Innovation Voucher Scheme - Fife Sensory Impairment Centre

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Innovation Voucher Scheme

Fife Sensory Impairment Centre
The aim of the Tactile Maps for Visually Impaired Tourism is to provide FSBE Ltd with relevant and efficient guidance through research to create a method of translating complex map designs of local tourist attractions into simplified tactile graphics for use by the visually impaired. Using expert academic/design insights, we analyse existing materials and propose a method for reducing the information to a bare minimum that is functional and aesthetic for the end user.
The project is original in that as well as research into existing practice in using tactile graphics to depict 3-D objects and outdoor spaces the researcher also speaks with the end-user to determine the function of the map in relation to the tourist attraction. The original objective was to discover how much tactile information is needed to convey to a blind/partially-sighted person: a) the essence of an object b) a route around an unfamiliar place. This objective changed after preliminary research in which the end-users specified that they would rarely want to visit such tourist sites unaccompanied. The results of this research led to the development of a system of paring down the information contained within maps to the simplest form to enable a partially-sighted person to recall and comprehend a visit to a previously unknown space or place.
• Literature search revealed work and findings by RNIB, Braille Authority of North America and Canadian Braille Authority, Polly Edman, Ann Robinson, IFLA, Snakeskin Tactile Interface Project.
• Face to face interview with Dr Ann Gardiner (PhD in Tactile Cartography 2006 Manchester University) to determine best practice.
• Research into production methods revealed microcapsule printing/swell paper, printed plastic, etched metal, cast resin, cast metal, vacuum formed 0.25mm PVC maps as options.
• Creation of two simplified versions of a complex graphic using photec and deep etch relief printing process learning to value practical considerations and function over aesthetics.
• Location of 3 possible local visitor attractions and subsequent site visit of Edinburgh Castle.
• One solo visit to discover the layout and to look for what I thought would be important/relevant
• One 5-hour visit with D. Ross (blind since birth).
• Subsequent analysis of results demonstrated very different ideas as to points of interest and understanding reinforcing the principle to involve the VI end-user in the process.
• Video created of the testing, modifications suggested as technology issues were highlighted with regard to the inclusion of braille.
• 8 further maps created and symbols for escarpment, wall, path and building refined and honed.
• Bespoke textures and symbols finalized for future use by FSB.
• Discussion with Cecelia Anczwowski of Tactile Vision Inc. in Canada for test printing of tactile maps, final files sent for testing.
Academic: opportunity to apply design thinking and incorporate way finding and aesthetics with a social enterprise. Links formed have enabled students to contact FSB for research purposes. Understanding of the benefits of collaborative real world projects, being realistic about time required and expectations and the aesthetic component of functional design.

Company: The results have helped to confirm that most existing tactile graphics were based on a tactile approximation of the visual image. Project has demonstrated that it is possible to generate an interpretation and to present it in such a manner that the blind person is better able to understand the concept that is being conveyed by the image.