

Towards a Catalogue of Existing Education and Outreach Material in the CERN IT Department – Step 1: Inventory

Ariadne Melissargos
EPFL → HEIG-VD

Supervisor:
Maria Dimou / CERN IT

Includes input by: M. Marquina and M. Gaillard

Introduction

As the very first website of the planet was created at CERN, lots of web pages and other material have been accumulated. As a result, it is hard and confusing for the public to find exactly what they're looking for. That is, when not familiar with the environment of CERN, people might need some assistance so that they don't give up their searches. To give them the information they are seeking, we must improve search results and accessibility of the extensive material that exists. This project is specifically about IT educational and outreach material.

The goal

The goal of this project is to identify this material and propose a concise and clear structure to set it in.

The idea

The idea is to make a structured catalogue of the material available to us. Namely, a place where all the links are collected, explained, and organized. A website could be an easy way to accomplish this. Also, if the layout and interface of the web site is functional and simple, any person could easily navigate through it and not get disoriented.

The approach

Building a catalogue requires making an Inventory of what material already exists. Copying over or rewriting existing education or outreach information would create a big and tangled website. Furthermore, we don't own the information and the site could easily get out of date. Thus, placing links is sufficient for referring to the original sources. The objective is to divide them into categories specific to a certain subject, carefully choosing interesting labels in order to captivate the users' attention and make them want to search even further. However, if there are too many categories, then it will take too many clicks to lead to one link. This must be avoided as the users might want to abandon their search mid-way. Therefore, the smaller the number of categories and sub-categories the better.

Additionally, each link of our website corresponding to a given category, sub-category, and their labels should be tagged with keywords related to the data contained. This is important as it gives us the opportunity to change the labels and to shuffle the links without having to manually re-organize the whole catalogue. The challenge at this point is to give persistent URIs that don't contain the label name. This approach allows us to change any outdated labels freely to keep up with the current state of technology.

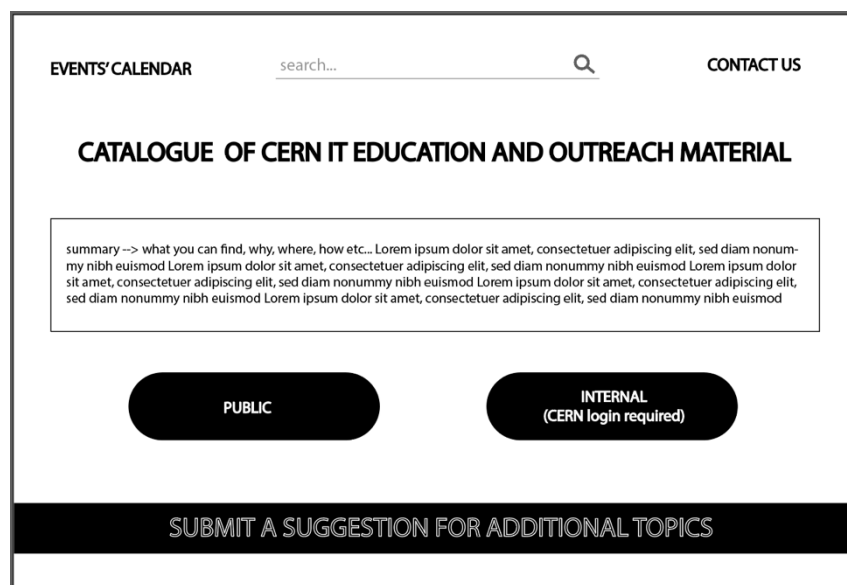


Figure 1

Above (see figure 1), is an example of how the home page could be structured. The first two categories must be Public and Internal. Such that, the user is informed of the fact that there are links that are not accessible without a CERN login. In addition, a brief but detailed text describing the purpose of the catalogue should be placed on the home page. Two separate sections for “contact us” and “events’ calendar” should appear on the home page at the top, for accessibility purposes. A suggestions’ box should be added at the end of the page. You can find a reflection on this in the implementation.

