Assignment 2

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Information Retrieval

LIBR 202-01 – Fall 2008

School of Library and Information Science - San Jose State University
Part A - Subject Access

Aboutness literally describes what a record is about, i.e. its subject matter. It is subjective in that what a user sees a document as being about is not necessarily what the author envisions or intends, and may also be different from what an indexer sees. This makes aboutness difficult to index. To represent aboutness, documents are indexed in one of three ways: 1) natural language, 2) controlled vocabulary and 3) classification.

Controlled vocabularies are a means of reducing ambiguity in indexing. Natural language can be ambiguous, as different words can share the same or similar meanings (the example given in this paper are the terms “teenager”, “teen”, “adolescent”, “juvenile”, “minor” and “young adult”), or one word can have multiple meanings (the example given in this paper is the term “mercury”). Catalogers who index the document in question assign controlled vocabularies.

Descriptors are used to describe the aboutness of a record. They are taken from the controlled vocabulary that is created for a particular database, and are used to describe aboutness according to the rules of the database in question. Different databases use different sets of descriptors for describing the same article. For an article on “Noise Reduction in an Undergraduate Library”, ERIC uses 12 descriptors, whereas PsycINFO uses only five, and Library Literature uses two.

Descriptors for records are created by coordinating terms. The two methods for doing this are pre-coordinate (preco) and post-coordinate (postco). Pre-coordinate terms are those where “subject headings are synthesized, or constructed, according to the syntactical rules for the vocabulary.” (p. 19). Pre-coordinate terms are assigned by an indexer and are more generally more complex than post-coordinate terms and follow a
specific set of rules. Pre-coordinate terms usually combine a set of related terms into a string. The paper gives examples of pre-coordinate terms for a work entitled “The administration of television newsfilm and videotape collections: a curatorial manual”: *Television broadcasting of news – Archival resources – Management – Handbooks, manuals, etc.*, which is taken from the *Library of Congress Subject Headings*.

Post-coordinate terms are assigned by a user doing a query. For example, a user will do a query based on any number of search terms using a Boolean search method. The terms are chosen by the user, and are based on what criteria the user is using for the search. Post-coordinate terms are single words, they do not use any syntax, and they do not need to be entered in a specific order.

Pre-coordination predates post-coordination, and was initially used in the era of printed indexes and card catalogs. Post-coordination is more common today, and is generally used in computer-based searches that employ Boolean searching.

Terms that make up a controlled vocabulary for a particular database are listed in a thesaurus. The thesaurus is usually not available to searchers meaning that they must discover appropriate terms through trial and error. The terms listed in the thesaurus are arranged according to how they are related to each other. Indeed, the thesaurus has what is known as a *syndetic* structure, meaning that the terms are interrelated. The paper includes excerpts from the thesauri for two databases, ERIC and PsycINFO. An example of the structure of a thesaurus entry from ERIC is as follows:

Under the term heading for “Information Retrieval” is listed the Scope Note (SN) which defines the term and its usage. Beneath this is a list of Narrower Terms (NT) that is more specific terms than Information Retrieval, such as “Downloading”. Broader
Terms (BT) are less specific (i.e. broader in meaning) than the entry term. There is also a listing of Related Terms (RT), which as the name implies are related to the entry term. Some terms also have the letters UF, for “Used For”, meaning that the entry term can be used for other terms that may seem related. For example, “Information Science” can be used in place of “Informatics”. There may also be indications that a term is not to be used, but that another term should be used instead. This situation is designated by the letters USE. An example is “Information Management” which the thesaurus indicates should be used instead of “Information Resources Management”.

The paper describes the difference between general keyword searches, phrase searches and descriptor searches, using the example of a search for “information retrieval”. The general keyword search retrieves any record that has the words “information” and “retrieval”, regardless of where the words appear in the record, or whether or not they are in close proximity to each other or part of the same phrase.

