



EnTag: Intute Demonstrator User Study Analysis

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Summary

The document is the D4.1 deliverable of the EnTag project, reporting on the analysis of the Intute demonstrator. For further information, please refer to related documents at the project Web site <http://www.ukoln.ac.uk/projects/enhanced-tagging/>.

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Intute Demonstrator User Study Analysis

1 Test setting

This report forms part of the deliverables for the EnTag (Enhanced Tagging for Discovery) project, funded by JISC as part of the Repositories and Preservation Capital Programme. The aim of EnTag was to investigate the combination and comparison of controlled and folksonomy approaches to semantic interoperability by developing and evaluating two demonstrators that combined social tagging facilities with the resources of a controlled vocabulary. The project explored two communities of use: at Intute, focusing mainly on tagging by readers (users annotating resources with tags); and at STFC, focusing mainly on tagging by authors (when they deposit in the repository).

This document reports on the user study conducted for the Intute demonstrator. There are three major interfaces: searching, basic tagging, and enhanced tagging. The searching interface offers a tag cloud with tags linked to documents that they index, names of taggers linked to documents they indexed, as well as a free-text search box where searching can be limited to tags, title and description fields. Once a document is selected from search results, a tagging interface appears. Two types of tagging interfaces are developed: the basic, with tagging features usual in popular tagging services (Simple Tagger), and the enhanced one, with options from the knowledge organization system (Enhanced Tagger, Fig. 1).



FIG. 1. Enhanced tagging interface.

Both tagging interfaces have the following options from which to select tags: a global tag cloud (an alphabetical list of all tags in the system, with different font sizes relative to popularity); tags assigned by a specific user; and list of own tags. A user may also type in a tag. The enhanced interface involves suggestions from the knowledge organization system, Dewey Decimal Classification (DDC), presented in three frames. In the first frame, a list of DDC classes are automatically suggested based on matches with a tag entered by the user (by any means). If the user selects a class its narrower and broader classes are shown in the second frame, allowing interactive browsing of the hierarchical context. Simultaneously, in the third frame a tag-cloud like list of DDC captions, relative index and LCSH mapped terms is presented as a source of suggestions from which the user may optionally select. While the current Intute implementation is DDC specific, the techniques could be generalized to employ elements such as synonym sets and related concepts from, for example, any SKOS encoded vocabulary.

The user study was carried out as an experiment, with a controlled setting. The two versions of the system were compared. Two tasks were controlled and two were free. We also wanted to

obtain realism in the test design by using tasks that reflect the daily work of participants (a well-know task situation). Furthermore, the participants did not sit in a lab, but carried out the test at home, with their own computer, without personal instruction and training, which also provided a more realistic test environment.

1.1 Participants

The analysis and results reported here are based on the total of 28 participants who completed the study. They were all politics students at British universities, with one from the European University Institute. A call for participation was put together (Appendix 1). They were recruited mainly from a written call for participation throughout the country. It was emailed to mailing lists for politics students as well as to several dozen top-rated politics departments in the UK.

Initially, there were 61 participants who completed the participation consent form (Appendix 2), and 54 who completed the pre-study questionnaire (Appendix 3), with 42 of them doing some tagging but not completing all the tasks. Six participants took part in pilot testing.

1.1.1 Characteristics of participants

Based on the pre-study questionnaire (Appendix 3), we see that the majority of participants had solid subject experience and were experienced Web users. Half of them had used tagging applications before but conducted little tagging. In more detail, the following characteristics can be drawn:

- 1) Equal distribution of gender
- 2) Majority were aged between 21 and 25:
 - 21-25: 16
 - 26-30: 5
 - 20 or younger: 4
 - 31-35: 2
 - 36 or older: 1
- 3) Majority had English as their native language (20)
- 4) Majority had solid subject experience, as indicated by the years spent studying politics:
 - Less than 1: 2
 - Between 1 and 2: 8
 - Between 2 and 3: 6
 - Between 3 and 4: 4
 - Between 4 and 5: 3
 - More than 5: 5
- 5) They came from 13 British universities, and 1 from the European University Institute: University Of Essex (5), University of Birmingham (4), University of Leeds (4), Birkbeck College University of London (2), London School of Economics (2), Queen Mary University of London (2), University of East Anglia (2), Kings College Cambridge (1), University of Bristol (1), University of Exeter (1), University of Manchester (2), University of Newcastle (1), University of Warwick (1).
- 6) Majority were experienced Web users, as judged by the number of years spent using the Web:
 - 7 or more: 21
 - Between 4 and 6: 6
 - Between 1 and 3: 1

7) Majority have never used Intute:

Never: 23

Once or twice a year: 4

Once or twice a month: 1

8) A little over half of them have used tagging applications before (16). Tagging applications they used were:

Flickr: 8

Last.fm: 4

Del.icio.us: 1

Technocrati: 1

Other: 2 (Facebook)

9) The ones who used tagging applications have relatively little tagging experience, as judged from the number of documents they tagged in those applications:

20 or less documents tagged: 11 participants

100-200 documents tagged: 2 participants

More than 200 documents tagged: 1 participant

10) Almost a third had some acquaintance with DDC (8), and none had any acquaintance with LCSH or other controlled vocabularies.

1.2 Documents and tasks

Each participant was given 4 tasks, and in each task 15 documents were to be tagged – 60 in total. Each task covered one topic of relevance to the politics student. Two tasks were controlled and two tasks free. The combination of controlled and free tasks permitted a common basis of comparison between document tags in the controlled tasks with the potentially more realistic situation where search tasks were freely chosen. In order to reduce the learning influence, tasks were rotated (for rotation order see Appendix 5). A hypothetical group project scenario was outlined as a rationale and motivation for the tagging activity (by users as reader/searchers).

In each task the participant was to first search for documents and then tag 15 of them. In controlled task, they were told to choose the top 15 documents, while in free tasks they could choose any documents they found relevant. In the case that a URL had become unavailable, the instruction was to move on to the following document.

Tagging instructions specified that tagging each document should on average take between 5 and 10 minutes. They were to describe as many aspects and topics they thought appropriate for the task. They were also reminded to open the URL, but need not follow further internal links within a Web site. In case of very long documents, they were to focus on its abstract, introduction, conclusion, headings and table of contents. Additional instruction was added to tasks for Enhanced Tagger, to try to consider the suggestions from the controlled vocabulary.

Topics for the controlled tasks were suggested by a subject expert, PhD student in politics, who also evaluated whether there were at least 20 documents in the database relevant to the topics. The controlled task for Simple Tagger was on the topic of European integration:

Imagine that as part of one of your courses, you are asked to write a four-page essay on the **topic of European integration**, as a joint project in groups of four. The essay should critically discuss existing theories about the creation of the European Union and its institutions. Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

The controlled task for Enhanced Tagger was on the topic of peacekeeping:

Imagine that as part of one of your courses, you are asked to write a four-page essay on **the topic of peacekeeping**, as a joint project in groups of four. The essay should describe and discuss deployment of non-partisan military forces to separate two sides of a conflict that have already agreed on an armistice (are no more at war with each other). Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

For full task description, see Appendix 4.

1.3 Instructions, training, and settings documents

After signing the participation form and completing a pre-study questionnaire, the Instructions document was sent out (Appendix 8). It was the main document that each participant was given. It introduced the study and described each step the participant was supposed to do. Major steps comprised the following:

- 1) Technical requirements for using the system (with reference to the Settings document)
- 2) Learning the system (reference to the Training document)
- 3) Task 1
- 4) Task 2
- 5) Task 3
- 6) Task 4
- 7) Final questionnaire
- 8) Email

Before starting the study itself, each participant was given a Training document through which she was to learn the system and try out tagging (Appendix 9). The Settings document described how to enable scripting in Internet Explorer and Firefox browsers, and how to zoom the screen display for better viewing in Firefox (Appendix 10).

2 Data collection

The main method of data collection was logging the steps the participants conducted in the demonstrator. In order to help contextualize and explain the results better, questionnaires were also used. Apart from the pre-study questionnaire for collecting background information about the participants (Appendix 3), the participant was to complete a post-task questionnaire, after every task (Appendix 6), and a post-study questionnaire, after finishing all the tasks (Appendix 7).

Below is an illustrative excerpt from the log data for one particular user, in the Enhanced Tagger. She logged on, searched for “peacekeeping” and opened one of the retrieved documents (<http://www.cordaid.nl/Upload/publicatie/RAPPORT%20CMR.pdf>). The document is a report about civil-military relations in Afghanistan and Liberia. Then she entered the term “NGO”, clicked on the Suggest button to get DDC suggestions. She decided to add the tag “NGO” to the document (choosing not to adopt any suggestion). The following five steps (in

green) show the user following a suggestion: she entered the term “civil-military relations” and asked for suggestions from DDC; she chose “Foreign policy and specific topics in international relations” from the list of suggested parts of DDC hierarchy (left bottom pane); she then chose its narrower term “International conflict” (second bottom pane); of the final tagging suggestions (right bottom pane), she chose “Conflict – international relations” and added it as another tag for the document. Rows marked in red are the ones where DDC suggestions were not used, and the ones in green are where the suggestions were used in the extract from the log.

