benefits. Each of these titles will become freely available online.

Florida – and, I am speaking broadly of Florida’s independent newspaper publishers – have achieved something other state newspaper programs have thought impossible. In granting Internet Distribution Rights, the newspaper publishers have but aside short-sighted commercial interests. Willing to take the chance that the value of ad-space increases as newspapers are reused, they have not demanded licensing fees that would have made this project untenable. Most have reaffirmed that they publish – yes, for profit; so they and their families can eat, but – in the social interest.

And, just as they recognized the UF microfilm as an archive of record, the recognize the Florida Digital Newspaper Library’s commitment to archiving content with the FCLA Digital Archive as an archive of record. It turns out that just as newspaper microfilming programs feared licensing fees as they went digital; the newspaper publishers feared archiving costs as they went digital. The Florida Digital Newspaper Library represents a quid-pro-quo.
The LSTA grant also commits UF to direct-capture of historic newspapers.

Work has already begun on Florida’s Civil War era and Boom era newspapers. And, scanning has been completed for runs of 1970’s counter-culture newspapers; titles such as *Different drummer* and *The eye*. Queues include titles representative of Florida’s historic groups: Christians, Jews, Miccosukee, Seminole, agriculturalists, and industrialists.
The University of North Florida should be awarded a metal as an early adopter. When it heard that we were considering migration from microfilm to digital technologies, it sought to include runs of its student newspapers – the Halyard and the Phoenix – in our pre-tests for costing and procedures development. Scanning of these papers has been completed.
The University of South Florida, using Ephemeral Cities project funds, is slated to begin work digitizing in-house its cigar industry newspapers. Though published out of state, their content is closely connected to the history of Tampa and Key West.

Ephemeral Cities workflow illustrates the benefits of collaboration. USF digitizes in-house on large format scanners, then ships the digital images to UF for text conversion and mark-up, … effectively sharing UF technologies.
A quick review of what’s under FDNL’s hood:

• Six BetterLight planetary digital camera-backs will join the one Phase One Power Phase FX digital camera-back currently in use;
• Locally programmed applications – UFDC Quality Control & UFDC Image Zoning – for image quality control, preliminary mark-up, etc.;
• Prime Recognition, Optical Character Recognition (OCR) software, configured with 6 OCR engines;
• Aware’s JPEG2000 encoder for creation of high-compression high-quality images that can deliver a 128 megabyte file in the blink of an eye;
and
• UF Digital Collections technology, which is actually the freeware Greenstone digital library software, enhanced with ASP.net and C# local programming. The technology is being structured to read NDNP metadata, to index text correlated to page image zones, and to support query across other textual collections, even to link text to geographically aware maps.

We are still acquiring and configuring hardware and software, only slightly off the grant’s time-table.

Behind this, subsequent to digital objects creation and deployment, there’s also the FCLA Digital Archive and support for OAI harvesting by the Florida Electronic Library.
FDNL’s third goal is capture of newspaper content that is born-digital.
Scanning after publication is kind of the Tang® of digitization. Why should we add water, when we can have fresh-squeezed?

We knew that some of Florida’s newspaper publishers were using electronic mark-up systems to compose and layout their newspapers. UF’s student newspaper, the Independent Florida Alligator, for example, has employed fully electronic systems for nearly five years and some form of digital design for a decade. But, we were surprised by offers to provide us with the electronic files.

I suppose we shouldn’t have been surprised. When one looks at the Independent Florida Alligator’s on-line presence, for example, one sees limited capacity. Digital file storage and post-publication access are secondary to the mission of most newspaper publishers. Independent newspaper publishers who maintain digital online content maintain the day’s lead stories for the most part. Many lack quantities of storage space and the robust systems required to support query and access beyond the day’s news. The Florida Digital Newspaper Library represents a ready made archive for them. What surprised was not perhaps offers of the files but offers of funds to support collection of the files.
The question, relatively speaking, was premature in the life of the Florida Digital Newspaper Library.

Newspaper publishers mark-up text and images for print publication. Most, but not all, use news industry standard mark-up, the News Industry Text Format or News Meta-Language. Acquisition of these files requires repurposing for newspaper repositories and archiving, and specifically mapping metadata to the formats required of the National Digital Newspaper Library and the University of Florida Digital Collections, which encapsulates the FCLA Digital Archives DAITSS mark-up.

Conversations will resume later in the fiscal year.
Copyright is treacherous sea for any digitization project. It is a treacherous sea on a stony shore for digital newspaper projects.
Pre-1923 newspapers are clear sailing. Any copyright interests have passed into the public domain.
Newspapers published between 1923 and 1977 were subject to a series of changing copyright legislation.

One iteration of trade law, the Inter-American Copyright Convention, early in the twentieth century, even for a time dared to lift copyright law for duplication of newspaper content within the Western Hemisphere.

Knowing what is and is not protected by copyright is risky business.
Post 1976 newspaper content is certainly copyrighted. But, now the question shifts to *Who holds the copyright?* Authors retain copyrights for articles published other than as *work-for-hire*.

So, while Florida's independent newspaper publishers have given us permission to digitize and re-distribute the content of their newspapers, they have no standing to grant us this right for content provided by independent or syndicated authors and photographers.
The UF Newspaper Queue, at least, is fortunate in that ninety-five percent of content published in Florida’s independent newspapers is work for hire. This content, the publishers have certified is rightly there’s.
If it were not there’s, Photographs would be presented something like this.
And copyrighted text would be resented like this. Patrons would be able to read the article title and by-lines. And, they would be able to search the text. But, they will not be able to read or copy the text.

Of the 5% of newspaper content in Florida's independent newspapers that is protected by copyright, most is syndicated. AccuWeather, Dear Abby, and the comics top the list. Most of this protected content is predictably located in national and leisure sections.

Fortunately, syndicated content is available in commercial digital newspaper repositories available elsewhere. Design for future technical enhancement of the Florida Digital Newspaper Library call broadcast searches in future. The broadcast search would be launched when primary search identifies content located within Copyright flags.
Text, whether created by vendor or generated in-house, is produced by Optical Character Recognition (OCR). While generated with state of the art – almost *steroidal* – software, accuracy is dependent upon publication characteristics.
Contemporary newspaper, with clear print and sharp contrast, generates searchable text that is between 98 and 100% accurate.
Older newspapers with uneven lighting, poor contrast, poor and uneven lettering and other deleterious effects, generates searchable text that is generally between 85 and 95% accurate.
Of course accuracy falls when source microfilm, with similar defects, must be used. Microfilm amplifies the adage *Trash in; Trash out!*
The JPEG2000 image format is used to deliver large files, such as this 64 MB sheet of the News-Sun (Sebring, FL) with nearly full image resolution in the space of a 64 KB file.
The user can search and read text or zoom in on the page image.
Special Issues: File Size

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So good is the resolution and image clarity that
By ROMONA WASHINGTON

Executive Editor

AVON PARK — For the past five years, Gloria Bryant has been wanting a better home for her and the six grandchildren she is raising.

The patron is able to clearly read the paper’s pearly whites.
Using the Gate ANNIE scripts, with programming funded by the Ephemeral Cities project, we are training FDNL technologies to recognize names.

In the Ephemeral Cities project, if our digital libraries contained any additional information about Gloria Bryant, you could know it too. And, newspapers allow historians to step virtually if not actually in the footsteps of their subjects.

This type of deep indexing will present Florida’s researchers with tremendous advantage. But, it also is generating large issues for authority control.