The phrase search looks for “information retrieval” as a phrase, and returns records wherein the phrase appears in the title, abstract or descriptors.

The descriptor search specifically looks for “information retrieval” only where it appears as a descriptor for a record. This tends to return the smallest number of searches of the three methods described.

The paper then presents an example of a complex search done in ERIC using DIALOG for the initial query “Information Retrieval And Information Storage”. The example demonstrates how searches can be refined by appending additional criteria to the original results. Using DIALOG, a user performs searches based on three different combinations of the terms in “Information Retrieval And Information Storage”. Each of
these searches and their results is known as a set, and has its own designation (in this case, S1, S2 and S3).

The user narrows the results for S3 by searching for “S3 and LIBRARIES”. This returns two new sets of records: one that matches all records containing just LIBRARIES (which becomes known as S4), and one whose records match the results found in S3 combined with LIBRARIES (which becomes known as S5). The user has reduced the number of records returned from 974 in S3, to 170 in S4. By amending the original results the user increases the precision of the returns.

The Library of Congress Subject Headings (LCSH) is the official list of subject headings used by the Library of Congress (LOC). It was initiated in 1897 upon the Library’s move to its current building. It was based on the American Library Association’s (ALA) *List of Subject Headings for Use in Dictionary Catalogs* that was prepared by the ALA in 1895. It replaces the previous subject heading system that was put in place by Thomas Jefferson. The 27th edition (LCSH 27) is the current edition that was published in December 2003, and which contains all the LOC subject headings up to that point.

LCSH subject headings are compiled by catalogers and use pre-coordinate indexing. They are often used in libraries, and are used to index any type of document that exists in a collection (such as books, serials and electronic records), as opposed to ERIC and PsycINFO which are only used to index articles and reports.

Creation of subject headings is done in accordance with rules that are enumerated in the Introduction to LCSH 27. There are rules for components of headings that include headings, scope notes and class numbers. There are also rules for relationships between
headings, wherein the rules for USE and UF are laid out. Subdivisions dealt with in the next section, which deals with the types of subdivisions (Topic, Form, Chronological) and Geographic) as well as the rules for ordering of subdivisions within the subject heading. Lastly, there exist what are known as free-floating subdivisions. These are subdivisions that can be appended by a cataloger to any subject heading, without having to be officially established as an official subject heading each time, though there are rules as to how the free-floating subdivisions may appended to the subject heading. A list of free-floating subdivisions is available in *Free-floating Subdivisions: An Alphabetical Index*.

While the LCSH and ERIC both use similar designations (such as USE, UF, BT, and NT), the pre-coordinate indexing method of the LCSH means that subject headings are further refined by use of subdivisions, such as “Information services industry” which as the further subdivisions of “—Employees” and “—Wages”, though in the latter instance, the user is instructed to use “Wages—Information services industry” instead of “Information services industry—Wages”. Another difference between LCSH and ERIC as that many of the subject headings have official LOC class numbers associated with them. To continue with the above example, “Information services industry” has the LOC class number *HD9999.149-HD9999.1494*.

The pre-coordinate terms in the LCSH may have further indications as to their use by the inclusion of such designations as *(May Subd Geog)* or *(Not Subd Geog)*, which indicates that the subject heading may or may not be subdivided on the basis of geography. An example of a subject heading that is subdivided by geography is *Information retrieval–Canada–Computer programs*. 
Part B – Video Records

The subject I chose for this assignment is “cats”. I chose the subject as I am a cat owner who personally likes cats, and who thinks they’re funny. Also, there is a significant online presence of what I call “funny cat videos”: people like to post videos of their cats doing funny things. The fact that there are a large number of these videos means that they are also relatively easy to find on YouTube.

