

Nevola, Fabrizio, David Rosenthal, Sharon Strocchia, Nicholas Terpstra, Colin Rose, Julia Rombough, Daniel Jamison, and François Penz, project creators.

Hidden Florence. Other.

Exeter: University of Exeter, 2013–14. Accessed 3 July 2021.
hiddenflorence.org.

The books of Frances Yates, Mary Carruthers, and Lina Bolzoni have highlighted the prominent role that medieval and Renaissance memorization techniques assign to space. Interestingly enough, recent research in neuroscience has corroborated this deep connection, attributing to the hippocampus the cognitive functions of both episodic memory and spatial navigation. Given the place of memory in education, it is perhaps not surprising that scholars specialized in Renaissance history should have come up with an innovative instructional experience based on spatial learning.

Hidden Florence is a smartphone application that guides users through the meanders of space and time. By mobilizing geolocation, historical geographic information, and audio recordings, it steers users through the city's past, and revives for them the experience of daily life in the Renaissance. Users are accompanied by five Renaissance characters, each one offering a different itinerary through the city by way of a first-person narrative. The app uses satellite navigation services such as Galileo to guide users from one spot to another. Contrary to conventional location-based apps that rely on contemporary maps, however, Hidden Florence displays the Bonsignori birds-eye-view representation of sixteenth-century Florence. This unique setup fosters an immersive historical learning experience. It gives users the curious impression of walking the line between two parallel universes, a feeling that amateurs of history and science fiction will no doubt appreciate.

It would be tempting to classify Hidden Florence as an augmented reality app, but the software is in fact much simpler: it is more akin to an audio guide for urban spaces. The app, for example, does not take advantage of audio spatialization technology, nor does it provide visual enhancements or historical soundscapes. Admittedly, it offers a 3D experience of San Pier Maggiore, a church destroyed in the eighteenth century. This feature is proposed as a separate product, however, and is only available for Apple devices running iOS.

Still, the interest of Hidden Florence lies less in its technological attributes than in its overall effectiveness as an educational outreach tool.

With this goal in mind, the app is a resounding success. The audio content is of outstanding quality, from a didactic and a scholarly perspective. The six first-person narratives offer a fascinating overview of the social and political history of Renaissance Florence, two aspects that are often overlooked in a city where cultural infrastructure traditionally puts art history to the fore. Giovanni, the wool worker, offers a plebeian perspective not only on the city and its politics but also specifically on Sant'Ambrogio, his own neighbourhood. Similarly, Marietta, the silk weaver who grew up in an orphanage, offers a glimpse into the world of sixteenth-century working women and the institutions they could rely on. Ercole is a "birro," a Florentine cop who exposes his particular views on the administration of justice. Niccolosa Alessandri, an upper-class widow, introduces users to questions of faith in a city under the spell of Savonarola's sermons. Finally, Cosimo the Elder himself invites us to walk around his city to the rhythms of his reflections on the legacy of his House. Some characters are historical, others are fictional, but all their stories are based on rigorous scholarship and extensive knowledge of archival sources. They offer lively, micro-historical perspectives on the daily experiences of Renaissance Florentines, on their hopes, their fears, and their expectations. In addition to listening to these first-person narratives, users can obtain more information from those whom Giovanni the wool worker cheekily describes as the "sapientoni dello studio," the know-it-all academics who, despite the developers' own modesty, are anything but pedantic and provide valuable context on the topics discussed by each narrator. Although the content incorporates information from the latest scholarship in the field, explanations remain admirably concise and accessible to a wide audience. Regretfully, however, only two narratives are available in Italian. This is all the more disappointing given the delightful Florentine accent of Roberto Andrioli, the actor behind Giovanni's voice.

Hidden Florence is easy to use and includes helpful features for visitors. To prevent roaming charges, for example, audio files can be downloaded in advance using a Wi-Fi connection. The app, however, is not entirely devoid of bugs that at times interfere with the user experience. On my iPhone 11 Pro, the map scrolled erratically, and a few stories included in the itineraries failed to activate in the expected spot, perhaps in response to a poor GPS signal. These are minor bugs, which are likely to be ironed out in future updates. More

problematic, however, is the absence of the familiar blue beam one usually expects on navigation maps. This core location feature of iOS and Android uses the phone's built-in compass to orient users and prevent them from walking in the wrong direction. This is not trivial. Users walk on the streets of Florence with their headphones on, many of which are noise cancelling. Engrossed by their phone screens, as they try to understand whether they are walking in the right direction, such users will likely pay less attention to obstacles and oncoming vehicles. Though the app does warn users about the dangers of traffic and even about the potential presence of pickpockets, developers could do more to prevent needless distractions, especially if the app is addressed to younger audiences who are unfamiliar with the city. Similarly, the 3D Augmented Reality extension for iOS obliges users to remain in the middle of a street for several minutes before they can fully appreciate the virtual San Pier Maggiore church on their screens. Here again, although warning messages are included in the instructions, more could be done to minimize safety hazards and increase situational awareness. A mechanism preventing users from proceeding with the experience if their headphones are plugged in would improve safety.

