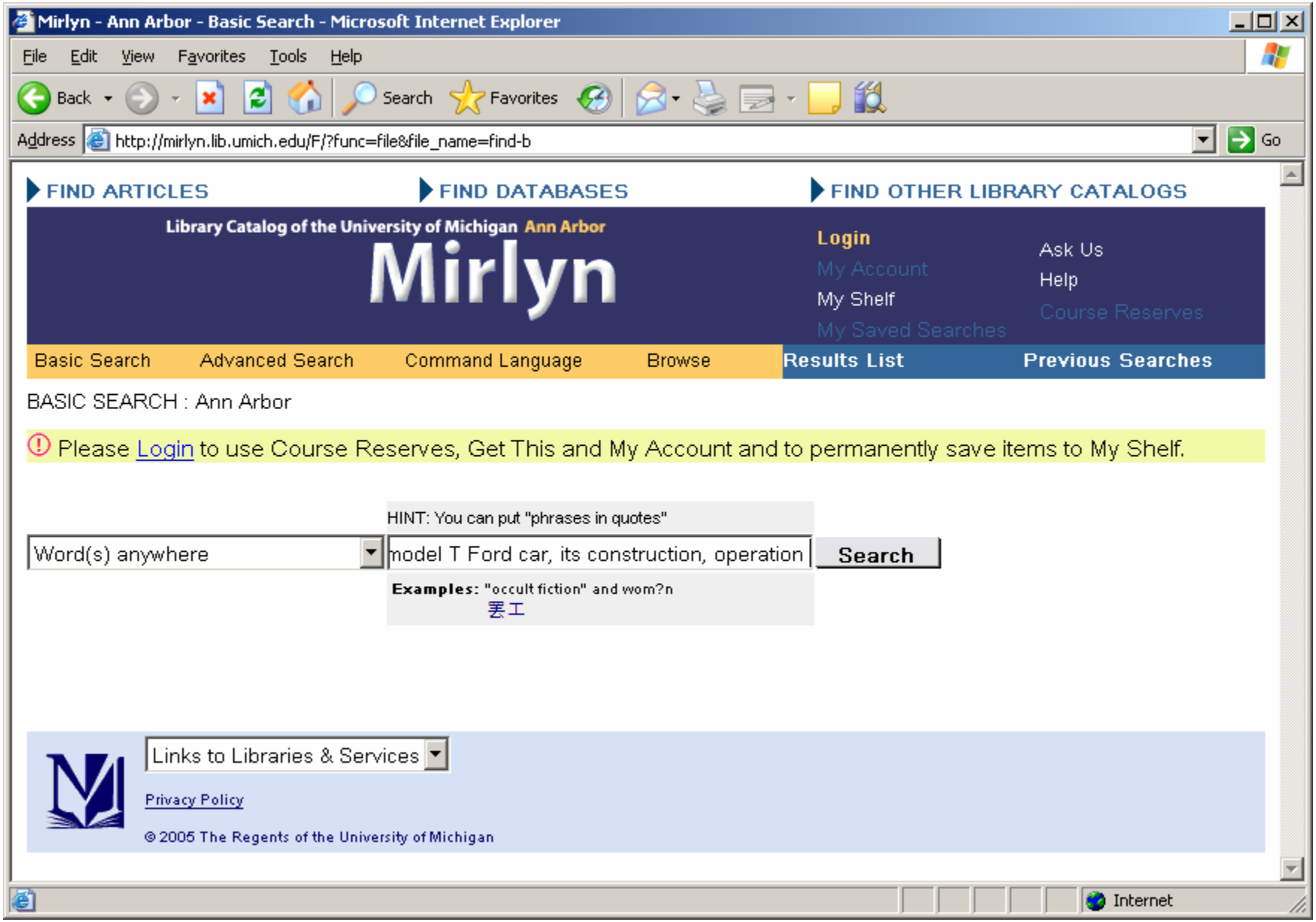
MBooks: Google Books Online at the University of Michigan Library

Phil Farber, Chris Powell, Cory Snavely

University of Michigan Library Information Technology


Mirlyn - Ann Arbor - Basic Search - Microsoft Internet Explorer
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FIND ARTICLES
FIND DATABASES
FIND OTHER LIBRARY CATALOGS
Library Catalog of the University of Michigan Ann Arbor
Mirlyn
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My Account
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My Saved Searches
Ask Us
Help
Course Reserves
Basic Search
Advanced Search
Command Language
Browse
Results List
Previous Searches
BASIC SEARCH : Ann Arbor
Please Login to use Course Reserves, Get This and My Account and to permanently save items to My Shelf.
HINT: You can put "phrases in quotes"
Word(s) anywhere
model T Ford car, its construction, operation
Search
Examples: "occult fiction" and wom?n
Links to Libraries & Services
Privacy Policy
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Internet