I performed my search by entering the word “cat” into the search field on YouTube. This returned about 618,000 records. Per the assignment, I chose 10 videos, making sure that they were directly related to cats, meaning that I had to skip over videos that related to “Cat Stevens” and “Pussycat Dolls” among others. I also chose the particular videos based on whether or not I thought they were funny. Below is the data structure I chose for the videos:

ID: This is an identifying number that is assigned to each particular record

Title of Video: The title as listed by the user on YouTube. This is important as the same video can be posted by different users under different titles.

Posted By: The user name of the person who posted the video. This is important as the same video can be posted by different users under different titles.

Date Posted: The date that this video was posted by this particular user. This is important as the same video can be posted by different users under different titles.

Length of video (hrs:min:sec): self-explanatory

Number of Views: the number of times this particular video has been viewed. This includes multiple viewings by the same viewer.
Number of Ratings: The number of times viewers have submitted ratings for this video. This includes multiple ratings by the same viewer.

Average Rating (out of 5 stars): Self-explanatory

Description: A brief description of the subject matter or content of the video.

Pre-Coordinate:

- Video-YouTube
- Video-YouTube-Cat
- Video-YouTube-Cat-Humor
- Video-YouTube-Humor
- Video-YouTube-Cartoon
- Video-Humor
- Video-Cat
- Video-Cartoon
- Internet-Video
- Internet-Video-Humor
- Internet-Video-Humor-Cat
- Internet-Cartoon
- Internet-Cartoon-Cat
- Cat-Video-Internet-YouTube
- Cat-Video-Humor
Post-coordinate:

- Cat
- YouTube
- Video
- Cartoon
- Humor
- Internet

URL: Where the video can be found online, if someone were to search directly, and not via YouTube.

The records:

ID: 1
Title of Video: Simon's Cat 'TV Dinner
Posted By: simonscat
Date Posted: July 15, 2008
Length of video (hr:min:sec): 00:02:35
Number of Views: 4,230,006
Number of Ratings: 14,926
Average Rating (out of 5 stars): 5.00
Description: Cartoon of a cat interrupting its owner who is trying to watch TV, so that it can be fed
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor; Video-YouTube-Humor; Video-YouTube-Cartoon; Video-Humor; Video-Cat; Video-Cartoon; Internet-Video; Internet-Video-Humor; Internet-Video-Humor-Cat; Internet-Cartoon; Internet-Cartoon-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Cartoon; Humor; Internet
URL: http://www.youtube.com/watch?v=s13dLaTIHSg

ID: 2
Title of Video: An Engineer's Guide to Cats
Posted By: klusmanp
Date Posted: February 13, 2008
Length of video (hr:min:sec): 00:06:57
Number of Views: 2,879,527
Number of Ratings: 18,347
Average Rating (out of 5 stars): 5.00
Description:  Humorous video of two engineers describing the care of cats and cat behavior
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor; Video-YouTube-Humor; Video-Humor; Video-Cat; Internet-Video; Internet-Video-Humor; Internet-Video-Humor-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Humor; Internet
URL:  [http://www.youtube.com/watch?v=mHXBL6bzAR4](http://www.youtube.com/watch?v=mHXBL6bzAR4)

<table>
<thead>
<tr>
<th>ID</th>
<th>Title of Video</th>
<th>Posted By</th>
<th>Date Posted</th>
<th>Length of video (hr:min:sec)</th>
<th>Number of Views</th>
<th>Number of Ratings</th>
<th>Average Rating (out of 5 stars)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Simon's Cat 'Let Me In!'</td>
<td>simonscat</td>
<td>March 4, 2008</td>
<td>00:01:51</td>
<td>7,188,595</td>
<td>31,905</td>
<td>5.00</td>
<td>Cartoon of cat trying extreme measures to gain entry to the house so it can be fed.</td>
</tr>
<tr>
<td>4</td>
<td>Cat solves printer-problem(with subtitle)</td>
<td>KnechtSantoZ</td>
<td>September 10, 2008</td>
<td>00:01:04</td>
<td>714,613</td>
<td>1,738</td>
<td>5.00</td>
<td>Video of cat attacking a printer</td>
</tr>
<tr>
<td>5</td>
<td>cat wheel by Richard Norton</td>
<td>makemagazine</td>
<td>August 21, 2006</td>
<td>00:00:43</td>
<td>2,264,926</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Number of Ratings: 4,851
Average Rating (out of 5 stars): 4.00
Description: Video of wheel that dispenses food to a cat that runs inside it
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-Humor; Video-Cat; Internet-Video; Internet-Video-
Humor; Internet-Video-Humor-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Humor; Internet
URL: http://www.youtube.com/watch?v=f5Fg6KFcOsU