Log On	
Document Search (peacekeeping)	
Open Document (http://www.cordaid.nl/Upload/publicatie/RAPPORT%20CMR.pdf)	
Dewey Suggest Button Clicked	NGO
Add Tag	NGO
Dewey Suggest Button Clicked	civil-military relations
Dewey Suggest TreeView Clicked	Foreign policy and specific topics in international relations
Dewey Hierarchy Clicked	International conflict
Dewey Suggestion Cloud Clicked	Conflict - international politics
Add Tag	Conflict - international politics
Dewey Suggestion Cloud Clicked	Foreign policy and specific topics in international relations
Dewey Suggest Button Clicked	liberia
Dewey Hierarchy Clicked	1945-
Dewey Suggestion Cloud Clicked	Liberia - History - Civil War, 1989- - Peace
Dewey Suggestion Cloud Clicked	Liberia - 20th century
Add Tag	Liberia - 20th century
Dewey Suggestion Cloud Clicked	Liberia - History - Civil War, 1989-
Add Tag	Liberia - History - Civil War, 1989-
Dewey Suggest Button Clicked	afghanistan
Dewey Hierarchy Clicked	1919-
Dewey Hierarchy Clicked	2001-
Dewey Suggestion Cloud Clicked	Afghan War, 2001-
Add Tag	Afghan War, 2001-
Dewey Suggestion Cloud Clicked	Afghan War, 2001-
Dewey Suggest Button Clicked	isaf
Add Tag	isaf
Add Tag	UNMIL
Add Tag	NATO
Dewey Suggest Button Clicked	nato
Dewey Suggestion Cloud Clicked	North Atlantic Treaty Organization
Add Tag	North Atlantic Treaty Organization
Dewey Suggest Button Clicked	development
Add Tag	development
Add Tag	cordaid
Dewey Suggest Button Clicked	cordaid
Dewey Suggest Button Clicked	civil society
Dewey Suggest TreeView Clicked	Armed services
Dewey Suggestion Cloud Clicked	Armed Forces - Political activity
Add Tag	Armed Forces - Political activity
Dewey Suggestion Cloud Clicked	Civil supremacy over the military
Add Tag	Civil supremacy over the military
Goto Searching	

3 Analysis

3.1 Number of tags

As seen from Table 1, there were in total 7568 tags assigned in both systems and in both tasks. More tags were assigned in the Simple Tagger than in the Enhanced Tagger, which can perhaps be explained by the fact that the participants reported that they spent more time in the Enhanced Tagger because of exploring the different suggestions (instead of adding the first tag that came to their mind). The difference between the two systems is especially visible for the controlled task, while for the free task it is less obvious. This could imply that the topic of interest was also a factor, especially since more tags were assigned in the Enhanced Tagger for the free task than for the controlled one. In the Simple Tagger roughly the same number of tags was assigned in both tasks, though a bit higher in the controlled task.

As a result of tagging, for the 94 documents that were tagged in the controlled task, we have on average 41 tags per document. For the 751 documents that were tagged in the free task, we have on average 5 tags per document (where typically fewer users viewed a given document since the search was freely chosen). This is similar to findings of Angus, Thelwall, and Stuart (2008), where on average four tags were assigned.

Each participant assigned on average 278 tags in total, a few more in the Simple Tagger and a few more in the free task.

Table 1. Number of tags

	Simple	Enhanced	Total
Tags in total	4022	3546	7568
Controlled task	2025	1688	3713
Free task	1997	1858	3855
Tags per document (controlled)	49 (41 docs)	32 (53 docs)	avg. 41 (94 docs)
Tags per document (free)	5 (374 docs)	5 (377 docs)	avg. 5 (751 docs)
Tags per tagger (controlled)	avg. 72	avg. 63	total avg. 135
Tags per tagger (free)	avg. 74	avg. 69	total avg. 143

3.2 Choosing a tag

As seen from Table 2, most tags (82%) are added by typing them directly in, as common in social tagging applications. When we compare the Simple and Enhanced tasks, we see a change from 91% to 71% in typing tags directly. Taking DDC-based suggestions in the Enhanced Tagger, 17% of all tags were the suggested ones. In the instructions for the enhanced tasks, participants were encouraged to consider the suggestions if they thought them appropriate. Thus the figures should not be considered a simple measure of popularity. However, some participants also commented that:

- They appreciated the suggestions when they did not know the topic well;
- What they disliked about the Simple Tagger was that there were no suggestions;
- They understood the benefit of having controlled tags.

Table 2. Choosing a tag

Activity	Simple		Enhanced		In total	
Typing Own Tag	3656	90.90%	2525	71.21%	6181	81.67%
Main Tag Cloud	94	2.34%	88	2.48%	182	2.40%
Own Tag	0	0.00%	32	0.90%	32	0.42%
Certain Tagger's Tag	272	6.76%	303	8.54%	575	7.60%
Dewey Tag			598	16.86%	598	7.90%
In Total	4022	100.00%	3546	100.00%	7568	100.00%

Selecting from another tagger's tags is a common feature in popular social tagging applications, and has been used in both of our systems, too – on average 8% of all tags assigned. Main Tag Cloud is yet another common feature, but has hardly been used at all. This is partly due to the fact that, as we can see from the participants' comments, it was too bulky to scroll around (but see also discussion in the conclusions).

Table 3. Browsing for tags

Activity	Simple	Enhanced
Main Tag Cloud Clicked	16.78%	5.11%
Own Tag Clicked	10.26%	2.71%
Tagger Cloud Clicked	18.89%	3.65%
Taggers Tag Clicked	54.07%	14.51%
Dewey Hierarchy Clicked		3.20%
Dewey Suggest Button Clicked		28.89%
Dewey Suggest TreeView Clicked		13.70%
Dewey Suggestion Cloud Clicked		28.24%
	100.00%	100.00%

Table 3 shows where the participants looked for potential tags. Of the common features in social tagging applications, the most frequent one was a certain tagger's (Taggers Tag Clicked) and her tags (Taggers Tag Clicked). As in the previous table, Main Tag Cloud was less used.

In Enhanced Tagger most frequent activities (74%) were the ones related to DDC suggestions, which could be explained in similar way as in the previous paragraph.

3.3 Retrieval implications

3.3.1 Tags in documents and metadata

The EnTag demonstrator operated over an extract of the Intute database, where the Intute indexing had been stripped out and retained separately for analysis purposes. In the original Intute data set, most documents had manually assigned controlled keywords, and more than half of them also uncontrolled keywords. This allowed for comparison between standard controlled indexing terms and end-user tags, in addition to comparison between end-user tags and tagged document content.

Table 4 shows that almost all documents that have been tagged also have controlled keywords; and more than half of them uncontrolled keywords too. Uncontrolled keywords are in most cases country names.

Table 4. Coverage of tagged documents by (un)controlled keywords

	Simple	Enhanced
Documents tagged	414	416
Documents tagged, with controlled keywords	414	414
Documents tagged, with uncontrolled keywords	232	238

Further analysis showed that in total the assigned tags (both Simple and Enhanced) can be found in 64% of tagged documents (500 out of 780), either in their title, URL or the manually-produced description by Intute (it was not possible to compare the assigned tags against the documents full text).

As seen from Table 5, comparing Simple and Enhanced Tagger, fewer tags assigned in the Enhanced Tagger are found in the documents. This suggests that enhanced tagging might potentially provide more access points than simple tagging when used in combination with a full text search engine. Tags from the Enhanced Tagger could be due to DDC-based suggestions or from free tagging activity in the Enhanced demonstrator. Therefore the enhanced demonstrator log file was analysed to derive tags which arose from DDC-based suggestions. Out of 143 documents to which tags from DDC suggestions were assigned, only in 17 documents were they found in title (12%), 2 in URL (1.4%), and 25 in description (18%), so the difference is much bigger for DDC-based tags. This point is further developed in the conclusions.

Table 5. Tags found in which number of tagged documents

	Simple		Enhanced		In Both Systems	
Tags in Title	200	48.31%	174	41.83%	350	44.87%
Tags in URL	76	18.36%	72	17.31%	137	17.56%
Tags in Description	262	63.29%	232	55.77%	468	60.00%
Tagged Documents in Total	414		416		780	

Table 6 shows overlap of Simple and Enhanced tags with pre-assigned keywords (original Intute indexing). The results show no major difference between Simple and Enhanced in the number of matches, both showing a very low overlap. First two rows show to what degree are tags exact same as keywords, less than 5% in total. Third and fourth row include the exact matches and also cases where tags are parts of keywords, in which case there is about 7% overlap. This small overlap indicates that 95% of tags could serve as additional access points beyond the original Intute indexing.

Table 6. Tags versus pre-assigned (un)controlled keywords

	Simple		Enhanced		In Total	
Tags like controlled keywords	125	3.11%	119	3.36%	244	3.22%
Tags like uncontrolled keywords	60	1.49%	39	1.10%	99	1.31%
Tags parts of controlled keywords	251	6.24%	175	4.94%	426	5.63%
Tags parts of uncontrolled keywords	84	2.09%	60	1.69%	144	1.90%
Tags in total	4022		3546		7568	

Additional analysis showed that only few tags selected from DDC were the same or contained in controlled keywords: out of 598 tags selected from DDC, 12 were contained (or the same as) in controlled keywords. These were:

controlled keyword	DDC tag
peace keeping	Peace
foreign policy	Foreign policy
civil-military relations	Civil-military relations
intelligence	Intelligence
local government	Local government
democracy	Democracy
diplomacy	Diplomacy
nationalism	Nationalism
rwanda	Rwanda
european union	Europe
socialism	Socialism
maps	Maps

3.3.2 Search terms

Table 7 compares search terms the participants used in their tasks to tags and pre-assigned (un)controlled keywords. There were 98 search terms used in the Simple Tagger, and 122 in the Enhanced Tagger. In Simple Tagger, almost three times as many search terms are found in tags than in controlled keywords, and twice as many as in uncontrolled keywords. The difference is even bigger for Enhanced Tagger. The hypothesis that there is a greater probability of finding search terms in tags is an interesting avenue of future work. However, caution must be exercised since the study context might naturally encourage the use of search terms in tags, since tagging was always preceded by a search.

Table 7. Search terms versus tags a keywords

	Simple N=98	Enhanced N=122
Nbr of tags in which search terms are found	249	254
Nbr of controlled keywords in which search terms are found	91	40
Nbr of uncontrolled keywords in which search terms are found	111	101

3.4 Post-task questionnaire

After each task, the participants completed a post-task questionnaire. Main results are summaries in Table 8. In both systems, the majority were on average familiar with the topic of the task, they found it easy to choose tags, were satisfied with tags assigned, and were certain that they assigned the tags correctly. Of the tagging-support features, they found the following ones helpful:

- Listing of own tags;
- DDC disambiguation tree (first panel on the left bottom part of the screen); and,
- DDC/LCSH suggestions.

The ones they did not find as useful were:

- Main tag cloud;
- Clickable names of others; and,
- DDC hierarchical browsing for narrower or broader classes (bottom middle pane).

Table 8. Post-task questionnaire

	simple	enhanced
Familiarity with tasks	majority familiar or very familiar	
Easy to choose tags	majority easy or very easy	
Satisfaction with tags assigned	majority satisfied or very satisfied	
Certainty that tags assigned correctly	majority certain or very certain	
Main Tag Cloud	helpful to half, unhelpful to half	
Clickable Names of Others	helpful to half, unhelpful to half	Unhelpful to majority
Listing of Own Tags	helpful to majority	
Dewey Tree Disambiguation	n/a	helpful to majority
Dewey Hierarchy	n/a	helpful to half, unhelpful to half
Dewey/LCSH suggestions	n/a	helpful to majority

Detailed responses to each question follow for the Simple Tagger:

1) Before doing this task, how familiar were you with the topic of the task?

Very familiar, 22
Familiar, 20
Neutral, 8
Unfamiliar, 5
Very unfamiliar, 2

2) How easy was it to decide which tags to choose?

