

Exploring Cartographic Narratives: Applying Storytelling Techniques and Agile Methodologies

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Keywords: Story map; storytelling; map design; visual narrative; agile methods

Abstract:

Once upon a time... there was a map! Since the early days of writing, human beings have created and improved methods to tell a story, also known as storytelling. Inserted in the most diverse civilisations - fairy tales, fables and epic narratives - had an essential role in different populations' moral and cultural building. From the time the scientific method was devised, researchers and scientists began to study and parameterise the different forms of storytelling, aiming to find patterns. Among these researchers, the anthropologist Joseph Campbell stands out when studying narrative structures of different cultures (Campbell, 1989). The "Monomyth", also called "Hero's Journey", presented by Campbell, served as a base for other researchers, writers, screenwriters and storytelling enthusiasts. Despite being documented only in the 20th century, various authors have applied this structure, even unconsciously.

The concepts present and used in these narration techniques are not restricted to literature; among the several areas that can apply them, it is also Cartography. Storytelling is not new in mapmaking; it can even be said that the role of the Cartographer could be once mixed with that of a Bard. This connection is perceived as many ancient maps worked not because they were accurate or complete but aligned with an oral tradition or cultural narrative (Roth, 2020; Wood, 1987). The study of cartographic narratives is instrumental in developing maps conveying helpful information and connecting emotionally with the user. Among the various ways of applying storytelling in Cartography, it is possible to mention the development of visual geospatial narratives or the so-called story maps. These maps are a way to document, explain, communicate and share a particular worldview. The so-called visual narratives can also be presented in several ways, one being through interactive maps. As a result of technological advances, cartographic narratives have become more widespread in recent years. Its popularisation was among the most extensive tools and technologies to develop and present geospatial data (Caquard, 2013; Roth, 2021). Despite having similarities with standard interactive maps, conceiving and developing a story map has peculiarities that make this activity challenging to overcome. Since besides promoting a detailed study of how the information will be presented - that is, the map design - it is also necessary to define which storytelling techniques will be applied so it is displayed in an instigating way (Roth, 2021). Some researchers, such as Roth (2021) and Caquard (2013), have published studies on the best way to conceive and apply storytelling techniques in cartographic products. The applications in telling a narrative from maps are limitless, given that members of the scientific community, journalists, cartographers and other professionals have used this method to tell their findings in an accessible way to the general public.

However, what is the best approach to developing a story map? Just as there are different ways of conceiving a story, a story map can be created using different approaches. Advancements in technology enable the creation of immersive, interactive visual narratives, such as the innovative story map presented by Caquard and Dimitrov (2017), which showcased a Rwandan refugee's journey. Agile methods, widely adopted in the software industry, can be integrated with storytelling techniques to develop story maps. Although Agile methods may initially seem to conflict with User-Centric Design/User Experience, there is potential for synergy between these two project visions. In contrast, traditional UCD sought to raise priori the requirements of projects for further development, and the advent of agile methods sought to bring users to short production cycles and validate intermediate stages. Agile methodologies such as "Design Thinking," "Participatory Design," "Scrum," and "Project Model Canvas" can provide valuable insights for shaping narratives and defining key development aspects. Implementing Agile methodologies in story map conception and development can streamline spatial and non-spatial information organisation, enabling tailored cartographic projects. Therefore, conducting studies in this context is essential to explore its potential benefits and limitations further. In addition, these methodologies, when integrated with established storytelling techniques, such as the quinary scheme,

also called Freytag's pyramid and the "Hero's Journey", can be helpful to develop linear narratives that connect to users on an emotional level.

Additionally, designing interactive maps for storytelling presents unique challenges, as all elements must be aligned with the narrative. Considerations include selecting interactive, audiovisual, sensorial, and literary resources. These can be applied in participative whiteboard tools (e.g. Miro or FigJam). In addition, the team can cooperate in documenting the fundamental elements of map design, such as choice of scales, cartographic language, and base maps. A crucial aspect of such projects is addressing the perception of time in narratives. Firstly, it is vital to ensure the maps' temporal accuracy in relation to the time depicted in the story. Secondly, the user's timeline as they progress through the narrative must be considered. So, it is vital to establish the order of resource use for story presentation and the possible emotions the user may have when using each map. Figure 1 demonstrates the application of Agile methodologies and storytelling techniques to develop a story map based on a renowned Brazilian True Crime case, "O Caso Evandro."

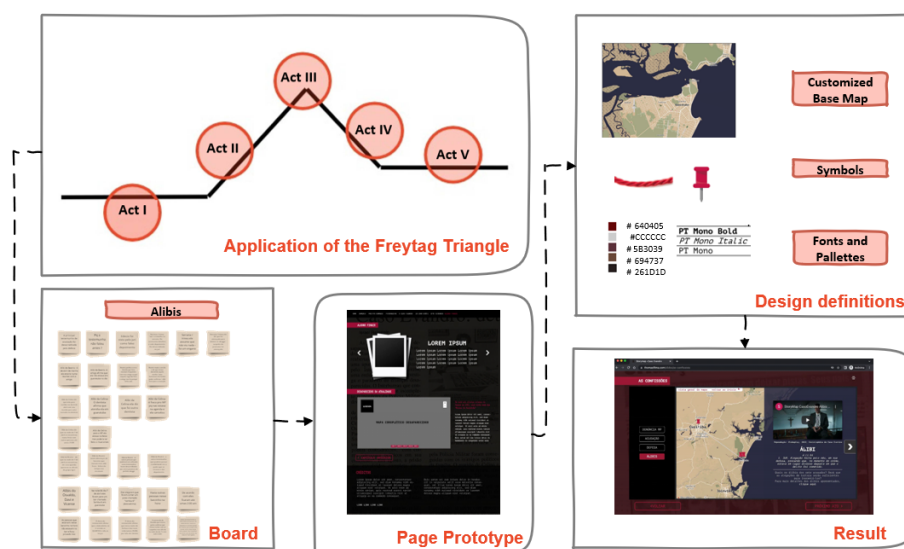


Figure How Agile and Storytelling methods were applied in the "O Caso Evandro" story map.

The experience of creating this story map, based on a podcast and homonymous books, shows us that the intersection between Literature and Cartography can generate exciting results. From the spatial visualisations, the user can navigate in time and space through the places where the narrative occurred, visualise and understand its elements. Moreover, the use of story maps enables the presentation of new perspectives of stories, previously known or not, being this a differential about other narration techniques, since the spatial visualisation allows a broader and more complete view of the events and the places involved, be they real or imaginary. Finally, the use of storytelling techniques and methodologies, aligned with agile methodologies, showed promise to expand cartographic communication, increasing the possibility of interactive dialogue with the user and producing powerful visual narratives.

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