ID: 6
Title of Video: cowboys herding cats
Posted By: firenearth
Date Posted: October 31, 2006
Length of video (hr:min:sec): 00:01:08
Number of Views: 745,442
Number of Ratings: 1,143
Average Rating (out of 5 stars): 5.00
Description: Commerical for EDS.com that shows cowboys herding cats as if they were cattle
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-Humor; Video-Cat; Internet-Video; Internet-Video-
Humor; Internet-Video-Humor-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Humor; Internet
URL: http://www.youtube.com/watch?v=Pk7yqlTMvp8

ID: 7
Title of Video: The killer tortoise
Posted By: salvelio
Date Posted: September 5, 2006
Length of video (hr:min:sec): 00:02:16
Number of Views: 5,370,525
Number of Ratings: 17,809
Average Rating (out of 5 stars): 4.50
Description: Video of a cat trying to run away from a turtle that keeps going after it
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-Humor; Video-Cat; Internet-Video; Internet-Video-
Humor; Internet-Video-Humor-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Humor; Internet
URL: http://www.youtube.com/watch?v=Ul0gfCyeivM

ID: 8
Title of Video: How to Wash A Cat - By Bud Herron
Posted By: Pipesofpan
Date Posted: July 17, 2006
Length of video (hr:min:sec): 00:05:44
Number of Views: 1,772,942
Number of Ratings: 8,182
Average Rating (out of 5 stars): 4.50
Description: Humorous video that instructs viewers on the proper way to wash a cat
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-Humor; Video-Cat; Internet-Video; Internet-Video-
Humor; Internet-Video-Humor-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Humor; Internet
URL: http://www.youtube.com/watch?v=d9QwK5EHSmg

ID: 9
Title of Video: Simon's Cat 'Cat Man Do'
Posted By: simonscat
Date Posted: March 4, 2008
Length of video (hr:min:sec): 00:01:37
Number of Views: 5,233,546
Number of Ratings: 22,471
Average Rating (out of 5 stars): 5.00
Description: Cartoon of a cat trying to wake its owner up so that it can be fed
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-YouTube-Cartoon; Video-Humor; Video-Cat; Video-
Cartoon; Internet-Video; Internet-Video-Humor; Internet-Video-Humor-Cat; Internet-
Cartoon; Internet-Cartoon-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Cartoon; Humor; Internet
URL: http://www.youtube.com/watch?v=w0ffwDYo00Q

ID: 10
Title of Video: Simons Cat (real)
Posted By: derrobsi
Date Posted: October 5, 2008
Length of video (hr:min:sec): 00:01:13
Number of Views: 421,440
Number of Ratings: 564
Average Rating (out of 5 stars): 5.00
Description: Video response to "Simon's Cat 'Cat Man Do". This is a live-action
version of the cartoon
Precoordinate: Video-YouTube; Video-YouTube-Cat; Video-YouTube-Cat-Humor;
Video-YouTube-Humor; Video-YouTube-Cartoon; Video-Humor; Video-Cat; Video-
Cartoon; Internet-Video; Internet-Video-Humor; Internet-Video-Humor-Cat; Internet-
Cartoon; Internet-Cartoon-Cat; Cat-Video-Internet-YouTube; Cat-Video-Humor
Postcoordinate: Cat; YouTube; Video; Cartoon; Humor; Internet
URL: http://www.youtube.com/watch?v=6Gknp-8ltnE
Part C Search and Evaluate Pre-coordinate and Post-coordinate Systems