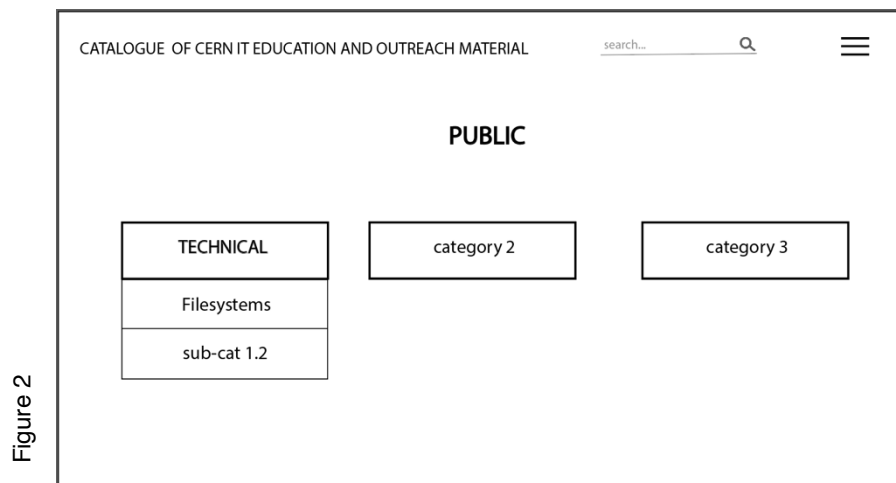


Figure 2

Pictured above (see figure 2) is the example of the page when the user clicks on Public or Internal. All the chosen categories should appear on the page and should be visible. If one hovers with the mouse on top of the category, the sub-categories should appear. The number of categories must be limited for usability purposes.

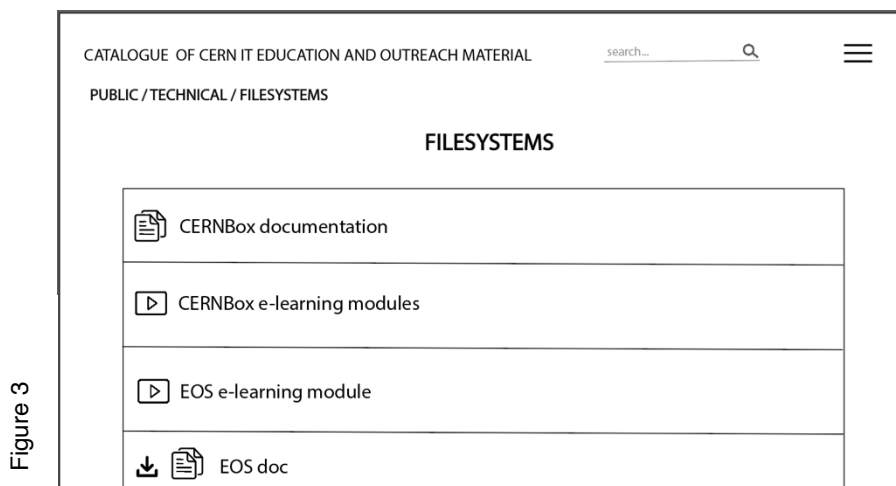


Figure 3

Next (see figure 3), if one clicks on a sub-category a list of links should appear expressed by a description field. Each description is complemented by an icon corresponding to the content. The values used in all figures in this document are examples from the inventory. Evidently, the category and sub-category and their contents are not decided at this step of the project. Note that the category and sub-category should be displayed as breadcrumbs for the users to know where they are in the navigation.

