When Fulltext Searching Isn’t Enough

Text Encoding for Manuscripts and Other Special Collections Materials

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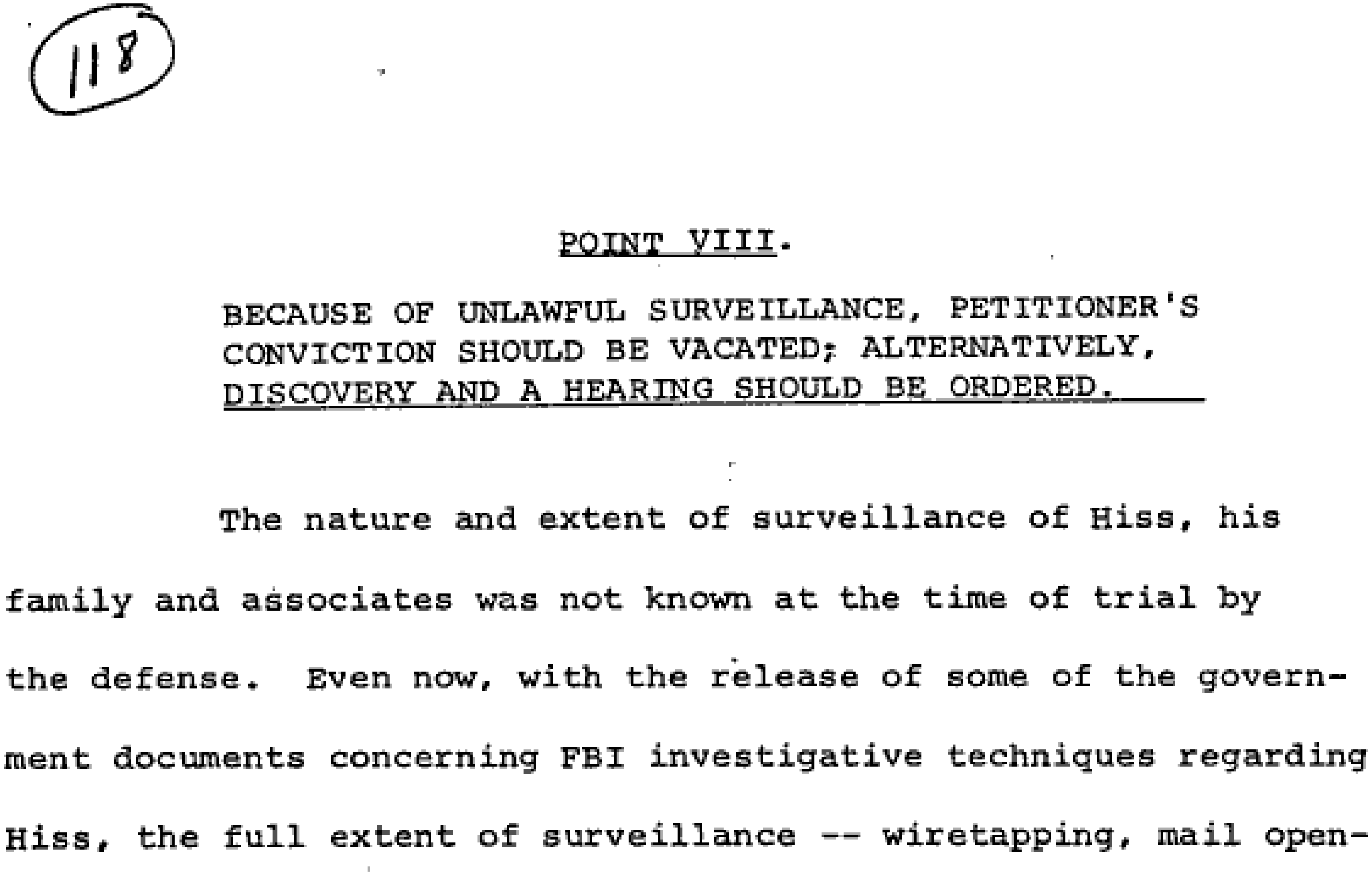
Let’s say you have an important document



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POINT VIII.

BECAUSE OF UNLAWFUL SURVEILLANCE, PETITIONER'S CONVICTION SHOULD BE VACATED; ALTERNATIVELY, DISCOVERY AND A HEARING SHOULD BE ORDERED.

The nature and extent of surveillance of Hiss, his family and associates was not known at the time of trial by the defense. Even now, with the release of some of the government documents concerning FBI investigative techniques regarding Hiss, the full extent of surveillance -- wiretapping, mail open-

You scan it

You store an image of the page in an openly documented, non-proprietary, standard, preservation-quality format such as TIFF or JPEG2000, perhaps embedded in a PDF/A.

