

Italian Institute of Technology: The MEMEX app, the inclusive app that tells people thanks to artificial intelligence technologies and geolocation of cultural heritage, at the Maker Faire.

The MEMEX project, coordinated by the Italian Institute of Technology, aims to develop new technologies that support visibility and inclusion of the most vulnerable social groups, exploiting the pervasiveness of smartphones. The project consortium, led by the IIT-Italian Institute of Technology, includes various European partners.

Some features of the application will be shown to the public during the Maker Faire in Rome, inside the CINI stand:

Link to image: <https://multimedia.iit.it/asset-bank/images/assetbox/577735bb-5d9d-4bc4-9a03-bba176517aef/assetbox.html>;

Link to video: <https://memexproject.eu/en/pilots-en/the-3-pilots/9-english/56-discover-the-memex-pilotsin-video-2>

Genoa, 8 October 2021. A mobile application that allows you to tell your stories using Augmented Reality and information from the surrounding cultural heritage. It is the app that the IIT researchers are developing as part of the MEMEX project, and which will be shown in some of its features at the Maker Faire in Rome, from 8 to 10 October.

MEMEX - "MEMories and EXperiences for inclusive digital storytelling" is a 3-year transnational project that started at the end of 2019, coordinated by the IIT - Italian Institute of Technology (IIT) and funded under the European Union Horizon 2020 programme. The MEMEX project has successfully completed a first version of the mobile phone application, designed to undertake inclusion activities with communities at risk in some cities: Barcelona, Lisbon, and Paris. The application allows socially fragile people to narrate their life experience with digital tools.

"What we will show at the Maker Faire are some of the properties that the MEMEX app will have at the end of the project," said Alessio Del Bue, coordinator of the European project and head of the PAVIS laboratory at the IIT in Genoa. "At the moment this allows you to create a simple 3D model of objects in the scene, to associate the contents entered by the user to each object and to view those contents in Augmented Reality mode"

These features will be integrated into the MEMEX project app in the coming months. In the first phase of the project, MEMEX partners, namely IIT, Ca' Foscari University of Venice, EY & Interactive Technologies Institute - LARSyS, developed an application that allows users to share compelling and meaningful stories, with the goal of making visible the memories of people at risk of social exclusion.

The app is built so that users can write and share interests, memories, thoughts, feelings, in the form they prefer. It can be narrative or poetic and can be further enriched by uploading multimedia content such as photos, voice audio or even video. Once the story has been loaded, the app allows you to geolocate it and identify a site or asset of the cultural heritage present in the area, to add more content to the story.

The result is a set of contributions that can be accessed via a list that filters stories by category and title or via a map that shows the specific location of each story, allowing you to explore and search for specific points of interest. Both viewing modes present the stories and their content in a simple and accessible way while maintaining a spatial awareness of the places and cultural heritage highlighted by users.

The MEMEX app is undergoing further development based on a study conducted in the pilot cities: Barcelona, Lisbon, and Paris. In Lisbon, the project partners Interactive Technologies Institute - LARSyS, in collaboration

with Mapa das Ideias and Instituto Marquês de Valle Flôr, invited young migrants to use the app to tell their stories. Thanks to this first experience, it was possible to define a list of requirements and technical specifications of the app that were tested with migrant women in Barcelona and with the inhabitants of the 19th district in Paris.

"The main objective of these tests was to analyse the expectations of the communities in different cities of the European territory, in collaboration with local associations" explains Alessio Del Bue. "From October 2020 to May 2021, we involved the reference communities through personalized workshops in each of the pilot locations, so that participants could reflect on the stories they wanted to share and on the format these stories should take".

To date, 34 participants, aged between 30 and 80, are involved in the project. They created 31 stories in the first version of the app. All participants created a story while testing the current functionality of the app, supported, and guided throughout the entire process thanks to special methodologies created specifically for the project by ECCOM - European Centre for Cultural Organization and Management. In addition, some facilitators, already familiar to the participants, helped them to feel more comfortable along the way, given the lack of familiarity with the technology of some of them.

A second version of the MEMEX app will incorporate improvements suggested by the valuable information gathered during testing. In addition, new features will display stories with Augmented Reality, with a Knowledge Graph integration that will engage users in creating more vibrant stories.



An image of the application in operation during a test session in Lisbon. The statue of the writer Fernando Pessoa is modelled with a simple geometric shape, which will allow stories to be linked to elements of cultural heritage and visualized in Augmented Reality.



The MEMEX project is coordinated by the Italian Institute of Technology (Italy) and the project consortium is composed of: Ca' Foscari University of Venice (Italy), EY (Italy), ECCOM (Italy), CNRS - Centre National de Recherche Scientifique (France), Interactive Technologies Institute - LARSyS (Portugal), Michael Culture Association (Belgium), Dédale (France), Interarts (Spain), Noho (Ireland), Mapa das Ideias (Portugal)



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