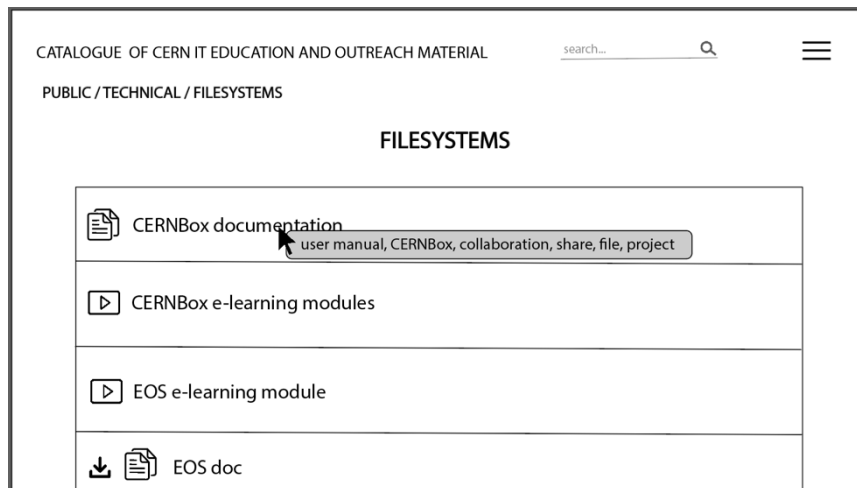


Figure 4

As in figure 4, when one right-clicks on an element for a given table row, one can see the associated keywords in the metadata. The above categories with icons are associated each with a link, such as when clicked the user is redirected to the content outside of our website.

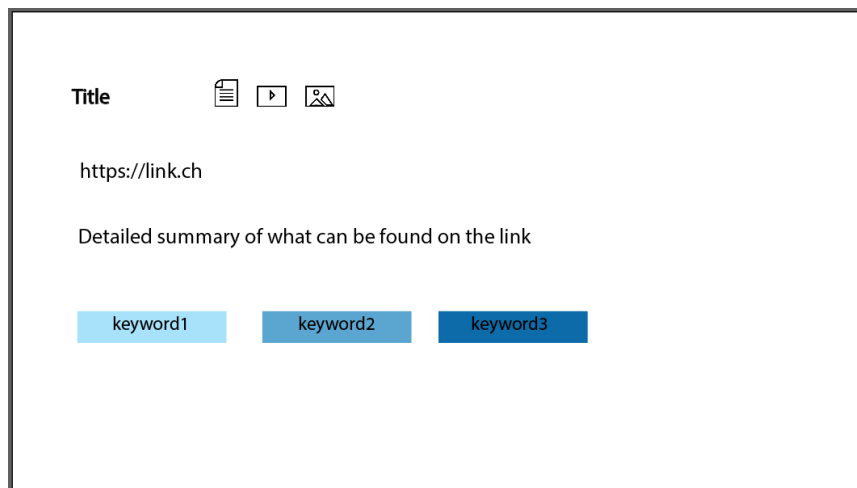


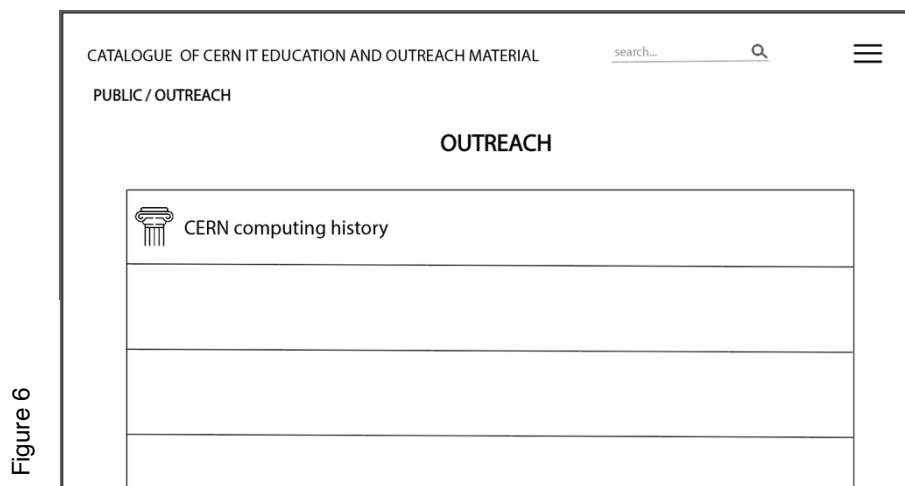
Figure 5

An alternative way to handle keywords would be to display them as per figure 5 above. The advantage is that the user has a more visual representation of the content. However, the disadvantage is that the depth of the site increases.