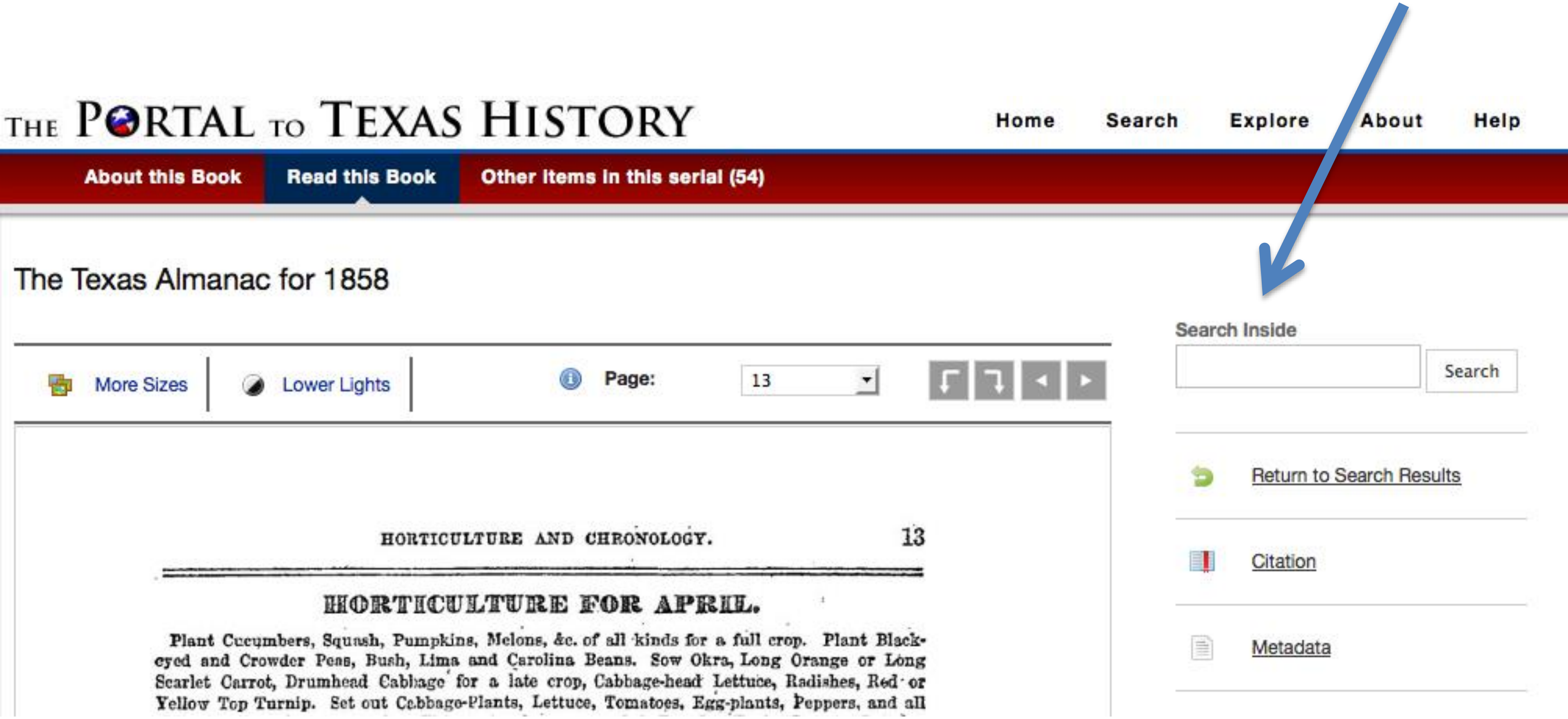
If you scan at a high resolution, you can print at a high quality and allow users to zoom in closely.

But the reader has to look at pages as if they were part of a physical document. They can’t use a “find” feature to search the text.

So you OCR it

Optical character recognition (OCR) software turns an image of text into actual text that a user can search. (You’ve seen PDFs of scanned documents like this.)

Now you can use the “find” feature.