I did my search on the subject of homeless patrons in public libraries, as I am personally interested in the topic, and because I have been working on two projects on the subject for my Information Management (LIBR 204-01) class. For the search of a system that uses pre-coordinate indexing, I searched the SJSU Library (Table 1). For the search of a system that uses post-coordinate indexing, I searched the Library Literature and Information Full Text database (Table 2). The numbers of instances of false drops that resulted from the set of searches in Table 2 are listed in Table 3.
Table 1. Search using SJSU Library (Pre-coordinate system):

<table>
<thead>
<tr>
<th>Query</th>
<th>Number of Results</th>
<th>Annotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 homelessness in libraries</td>
<td>90</td>
<td>Records returned tend to be policy reports about homelessness</td>
</tr>
<tr>
<td>2 (homelessness) and (libraries)</td>
<td>90</td>
<td>Same results returned as query 1</td>
</tr>
<tr>
<td>3 homeless patrons in libraries</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>4 (homeless) and (patrons) and (libraries)</td>
<td>1</td>
<td>This relates exactly to the desired result</td>
</tr>
<tr>
<td>5 (homeless patrons) and (libraries)</td>
<td>1</td>
<td>Same results returned as query 4</td>
</tr>
<tr>
<td>6 homeless patrons and library policy</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>7 (homeless) and (patrons) and (library policy)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>8 (homeless) and (patrons) and (library) and (policy)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>9 (homeless patrons) and (library policy)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>10 (homeless patrons) and (library) and (policy)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>11 library policy towards homeless patrons</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>12 library use by homeless patrons</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>13 (library use) and (homeless patrons)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>Query</td>
<td>Results</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>(library) and (use) and (homeless patrons)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>(library) and (use) and (homeless) and (patrons)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>(library use) and (homeless) and (patrons)</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>library policy towards homelessness</td>
<td>0</td>
<td>Possible that query is too narrow.</td>
</tr>
<tr>
<td>(library policy) and (homelessness)</td>
<td>1</td>
<td>Policy paper about homelessness in the US. Only mention of &quot;library&quot; is in addition author: Library of Congress. Congressional Research Service</td>
</tr>
<tr>
<td>(library) and (policy) and (homelessness)</td>
<td>1</td>
<td>Same results as query 18</td>
</tr>
<tr>
<td>(homeless) and (libraries)</td>
<td>167</td>
<td>Policy reports on homelessness. Mention of &quot;libraries&quot; is in note: Distributed to some depository libraries in microfiche.</td>
</tr>
</tbody>
</table>
Table 2. Searches using Library Literature and Information Full Text (Post-coordinate system)

