Virtual Worlds for Serious Applications (VS-GAMES'12)

Building a Comprehensive R&D Community on Serious Games

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Abstract

There is a wide consensus in the scientific community about the educational potential of Serious Games (SGs). However, most authors highlight that more extensive tests need to be performed in order to provide valid and reliable evidence for effectiveness of SGs as educational tools. An effective application of SGs for education and training demands appropriate metrics, analytics, tools, and techniques for in-game user assessment, in order to allow meeting the educational goals, provide proper user feedback and support adaptivity. These are the major requirements that have inspired our approach in organizing the VS-Games 2012 conference. This short paper describes the aims and scope of the conference and provides an explanation of its program and future plans.

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1. Main text

There is a wide consensus in the scientific community (e.g., [1]) about the educational potential of Serious Games (SGs), games designed for a primary goal different from entertainment [2, 3]. SGs are very well suited to motivate learners (e.g., [4, 5]) and, exploiting the latest simulation and visualization technologies, are able to contextualize the player’s experience in stimulating and realistic environments, suited to situated cognition [6]. Furthermore, a large and growing population is increasingly familiar with playing games.

This growing interest in SGs is also due to economic considerations. Companies need to instruct employers, and individuals need to update or innovate their skills, in a lifelong learning perspective. If able to deliver effective instruction, SGs represent a cost effective viable way, also considering personalization, that should allow meeting the needs of several different users with a . In addition, SGs are also entertaining and this should encourage people to spend their free time in educational activities that they would have.

H these interests in SGs and their acknowledged potential capabilities, so far, only few tests have clearly shown the educational effectiveness of SGs, mainly in the field of business/management, health-care and military training (e.g., [7]). In general, most authors agree that more extensive tests need to be performed in order to provide valid and reliable evidence for effectiveness of SGs as educational tools (e.g., [8, 9, 5]). SGs
should lead to improved learning in an efficient and attractive way. We believe that providing evidence of these benefits is key to promote SGs for education and training amongst the large public of families, teachers and stakeholders. Furthermore, there is a growing concern that there is a need for scientific and engineering methods for building games as means that provide effective learning experiences [10].

An effective application of SGs for education and training demands appropriate metrics, analytics, tools, and techniques for in-game user assessment, in order to allow meeting the educational goals, provide proper user feedback and support adaptivity [11]. This can be achieved in particular by measuring elements such as learning outcomes and engagement, considering the twofold nature of SGs as compelling games that achieve some precise educational goals (e.g., [12, 13]). We believe that this is necessary in order to develop a new generation of SGs that are able to meet the above mentioned expectations and the requirements for availability of more effective education-supporting tools.

Meeting such requirements is the major driver that has inspired our approach in organizing the conference.

Several research coordination initiatives have been undertaken recently, such as the Games and Learning Alliance (GaLA) EU FP7 Network of Excellence (NoE) [14] – the conference organizers are the coordinators of - and the Serious Games Network (Segan) NoE in the EU Lifelong Learning Programme [15]. The main goal of these networks is to study SGs so that they can be designed and deployed in such a way that they can guarantee effectiveness for education and corporate training.

The organization of a conference specifically devoted to SGs is a natural consequence of the GALA mission, given the need of gathering, building and nurturing an academic community on SGs. The community should dialogue with the business sector in a technology/knowledge transfer perspective. The conference is planned to be self-sustainable in a long-term perspective, also after the end of the EU funding. For this reason, the conference is managed by the recently founded Serious Games Society (SGS) [16].

The 2012 Vs-Games call for paper has been specifically focused on SG. The number and quality of received papers and workshop proposals testify the need for an ad-hoc conference dedicated to SGs.

VS-Games, the International Conference Games and Virtual Worlds for Serious Applications, has received a huge amount of submissions concerning SGs, in 2012. This has allowed the organizers to prepare 7 high quality sessions covering all the major phases of SG design and deployment, from the theoretical foundations to the real-world use cases. as it is shown by the titles: SGs’ Theoretical Foundations, SG Design Principles, SG Design, SG Engineering, SG Assessment, SGs in Formal Education, SG Application Fields. A parallel poster session will be made as well.

The conference will host 3 key-note speakers from the the top levels of the world of industry and the European Union. Marco Marsella, Deputy Head of the Unit eContent and Safer Internet of the European Commission Directorate-General for Information Society and Media, will open the conference addressing emerging trends in the EU in a speech entitled: “Serious Games and gamification of learning: taking stock of latest EU research on Technology-Enhanced Learning”. Pascale Xélot, who is the leader for the European IBM Innovation Centers run by ISV & Developer Relations (IDR), will talk on “How to use serious games to teach business process management in an Industry context”. Finally, Donald Brinkman, who manages external programs in digital humanities, digital heritage and games for learning at Microsoft Research in the US, will deliver a speech on “Structured Signs and Infinite Games: Serious Play for Lifelong Learning”.

The first day of the conference will be devoted to workshops and tutorials. Two workshops will give attendees the possibility of making more in-depth and hands-on activities on the topics addressed in the conference. The first one, by Carolina Isla Sedano, is devoted to design - “Designing games for specific
context" is the title -, while the second one, “The use of serious games in the education of engineers”, by Jannicke Baalsrud Hauge et al., is devoted to deployment. The tutorial, instead, is a whole day application-specific venue by Lucia Pannese, that provides a multi-perspective view on entrepreneurship education through SGs. The tutorial will allow participants to learn and practice about the whole SG development and deployment cycle, from requirements and pedagogically-driven design to deployment and assessment.

We believe that applied research should systematically confront itself with the marketplace, in order to get requirements from end-users and stakeholders, and be able to deliver viable and useful results. For this reason, in parallel to the conference, a SG exhibition will take place, with field cutting-the-edge companies showing their products and doing networking. Business-to-business speed-dating and conference crawling sessions will be held as well.

For the next year, we look forward to meeting all you in the 2013 Games and Learning (GaLA) conference.. We hope that the 2013 authors’ contributions will maintain and further improve the high level of the conference reached this year. Thanks to the work of the GALA partners, of the associate partners and of external experts if the field, a community has been established This community represents a significant blend of industrial and academic professionals committed to the study, development and deployment of SGs as really useful and effective tools to support better teaching and learning.

References

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