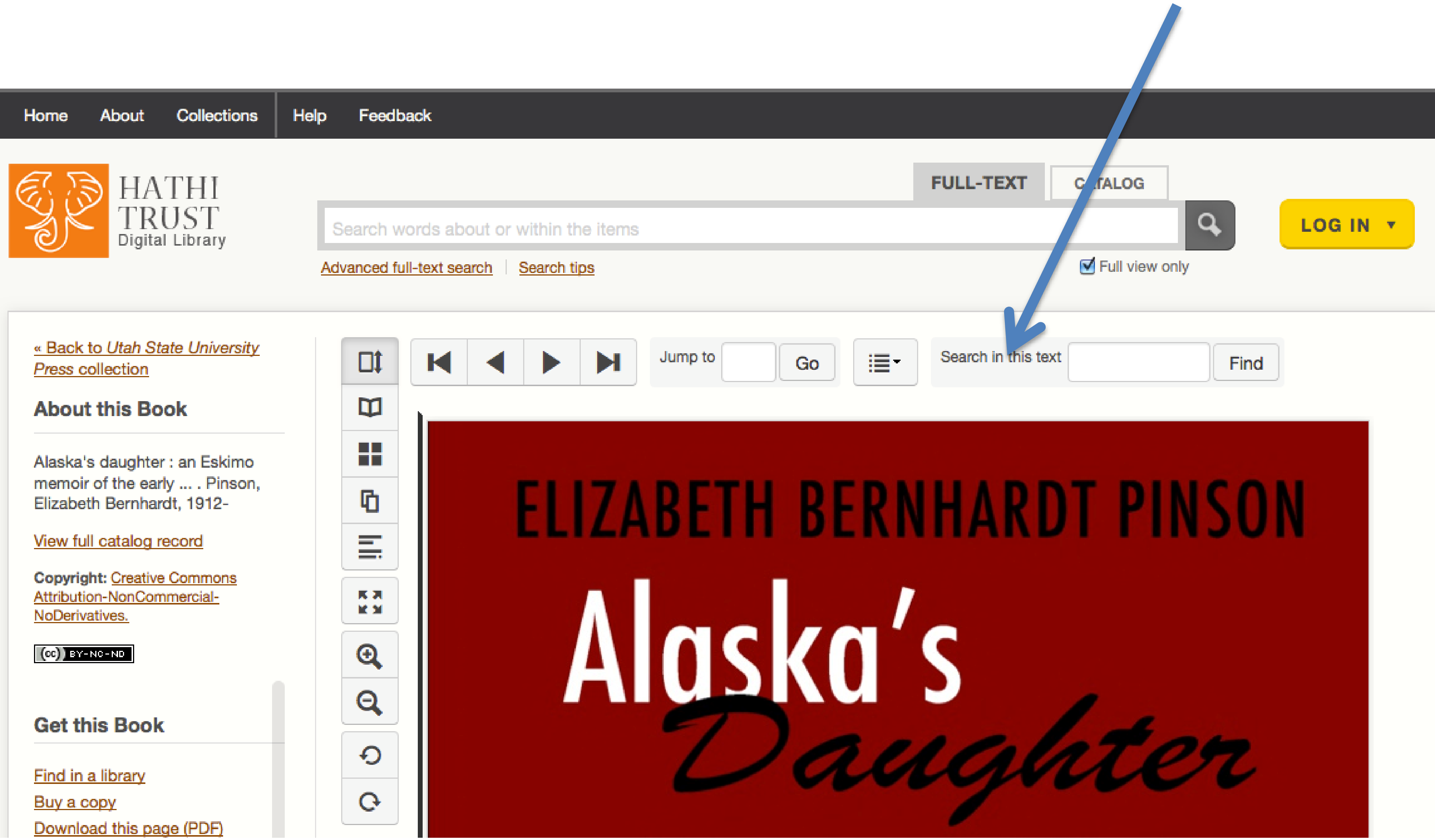


The Texas Almanac for 1858

HORTICULTURE AND CHRONOLOGY. 13

HORTICULTURE FOR APRIL.

Plant Cucumbers, Squash, Pumpkins, Melons, &c. of all kinds for a full crop. Plant Black-eyed and Crowder Peas, Bush, Lima and Carolina Beans. Sow Okra, Long Orange or Long Scarlet Carrot, Drumhead Cabbage for a late crop, Cabbage-head Lettuce, Radishes, Red or Yellow Top Turnip. Set out Cabbage-Plants, Lettuce, Tomatoes, Egg-plants, Peppers, and all



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But OCR technology usually can’t handle …

- cursive handwriting
- printed handwriting
- early printed books
- poor-quality facsimiles (especially microforms)

So if you want to enable someone to search the text of this, you have to correct the OCR or transcribe from scratch.

But what if you want to …

- Digitize a print dictionary and allow searching on just the headwords
- Distinguish between words in the original manuscript and edits made by another hand?
- Restrict your search to the author’s words, excluding words contained in quotations?
- Produce an e-book version of the document that will reflow nicely on e-book readers?
- Add your own annotations that will be readable on any system? (unlike annotating a PDF!)

To go beyond full-text searching, you need something …

- that allows you to annotate the structure of the text
- that is an openly documented, non-proprietary standard suitable for long-term preservation and reuse of the content

If you’re not happy with just full-text search

YOU NEED XML

What is XML?

The Extensible Markup Language (XML) is an open, nonproprietary format for encoding of data (or documents).

It’s not really a language: it’s a standard way of writing languages to structure data (or documents). You get to make up most of the vocabulary and syntax.

But you don’t need to invent your own! Lots of XML markup languages have been created for specific purposes. Each has a way of *validating* a document to make sure it uses the right vocabulary and syntax.

Lofts of software can process any kind of XML.

Some XML markup languages

- **XHTML**: a format for webpages which is stricter than other flavors of HTML
- **RSS**: allows websites to broadcast updates
- **MARCXML**: a format for bibliographic data which is more transparent in structure than MARC21 and which can be manipulated with standard software
- **ONIX**: a format for publishers to transmit metadata to vendors
- **JATS**: a format for publishing and archiving journal articles
- **EAD**: a format specially designed for finding aids
- **EAC-CFP**: a format specially designed for authority records for archives
- **TEI**: guidelines for representing any kind of text but especially suited to non-digital source documents

A steep learning curve, but very powerful.

For example …

Scholarly editions

- Documenting the American South (a sample)
- The Chymistry of Isaac Newton (a sample)

Searching

- The Anglo-Norman Online Hub

Questions?

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