Mirlyn - Ann Arbor - Search Results - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://mirlyn.lib.umich.edu/F/JPLG2FFI4JM4M2EGAS51LA27XDB2MXREY4Q6VD6RYYBQBS3YHV-31284?func=find-b&find_code=WRD&request=The+m
Go
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Mirlyn
Login
My Account
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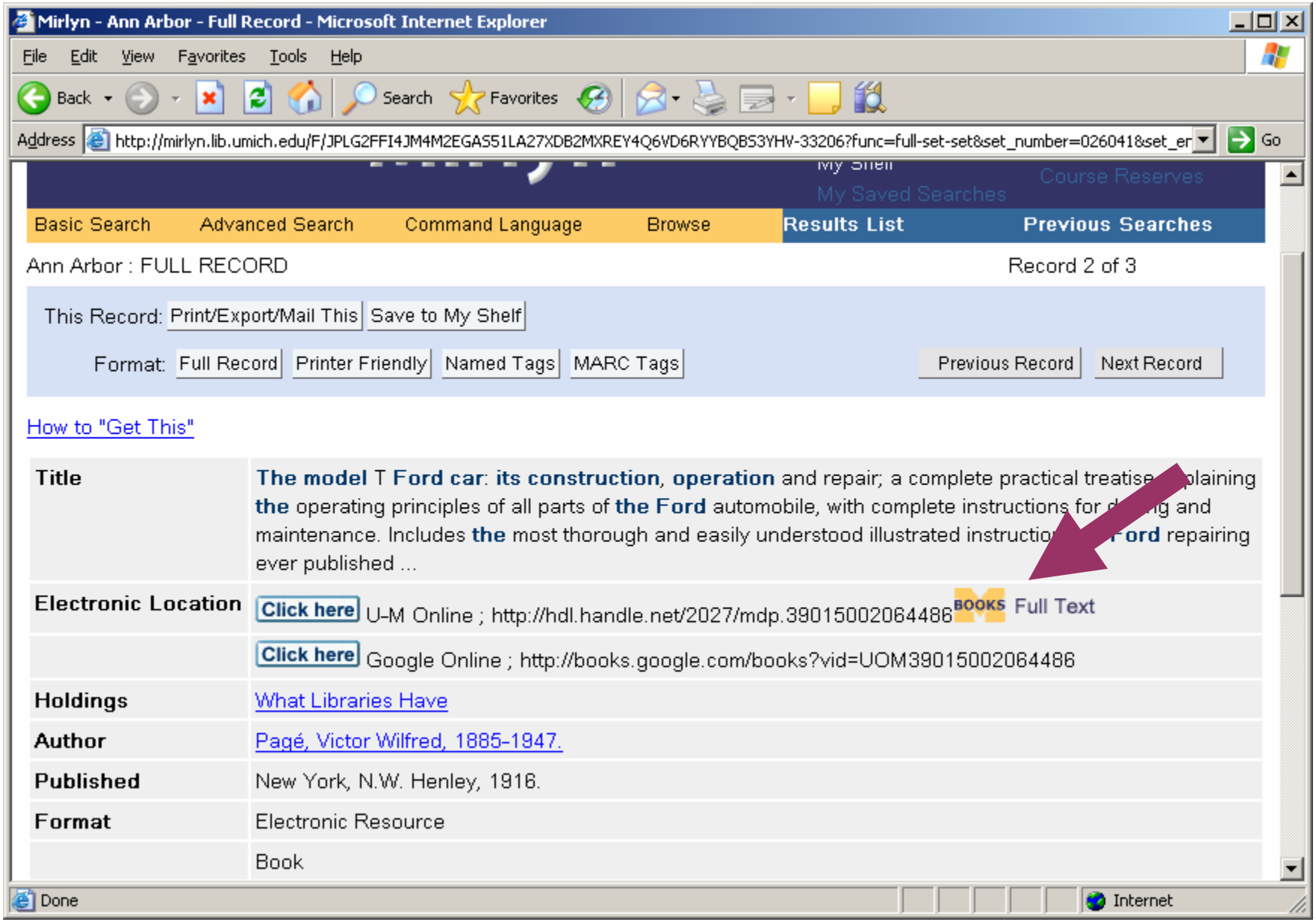
My Saved Searches
Ask Us
Help
Course Reserves
Basic Search
Advanced Search
Command Language
Browse
Results List
Previous Searches
Ann Arbor : SEARCH RESULTS
RESULTS FOR Words= The model T Ford car its construction operation; Sorted by: Title, then Year(descending)
Records 1 - 3 of 3
Selected records: Select All Deselect All Create Subset Add to My Shelf
Jump to Title
Limit options: Available Now Modify Search
Jump to #
Sort options: Format Author Title Year(a) Year(d)
Format Author Title Year Location
1 Pagé, Victor Wilfred, The model T Ford car: its construction, operation and repair; a complete practical treatise explaining the operating principles of all parts of the Ford automobile, with complete instructions for 1916 • Bentley Historical FB 2 F699 P133
2 Pagé, Victor Wilfred, The model T Ford car: its construction, operation and repair; a complete practical treatise explaining the operating principles of all parts of the Ford automobile, with complete instructions for 1916 • Buhr Shelving Facility - Ask at any library | TL 215 .F7 P128 1916
Internet


Mirlyn - Ann Arbor - Full Record - Microsoft Internet Explorer
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Address http://mirlyn.lib.umich.edu/F/JPLG2FFI4JM4M2EGAS51LA27XDB2MXREY4Q6VD6RYYBQBS3YHV-33206?func=full-set-set&set_number=026041&set_er
Go
My Shelf
My Saved Searches
Course Reserves
Basic Search
Advanced Search
Command Language
Browse
Results List
Previous Searches
Ann Arbor : FULL RECORD
Record 2 of 3
This Record: Print/Export/Mail This
Save to My Shelf
Format: Full Record
Printer Friendly
Named Tags
MARC Tags
Previous Record
Next Record
How to "Get This"
Title
The model T Ford car: its construction, operation and repair; a complete practical treatise ...plaining the operating principles of all parts of the Ford automobile, with complete instructions for d...ng and maintenance. Includes the most thorough and easily understood illustrated instructio... Ford repairing ever published ...
Electronic Location
Click here U-M Online ; http://hdl.handle.net/2027/mdp.39015002064486
BOOKS Full Text
Click here Google Online ; http://books.google.com/books?vid=UOM39015002064486
Holdings
What Libraries Have
Author
Pagé, Victor Wilfred, 1885-1947.
Published
New York, N.W. Henley, 1916.
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Electronic Resource
Book
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Internet