That being said, the 3D reproduction of Jacopo di Cione's altarpiece, which is now displayed at the National Gallery in London, is beautifully rendered in the virtual church. To see this work of art in its original location gives a better sense of its relative scale, of its liturgical function and devotional context. This immersive modelling no doubt restores part of San Pier Maggiore's lost splendour, giving a compelling idea of its past importance in the city. Unfortunately, Francesco Botticini's *Assumption of the Virgin*, which is now also at the National Gallery, is not included. Still, the 3D experience is truly captivating: it convincingly transported me to another time, until a delivery man honked his van horn that is, visibly exasperated as he was by my complete detachment from the realities of contemporary circulation in Florence.

This rude awakening led me to reflect on the merits of such technologies in a city so egregiously affected by mass tourism. Indeed, as much as walking the line between two parallel universes can stimulate one's imagination and enhance one's learning experience, the sensorial disconnection fostered by such apps uncouples users from present-day Florence and from the daily lives of its inhabitants. Perhaps more importantly, this alienation from contemporary Florence is unwittingly reinforced by narratives that solely focus on one remote period of history, giving the impression that Renaissance Italy has no bearing

on any other period than the Renaissance itself. This issue is not unique to Hidden Florence. After all, a significant part of the city's economy is focused on—and positively encourages—a historical encapsulation of Florence as “the Renaissance.” In fact, contrary to some travel guides, Hidden Florence doesn't fall prey to folklorization. It provides intelligent and nuanced perspectives on the period, offering the best of historical scholarship in an accessible and engaging format. Nonetheless, while historicism may be germane to scholarly endeavours, the same approach may lose some of its relevance as the medium, the audience, and the context change. Indeed, by releasing audio guide technology outside the walls of a museum, the risk of further reducing the city to an open-air museum, a theme park of some sorts, should be accounted for.

Geohistorical content management systems could mitigate this risk by complementing historical narratives with some diachronic perspectives: viewpoints that would encourage users to reflect not only on the range of human attitudes towards the past but also on their own approach to historical sightseeing. In the case of Florence, one could imagine, for example, the itinerary of a nineteenth-century peasant eager to introduce visitors to Italy's new capital; the narrative of a futurist painter in the early 1920s exposing his peculiar relationship to the city's monuments and artistic achievements; or a promenade with Sir Harold Acton recollecting the long line of “creative spirits” who once visited the region in search of inspiration.

Granted, adding more narratives would increase the cost of a service that is intended to remain free of charge. This is especially the case for Hidden Florence, since it is a native application based on proprietary software. It is understandable that the developers should want to keep control over the available narratives to ensure that the highest scholarly standards are met. Yet, this closed-source approach may affect the app's long-term sustainability. It also prevents other people from repurposing the app for specific pedagogical objectives. Open-source architectures, on the contrary, provide the kind of flexibility a community of scholars and educators would need to experiment with additional narratives and historical maps at a minimal cost. In an open-source scenario, instructors could develop specific narratives with students, promoting interaction and learner engagement through archival research, location scouting, georeferencing, creative writing, photography, sound editing, and perhaps even some basic coding. Students would have the opportunity to work together on a common project, producing something that could then be

shared with classmates, families, and even with the city's own inhabitants. Open-source architectures do not necessarily prevent app creators from controlling the contents. While alternative versions of an app like Hidden Florence could be “forked” by the community as independent variants and made available as progressive web applications, the developers would still conserve the authority to decide whether any of these new features should be added to future updates of the original app.

Open-source and platform-agnostic architectures promise to help geohistorical content management systems to reach their full potential. In the meantime, students, tourists, and Florentines can benefit from a compelling and user-friendly solution that successfully brings state-of-the-art scholarship to new audiences.

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Terpstra, Nicholas, and Colin Rose, principal investigators.

**Digitally Encoded Census Information & Mapping Archive (DECIMA).
Other.**

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decima-map.net.

Begun in 2010 by Nicholas Terpstra, the Digitally Encoded Census Information & Mapping Archive (DECIMA) is an ongoing project that until now has geo-referenced the data of three censuses of Florence (1551, 1561, 1632) to create a searchable ArcGIS map, the base layer of which is a high-resolution reproduction of the axonometric view of the city etched in 1584 by Stefano Buonsignori. The primary purpose of DECIMA is to serve as a platform for the study of urban dynamics in early modern Florence; on a more general level, it also aims to explore how archival information can be encoded and made more accessible through GIS mapping. As indicated by the acronym DECIMA (Digitally Encoded Census Information & Mapping Archive), the project stands at the intersection of two modes of encoding: census and cartography.