Very easy, 18
Easy, 21
Neutral, 16
Uneasy, 2
Very uneasy, 0

3) How satisfied are you with the tags you assigned?

Very satisfied, 17
Satisfied, 22
Neutral, 14
Unsatisfied, 3
Very unsatisfied, 1

4) How certain are you that you assigned the tags correctly?

Very certain, 14
Certain, 29
Neutral, 9
Uncertain, 5
Very uncertain, 0

5) How helpful was *Main Tag Cloud* in assisting you in choosing the specific tags to describe a given topic?

Very helpful, 9
Helpful, 14
Neutral, 13
Unhelpful, 13
Very unhelpful, 8

6) How helpful was *Clickable names of others leading to their tags* in assisting you in choosing the specific tags to describe a given topic?

Very helpful, 1
Helpful, 15

Neutral, 15
Unhelpful, 14
Very unhelpful, 12

7) How helpful was *A listing of all your tags* in assisting you in choosing the specific tags to describe a given topic?

Very helpful, 17
Helpful, 31
Neutral, 5
Unhelpful, 3
Very unhelpful, 1

Detailed responses to each question follow for the Enhanced Tagger:

1) Before doing this task, how familiar were you with the topic of the task?

'Very familiar', 21
'Familiar', 19
'Neutral', 8
'Unfamiliar', 4
'Very unfamiliar', 3

2) How easy was it to decide which tags to choose?

'Very easy', 15
'Easy', 26
'Neutral', 9
'Uneasy', 4
'Very uneasy', 1

3) How satisfied are you with the tags you assigned?

'Very satisfied', 12
'Satisfied', 23
'Neutral', 14
'Unsatisfied', 5
'Very unsatisfied', 1

4) How certain are you that you assigned the tags correctly?

'Very certain', 13
'Certain', 25
'Neutral', 15
'Uncertain', 2
'Very uncertain', 0

- 5) How helpful was *Main Tag Cloud* in assisting you in choosing the specific tags to describe a given topic?
- 'Very helpful', 4
 - 'Helpful', 17
 - 'Neutral', 11
 - 'Unhelpful', 16
 - 'Very unhelpful', 7
- 6) How helpful was *Clickable names of others leading to their tags* in assisting you in choosing the specific tags to describe a given topic?
- 'Very helpful', 6
 - 'Helpful', 8
 - 'Neutral', 10
 - 'Unhelpful', 20
 - 'Very unhelpful', 11
- 7) How helpful was *A listing of all your tags* in assisting you in choosing the specific tags to describe a given topic?
- 'Very helpful', 18
 - 'Helpful', 25
 - 'Neutral', 9
 - 'Unhelpful', 3
 - 'Very unhelpful', 0
- 8) How helpful was *Possible suggested matches (first bottom pane)* in assisting you in choosing the specific tags to describe a given topic?
- 'Very helpful', 11
 - 'Helpful', 21
 - 'Neutral', 11
 - 'Unhelpful', 10
 - 'Very unhelpful', 1
- 9) How helpful was *Browsing hierarchy of tags (middle bottom pane)* in assisting you in choosing the specific tags to describe a given topic?
- 'Very helpful', 7
 - 'Helpful', 17
 - 'Neutral', 17
 - 'Unhelpful', 12
 - 'Very unhelpful', 1

10) How helpful was *Tagging suggestions (third bottom frame on the right)* in assisting you in choosing the specific tags to describe a given topic?

- 'Very helpful', 12
- 'Helpful', 23
- 'Neutral', 11
- 'Unhelpful', 6
- 'Very unhelpful', 2

3.5 Post-study questionnaire

At the very end of the study, the participants filled in a post-study questionnaire about the whole study. The majority enjoyed the study, thought it extremely or very easy to learn and use Simple Tagger, somewhat or very easy to learn and use Enhanced Tagger, and thought a similar system would be useful in real life.

Detailed responses to each question follow:

1) How much did you enjoy participating in the study?

- 'Not at all', 2
- 'Barely', 3
- 'Kind of', 12
- 'Very', 9
- 'Totally', 2

2) How easy was it to learn to use the Simple Tagger?

- 'Not at all', 0
- 'Not very', 0
- 'Somewhat', 5
- 'Very', 12
- 'Extremely', 11

3) How easy was it to use the Simple Tagger?

- 'Not at all', 0
- 'Not very', 0
- 'Somewhat', 3
- 'Very', 13
- 'Extremely', 12

4) How easy was it to learn to use the Enhanced Tagger?

- 'Not at all', 0
- 'Not very', 4
- 'Somewhat', 15
- 'Very', 7

'Extremely', 2

5) How easy was it to use the Enhanced Tagger?

'Not at all', 1

'Not very', 3

'Somewhat', 12

'Very', 10

'Extremely', 2

3.6 User comments from questionnaires

Comments were gathered from post-task and post-study questionnaires. Key points and some illustrative comments follow.

Users were asked what they liked best and least about the Simple and Enhanced taggers. Of the comments about Simple Tagger, they liked freedom to have own choices, its simplicity and speed. They mostly did not like the fact they did not have enhanced suggestions and the need to scroll in the main cloud. About the Enhanced Tagger they liked suggestions when useful; they also said it was time saving, good when they were unsure of which tags to assign, and that it was good for consistency. One preferred simple tagging when tagging a familiar topic and enhanced tagging when tagging an unfamiliar topic - both being useful in different contexts. They did not like sometimes irrelevant suggestions and some commented on the cluttered interface and the number of interaction steps required to tag a suggestion. One or two may have experienced excessive scrolling when employing browser platforms the system was not optimised for. A few suggested that a streamlined version of the Enhanced Tagger would be useful, with easier interaction and more selective focused suggestions. A couple of users volunteered that the experience was useful for their studies.

These are a selection of illustrative comments:

- 'The Main Cloud pane was difficult to access - took ages to scroll down (my screen slow) and visually unclear.'
- 'In the tagging frame could not observe the tags that had already been assigned to the document - these would be more useful to add more tags to the document through observing what other previously added tags link to.'
- 'How to deal with similarly spelt tags e.g. EU or European Union - could generate almost double the number of tags when it means the same.'
- 'continuity in the exact labels is important since there are a bunch of different ways of labelling the same thing (i.e. Croatia vs. Republic of Croatia European Parliament vs. Parliament of Europe etc.)'
- 'The suggested tags were variable in accuracy - sometimes they were completely irrelevant sometimes they were spot-on. It was a bit hit and miss.'
- 'Sometimes offered useful suggestions; time-saving'
- 'I like that if I was unsure about a subject in an article it usually hinted at good terms to use.'
- 'It was interesting to see what suggestions the enhanced tagger came up with and sometimes these were things I would not have thought of if left to my own devices.'
- 'Some suggestions were good and allowed you to include tags initially not thought of.'
- 'Sometimes useful to have different suggestions guiding in the right direction'

- 'I thought that I was tagging words similarly to others who had already tagging creating a kind of consistency for the database.'
- 'Often gave no suggestions or irrelevant suggestions. Took longer to input tags.'
- 'Often gave inappropriate suggestions/ no suggestions. cluttered interface (vs Simple Tagger)'
- 'I could ignore it when I wanted to be quicker about tagging something'
- 'not so useful once you are familiar with a topic as you then require more specific searches'
- 'categories not well defined as well as being a little complicated in its threefold structure.'
- 'The layout again was pretty awkward and wasn't very user friendly. When you click on a suggestion you then have to move and confirm the tagging. If you could rapidly tag by simply clicking on the suggestions you would get a much more efficient system'
- 'I think a simpler version of the Enhanced Tagger system would be more useful; generally I preferred the Simple Tagger but a simple search might prompt tags that I wouldn't ordinarily have thought of.'
- 'If this was to be implemented a much more streamlined system would be more useful e.g. a box with suggested tags popping up only when it is useful so that you are not crowded with lots to read and search through when you do not need it - this or similar would make the advanced tagging system much more efficient and useful whereas currently I found the simple tagger much easier and therefore preferred.'
- 'It took me a while to get into using the system etc. but once I had I found it easy to use and a useful way of categorizing and flagging material. That having to tag twice thing was quite annoying - if this were ironed out it would speed up the process for me no end!'
- 'In general I preferred simple tagging when tagging a topic I was very much familiar with and enhanced tagging when tagging a topic I was not very familiar with. Thus both are useful but in different contexts.'

4 Conclusions

These conclusions are based on the initial analysis conducted in the month following the end of the Intute study. This focused on collation and immediate analysis of the questionnaire and log data. More detailed qualitative analysis of the log data is ongoing and will be reported in subsequent publications.

4.1 Study methodology

The study involved 28 politics students. While the original idea was to have more, it proved hard to recruit them. However, 28 is a reasonable size that provides useful insights, especially since each participant was given 4 tasks, and in each task 15 documents were to be tagged – 60 in total for each tagger. In order to make the experiment as real as possible, a hypothetical group project scenario was outlined as a rationale and motivation for the tagging activity (by users as reader/searchers). Each task covered one topic of relevance to the politics student. Two tasks were controlled and two tasks free. In order to reduce the learning influence, tasks were rotated.

The main method of data collection was logging the steps the participants conducted in the demonstrator. In order to help contextualize and explain the results better, questionnaires were also used. Apart from the pre-study questionnaire for collecting background information about the participants, the participant was to complete a post-task questionnaire, after every task, and a post-study questionnaire, after finishing all the tasks.

Still, a further, larger study with retrieval focus is recommended; it should also involve more participants to allow for stronger generalizations.

4.2 Interface generally

User experience and task completion showed that both Simple and Enhanced Demonstrators were usable with little prior training. However comments showed that the interface, particularly in the Enhanced system was experienced as complex. By design the interface was cluttered, as we wished to test a variety of tagging features. An operational system should have a simpler, less cluttered user interface, focusing on the key functionality.

4.2.1 Streamlined Enhanced tagger

Some comments referred to complicated interaction in the enhanced tagger. This almost certainly referred to the number of keystrokes in the Enhanced Tagger required to request and act on a suggestion. One comment referred to the desirability of a future 'streamlined' suggestion mechanism. The interaction sequence should be reduced, with more use of defaults. An auto-completion feature in the suggestions would potentially reduce interaction steps.

4.2.2 Consider target platform

The system was optimised for a fairly high resolution display due to the large number of interface features. A few users reported excessive scrolling, probably due to platform issues. Platform and browser support should be considered in an operational version, along with the appropriate target platform.

