Title:
BTactile: the place to find tactile graphics and to learn how to create them

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Content
Abstract:
How to democratize the access to Tactile Graphics? Enabling better access to the best solutions in the market and providing low-cost alternatives for developing countries.

Extended Abstract:
Developed countries such as United States of America [1], Canada [2], United Kingdom [3], Japan [4] and France [5] have worked for years in accessibility of tactile graphics. This can be evidenced by the fact that these countries have pursued many efforts for creating special standards for tactile graphics access, as well as legislations and technologies. As one of the results of these efforts, many efforts have been conducted to created centralized repositories of tactile graphics designs, which can be used mostly freely on the web by just creating an account or visiting their websites. However, despite the good intentions of these type of repositories, most of them could be improving by having the following improvements:

● Bigger number of tactile graphics designs, since some of them are limited to as low as 20 designs.

- Better searching tools, which allow users to find more easily what they want by searching for keywords and navigating facets instead of having to browse through menus.
- Better general usability and presentation, which could offer more modern interfaces for navigating the repositories.

Moreover, even by implementing all of this suggestions in one new tactile graphics repository, the impact would still be small because it will be once more a process of reinventing the wheel.

To avoid this, we propose a different approach: to create a centralized crawler and search engine, that indexes most of the images already available all over the world in the different tactile graphics designs repositories and allows for quick search and navigation of the images using a modern, usable and accessible interface that is up to the standard of the current technologies. We call this website BTactile, the place to find tactile graphics. BTactile allows teachers for the visually impaired, parents of visually impaired children, or simply sympathizers to navigate through thousands of tactile graphics designs already curated by the different organizations and countries that posted them on the first place. Once an user has found an image of their interest they will be redirected to the repository of the original poster where each image owner could specify their conditions for allowing reproduction. For example, one repository could require the interested user to complete their site registration, to show a certificate of disability or any other specific requirement for downloading the original tactile graphic design.

By building BTactile we want to democratize the access to tactile graphics designs, allowing for friends of visually impaired students to help them access the images that they so much need. Moreover BTactile wants to enable developing countries to take advantage of the resources made available from their developed counterparts, but that they can't use because they don't even know that neither tactile graphics designs nor the technologies to represent them exist. This is even more critical given the deep absence of resources that sometimes make teaching of graphic content an unattainable dream [6].

In our goal to democratize access to tactile graphics, with especial focus on developing markets we are set to:
- Crawl, index and publicize worldwide repositories of tactile graphics designs. We also want to encourage organizations to share new tactile graphics designs under whatever license or model they prefer.
- Educate about the different technologies available for creating tactile graphics from the designs listed on our site. Providing links for acquiring them, and tutorials on how to use them.
- Finally, for users that simply cannot afford the top end technologies, provide low cost DIY (Do it yourself) alternatives that enable even the most economically challenged friend of a visually impaired student to craft an alternative to at least partially address the access to tactile graphics.

After more than 10 years of developing accessibility technologies from a developing country, we believe that enriching access to the current best solutions of the market, while at the same time providing low cost alternatives can maximize the impact of an innovation such as BTactile, and by this democratize the access to tactile graphics in the whole world.

[1] APH Tactile Graphic Image Library http://www.aph.org/tgil/
[2] Provincial Resource Centre for the Visually Impaired PRCVI
https://www.prcvi.org/tactile-graphics.aspx
[3] UK education collection images RNIB https://www.load2learn.org/cms/images-central
[4] Sawa Yahoo Japan Project http://www.thingiverse.com/YahooJAPAN/designs/page:1
[5] INS HEA Institut d'enseignement supérieur et de recherche Handicap et besoins éducatifs particuliers http://www.inshea.fr/fr/ressource/liste-des-fiches-sdadv-multi-filtre
[6] Experiences with Lower-Cost Access to Tactile Graphics in India
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