

Paradata: Voices Recognition

Stu Eve, Kerrie Hoffman, Colleen Morgan, Alexis Pantos, Sam Kinchin-Smith

Voices Recognition is an app designed to augment one's interaction with York Cemetery, its spaces and visible features, by giving a voice to the invisible features that represent the primary reason for the cemetery's existence: accommodation of the bodies buried underground. Or rather, many voices: **Voices Recognition** attempts to give every single one of these bodies a voice, and to present a realistic representation of those voices speaking simultaneously, to offer a user a sense of the weight of history - the *noise* of history - that accompanies every step through a space as charged as a cemetery. It is too easy, we would suggest, to walk through the York Cemetery's beautifully managed gardens and wildernesses without confronting this history. The cemetery, and its inhabitants, deserve better.

Oh, and by every step, we really mean every step: the soundscape the app produces will be linked to GPS to ensure that the voices a user hears are based on the bodies buried underneath the exact places where the user is walking. When walking over densely populated ground, the sound will be deafening. When walking between unevenly spaced grandiose mausolea, listening to individual voices will be much more straightforward. However, the relationship between what's above and what's below is not at all straightforward, and **Voices Recognition** will offer a thrilling representation of that.

Voices Recognition is pitched halfway between an artistic soundscape - for some things are best represented by the abstraction of art, we would argue - and a pedagogical project: as individual voices become clear for a moment, the user will hear the stories of a grave's inhabitant(s), with details mined from births, marriage, deaths and census records. The pedagogical aspect of the app is supplemented by visual features navigable via an interactive map, which graphically represent different aspects of the history of the cemetery, from the phases of its expansion, to its different sectors (consecrated, non-consecrated) to the design of mausolea, to the manner in which bodies are actually packed into a cemetery's soil (in a manner that graphically reflects the diversity that often exists within an incredibly small area). This method of navigation means the app can be explored outside of the cemetery space, too, with the option of one's 'path' being accompanied by the cemetery's voices still being available within this setting. The pedagogical facet suggests that the audience for the app will primarily be comprised of students, scholars and history buffs, however its central, abstract component opens its potential audience up into totally different (and dare we say it, far more interesting) territory.

The app will be attractive to users who are keen to understand the cemetery space and its history. Crucially, though, it also serves another audience: users who wish to *experience* the cemetery too. The only threat to its project is, we suspect, objections from the families of the recently deceased towards our intention to tell the stories of everybody in the cemetery [backed up by presentation Q&A]. Our project would be sensitive to this, and consider a cut-off of the year 1920 - no burials from after then would be explored or vocalised. The necessary technology to use the app is widely available and used by our target demographics, and the concept could easily be adapted by parallel institutions/venues/cemeteries.

We chose to use the methods applied for three principal reasons: the provocative clash of a traditionally stately, quiet space - the cemetery - with a confrontational oral/aural representation of history; the opportunity to combine vast quantities of data (census records and the like) with a creative extrapolation, without investing any one fragment of extrapolation with too much responsibility - a dangerous thing to do with a creative component; and the effectiveness of sound in the representation of a sort of 'heat map' approach to representing clustered data, because of the fact it's eminently possible to render delicate distinctions between layers/concentrations, and of the human ear to identify them more distinctly than they can colour, light or smell, say.

Hasty completion from here!

Basic steps in putting together: see appendices.

Other supporting evidence: births/marriage/deaths/census data, memorial texts, *The Garden of Death* by Hugh Murray, grave type typologies (online sources) and so forth.

Uncertainty: uncertainty *clearly* manifests in the creative monologues we'll be producing to render the voices of the York Cemetery dead into meaningful prose. It is a matter of utilising the given data, and making sure the narratives don't deviate from that given data substantively, while also referencing the choices that the writer makes in choosing to string a narrative together in a certain way. The monologues we'll produce will be self-referential, referencing where certain details can't be anything other than inferred, to acknowledge the inevitable role of process in this important act of interpretation.

