

VIDEOGAMES AND GAMELEARNING KNOW-HOW: BYTEREALMS

TECHNOLOGY DESCRIPTION

ByteRealms is the University of Alicante brand for designing and developing educative and innovative videogames. This know how has been developed by a research team, with the name I3A, from the Artificial Intelligence and Computing Science Department. The research team makes innovative, educational and serious videogames under particular requirements. They mainly focus on finding creative technical solutions for the learning objectives pursued.

The goal of the research team is to take videogames a step forward and design new concepts for improving learning and other communication aspects like promotion, branding, spreading ideas, promoting culture and positive values, etc.

The videogames designed by ByteRealms make a better use of new technologies and methodologies; know-how of the research team is not a reproduction of existing techniques like books or questionnaires. The idea is to learn just by playing, while the designed videogame rules reinforce the learning concepts, avoiding being interrupted by questions or tests. Following this idea, videogames become an interactive arena where concepts learned can be tested.

The research team has a deep knowledge and expertise in three different fields:

- Videogames.
- IT and Computing Sciences,
- Learning and Education.

APPLICATION SECTORS

Clients can be from different sectors and their requirements will be taken into account for customizing the learning videogames designed. These clients could be:

- SMEs, big companies o associations willing to:
- Perform educational campaigns through their employees or to their clients.
- Develop educational, training, marketing, cultural products to promote a message, a concept, a culture, etc.
- Industrial associations willing to encourage its members with new initiatives, ideas, concepts, etc.
- Companies willing to market a product including educative and innovative values in their marketing campaigns.
- Non-governmental organizations, cultural associations, etc., willing to foster or promote messages, ideas and/or values through videogames.
- Public bodies looking for didactic and/or funny ways to reach people in particular campaigns.
- Videogame developers that need expert assessment in the interaction of the educational and technological aspects in order to use the most of the features of existing technologies when applied to educational gaming.
- Entities and institutions working on research and with the need of interactive experimentation environments.

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TECHNICAL ADVANTAGES AND INNOVATION

All the developed videogames have as a technological basis a game engine developed by the research team. This game engine has been released under open source distribution licenses. The game engine includes different modules, like graphics, audio, data access, internal logic management, etc. Due to the educative nature of the videogames developed, the research team usually creates web platforms for rankings, statistics, competitions and user tracking and analysis.

The videogames are highly innovative, with a new learning methodology and, contrary to the existing educational videogames, with a high level of entertainment which leads to extend the videogame playing time and to empower the learning process. These customized developments give the product and the client an added value of exclusivity and innovation, different from standard products.

CURRENT STATE OF TECHNOLOGY

Basic fundamentals of technical developments for ByteRealms are:

1. Own technology developed for critical aspects in games.
2. Open standards are used (if possible) in order to improve interoperability and compatibility with game environment.
3. Multiplatform development ability, from desktop games to web and mobile products.

INTELLECTUAL PROPERTY RIGHTS

Developed technology is owned by the Universidad de Alicante, through its registered trademark ByteRealms. Some versions have been opened to its community use under GPL license.ad.

COOPERATION SOUGHT

The research team is looking for companies and/or other institutions to:

- Design and develop videogames under their requirements.
- Use the developed Know-How in particular projects.
- Develop new R&D projects (with public or private institutions) in order to open new research fields.

CONTACT

Víctor Manuel Pérez Lozano
SGITT-OTRI (Universidad de Alicante)
Teléfono: +34 96 590 3467
E-Mail: otri@ua.es