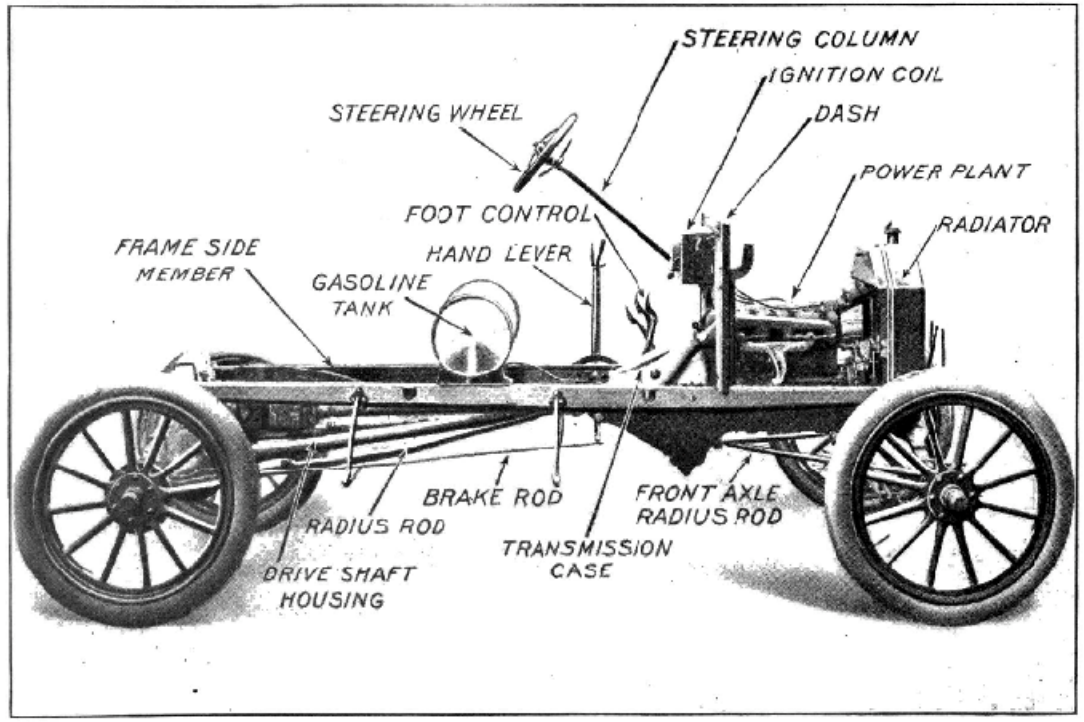
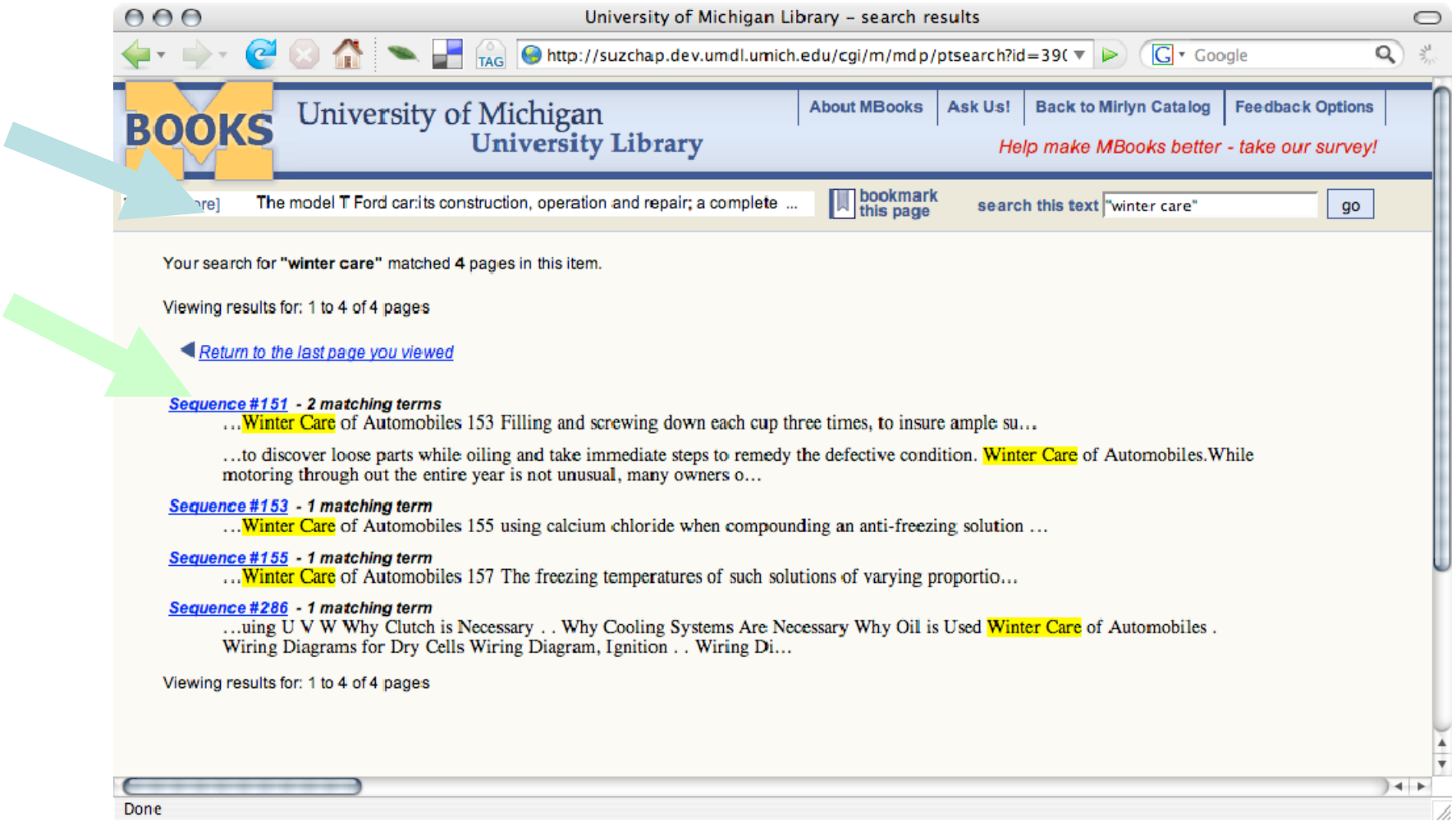


Fig. 3.—Side View of Stripped Ford Chassis Showing Valve Side of Motor.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The model T Ford car:its construction, operation and repair; a complete ...
bookmark this page
search this text
"winter care"
go
Your search for "winter care" matched 4 pages in this item.
Viewing results for: 1 to 4 of 4 pages
Return to the last page you viewed
Sequence #151 - 2 matching terms
...Winter Care of Automobiles 153 Filling and screwing down each cup three times, to insure ample su...
...to discover loose parts while oiling and take immediate steps to remedy the defective condition. Winter Care of Automobiles.While motoring through out the entire year is not unusual, many owners o...
Sequence #153 - 1 matching term
...Winter Care of Automobiles 155 using calcium chloride when compounding an anti-freezing solution ...
Sequence #155 - 1 matching term
...Winter Care of Automobiles 157 The freezing temperatures of such solutions of varying proportio...
Sequence #286 - 1 matching term
...uing U V W Why Clutch is Necessary . . Why Cooling Systems Are Necessary Why Oil is Used Winter Care of Automobiles . Wiring Diagrams for Dry Cells Wiring Diagram, Ignition . . Wiring Di...
Viewing results for: 1 to 4 of 4 pages
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using calcium chloride when compounding an anti-freezing solution care must be taken that commercially pure salt is employed, as the cruder grades will liberate a larger percentage of free acid. The mistake should not be made of using chloride of lime, which has much the same appearance, but the corrosive action of which is very great.

It is well to test a solution of calcium chloride for acid before placing it in the radiator. A piece of blue litmus paper may be obtained at any drug store and immersed in the solution. If the paper turns red it is a sign that there is acid present. Acid may be neutralized by the addition of a small quantity of slacked lime.