4.3 Tagging features

4.3.1 Auto-completion

Most tags were added by typing directly and this should continue to be supported. An auto-complete feature would allow an easier entrée to a suggestion facility. It would also offer an option to shorten the sequence of interaction steps in choosing suggestions

4.3.2 Document (and community) tag clouds rather than a global tag cloud

The global tag cloud (all tags) was little used and had mixed response in the questionnaires. Part of the problem was excessive scrolling due to the size of the table. This could be reduced by filtering the table on same criteria (it is likely that many popular social tagging systems take recency into account), or possibly providing sort/search facilities. However, the purpose of any JISC IE social tagging retrieval tool is different from popular social tagging systems, such as Flickr and Del.icio.us. Reflecting on experience with the EnTag, it is not clear that displaying all global tags is useful for primarily retrieval purposes with large collections. Much more useful would be a single document (all user) tag cloud (we did not show include this feature as we were concerned that some users would copy most of their tags from it). Community-of-use tag clouds (or tag cloud filters), based on friends, communities or work groups would be another possibility.

4.3.3 Suggestion facility

While the study instructions encouraged users to consider the suggestions if appropriate, the 17% take up of suggestions, taken together with the questionnaire data and comments on the potential helpfulness of suggestions indicates support from the users for a suggestion facility.

However, the comments clearly indicated that this was dependent on the quality of the suggestions. Generally the comments reported that the Enhanced suggestions were sometimes useful but sometimes very wide of the mark and unhelpful. Some comments also showed an appreciation of the need for consistency in tagging. See the illustrative comments in Section 3.6.

Suggestions can serve to encourage consistency and also to introduce new angles on topics to tag. Suggestions should be user-oriented as regards terminology, level of specificity, perspective and currency.

4.3.3.1 *Quality of suggestions crucial*

Clearly the quality of the suggestions will depend in part on the quality and richness underlying vocabulary. The Intute demonstrator was able to make use of the very rich Dewey entry vocabulary, including captions, relative index terms and LCSH mapped terms. Suggested tags were taken from the DDC captions, relative index terms and mapped LCSH terms. Due to the need to produce a working system in time for the study, no further processing of these tag suggestions was possible. However many of the 'raw DDC' suggestions were overly long, complicated and not suited as tagging suggestions. Various comments picked up on this and the consequent cluttered appearance of the suggestion tag cloud. It is clear that one problem with the DDC suggestions in the Enhanced demonstrator version used for the study was the length and formal structure of the 'raw Dewey' tags.

While a comprehensive solution would involve collaboration with OCLC's ongoing work on appropriate online presentation of the DDC, we hope to implement some simple heuristics to improve suggestion quality by eliminating or pruning some inappropriate DDC-based suggestions in the final online version of the Intute demonstrator, publicly available on the EnTag website shortly.

One possibility for future work would be to study whether it is useful to structure the suggestions, using the structure of the vocabulary to derive a faceted check list of suggestions. This has the potential of encouraging more nuanced, more exhaustive tagging behaviour, as also shown by Panati and Kjær (2008) .

Another aspect of improving suggestion quality is finer grained matching of potential matches in DDC with a user string. The Demonstrator employed the MYSQL string matching functionality. More sophisticated pattern matching and possibly stemming or spelling correction could increase potential for matching. One immediate improvement, following feedback from the NKOS workshop presentation is the treatment of singular/plural partial string matching. For example, currently "NGO" will not match whereas "NGOs" would find a match in the DDC entry vocabulary.

For purposes of the study, we were fairly generous in the number of potential matches returned. More sophisticated matching and ranking algorithms, together with clustering of the resulting DDC matches (eg where several positions in the same hierarchy match) would reduce the number of options in the left hand 'possible match' pane.

Automatic disambiguation of potential matches was performed to the extent that the top ranked match by default fed through to the browsing option and the suggested tag cloud. Improved ranking of suggestions would also therefore assist with the automatic disambiguation facility. It would be useful to explore the extent to which adaptive contextual information on the user session and user interests can improve disambiguation.

4.3.3.2 *Automatic classification (annotation)*

Potential suggestions could take account of recency and frequency (as in Google Suggest), which may conceivably be relevant to some JISC IE settings. More generally, suggestions can come from various sources. Consider the broad components of the information architecture:

- User tag topic, or expression of interest
- Document content: title, metadata, abstract, full text
- Vocabulary or Knowledge Organization System (the particular vocabulary could be switched for different domains)

We see that different matching combinations give rise to different bases of automatic suggestions. They can be based on a match between user topic and an underlying vocabulary (this was the main focus of EnTag). They could be based on matches between documents or document indexing (as in co-occurrence techniques).

Crucially, suggestions can also be based on automatic classification. In this case, the match is between a given document and the underlying vocabulary. The Intute demonstrator implemented a very crude form of automatic classification, in that the title of a document selected for tagging was fed through to the DDC matching system. The top ranked match yielded suggestions which automatically appeared in the Suggestion tag cloud. In some cases, this works remarkably well. In many cases, it does not. However, a more sophisticated automatic classification system would

in our view be a very useful source of suggestions. There are various automatic classification and indexing tools available and we see this as a very promising line of inquiry.

4.3.3.3 *Non-topical tagging*

One element of feedback on EnTag at DC 2008 concerned the possibility that non-subject (non-topical) tags might prove useful for general retrieval purposes, in some contexts. For example, tags might express the genre or utility of a document for a user's purposes – see Golder and Huberman (2006), Kipp (2006), and Kipp and Campbell (2006). Catarino & Baptista (2008) surveyed types of tags generally and attempted to distinguish different types (and purposes) of tagging. For example, tags might express the genre or utility of a document for a user's purposes. While much of this tagging activity is for personal bookmarking purposes, some of it may have retrieval potential for third party retrieval. To the extent that others share the same perspective, non-subject based tags might serve as useful access points for others, in addition to their potential in personalising access to a collection. This is another possibility for future work with EnTag.

4.3.3.4 *Browsing the hierarchies*

While users appreciated the 'direct' suggestions and made some use of the disambiguation interface element, the analysis shows that they did not browse the Dewey hierarchy very much. In the (artificial) study context, this was certainly an extra, 'advanced' interface feature and as such we might expect it to be less used. It is also likely that direct suggestions are appreciated when time is an important factor. Further work is needed to explore when browsing functionality is desirable in this context. Potentially it allows the possibility of refining a suggestion and exploring the knowledge space and various studies have supported the utility of some forms of browsing. Recent work at OCLC on presentation of DDC for online purposes has proposed a restructuring of the DDC hierarchy for online presentation and this would be a fruitful avenue, as far as the DDC itself is concerned. The point also applies more generally and may depend on the type of vocabulary (and its structure), the expertise and style of individual users, etc.

4.4 Retrieval implications

While a systematic evaluation of the retrieval implications would require a longer study, explicitly focused on retrieval performance, some initial conclusions can be drawn from the analysis of the tags assigned. We can compare user tags from the Simple and Enhanced systems and we can also take into account the original Intute indexing, stripped out but retained for purposes of analysis.

4.4.1 Comparison with original Intute indexing

The analysis comparing the original Intute indexing with the tags added from both Simple and Enhanced showed little overlap. This suggests that tagging (both Simple and Enhanced) can provide additional access points to conventional indexing. This supports recent studies by Trant and colleagues from the *steve.museum* project comparing user tags with image metadata (Trant 2008). It seems plausible that free social tagging and vocabulary-based suggestions may be complementary and this is being investigated in detailed qualitative analysis.

4.4.2 Comparison with document content

The analysis comparing user tags to the document content (as represented by title, url and descriptor) shows that taken together tags (both Simple and Enhanced) occur in 64% of tagged documents. In comparison, Heckner, Mühlbacher, and Wolff (2008), report that 49% of tags are found just in title. On average 6% fewer tags per each element assigned in the Enhanced Tagger are found in the documents, compared to the Simple Tagger. Moreover, when purely DDC-based tags are isolated, the overlap is much lower (only 12% documents matching on title and 18% on description). This suggests (based on a sample of 143 documents) that when used in combination with a free text search engine, DDC-based tags may be likely to provide more additional access points for retrieval than simple tagging.

It may be that in the context of the study there was a tendency by some users to copy/paste from the document title or description, in order to achieve their tagging requirement in the

Simple Tagger. For example, the tag “post-Soviet societies” from title “Journal of Power Institutions in Post-Soviet Societies”, the tag “Domestic Structures and European Integration” from title “DOSEI: Domestic Structures and European Integration”, or, the tag “Institute for fiscal studies” from title “General Election 2005: Institute For Fiscal Studies Analysis”. It seems likely that this may hold for (detailed) free tagging generally. If that is the case then, arguably, such tags may not yield much added value compared to conventional free text search engines. If the search engine is ‘tag-aware’ then tags may be prioritised over in-text matches but this would be a refinement rather than a significant improvement in retrieval effectiveness.

On the other hand, if vocabulary-based suggestions are less likely to be a reflection of literal content then – where they are used – they may offer significant ‘value for money’ in terms of additional access points. The next section further develops this line of analysis.

4.4.3 Comparison between Simple and Enhanced tags

The EnTag project is in the process of making a full qualitative analysis of the differences between tags derived from the Simple and Enhanced demonstrators and within the Enhanced demonstrator on the DDC-based suggestions. This work will take longer than the time allotted for the end of project report and is ongoing. Some preliminary results are presented here, based on analysis of the log files.

We focus on a few suggestive cases (presented only as illustrations). The comparisons are between different taggers in the Simple and Enhanced systems. It is assumed that specific tags relate to the same documents. Another issue is whether there is significant difference between individual taggers styles, with regard to the foci of analysis and number of tags. For example, some individuals may have been significantly more prolific. A full assessment of representativeness must await the full analysis, however we believe the examples are not untypical.

The first example illustrates that the suggestions from the Enhanced tagger can describe the document (topic) by more facets: time (20th century), specific event (Afghan war), politics and government. In the Simple tagger, the only tag is Afghanistan. In the column ‘Enhanced Tagger’ the number next to the term is the number of terms added in the Enhanced Tagger; in the DDC column, it is the number of terms added from the DDC tags, also in the Enhanced Tagger.