<table>
<thead>
<tr>
<th>Query</th>
<th>Number. of Results</th>
<th>Annotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(library services) and (homeless patrons)</td>
<td>1</td>
<td>Same record returned as query 9</td>
</tr>
<tr>
<td>(homelessness) and (libraries)</td>
<td>7</td>
<td>1 result relates to search query</td>
</tr>
<tr>
<td>(library services) and (homeless) and (patrons)</td>
<td>2</td>
<td>Very precise</td>
</tr>
<tr>
<td>(homeless) and (patrons) and (libraries)</td>
<td>19</td>
<td>Every record returns relates to query</td>
</tr>
<tr>
<td>(homeless patrons) and (libraries)</td>
<td>8</td>
<td>Every record returns relates to query, results more precise than query 4</td>
</tr>
<tr>
<td>(library) and (services) and (homeless patrons)</td>
<td>4</td>
<td>Very precise, somewhat greater recall than query 3</td>
</tr>
<tr>
<td>(homeless) and (patrons) and (library policy)</td>
<td>5</td>
<td>Every record returns relates to query, results more precise than query 5</td>
</tr>
<tr>
<td>(library services) and (homeless)</td>
<td>18</td>
<td>Greater recall and precision</td>
</tr>
<tr>
<td>(homeless patrons) and (library policy)</td>
<td>1</td>
<td>Greatest precision</td>
</tr>
<tr>
<td>(homeless patrons) and (library) and (policy)</td>
<td>2</td>
<td>Very precise. Both results are relevant</td>
</tr>
<tr>
<td>(homeless patrons) and (library) and (policy)</td>
<td>98</td>
<td>Good recall and precision</td>
</tr>
<tr>
<td>(libraries) and (homelessness) and (issues)</td>
<td>3</td>
<td>Only one record relates to query</td>
</tr>
<tr>
<td>No.</td>
<td>Query</td>
<td>Records</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>13</td>
<td>(library use) and (homeless patrons)</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>(library) and (use) and (homeless patrons)</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>(library) and (use) and (homelessness)</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>(library use) and (homeless) and (patrons)</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>(libraries) and (homelessness issues)</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>(library policy) and (homelessness)</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>(library) and (policy) and (homelessness)</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>(homeless) and (libraries)</td>
<td>131</td>
</tr>
</tbody>
</table>
Table 3. False drops received from searches using Library Literature and Information Full Text

<table>
<thead>
<tr>
<th>Query</th>
<th>Number of False Drops</th>
<th>Possible Reason(s) for False Drops</th>
</tr>
</thead>
<tbody>
<tr>
<td>(homelessness) and (libraries)</td>
<td>7 (out of 8 results)</td>
<td>Search criteria are too broad</td>
</tr>
<tr>
<td>(homeless) and (libraries)</td>
<td>4 (out of 131 results)</td>
<td>Search criteria are broad enough that it returns records regardless of whether or not the keywords are related.</td>
</tr>
<tr>
<td>(library) and (services) and (homeless)</td>
<td>3 (out of 98 results)</td>
<td>Search criteria are broad enough that it returns records regardless of whether or not the keywords are related.</td>
</tr>
<tr>
<td>(libraries) and (homelessness) and (issues)</td>
<td>2 (out of 3 results)</td>
<td>Only one record relates to query. Including the term “issues” increases the possibility that the records returned will not relate to the specific subject of homelessness issues in libraries.</td>
</tr>
<tr>
<td>(libraries) and (homelessness issues)</td>
<td>1 (out of 2 results)</td>
<td>Only one record relates to query. Combining the terms “homelessness” and “issues” in one keyword increases the possibility that the records returned will not relate to the specific subject of homelessness issues in libraries.</td>
</tr>
</tbody>
</table>

I found that using a using a pre-coordinate indexed system does not produce very great precision, as the results I did get were not relevant to what I was looking for. In many cases, no records were returned based on my search criteria meaning that oftentimes recall was very low or even non-existent.

The searches performed using the post-coordinate system did not always produce the greatest amount of recall, though precision was very high, meaning that overall, the records are did retrieve were more relevant to what I was looking for than the records retrieved from the pre-coordinate system. I believe that using a post-coordinate system produces greater performance primarily due to ease of use, as the user can enter multiple versions of the search criteria and it not does it matter in what order the search criteria are
entered. Only three out of twenty searches returned no results at all, whereas with the pre-coordinate system, thirteen out of twenty searches returned no results.

I initially found it hard to determine whether or not false drops were a greater problem in the pre-coordinate or post-coordinate system. Upon further reflection, however, I determined that if a false drop can be strictly defined as retrieved document that is irrelevant to what the user is looking for, then the fact that none of the returned results in the pre-coordinate system were relevant would seem to indicate that false drops were greater in this system than in the post-coordinate one. False drops in the pre-coordinate system were therefore a greater problem than those in the post-coordinate system, as the number of relevant records retrieved in the latter system far outweighed the number irrelevant records.