The solutions may be made in these proportions:

Two pounds of salt to the gallon of water will freeze at eighteen degrees Fahrenheit.

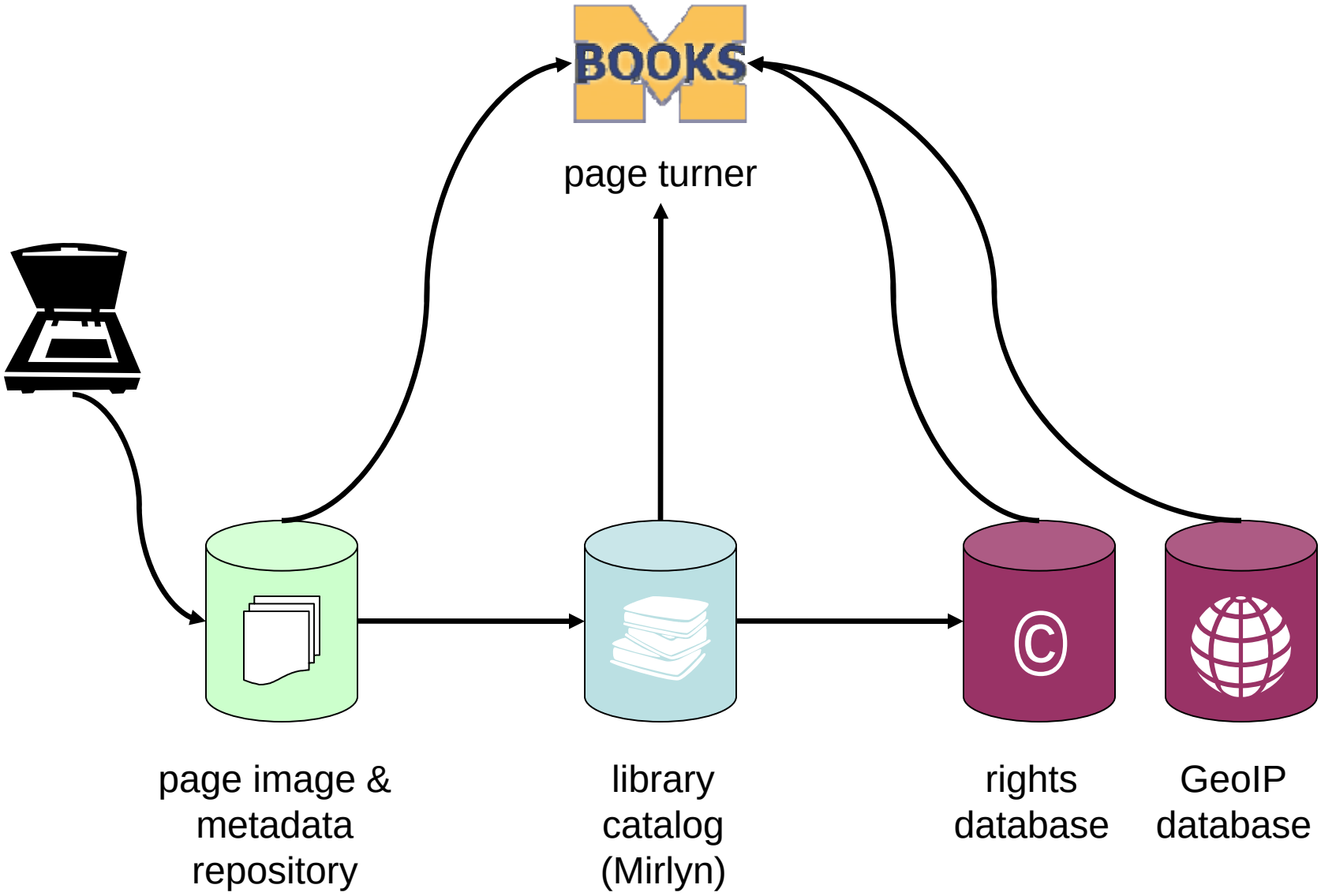
Three pounds of salt to the gallon of water will freeze at one and five-tenths degrees Fahrenheit.

Four pounds of salt to the gallon will freeze at seven-

Architecture overview

Four basic pieces:

- **Mirlyn, the library catalog**
- **Page image and metadata repository**
- **Rights and GeoIP databases**
- **Pageturner**

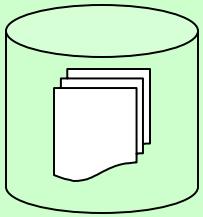

BOOKS
page turner
page image &
metadata
repository
library
catalog
(Mirlyn)
rights
database
GeoIP
database

Library catalog — Mirlyn

- **During scanning, tracking information is stored in Mirlyn:**
  - ***Manual scanning of barcode or batch process for a call number range***
  - ***Triggers unavailability message online***
  - ***Metadata extracted and made available***
  - ***Daily list of barcodes for returned items used to remove unavailable status***

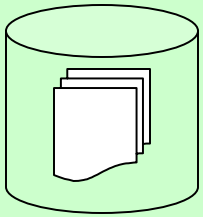
Library catalog — Mirlyn

- **When images are added to repository:**
  - ***Barcodes used to add to the item record call-number-2 field***
  - ***Supplies info to rights database***
  - ***Record updated in 006, 007, and 533 fields***
  - ***Virtual 856 fields or link to detailed holdings are generated in the display***
  - ***Supplies metadata to the pageturner***



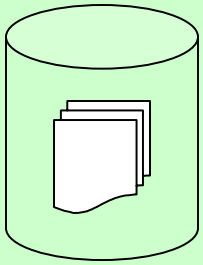
METS Object

- **Why METS?**
  - ***Can serve as an Archival Information Package and a Dissemination Information Package***
  - ***Designed to record the relationship between pieces of complex digital objects***
  - ***Can be created automatically as texts are loaded or reloaded***



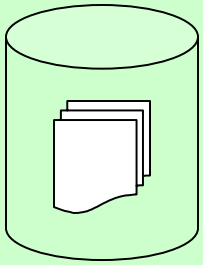
METS Object

- **What's there?**
  - ***metsHdr with an ID and CREATEDATE***
  - ***dmdSec with a URL***
  - ***Two techMD referencing notes files***
  - ***Two fileGrps (images and OCR)***
  - ***Physical structMap tying together the files with any metadata (page numbers or features)***