As mentioned before, the categories' names are just examples. As an external person to CERN IT's educational and outreach material here are some categories and sub-categories I would propose from the available references:

- Public
 - Computing
 - Lectures
 - Schools
 - Seminars
- Public
 - Events
 - Workshops
 - Talks

Implementation tips



The Public and Internal pages will have similar features. As an example, you can see the figure 6 above. The only thing that changes are the labels and the accessibility of the links. Concerning the internal links, it should be specified that there are different levels of security. That is, some require a CERN login and others require for you to be connected to the CERN internal network. Education material contains also Historical pages. As the example above such material should be flagged as historical, perhaps by a column icon.

Attention should be brought to the already existing strict CERN guidelines¹ on designing websites which must be taken into consideration in the implementation step. In the appendix you can find a color palette (see figure 7 in appendix) that is a good candidate for the website and is already used for the academic training website². It matches the CERN official colors used on other official website which are based on blue.

CERN IT events' calendar must have a URI so that it can appear as a link. It should be decided whether it will work as an anchor link that automatically scrolls down to the calendar on the home page or a page for itself.

In the appendix, there are also pictures that could be imbedded on the website to raise interest in the IT department³. There can be a different picture from these photo collections on each page of the site, similarly to the pages of a CERN IT group⁴.

Also, a mobile version should be made accordingly to the website. You can find a mockup in the appendix. The hamburger appears even on the home page as there is not enough space on smartphones.

A section for feedback at the end of the page should be made, as this will allow users and service managers to inform the site maintainers about changes to be made, items to add or obsolete things. Not to confuse with the contact us section, which is made available for questions, additional needed information, and such.

The implementors must think how to parse the feedback information.

Conclusion

Isolating the IT-related educational information from larger collections, for example academic training or colloquia requires a data curator, as these events are always multi-disciplinary, they contain a wealth of knowledge, but the end-user can't sort it out by him/herself without knowing what to expect to find in-there. The design of a page, such as forms and colours, is mostly based on taste, thus the aesthetic part of the website could be disputed. However, this is the

¹ <https://design-guidelines.web.cern.ch/guidelines/guidelines-cern-websites>

² <https://academictraining.cern.ch>

³ see <https://cds.cern.ch/record/2788598#> or <https://gillescollides.wordpress.com/2012/09/24/strangelscentre-de-calcul/>

⁴ <https://it-dep-cda.web.cern.ch>.

1st step to putting order into CERN's intricate network of information. Therefore, it is crucial that the interface chosen should be based on Graphical User Interface principles so that it remains simple and practical and stays true to its primary function: accessibility. Finally, I recommend that this be done as soon as possible to get CERN users' feedback.