APPENDIX I, CODING

Our idea for the project was partly inspired by previous work undertaken by Stuart Eve and Shawn Graham – the Historical Friction/Story Whisperer project (<http://www.graeworks.net/2013/06/06/historical-friction/>). The Historical Friction project remotely queries Wikipedia with a user's location to retrieve Wikipedia articles that are geo-referenced with that location. The Story Whisperer extension then turns that textual information into overlapping speech to create a cacophony of the surrounding history and to confront the user with the many varied stories and history from the past. Voices Recognition takes this project as its starting point and builds on it to create the stories and histories of the inhabitants of York Cemetery.

A dataset would be built from online census data, burial records and available biographies of the persons buried within the cemetery. Each grave is assigned a unique id (it should be remembered here that a grave can contain one or more burials). This dataset would then be linked to a GIS, spatially-enabling the dataset via a unique grave id. This dataset alone can be used to create powerful queries about the inhabitants of the cemetery, showing patterns across the cemetery itself. When coupled with the Voices Recognition app, this dataset can be explored while walking around the site, effectively creating an embodied GIS (Eve 2012), the data of which can and should be explored on the ground and in-situ.

The user's position is ascertained via either the GPS device embedded in the tablet or smartphone, or via a remote mouse-click on the interactive website. This location is then fed to a javascript handler script, that queries a remote GIS server of grave locations. The javascript retrieves the metadata about every grave within 10 metres of the user's position. This metadata contains details about the grave's occupants (name, date of death, memorial text and a unique grave id). The data is then either fed to a Text To Speech generator to produce a sound file of the very basic information about the individual(s) within the burial; or it is directed to a pre-recorded history of the individual(s). These sound files are then played simultaneously, overlapping; at once exhausting, and yet because it is built from real data, informative and exploratory.

Eve, S., 2012. Augmenting Phenomenology: Using Augmented Reality to Aid Archaeological Phenomenology in the Landscape. *Journal of Archaeological Method and Theory*, 19(4), pp.582–600.

APPENDIX II, VIDEO

The video draws exclusively on media available by Creative Commons. Alexis Pantos and Colleen Morgan searched YouTube for videos that were licensed under Creative Commons Attribution to find appropriate voices to populate York Cemetery. After these videos were located, we ran them through Vid to MP3 (<http://www.vidtomp3.com/>) to extract the MP3s, then were edited down to the pertinent segments of audio. These were then layered over each other in Final Cut Pro X and the levels were adjusted to correspond with the landscape. This was one of the most difficult aspects of the video production; future projects should assign grave stones certain "voices" and then adjust accordingly. Scraping YouTube was extremely educational and shaped the project in unexpected ways; the audio tracks truly made the cemetery into a conversation. Who knows what you'd want to talk about after you are dead?

Editing each of the video tracks individually was onerous and was the most time-intensive aspect of the video editing process. Additionally, Creative Commons music was added to the beginning and end credits. Some time was saved as Colleen Morgan had already produced several Heritage Jam videos and could use recycled material. Finally, editing the video was shocking and very interesting, highlighting the omissions of data but also the compelling narrative that could be produced by paring voices with graveyard imagery.

APPENDIX 3, IMAGE MANIPULATION

The reasoning behind rendering a line map was to provide a stimulating background for the interactive app features. Using colour would appeal to a wider audience and compliments the accompanying audio and film. Furthermore this enabled tree coverage to be represented, highlighting that individuals buried in these areas are hidden, yet audio is present; conversely empty space and visually displayed where it is known many people are buried would produce a contrasting ... sound.

GIMP (image manipulation program) was used alongside a graphics tablet and the map was 'painted'. The image was then manipulated into a series of images to display the sequential development of areas of the cemetery. The intention is for this map to provide a background for interactive features which users could click on and autonomously navigate.