Simple Tagger	Enhanced Tagger	DDC tags
afghanistan, 6	Afganistan, 2 Afghan War, 2001-, 1 afghanisan and liberia, 1 Afghanistan, 5 Afghanistan - 20th century, 1 Afghanistan - Politics and government, 1 Afghanistan - Politics and government - 1973-, 1 afghanistan and liberia, 1 Afghanistan and Liberia - Civil rights, 1 afghanistan casestudy, 1	'Afghan War, 2001-', 1 'Afghanistan', 1 'Afghanistan - 20th century', 1 'Afghanistan - Politics and government - 1973-', 1

The next example shows that the DDC tags can be more general and classificatory: communism, Communist party of China. However, more specific tags have also been assigned in the Enhanced: communist regimes, and communist theory – different from the Simple tagger (note “Communist Party of Cuba” is the document title; “communist regimes” is on the website itself).

Simple Tagger	Enhanced Tagger	DDC tags
'communist bloc', 1	'Communism', 6 'Communist Party of China', 6 'Communist Party of Cuba', 1 'communist regimes', 1 'Communist theory', 1	'Communism', 1 'Communist Party of China', 3

Taken together with the numerical results on the low overlap between DDC-based suggestions and document literal content, these examples suggest that the vocabulary-based suggestions may prompt taggers to escape the literal text. From these preliminary examples, they may potentially both encourage the description of resources by more facets (increased *exhaustivity*) and the vocabulary-based suggestions may also afford the capability of describing resources at a higher level of generalisation (the activity of *classification*). In other words, the suggestions may encourage both indexing and classification.

These are only tentative conclusions and require further analysis and further studies in operational contexts. Further work is required to validate this hypothesis and to determine the effect of using a classification system (albeit the DDC is rich with many mapped terms) as the basis for recommendations rather than a different type of knowledge organization system, such as a thesaurus (more commonly used for indexing). Such work should also examine the effect of automatic suggestions in general. Conceivably the effect might be due primarily to the act of suggestion and different bases of suggestion might yield different types of outcome.

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5 Appendices

Appendix 1: Call for participation



Are you a political science student?

Earn £50 while having fun with social tagging!

Intute (<http://www.intute.ac.uk/>), a national service providing access to high quality resources, is involved in a project funded by the Higher Education community. The purpose of the project is to design a new approach to providing information by taking advantage of Web 2.0 technologies. This specific study will investigate whether students such as yourselves use and value social tagging as a means of discovering and arranging information (e.g., <http://flickr.com> for organizing images, <http://del.icio.us> for bookmarks). Since problems with social tags have been recognized by research communities, solutions to address those issues will also be examined. More information about the project can be found from: <http://www.ukoln.ac.uk/projects/enhanced-tagging/>.

Each participant in the study will be asked to add tags (keywords) to records of political websites and documents from Intute, related to your areas of study. This is predicted to take you between four and six hours. Participants involved in the study will receive a £50 bookshop voucher for their time.

The study will be conducted online, from any place with access to Internet. The predicted timescale for the study is June. Once you register, you will be sent all instructions via email.

Your participation would be much appreciated. If interested, or for further information, please email Kora, k.golub@ukoln.ac.uk, preferably by early June.

Appendix 2: Participation consent form

Designed and available at:

http://www.surveymonkey.com/s.aspx?sm=7szdPVO3ns5_2fDG6BvXq4wg_3d_3d

[Exit this survey >>](#)



UKOLN
Participation form

~Introduction~
Thank you for your interest in this research study. Participation is voluntary. You may withdraw from participation at any time, and you may decline to answer any question. Please note that we are seeking participants who will be willing to perform a number of search tasks using an online search system that we will provide. Interactions with the search system will be tracked by means of computer software.

~Purpose~
The overall purpose of this research is to investigate ways of enhancing social tagging to improve the quality of tags for increased information discovery and retrieval performance.

~What you will be asked to do~
In this study you will be using a computer connected to the Internet. The session will take the following form: after formally agreeing to participate, we will assign you a number of search tasks to perform using the system. You will be searching for documents and adding tags to them. We will track the clicks that you make and retrieve your tags, using computer software. We will also ask you to fill in a number of questionnaires at various stages during the study.

~Risks/Benefits~
We do not anticipate any risks, as the research setting resembles a normal online search environment conforming to standard occupational health and safety guidelines. Participating in this study will not provide any personal benefits for you; however we may learn something that will help us better understand how people use search systems similar to the ones used in this study.

~Compensation~
Upon completion of the tasks, each participant will be awarded a £50 Amazon voucher.

~Confidentiality & Anonymity~
The results of your interaction with the search system will be reported without any reference to you specifically. While your name and email will be attached to the search logs and your evaluations, only the researchers will have access to this data and for the purposes of data analysis only. All information that you provide will be treated confidentially and your identity will not be revealed in reporting the study results.

I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in this study and have my search interactions tracked by computer software. However, I realize that my participation is voluntary and that I am free to withdraw from the study at any time.

Name

Date

Appendix 3: Pre-study questionnaire

Designed and available at:

http://www.surveymonkey.com/s.aspx?sm=leHjyX_2fVhicZfqcPXvKCJQ_3d_3d

[Exit this survey >>](#)



UKOLN
Pre-study questionnaire

* 1. Please enter your first and last names:

* 2. Please enter your email address:

* 3. Please choose an alias, or name you would like to have in the system. It should consist of at least 3 and at most 7 characters, letters or numbers:

* 4. Please choose a password, which should contain at least 4 and at most 7 characters starting with a letter from English alphabet.

* 5. Please enter your age:

20 or younger

21-25

26-30

31-35

36 or older

* 6. Please enter your gender:

Female

Male

* 7. Is English your mother tongue?

Yes

No

* 8. For how many years have you been studying political science?

Less than 1

Between 1 and 2

Between 2 and 3

Between 3 and 4

Between 4 and 5

More than 5

* 9. At which university or college do you currently study political science?

* 10. For how many years have you been using the Web (e.g., search engines such as Google)?

Less than 1

Between 1 and 3

Between 4 and 6

7 or more

* 11. How often do you use Intute (<http://www.intute.ac.uk/>)?

Never

Once or twice a year

Once or twice a month

Once or twice a week

One or more times a day

12. If you have used any tagging applications before, please select which ones:

- Del.icio.us
- Flickr
- Last.fm
- Librarything
- Technorati
- Other (please specify)

13. If you have done any tagging before, please indicate approximately how many documents/photographs/bookmarks you have tagged:

- 20 or less
- 20-100
- 100-200
- More than 200

14. If you are familiar with the structure and content of any of the following library or database vocabularies, please select which ones:

- Dewey Decimal Classification (DDC)
- Library of Congress Subject Headings (LCSH)
- Other (please specify)

* 15. Please indicate when would you be able to complete the study:

- In June
- In July
- Other (please specify)

Done >>

Appendix 4: Tasks

1) Controlled task, Simple Tagger

Imagine that as part of one of your courses, you are asked to write a four-page essay on the **topic of European integration**, as a joint project in groups of four. The essay should critically discuss existing theories about the creation of the European Union and its institutions. Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page, choose **Task 1** and **Simple Tagger Log In** and in the "Search for Documents" box enter these words: **European integration**.

Then, tag the **first 15 retrieved documents**. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

2) Controlled task, Enhanced Tagger

Imagine that as part of one of your courses, you are asked to write a four-page essay on **the topic of peacekeeping**, as a joint project in groups of four. The essay should describe and discuss deployment of non-partisan military forces to separate two sides of a conflict that have already agreed on an armistice (are no more at war with each other). Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page, choose **Task 2** and **Enhanced Tagger Log In** and in the "Search for Documents" box enter these words: **peacekeeping**.

Then, tag the **first 15 retrieved documents**. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. **Please especially try to consider the suggestions in the bottom of the screen**. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

3) Free task, Simple Tagger

Imagine that as part of one of your courses, you need to collect a number of different resources on a certain topic **of your own choice** in political science. Your lecturer has instructed you to look for resources in the EnTag system. Since the EnTag system will also be used by your fellow students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page, choose **Task 3** and **Simple Tagger Log In** and in the "Search for Documents" box enter whichever terms you think should retrieve relevant documents. You might need to explore which search terms return the most relevant documents. On a piece of paper, write down each search term you have used, as you will be asked to enter these later in a post-study questionnaire.

Then, tag **15** documents, whichever you find relevant to you, returned to whichever of the search terms. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

4) Free task, Enhanced Tagger

Imagine that as part of one of your courses, you need to collect a number of different resources on a certain topic **of your own choice** in political science. Your lecturer has instructed you to look for resources in the EnTag system. Since the EnTag system will also be used by your fellow students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page, choose **Task 4** and **Enhanced Tagger Log In** and in the "Search for Documents" box enter whichever terms you think should retrieve relevant documents. You might need to explore which search terms return the most relevant documents. On a piece of paper, write down each search term you have used, as you will be asked to enter these later in a post-study questionnaire.

Then, tag **15** documents, whichever you find relevant to you, returned to whichever of the search terms. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. **Please especially try to consider the suggestions in the bottom of the screen.** Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

Appendix 5: Rotation

Groups of task sequences

A	1	controlled task, Simple Tagger
	2	controlled task, Enhanced Tagger
	3	free task, Simple Tagger
	4	free task, Enhanced Tagger
B	1	controlled task, Enhanced Tagger
	2	controlled task, Simple Tagger
	3	free task, Simple Tagger
	4	free task, Enhanced Tagger
C	1	controlled task, Simple Tagger
	2	controlled task, Enhanced Tagger
	3	free task, Enhanced Tagger
	4	free task, Simple Tagger
D	1	controlled task, Enhanced Tagger
	2	controlled task, Simple Tagger
	3	free task, Enhanced Tagger
	4	free task, Simple Tagger

