Requirements

Last modified: October 15, 2016

Preamble

In the following document, the SI standards will be used for measurements: [1]

- *1 second* will be abbreviated as *sec* or *s*;

- *1 byte* (abbreviated *B*) refers to *one octet*, or *eight bits*;

- *1 megabit per second* (abbreviated *1 Mbps*) refers to 10^6 *bits/sec*;

- *1 kilobit per second* (abbreviated *1 Kbps*) refers to 10^3 *bits/sec*;

- *1 Terabyte* (abbreviated *1 TB*) refers to 10^{12} *bytes*

Functional requirements (most important first)

1. User should be able to search through a transcribed document [2]

   (a) User should be able to search for plain-text strings [3]

   (b) User should be able to search through documents by ID (volume, date, page) [4]

   (c) User should be able to use simple regular expressions in their searches [5]

   (d) User should be able to search through documents by proper names [6]

   (e) User should be able to search through documents by annotations

2. User should see the search results and the ten words of context surrounding the result [7]

3. User should be able to view a list of documents in chronological order [8]

4. User should be able to download the XML file of desired document [9]

5. User should be able to download the original scan of desired document [10]

6. User should be able to turn annotations "off" and "on" [11]

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[1] I've chosen SI units since this is what ISPs go by, does everyone agree with me? This is much less than the JEDEC Mbit, which is what most people mean by a megabit

[2] Rationale: this is the main purpose of the software, and it would be basically useless without it. The sub-requirements are requirements as a part of this

[3] Rationale: Most people won't know the ID of what they want, or a specific name

[4] Rationale: This was specifically stated to be an important requirement

[5] Rationale: This was also specifically stated, however I didn't get the impression they wanted it as much as the previous requirement

[6] Rationale: Not specifically stated by the LACR team

[7] Rationale: It's obviously as important to be able to see the search results as to be able to make a query, unless you're using your server as a space-heater

[8] Rationale: After searching, this is the other main point of our package

[9] Rationale: Although considered important by the LACR team, it only makes sense when there is some way to search for a document

[10] Rationale: See above

[11] Rationale: This was considered a nice extra to have by the LACR team AFAIK

Non-functional requirements (most important first)

1. The web-application must be suitable for searching queries, browsing the XML documents, translations, interpretation and scanned pages for these user groups: [12]

   - secondary school children aged 11 years old or older;
   - University and college students;
   - researchers;
   - The wider public with average computer skills, and who are aged 11 years or older

2. The web-application must be accessible from Chrome version 50.+, Firefox version 45.+, Safari version 9.+ , Edge version 38.14393 and higher. [13]

3. The web application will be optimized for these screen resolutions: [14]

   - Extra small devices, Phones: less than 768px
   - Small devices Tablet: min-width:768px
   - Medium devices Desktops: min-width:992px
   - Large devices Desktops: min-width:1200px

4. User should receive search results within 5 sec. if their device's connection to the Internet has a download speed of 1 Mbps, and their upload speed is 256 Kbps [15]

5. New data (XML files, translations, interpretations and scanned pages) should be imported via SFTP to dedicated folders for them. (via web interface, drag and drop function, filter out directories, only files which are supported) (functional requirement?) [16]

6. The system should be reliable and available at least 363 days in the year. [17]

7. It is acceptable to restart the system in the event of failure at most 1 time a week. [18]

8. The web-application should support up to 1000 concurrent users. This requirement is bound with minimal hardware requirement specification.

9. The system can be restarted at most once a week for maintenance purposes and applying software updates.

10. The system should be able to store single file with size up to 1 TB.

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[12]Rationale: being accessible to everyone was considered very important by the LACR team, and thus the usability requirements are the most important non-functional requirements

[13]Rationale: This is also important to accessiblity

[14]Rationale: Whilst it is important to accessability, it will mainly just impose annoyances on the user as opposed to making it unavailable to them

[15]Rationale: See above

[16]Rationale: This is about usability for the LACR team, and is probably the part of the system they will have most interaction with

[17]Rationale: this also impacts usability to a large extent

[18]Rationale: See above

11. The system should be running on Ubuntu 16.04 LTS

12. The system should be installed and tested within one week by our team. [19]