Appendix

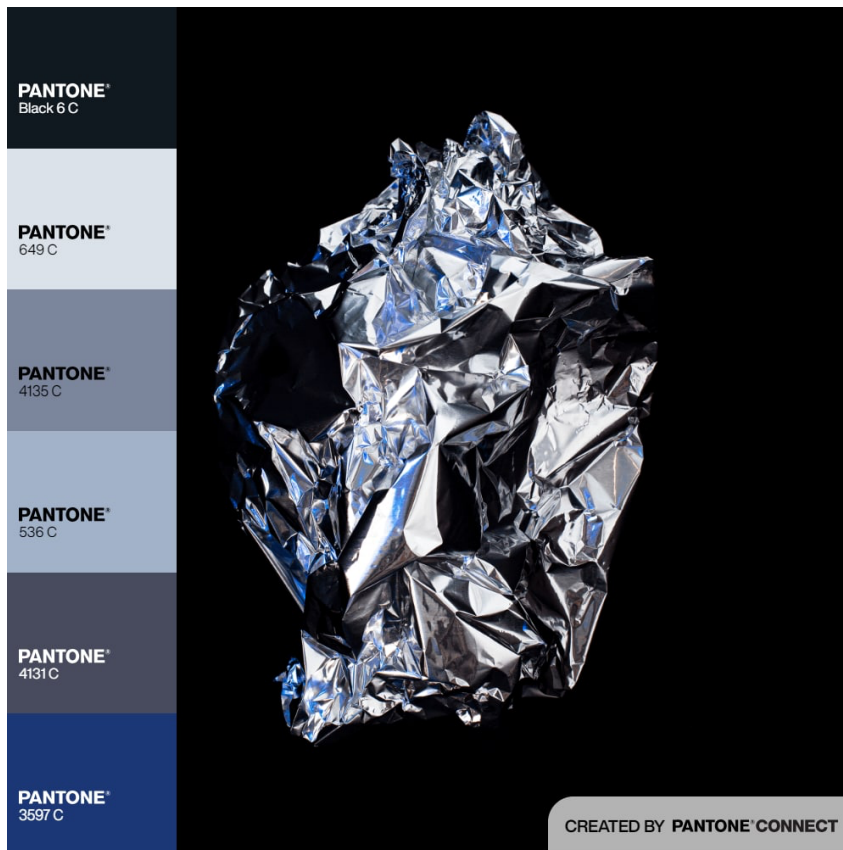


Figure 7: color palette

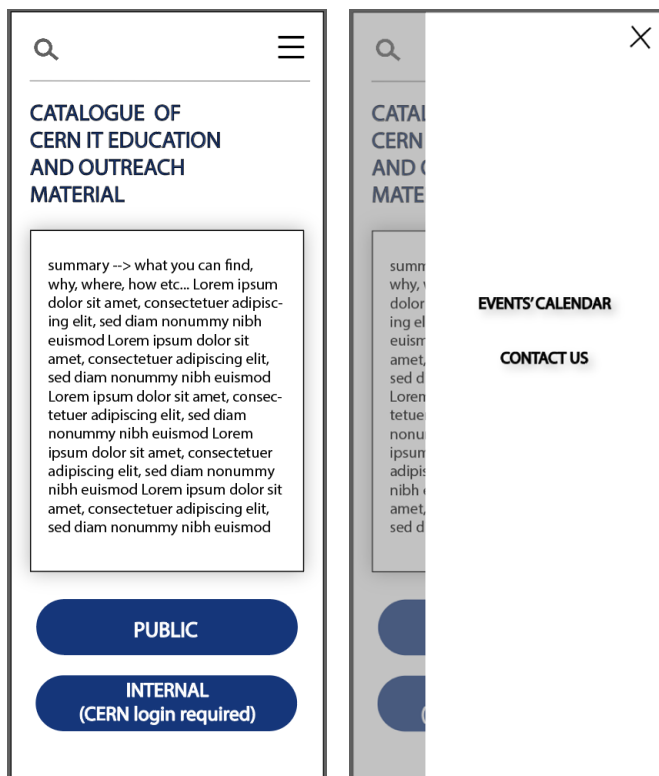


Figure 8: mobile version mockup

References

1. Project page, <https://it-student-projects.web.cern.ch/projects/catalogue-existing-education-outreach-material-cern-it-department-step-1>
2. Inventory, <https://codimd.web.cern.ch/s/aKqHtwDDa#>
3. Pictures of people dancing in the Data Center, <https://gillescollides.wordpress.com/2012/09/24/strangelscentre-de-calcul/>
4. Pictures of the Data Center, <https://cds.cern.ch/record/2788598#>
5. Design guidelines, <https://design-guidelines.web.cern.ch>
6. CERN IT group, <https://it-dep-cda.web.cern.ch>