Rotation of task sequences

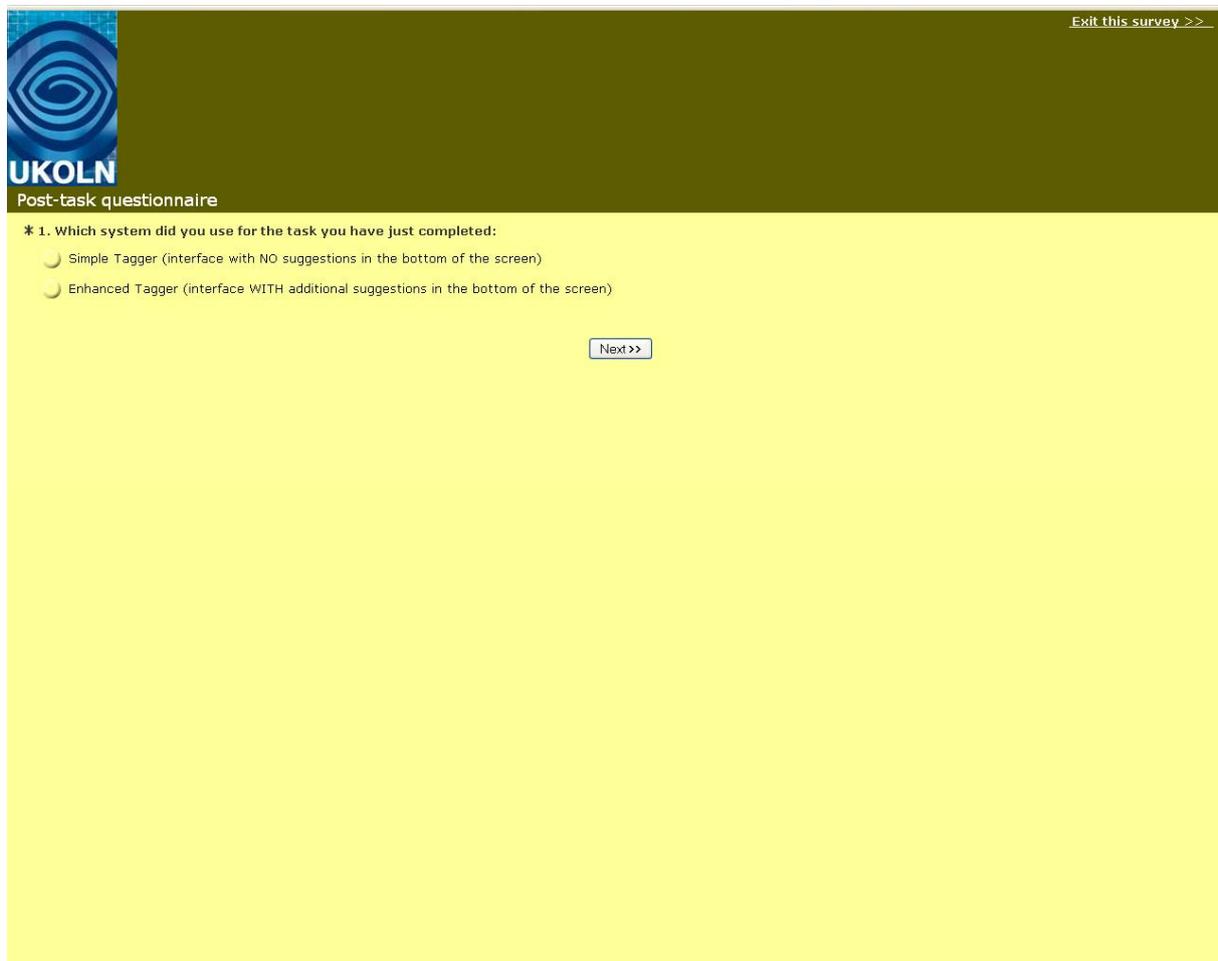
Participant sequence number	Rotation
1	A
2	B
3	C
4	D
5	A
6	B
7	C
8	D
9	A
10	B
11	C
12	D
13	A
14	B
15	C
16	D
17	A
18	B
19	C
20	D
21	A
22	B
23	C
24	D
25	A
26	B
27	C
28	D

Appendix 6: Post-task questionnaire

Designed and available at:

http://www.surveymonkey.com/s.aspx?sm=aFNXqoQFk2EG39_2b_2fCk9Jpw_3d_3d

Page 1:



Exit this survey >>

UKOLN
Post-task questionnaire

* 1. Which system did you use for the task you have just completed:

- Simple Tagger (interface with NO suggestions in the bottom of the screen)
- Enhanced Tagger (interface WITH additional suggestions in the bottom of the screen)

Next >>

[Exit this survey >>](#)



Post-task questionnaire

* 1. Please enter your email address:

* 2. Please enter the TOPIC of the task that you have just completed (e.g., fall of Yugoslavia):

* 3. Please enter SEARCH TERMS you have used to successfully retrieve the documents (e.g., Yugoslavia, civil war, Milosevic...).
 NOTE: These can be the same as the topic, as they are in the first two tasks.

* 4. Before doing this task, how familiar were you with the topic of the task?

Very familiar
 Familiar
 Neutral
 Unfamiliar
 Very unfamiliar

* 5. How easy was it to decide which tags to choose?

Very easy
 Easy
 Neutral
 Uneasy
 Very uneasy

* 6. How satisfied are you with the tags you assigned?

Very satisfied
 Satisfied
 Neutral
 Unsatisfied
 Very unsatisfied

* 7. How certain are you that you assigned the tags correctly?

Very certain
 Certain
 Neutral
 Uncertain
 Very uncertain

* 8. How helpful were each of these features in assisting you in choosing the specific tags to describe a given topic?

	Very helpful	Helpful	Neutral	Unhelpful	Very unhelpful
Main Tag Cloud	<input type="radio"/>				
Clickable names of others leading to their tags	<input type="radio"/>				
A listing of all your tags	<input type="radio"/>				

[Exit this survey >>](#)



Post-task questionnaire

* 1. Please enter your email address:

* 2. Please enter the TOPIC of the task that you have just completed (e.g., fall of Yugoslavia):

* 3. Please enter SEARCH TERMS you have used to successfully retrieve the documents (e.g., Yugoslavia, civil war, Milosevic... NOTE: can be the same as the topic):

* 4. Before doing this task, how familiar were you with the topic of the task?

Very familiar
 Familiar
 Neutral
 Unfamiliar
 Very unfamiliar

* 5. How easy was it to decide which tags to choose?

Very easy
 Easy
 Neutral
 Uneasy
 Very uneasy

* 6. How satisfied are you with the tags you assigned?

Very satisfied
 Satisfied
 Neutral
 Unsatisfied
 Very unsatisfied

* 7. How certain are you that you assigned the tags correctly?

Very certain
 Certain
 Neutral
 Uncertain
 Very uncertain

* 8. How helpful were each of these features in assisting you in choosing the specific tags to describe a given topic?

	Very helpful	Helpful	Neutral	Unhelpful	Very unhelpful
Main Tag Cloud	<input type="radio"/>				
Clickable names of others leading to their tags	<input type="radio"/>				
A listing of all your tags	<input type="radio"/>				
Possible suggested matches (first bottom pane)	<input type="radio"/>				
Browsing hierarchy of tags (middle bottom pane)	<input type="radio"/>				
Tagging suggestions (third bottom frame on the right)	<input type="radio"/>				

Appendix 7: Post-study questionnaire

Designed and available at:

http://www.surveymonkey.com/s.aspx?sm=o8iRom1huT_2bW3AVPA_2fNqbA_3d_3d

Exit this survey >>

UKOLN
Post-study questionnaire

* 1. Please enter your email address:

* 2. How much did you enjoy participating in the study?

Not at all
 Barely
 Kind of
 Very
 Totally

* 3. Please choose what best corresponds to your view on the following questions:

	Not at all	Not very	Somewhat	Very	Exteremly
How easy was it to learn to use the Simple Tagger (NO extra suggesstions)?	<input type="radio"/>				
How easy was it to use the Simple Tagger (NO extra suggesstions)?	<input type="radio"/>				
How easy was it to learn to use the Enhanced Tagger (WITH extra suggesstions)?	<input type="radio"/>				
How easy was it to use the Enhanced Tagger (WITH extra suggesstions)?	<input type="radio"/>				

4. What did you like about the Simple Tagger (interface with NO suggesstions in the bottom of the screen)?

5. What did you dislike about the Simple Tagger (interface with NO suggesstions in the bottom of the screen)?

6. What did you like about the Enhanced Tagger (interface WITH additional suggesstions in the bottom of the screen)?

7. What did you dislike about the Enhanced Tagger (interface WITH additional suggesstions in the bottom of the screen)?

8. Any general comments and suggesstions are most welcome!

* 9. Do you think you could find a system similar to this one useful in real life?

Yes
 No
 I don't know

Please explain

~ . ~ I n s t r u c t i o n s ~ . ~

1 Introduction

Well known websites such as Flickr (<http://www.flickr.com/>), Del.icio.us (<http://del.icio.us/>), or Last.fm (<http://www.last.fm/>), describe their content using words provided by users. The users add so-called 'tags' to items such as photographs, bookmarks, or articles, which improves their ability to search and find different content. This approach is seen as an important way of allowing new versions of the web to develop. Describing things with words has problems though; users might misspell tags, use the wrong terms to describe things or use words that have more than one meaning. All of these issues can confuse computers and users searching on these sites. This study will explore ways of improving searching for different content by addressing some of the problems listed above.

You will first log on to the system. The log-in screen offers two options, **Simple Tagger**, and **Enhanced Tagger**. In both interfaces you can search for documents in the same way. Once you find the document that you like, it is possible to tag it in several different ways. The basic difference between **Simple Tagger** and **Enhanced Tagger** is that the latter also makes suggestions of possible tags to assign. Some suggested tags will be useful and others will not.

The main point of the study is to investigate whether you find the tagging suggestions in the **Enhanced Tagger** useful, and we would encourage you to consider them and use any that you think are appropriate for the document. You will be asked to undertake four tasks, two with the Simple Tagger and two with the Enhanced Tagger.

2 Procedure of the study

In order for the study to be scientifically valid, it is crucial that you follow the steps as outlined below.

Please refer back to this document after you have completed each step. Thank you!

- I. Requirements
- II. Learning the system
- III. Task 1
- IV. Task 2
- V. Task 3
- VI. Task 4
- VII. Final questionnaire
- VIII. Email

I. Requirements

a) The EnTag software is optimised for **Internet Explorer 7** and this is the recommended platform.

Internet Explorer 7 can be downloaded from:

<http://www.microsoft.com/windows/downloads/ie/getitnow.mspx>

Please check the release notes before installing: <http://msdn.microsoft.com/en-us/ie/aa740486.aspx>

Limited trials of the EnTag software have been successful using **Firefox 3** under Windows XP and with **Safari 3.1** on Apple computers. Firefox 3 can be downloaded from:

<http://www.mozilla.com/en-US/firefox/all-rc.html>

Please read the Mozilla advice on upgrading before installing Firefox 3:

<http://support.mozilla.com/en-US/kb/Upgrading+to+Firefox+3>

There are a number of known issues when running Firefox. Details may be found at:

http://support.mozilla.com/tiki-wiki_rankings.php?limit=500&categId=1

If you are considering using Safari under Windows please see the Microsoft Advisory Security note at: <http://www.microsoft.com/technet/security/advisory/953818.mspx>

Note: Older browsers such as Internet Explorer 6 and Firefox 2 do not fully support the advanced markup tags employed in the EnTag software. It is suggested that a more up to date browser be used (see above).

b) The Entag software is designed for a screen resolution of 1280 * 1024 pixels.

