

An introduction to Location Based Games

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What is a Location-Based Game?

- ⌘ A location-based game (or location-enabled game) is a type of pervasive game in which the gameplay evolves and progresses via a player's location.
- ⌘ Thus, location-based games must provide some mechanism to allow the player to report their location, frequently this is through some kind of localization technology, for example by using satellite positioning through GPS.

Are LBGs new?

- ☞ Hide and seek, I-Spy, police and thieves, role playing games and capture-the-flag have all been popular **real-life** location-based games that have been played in different versions across the globe.
- ☞ These games allow the players to refer to physical objects and location(s) and use their creativity and imagination in order to interact meaningfully with others, as well as with the location(s).
- ☞ In recent years there has been a rise in the number of creative games, interactive narratives and playful activities that are facilitated by mobile devices so that the game activity follows the players' location. A term used to describe such games is "mobile location-based games" .

Do all LBGs
have learning
objectives?

 Pokemon Go



Learning attributes of LBGs

Activities that produce learning that is:

SOCIAL

EXPERIENTIAL

SITUATED

Learning attributes of LBGs

✧ It is common for students to use games in a playful way with little attention on the learning aspect, bringing to the fore serendipitous or incidental learning where students learn without insinuating a learning goal

Learning outcomes

- ❧ LBGs offer an additional level of experience: due to the fuzzy border between games and real world activities, players become immersed in the LBG, thus gaining stronger emotions and satisfaction from well designed LBGs.
- ❧ Mobile games are particularly suited to creating educational experiences in informal settings.
- ❧ Mobile media and augmented reality can fruitfully combine the advantages of educational video games with **place-based learning**.
- ❧ LBGs have another important feature, which makes them valuable for education: they **connect places and stories**. In an LBG, it is possible to embed extra layers of information and narratives about, for example, historical locations or other places in a city. By visiting real places, the story becomes a **personal experience** linking physical objects with learning content.

Learning outcomes

Category	Outcome
Remembering	Learner can memorise and recall information
Understanding	Learner can comprehend, explain and predict.
Applying	Learner can use information and solve problems
Analysis	Learner can analyse data patterns or concepts and findings can be discerned to prior evidence
Evaluating	Learner can compare and make justifiable judgements about the value of ideas, methodologies or products
Creating	Learner can design, build, invent, plan or produce original knowledge and transferring it to new contexts for making a contribution to the society

Examples of
LBGs in
education:

The INVOLEN
project

- ❧ Project concept: Intergenerational learning
- ❧ Theme: Natural conservation areas
- ❧ 5 countries: Italy, Greece, Hungary, France, Slovenia
- ❧ Method: Students interviewing seniors on local sites of nature conservation, and using the stories and information as fuel for developing LBGs aimed at raising awareness on environmental protection themes and providing a learning tool for environmental education at school.

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✧ The LBG from Hungary: **Discovery of the Dead Rába**

Examples of
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✧ The LBG from Italy: **Boar Marley** adventure



Examples of
LBGs in
education:

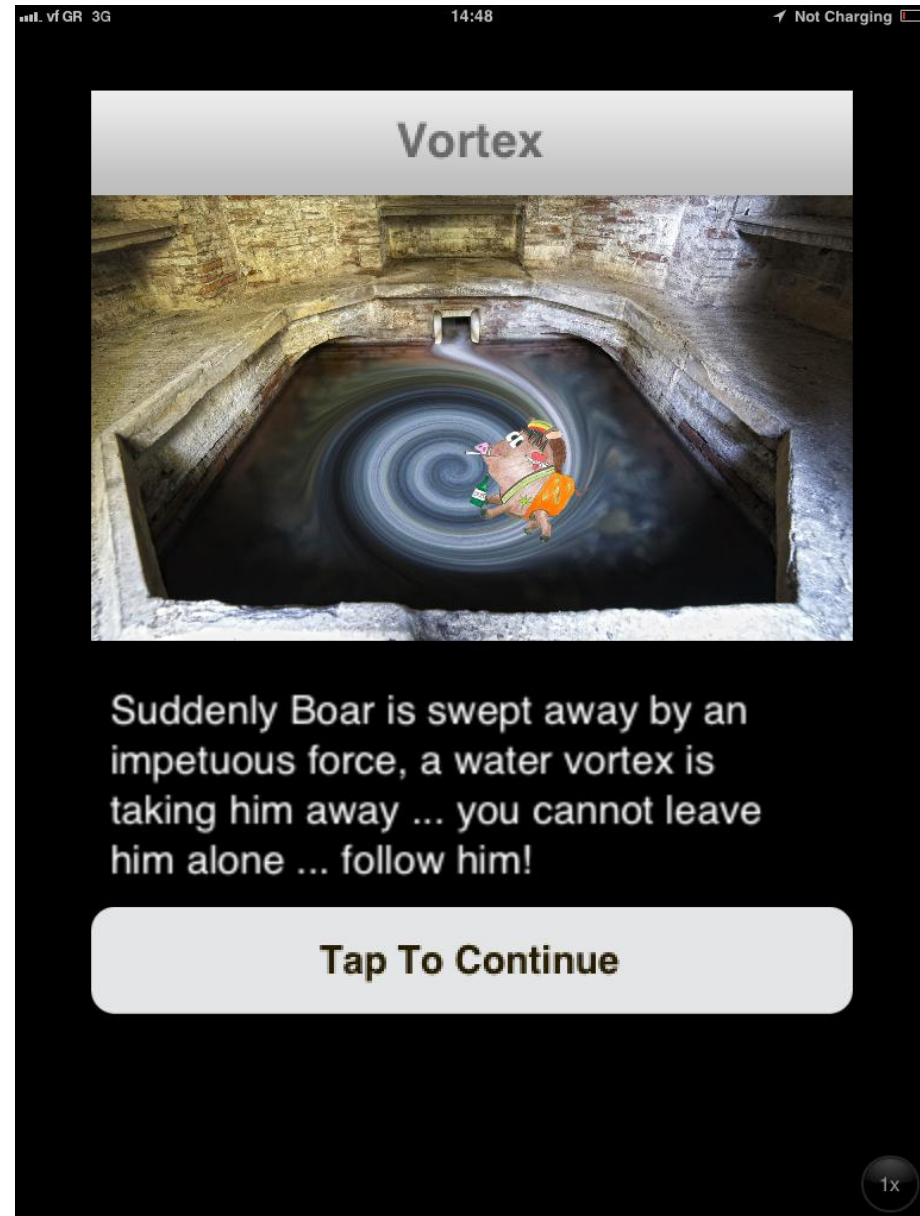
The INVOLEN
project

Storyboard

- ✧ The player looks for Colognole into to the map and starts the adventure: he will know what happened to Boar Marley and help him to get over his bad habits.
- ✧ The player arrives close to some strange small buildings. The amazing adventure with Boar Marley back in time starts here, at the water springs of the Colognole aqueduct. He will meet a lot of characters that will help him to free Boar Marley from the human vices.
- ✧ Firstly, the player meets Boar Marley... and has a dialogue with him. The player wants to help Boar Marley to get over his bad vices. To do this, they get into a small building.
- ✧ Inside the small building they find a water source. Apparently nothing strange, but suddenly.... a strange sound is heard... an unexpected event..
- ✧ Boar Marley is taken by surprise by an impetuous force, a water vortex and the player, virtually, has to follow him.

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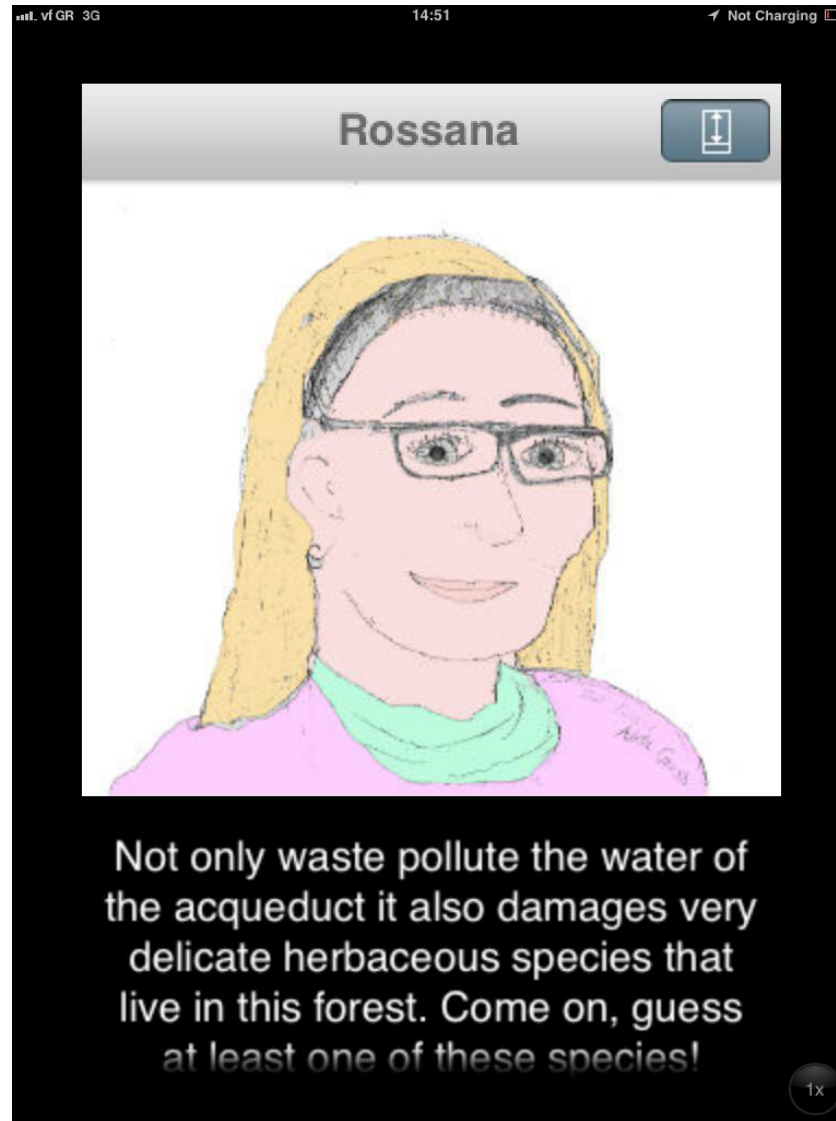
Examples of LBGs in education:

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- ✧ They meet some youngsters that are back in the XIX century and they tell the player about Pasquale Poccianti, the Colognole aqueduct designer and how to complete the quest in order to set them free and help Boar Marley.
- ✧ All characters and player meet Pasquale Poccianti who explains the quest: the player has to solve two questions.
- ✧ Once he gives the right solutions, Boar Marley loses the tattoo and the cartridge (so that these are then stored in the inventory).
- ✧ Then, all characters and player meet Rossana, a lady expert in botany, checking plants that are at risk of survival.
- ✧ They have a dialogue with her. She asks to guess which is the protected flower species out of two (Cyclamen sp. vs. Taraxacum sp.). The player can read information about the species and once he guesses the right answer, Boar Marley loses the bottle of beer.

Examples of
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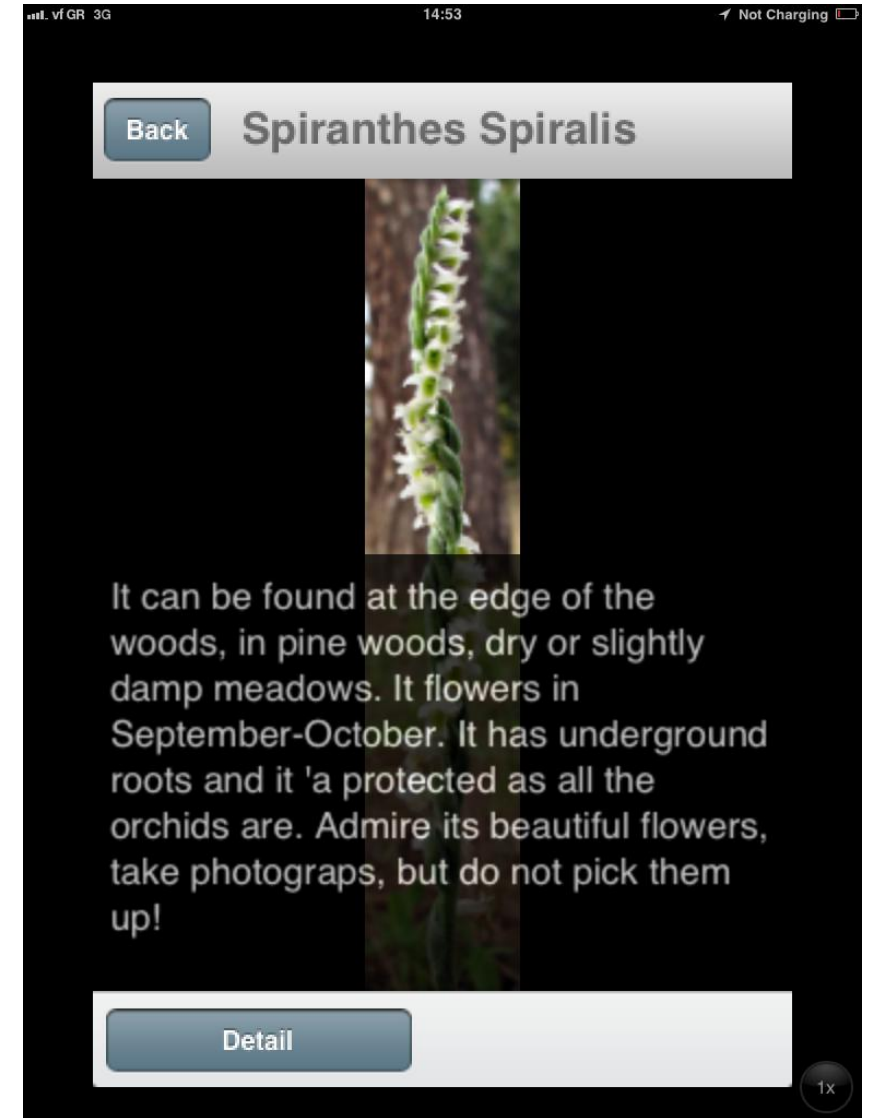
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Examples of
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Then, all characters and player meet Iolanda, a lady who loves nature and is expert of spontaneous orchids. They have a dialogue about these flowers and she asks what's the name of a particular species that can be found in the area (Thymus vs. *Spiranthes spiralis*). If the player succeeds to answer properly, Boar Marley loses the cigarette.



Examples of
LBGs in
education:

The INVOLEN
project

Boar Marley is finally clean ! and the characters are back to the present time. They have learnt how much damage the man can provoke to the environment.



LBG Platforms

- ✧ ARIS (on Apple devices / unstable on Android)
- ✧ Enigmapp (less capabilities, but easy to use)
- ✧ TaleBlazer (easy to use, simple mechanics)

Prepare your
mobile phones
or tablets!

Thank you