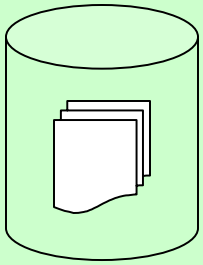
Page image and metadata repository

- **Objectives:**
  - ***A guiding principle: store archival images, create deliverables on demand***
  - ***Incorporate TDR-like practices***
- **Simple filesystem layout adapted from DLXS**
  - ***One directory per volume, all files inside***
  - ***Example:* /l1/obj/bc/39015/1/2/3/39015123456789/**
  - ***Use of a namespace allows for conflicting identifiers***
  - ***Currently, one namespace: UM barcode (*'bc'*) at scan time***



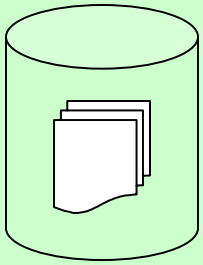
Page image and metadata repository

- **Download and ingest**
  - ***Google Return Interface (GRIN) at Google provides volumes over HTTPS***
    - *TIFF, JPG, UTF-8 OCR, metadata in a package*
  - ***Google Return (Object Oriented) Validation Environment (GROOVE) at UM***
    - *manages all download and validation*
    - *Written in Perl; MySQL backend for state tracking*
    - *available to Google Partners via CVS (see me!)*



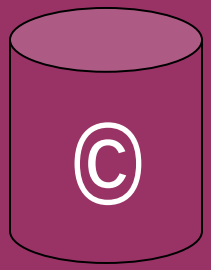
Page image and metadata repository

- **Automatic validation in GROOVE**
  - ***Check barcode check digit using Luhn algorithm***
  - ***Fixity check on JPG, TIFF, UTF8 using MD5***
  - ***Well-formedness and embedded metadata check on JPG, TIFF, UTF8 using JHove***
  - ***Various completeness cross-checks***
  - ***Failures retried, will eventually refer to Google***
- **Periodic fixity checks using MD5**



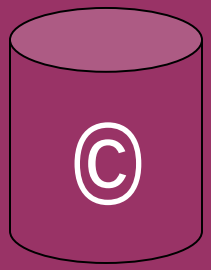
Page image and metadata repository

- **Qualitative validation (manual)**
  - ***20-page samples to QA staff (primarily students)***
  - ***ACDSee used to examine visual characteristics and severity (readable/not readable); recorded in database***
  - ***Trends identified and reported to Google***
- **METS file created (functions as a manifest)**
- **Persistent identifier (Handle) created**
- **Feed of identifiers sent to/from Mirlyn via ssh**



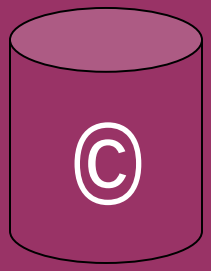
Rights database

- **What information to store?**
  - ***Considered complexity and maintenance***
  - ***Considered using MARC directly***
  - ***Needed to accommodate both bib record-derived rights and manual overrides***
- **Approach: examine bib record, determine authoritative copyright status, store rights attribute, source, reason, and timestamp**
- **Stored in MySQL**



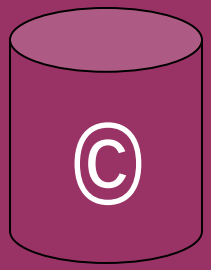
Rights database

- **Rights attributes currently in use**
  - **pd*: public domain***
  - **pdus*: public domain for US viewers****
  - **inc*: in copyright***
  - **und*: undetermined (a body of work for cataloging!)***
  - **nobody *(override): no access***



Rights database

- **Rights attributes not yet in use:**
  - **orph*: orphaned work***
  - **umall *(override): open access for authenticated UM affiliates***
  - **world *(override): open access to world***
- **Source can currently be ‘google’ or ‘lit-dlps-dc’ (local digitization)**



Rights database

- **Each rights attribute must have a reason.**
- **Reasons in use:**
  - **bib*: bibliographically-derived***
  - **man*: manual access control override***
- **Reasons not yet in use:**
  - **con*: contractual agreement on file***
  - **ddd*: due diligence documented***