(In Windows XP: adjust by Start/ Control Panel/ Display/ Display Properties/ tab Settings/ Screen Resolution.)

If your computer display will not operate at a resolution of 1280 * 1024 the Entag software may be run with Firefox 3, using the Zoom feature with the maximum screen resolution possible.

See [Settings document](#) (page 4) to set zoom.

c) Javascript should be enabled.

See [Settings document](#) to check if enabled.

If at any point you have any difficulties, please contact Kora (k.golub@ukoln.ac.uk).

II. Learning the system (*takes between 20 and 40 minutes, depending on your previous experience*)

Once you have received an email saying you can log in, please continue by going to the training step:

<http://www.ukoln.ac.uk/projects/enhanced-tagging/study/training.pdf>.

III. Task 1

Once you have acquainted yourself with the system, you should proceed with your first task. Please read carefully.

Task 1: Simple Tagger, "European integration"

Imagine that as part of one of your courses, you are asked to write a four-page essay on the **topic of European integration**, as a joint project in groups of four. The essay should critically discuss existing theories about the creation of the European Union and its institutions. Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page*, choose **Task 1** and **Simple Tagger Log In** and in the "Search for Documents" box enter these words: **European integration**.

Then, tag the **first 15 retrieved documents**. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

* http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Task 1

Simple Tagger

UserName: your e-mail address

Password: the one you entered in the questionnaire

You can log out of a task and return later, obviously choosing the same task number.

Immediately after you have completed tagging the 15 documents, click on the "**Post-Task Questionnaire**" button at the top right corner, next to "Log Out" and "Help" buttons. There you will be asked to fill-in a short questionnaire about the task you have just completed. This could take between 5 and 10 minutes.

IV. Task 2

Please continue with the second task:

Task 2: Enhanced Tagger, "peacekeeping"

Imagine that as part of one of your courses, you are asked to write a four-page essay on **the topic of peacekeeping**, as a joint project in groups of four. The essay should describe and discuss deployment of non-partisan military forces to separate two sides of a conflict that have already agreed on an armistice (are no more at war with each other). Your lecturer has instructed you to look for resources in the EnTag system. Since you will be working together with three other students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page*, choose **Task 2** and **Enhanced Tagger Log In** and in the "Search for Documents" box enter these words: **peacekeeping**.

Then, tag the **first 15 retrieved documents**. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. **Please especially try to consider the suggestions in the bottom of the screen**. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

* http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Task 2

Enhanced Tagger

UserName: your e-mail address

Password: the one you entered in the questionnaire

You can log out of a task and return later, obviously choosing the same task number.

Immediately after you have completed tagging the 15 documents, click on the "**Post-Task Questionnaire**" button at the top right corner, next to "Log Out" and "Help" buttons. There you will be asked to fill-in a short questionnaire about the task you have just completed. This could take between 5 and 10 minutes.

V. Task 3

Please continue with the third task. Please read carefully.

Task 3: Simple Tagger, free topic

Imagine that as part of one of your courses, you need to collect a number of different resources on a certain topic **of your own choice** in political science. Your lecturer has instructed you to look for resources in the EnTag system. Since the EnTag system will also be used by your fellow students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page*, choose **Task 3** and **Simple Tagger Log In** and in the "Search for Documents" box enter whichever terms you think should retrieve relevant documents. You might need to explore which search terms return the most relevant documents. On a piece of paper, write down each search term you have used, as you will be asked to enter these later in a post-study questionnaire.

Then, tag **15** documents, whichever you find relevant to you, returned to whichever of the search terms. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

* http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Task 3

Simple Tagger

UserName: your e-mail address

Password: the one you entered in the questionnaire

You can log out of a task and return later, obviously choosing the same task number.

Immediately after you have completed tagging the 15 documents, click on the **“Post-Task Questionnaire”** button at the top right corner, next to “Log Out” and “Help” buttons. There you will be asked to fill-in a short questionnaire about the task you have just completed. This could take between 5 and 10 minutes.

VI. Task 4

Please continue with the fourth task:

Task 4: Enhanced Tagger, free topic

Imagine that as part of one of your courses, you need to collect a number of different resources on a certain topic **of your own choice** in political science. Your lecturer has instructed you to look for resources in the EnTag system. Since the EnTag system will also be used by your fellow students, you should tag the documents you retrieve with tags that would be useful to you but would also enable other students to find those documents in EnTag and understand from your tags what the documents are about.

Go to the EnTag login page^{*}, choose **Task 4** and **Enhanced Tagger Log In** and in the "Search for Documents" box enter whichever terms you think should retrieve relevant documents. You might need to explore which search terms return the most relevant documents. On a piece of paper, write down each search term you have used, as you will be asked to enter these later in a post-study questionnaire.

Then, tag **15** documents, whichever you find relevant to you, returned to whichever of the search terms. Do only the ones you can open - if a URL is unavailable move on to the next document in the Results.

Tagging each document should on average take between **5 and 10 minutes**. Please describe as many aspects and topics as you think appropriate for the task. **Please especially try to consider the suggestions in the bottom of the screen**. Remember to open the URL, but you do not need to follow further internal links within a Web site. If the document is very long, focus on its abstract, introduction, conclusion, headings and table of contents.

* http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Task 4

Enhanced Tagger

UserName: your e-mail address

Password: the one you entered in the questionnaire

You can log out of a task and return later, obviously choosing the same task number.

Immediately after you have completed tagging the 15 documents, click on the “**Post-Task Questionnaire**” button at the top right corner, next to “Log Out” and “Help” buttons. There you will be asked to fill-in a short questionnaire about the task you have just completed. This could take between 5 and 10 minutes.

VII. Final questionnaire (*usually takes between 5 and 10 minutes*)

Once you have diligently completed all the four tasks, you would be asked for one final questionnaire about the overall experience you had with using the EnTag system. Please follow the link below to access it:

http://www.surveymonkey.com/s.aspx?sm=o8iRom1huT_2bW3AVPA_2fNqbA_3d_3d

VIII. Please email us

Please email Kora (k.golub@ukoln.ac.uk) once you have completed the study.

Appendix 9: Training document

~ . ~ Training ~ . ~

Before starting the real study, it is important that you learn how to use the system. Please complete the following two tasks to practice with the two systems. It is important for the study that these are fully completed, and also in the order given here.

In short, you will first log on to the system. The log-in screen offers two options, “Simple Tagger”, and “Enhanced Tagger”. In both interfaces you can search for documents in the same way. Once you find the document that you like, it is possible to tag it in several different ways. The basic difference between “Simple Tagger” and “Enhanced Tagger” is that the latter makes suggestions of which tags to assign.

First task: Simple Tagger

Open your Web browser and enter the following address or simply click on the following link:
http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Choose “General Use”.

Enter your UserName (your e-mail address) and Password (the one you entered in the questionnaire).

Click on the “**Simple Tagger Log In**”.

Observe that you have arrived to a page titled “Document search and browsing page”.

1) Try out searching for documents first. In the “Search for Documents” pane, enter words “Parliament UK” and click on “Start search”.

2) In the “Results” pane, you will get all the documents containing the words “Parliament UK” in its title, description, or tags if any. The documents are automatically ranked according to the relevance to the query. Click on the title of the first document, which will open in a new window. Look carefully at what the document is about.

3) Looking again at the “Results” pane, please click on the “Tag” button of the first document, which will lead you to another page on which you can add your own tags to describe what the document is about.

4) Observe that you are now on “Document Tagging Page”. You can see the document title, its URL and description.

Note: Please bear in mind the **whole document** and not just the description when deciding on which tags to assign.

In order to add your own tags to it, simply enter the tag you wish in the box as in the example below



MEPS europeanisation Add a Tag Remove Tag Return To Search Results

and then click on the “Add a Tag” button.

5) Now look at the “My Tags For This Document” pane and you will find your tag there. Also, look at the “Main Tag Cloud” pane and observe that your tag has been added.

6) Now pick any tag from the “Main Tag Cloud” pane and click on it. Observe that that tag is automatically entered in the tagging box. Click on the “Add a Tag” button. So, this is another way of adding a tag.

Note: If you are one of the first people using the system, there might not be many other tags added yet.

7) Now click on a person’s name from the “Taggers” pane, which will then result with a list of that person’s tags in the pane next to it, called “All XY’s Tags”. Again, each tag in this pane is clickable. Click on any tag of your choice. Observe that that tag is automatically entered in the tagging box. Click on the “Add a Tag” button. So, this is another way of adding a tag. You will also notice that your own alias is listed in the “Taggers” pane.

Note: If you are one of the first people using the system, there might not be many other taggers yet.

8) Let's remove the last added tag. Go to "My Tags For This Document" pane and click on the tag you want to remove. Observe that it has automatically appeared in the tagging box. Then simply click on the "Remove Tag" button.

9) Let's say that you are now happy with the tags you added for this document, and you want to go back to search results. In order to do that, click on "Return To Search Results" button.

10) Now try another way of searching for documents. Click on any tag in the left menu titled "Main tag cloud". What you get in the "Results" pane is all the documents in the system that were tagged by someone using that tag. The font size of each tag reflects how many documents have been tagged by it: the larger the size, the more popular the tag is.

Note: If you are one of the first people using the system, there might not be many documents that were tagged yet.

11) In "Main Tag Cloud", go to "Filter By" drop-down menu and choose "My Tags". Observe that you now get the tags you have assigned so far in this system.

Second task: Enhanced Tagger

Open your Web browser and enter the following address or simply click on the following link: http://reswin1.isd.glam.ac.uk/intute_test1/LogInPage2.aspx

Choose "General Use".

Enter your UserName (your e-mail address) and Password (the one you entered in the questionnaire).

Click on the "**Enhanced Tagger Log In**".

Observe that you have arrived to a page titled "Document search and browsing page".

1) In the "Search for Documents" pane, enter word "media" and click on "Start search".

2) Looking at the "Results" pane, please click on the "Tag" button of the first document.

3) Observe that you are now on "Document Tagging Page". You can see the document title, its URL and description.

Note: Please open the URL and look at the whole Web site when deciding on which tags to assign.

This interface is different from the previous one: **Enhanced Tagger** provides more suggestions from which to choose your preferred tags for a document. You have all the options as in **Simple Tagger** but also additional ones from another list of tags.

In **Enhanced Tagger**, to get additional suggestions, type a possible tag in the box as in Simple Tagger and then click on the "**Suggest**" button. In the lower part of the screen three panes will be returned. You will browse around these to find additional and/or more appropriate tags. You can assign as many tags as you like. Please bear in mind that suggestions may or may not be useful: the computer is trying to make relevant guesses but is not always getting it right. Help us teach it by selecting only the tags that are truly relevant to each document.