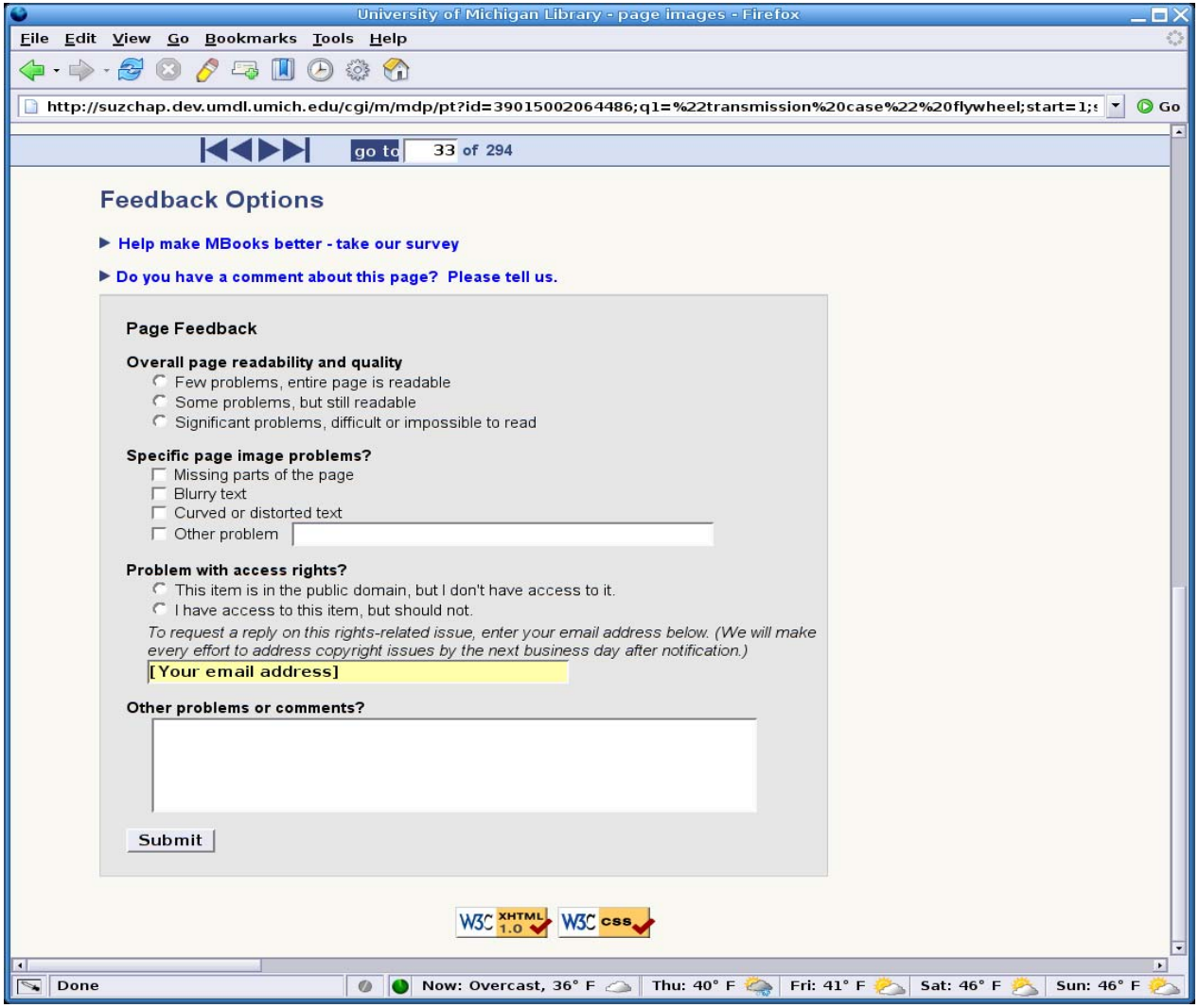
GeoIP database

- **Right attribute ‘pdus’ requires country of origin.**
- **Several options; all use DNS registry information with tweaks for additional accuracy.**
- **We chose MaxMind GeoIP database:**
  - ***99% accurate***
  - ***Update utility and several query APIs included***
  - ***$12/month***

Pageturner middleware

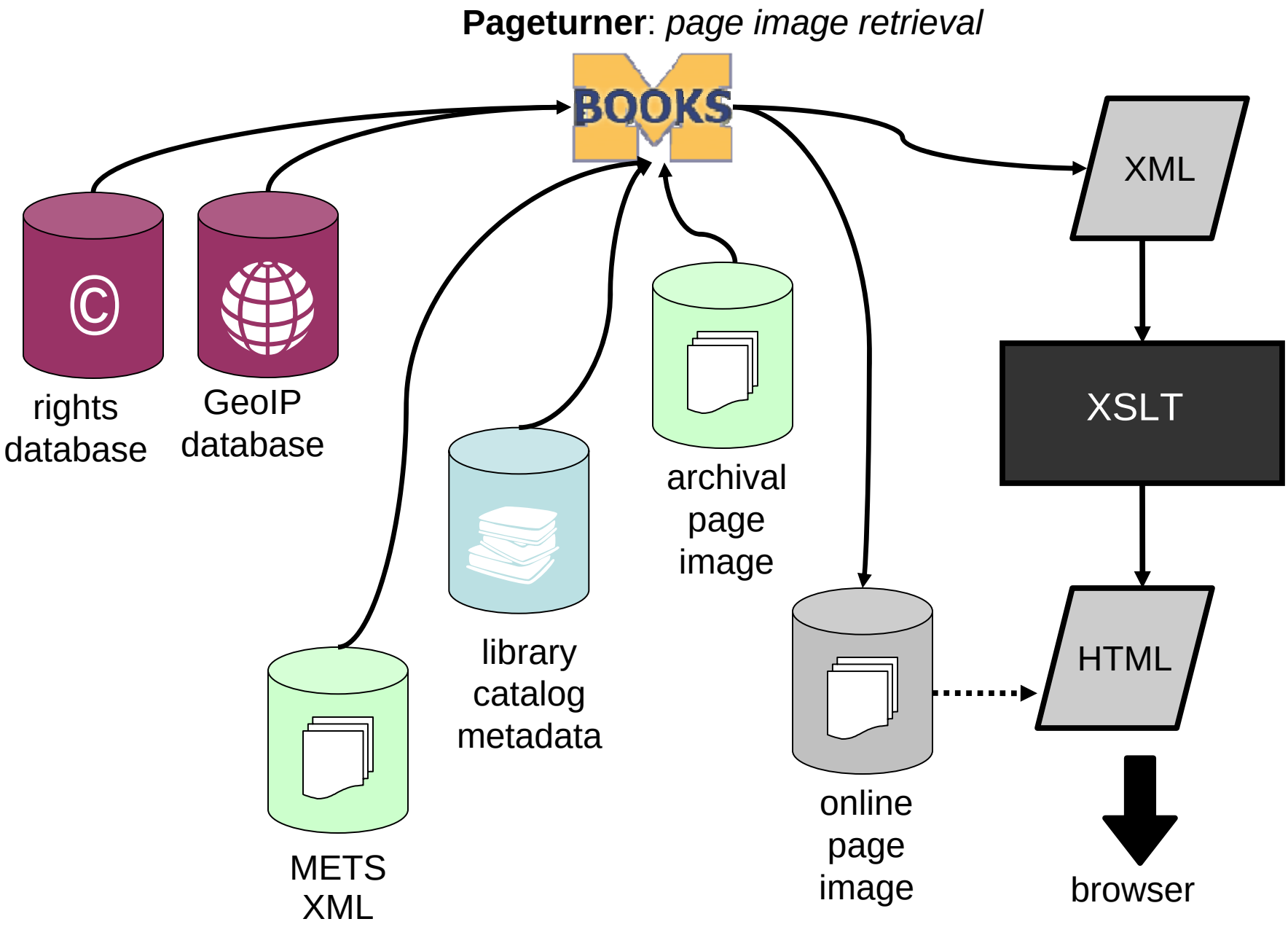
- **Ties all the rest together**
  - ***User interface***
  - ***Access rights detemination***
  - ***OCR, page image access***
  - ***Item search***
- **Gives users the opportunity to provide feedback**

Pageturner: *feedback form*



Pageturner: *image retrieval*

- ***Access GeoIP and Rights dB***
- ***Access repository for METS object and archival image***
- ***Access Mirlyn library catalog for item metadata***
- ***Transform images and cache them***
- ***Wrap in XML, apply XSL to create HTML***


Pageturner: *page image retrieval*
BOOKS
XML
XSLT
HTML
browser
rights database
GeoIP database
archival page image
library catalog metadata
METS XML
online page image

BOOKS Pageturner: *Item searching*

- ***Wrap, concatenate and cache OCR files***
- ***Create and cache indexes***
- ***Perform search***
- ***Display results***

Pageturner: *Item searching*

- ***Wrap, concatenate and cache OCR files***

```
<doc>
  <page SEQ="1"></page>
  <page SEQ="2">THE MODEL T FORD CAR ITS
CONSTRUCTION, OPERATION AND REPAIR
A COMPLETE PRACTICAL TREATISE [...]
  </page>
  [...]
  <page SEQ="292"></page>
  <page SEQ="293"></page>
</doc>
```

BOOKS Pageturner: *Item searching*

- ***Create and cache indexes***
  - **XPAT full text index**
  - **XML page region index**
  - **Processed in real-time**
  - **Cache indexes**

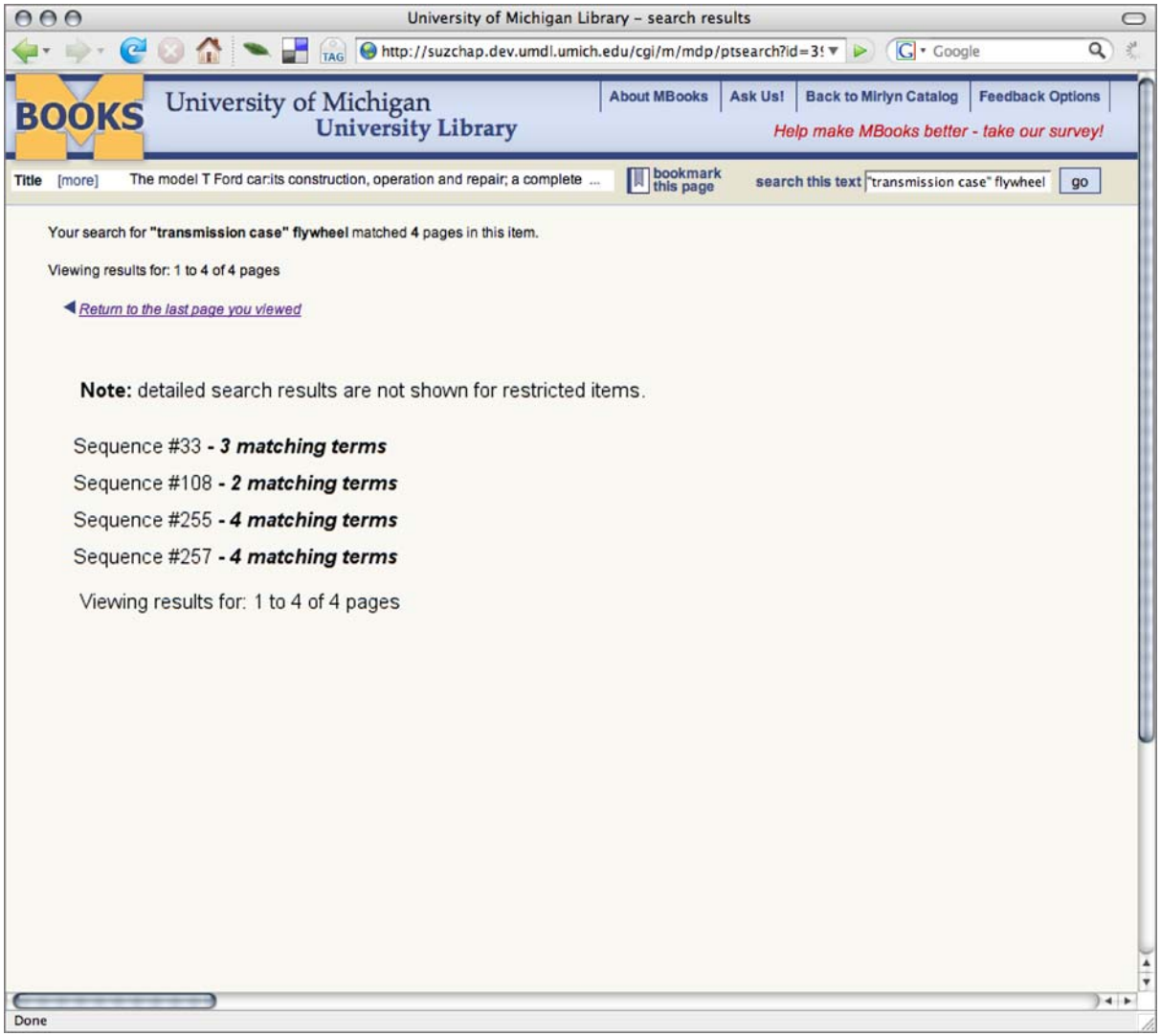
BOOKS Pageturner: *Item searching*

- ***Perform search***
  - **Individual words and/or phrases co-occurring within a page**
  - **Right stemming with “*”, e.g., "fond*" gives "fond," "fondest," "fondly," etc.**

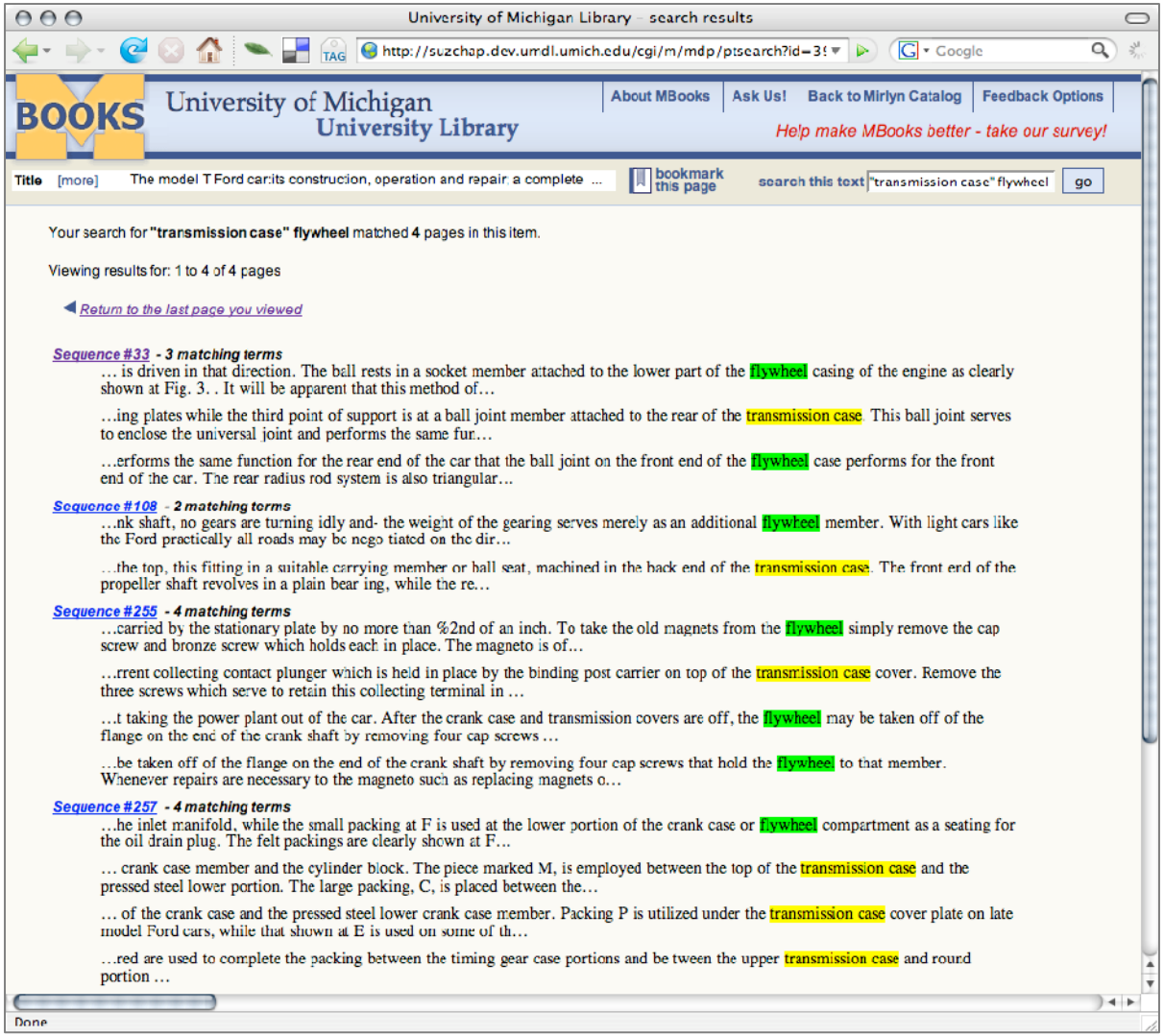
BOOKS Pageturner: *Item searching*

- ***Display results***
  - **Hit counts and KWICs, per page**
  - **No KWICs if access restricted**
  - **OCR Word/Phrase highlighting**

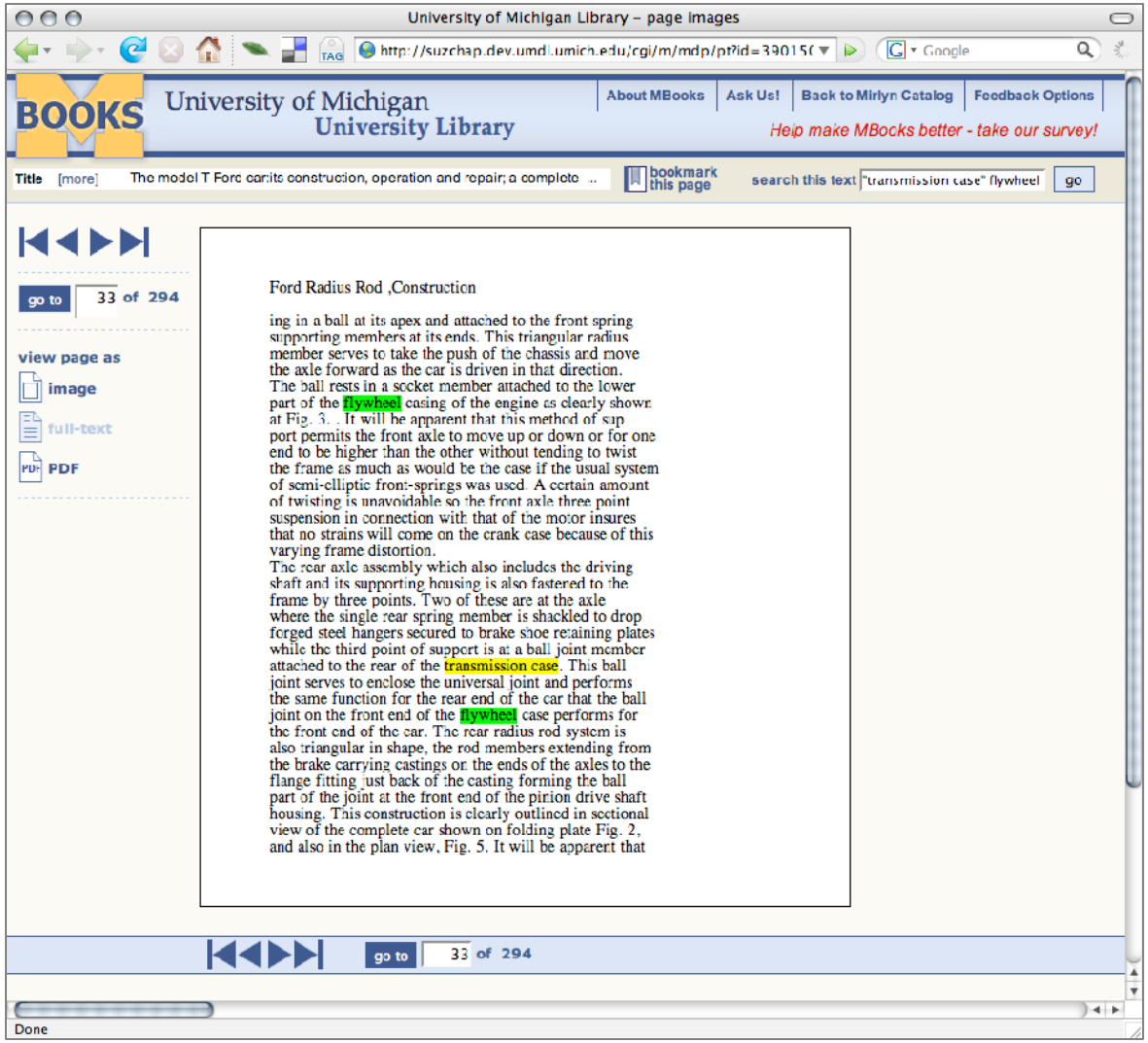
BOOKS Pageturner: *Item searching*



Pageturner: *Item searching*



BOOKS Pageturner: *Item searching*



What's Next?

- ***Display additional structural metadata***
- ***Building collections***
- ***Scalability of repository storage***