4) Some initial tagging suggestions (**Select/edit relevant tags**, bottom right) may be generated based on the title, if the computer finds any. You should also experiment by typing other possible tags that make sense to you into the box and see what suggestions arise. (You can also see what suggestions arise by choosing a possible tag from the tag clouds.) When one of the tagging suggestions from the **Select/edit relevant tags** pane seems appropriate you add it to your tags for the document by clicking on it (to bring it into the box) and then clicking Add a Tag. The steps are outlined in the example below.



5) Enter tag “media” and click on “Suggest”.

6) In the bottom left pane **Automatically suggested matches** are returned. These are general contexts (or classes) that may or may not be relevant for your purposes in tagging this document. More than one match may be relevant or possibly none – you should scan down the list to decide. Each context may have several tagging suggestions associated with it in the bottom right **Select/edit relevant tags** pane.

If you hover with a mouse above each context, you will get its broader context. This is especially useful when, in some cases, several same entries will be listed, but each from a different broader context. For example, enter “philosophy and theory” and click on “Suggest”. You will get three exact same matches, but each from a different context displayed when you hover above each of them: 1) political science, 2) the state, 3) civil and political rights.

Note: When you scroll down, there is a “End of Political Science” line. This means that the entries below this line belong to different subject areas, which could be related to politics, but could also be entirely irrelevant.

In some cases for the tag you enter and ask for suggestions there will not be any matches in politics at all – then “End of Political Science” will be the first line.

From the **Automatically suggested matches** pane, click on the match that you think is most appropriate, say, “Use and effect of media”. Then, the context for that tag will be shown in the bottom middle pane.

7) The bottom middle pane, **Explore hierarchy around the selected context**, shows in red the context that you selected in the left pane. Above it is the more general context and below it a more specific one (if one exists). Try browsing the hierarchy by clicking on broader and narrower contexts, in order to get more general and more specific tagging suggestions displayed in the bottom right hand pane.

8) The bottom right hand pane, **Select/edit relevant tags**, lists tags related to the one in red from the second pane (**Explore hierarchy around the selected context**). Click on one you think is relevant and it will automatically appear in the text box. There you can further edit it.

In order to assign a tag to a document, simply click on the Add a Tag button.

Summary

You can assign tags from any of the tag clouds (both the main tag cloud and individual tagger’s clouds) or by typing them in yourself, or by adopting some of the suggested tags.

The purpose of the study is to investigate the combination of social tagging with automatic suggestions (from a classification system). Thus, we would like you to consider the suggested tags but only to choose those you believe are useful for the document. Sometimes no suggested tags may be relevant and sometimes several may be relevant. Some suggested tags can be very long but may contain some useful words. Remember that you can always edit them in the text box before assigning them to the document.

Please continue by going back to the Instructions document that was sent to you by email.

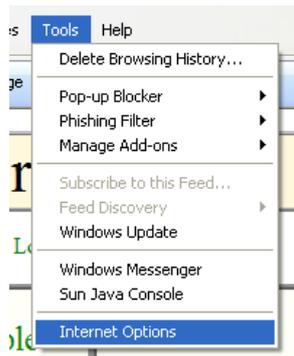
Appendix 10: Settings document

1 Internet Explorer

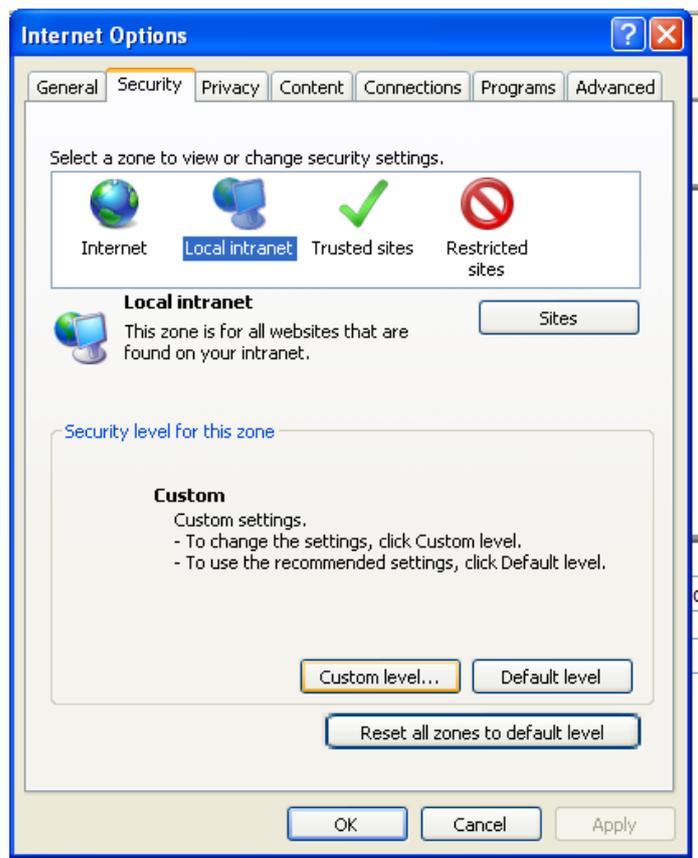
1.1 Enabling scripting in Internet Explorer 7

NOTE: Scripting is enabled by default if your security settings are medium-low. If your security is set to high by your network administrator you may not have permission to enable scripting.

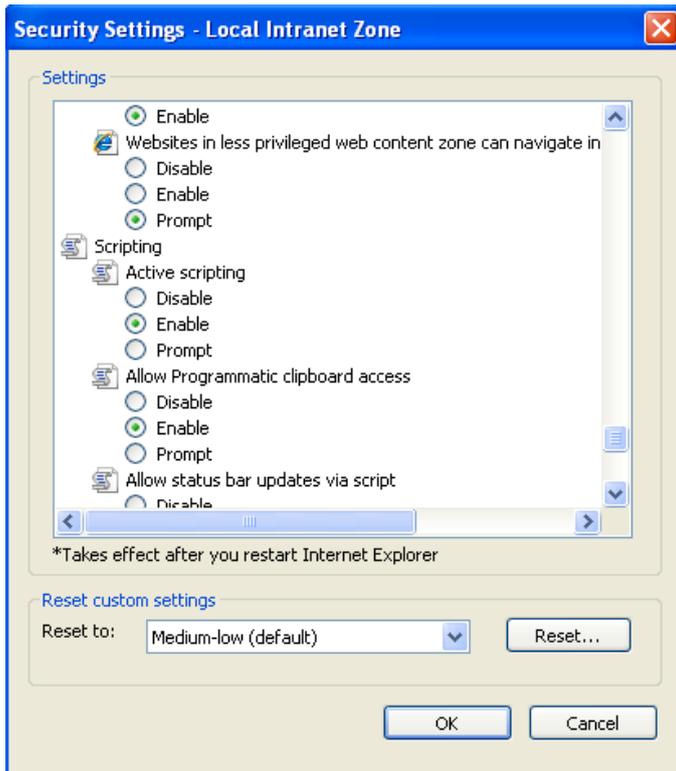
- 1) Choose 'Internet Options' from the file menu:



- 2) choose the security tab and click the 'Custom level...' button:



3) Scroll through the settings to 'Scripting' and ensure that 'Active Scripting' is enabled.

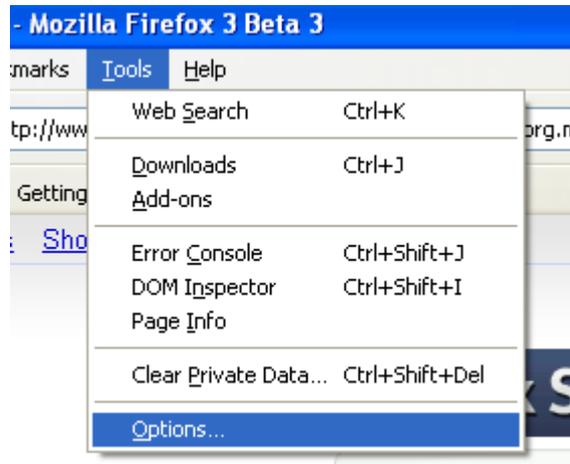


NOTE: It should NOT be necessary to restart your machine for this single change, however changes to the level of security will require a reboot.

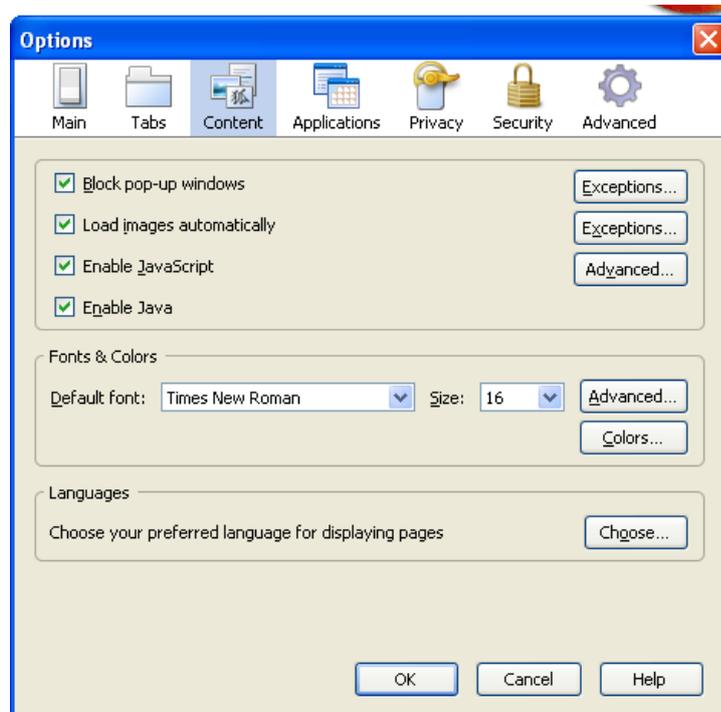
2 FireFox 3 Beta

2.1 Enabling scripting in Firefox 3 Beta

1) Goto 'Tools->Options'



2) Choose the content tab and ensure the Enable JavaScript checkbox is ticked.



NOTE: It is assumed that the Advanced features are set to the default settings as it is beyond the scope of this document to advise on these features.

2.2 Zooming the display Firefox 3 Beta

NOTE: Zoom is NOT supported in earlier versions.

1) Select Zoom from the View Menu:

