



Name: European Games Developer Federation Ekonomisk Förening (EGDF)
Interest Representative Register ID: 57235487137-80
Address: Katariinankatu 3, 00510 Helsinki, Finland

Subject: Future Networks Research and Innovation in Horizon2020

Executive summary

European Games Developer Federation (EGDF) represents about 600 game developer studios from 12 European countries. EGDF can actively bridge the gap between new, innovative, creative and content driven ventures and the existing European research community.

As a part of the first truly integrated digital ecosystem of the entertainment sector, games markets that are around \$100 billion globally, these companies are placed ideally to be the focal point of the coming Transmedia Era. Consequently, these companies are cultural, economic and innovation drivers in the digital markets. And there is a huge need for cross sector synergies uniting technological innovation with cultural creation and economic development in the area of content and media businesses.

Europe is falling behind the rest of the world when it comes to the state of its network infrastructure. Therefore the introduction of higher bandwidth should be one of the main research focuses. However not only the network drives the content, it happens both ways: the content also drives the requirements of the network. A digital Europe needs to be a strong, content driven, Europe.

Game developers are more and more considering self-publishing, and thus starting to distribute their own content. As the distribution of computer games has now shifted from boxes to online new distribution modes emerge. In the context of the "internet of the future" network and social network based games and game-like applications should be regarded as leading indicators of future requirements on the cloud based distribution structure.

The aim of the games industry is to perform rich, interactive 3D content in platforms that are integrated with people's everyday computer usage through multiplatform delivery. Thus it is crucial that networks are able to switch between streaming mobile content and fiber based online content. This is the only way to enable the full potential of multiplatform delivery of digital content.

The mobile units, smart-phones, handhelds, and related embodiments of ICT technology are likely to be the next-generation personal computers. Especially the area of human machine interface is an area of high strategic importance, and the world's leading mobile unit developers and the world's leading developers of interactive content should be very

strongly encouraged to join forces. As the example of location based games demonstrates, the research questions associated with this no more are connected only with the interface of the hardware but with the whole network.

As the innovation in digital markets is more and more user driven, it is vital that research projects will be more user-oriented. This means that in addition the needs of the companies trying to exploit the research results also the needs of the end-consumers have to be taken to account. It is also important that research itself is adapting more user driven models in order to maximize its impact.

The Finnish Tekes has actively broadened the definition of innovation from purely technological innovation related to content, services and business models. Games industry is one of the most potential constituencies maximizing the impact of the research based on the broad definition of innovation.

As in the Digital Era innovation happens in small entities instead of large corporations. Therefore it is crucial that public support is directed to many small projects with about four consortium partners (two at the minimum and five at the maximum) and a clear a SME-quota for EU RTD projects so that at least 50% of the funding goes to SMEs is set.

Future Networks Research and Innovation in Horizon2020

European Games Developer Federation (EGDF) represents about 600 game developer studios from 12 European countries. As a part of the first truly integrated digital ecosystem of the entertainment sector, games markets that are around \$100 billion globally, these companies are placed ideally to be the focal point of the coming Transmedia Era. Consequently, these companies are cultural, economic and innovation drivers in the digital markets.

Video games are a **cultural driver** at the heart of digital culture. Video games are played by young and old, male and female alike, and are now widely recognized as cultural. Thanks to constantly evolving content and the perpetual invention of new services by the sector, video games are becoming the main vehicle to popularize culture.

The video games market is the most dynamic entertainment market, has still a huge growth potential and a natural ability to overcome cultural and linguistic barriers. Therefore they are an important **economic driver** of digital markets. The replacement of the traditional – retail driven – value chain by digital value chains is an enormous opportunity for Europe, as it leaves a bigger share of the revenue to European content creators and offers a way to keep European Intellectual Property (IP) in European hands.

Furthermore games are a **driver of innovation**, at the centre of digital entertainment industry, video games constantly engender new business models, create ground-breaking content and germinate unique services that are driving groundbreaking technological discoveries leading the way for many other sectors. For example, they are constantly pushing the boundaries of human machine interfaces.

Thus video games are not only revolutionizing the field of art and media. With the content and services based on non-material goods business models they are preparing the way for the other sectors that still have not undergone the digital shift. A process, called **gamefication**, is currently introducing both the applied games and the new business models to the fields of education, geriatrics, training, policy making etc., and it is reshaping them to face the needs and challenges of the new networked era.

Games as innovation drivers of network technologies

Game developers are more and more considering moving to self-publishing, and thus they are starting to distribute their own content. As the distribution of computer games has now shifted from boxes to online new distribution modes emerge. This is also

relevant when considering the phenomenon of media convergence. In the context of the "internet of the future" network and social network based games and game-like applications should be regarded as leading indicators of future requirements on the cloud based distribution structure that is necessary to address both the needs and the rights of the creators and the end users.

The aim of the games industry is to perform rich, interactive 3D content in platforms that are integrated with people's everyday computer usage through multiplatform delivery. Nowadays, web browser, mobile devices and consoles are the primary platforms for content. The delivering of rich 3D content over these platforms is connected with challenges that must be solved in order to make this content well-integrated. We believe there are two directions that need support to be explored in order to this kind of content to become standard. In our view it is essential to fund improved abstract graphics; create and evolve virtual machines that are able to adapt to specific graphics hardware. Furthermore, it is crucial that networks are able to switch between streaming mobile content and fiber based online content.

The mobile units, smart-phones, handhelds, and related embodiments of ICT technology are likely to be the next-generation personal computers. The importance of games for such future hardware units is most likely obvious to the researchers and development engineers working on them. This does not necessarily mean that they are empowered to consult and involve the technology and content creators for games – the game developers – in early-stage decisions such as regarding hardware, operating system functionality, input and output interfaces and hardware. Especially the area of human machine interface is an area of high strategic importance, and the world's leading mobile unit developers and the world's leading developers of interactive content – the European game developers – should be very strongly encouraged to join forces.

How EGDF can contribute?

The European Games Developer Federation is committed to the stimulation and development of a stable, vibrant and creative European games development sector that is competitive globally and recognized culturally. The EGDF will act to advance the political and economic interests of the European computer and video games industry by providing a platform for collaboration and discussion between the European Union and game developers.

The federation represents more than 600 studios based in Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxemburg, the Netherlands, Spain, and the United Kingdom, which together employ over 17,000 people. The European computer and video games industry, including distributors and students in game education, encompasses 100,000 individuals.

Through EGDF new technologies, tools, standards etc. can be mainstreamed among European game developers as well their experiences on the development of digital markets can be collected for the European policy makers. EGDF can actively bridge the gap between new, innovative, creative and content driven ventures and the existing European research community. It is widely accepted that the existing constituency needs to be widened and that there needs to be more interaction between programmes like Horizon 2020 and tomorrows European digital class. The EGDF is accepted by the developer community as their organization and therefore it has a high credibility and it can voice their interest.

What should be the research priorities in network technologies?

Europe is falling behind the rest of the world when it comes to the state of its network infrastructure. South Korea, for example, introduced a goal to offer 1Gbps network connection to every home in the country by the end of 2012. This gives South Korean game developers a clear head start to developing new services and business models that

cannot be introduced or tested in Europe for some years now. Therefore the introduction of higher bandwidth should be one of the main research focuses. However not only the network drives the content, it happens both ways: the content also drives the requirements of the network. Nobody needs empty pipes, which channel data from the other regions of the world. A digital Europe needs to a strong, content driven, Europe.

Furthermore, it is crucial that networks are able to switch between streaming mobile content and fiber based online content. This is the only way to enable the full potential of multiplatform delivery of digital content.

In addition the research should focus on the development of human machine interfaces. As the example of location based games demonstrates, the research questions associated with this no more are connected only with the interface of the hardware but with the whole network.

What are cross sector synergies are needed?

Video games are at the cross roads of economic, cultural and technological innovation. They engender new business models, create ground-breaking content and germinate unique services that are driving groundbreaking technological discoveries leading the way for many other sectors. Consequently there is a huge need for cross sector synergies uniting technological innovation with cultural creation and economic development in the area of content and media businesses.

How research community should engage with user community?

As the example of European games industry demonstrates, innovation in digital markets is more and more user driven. Quite often online games are released to the markets as early as possible and developed based on the feedback from the players. We call this the viral innovation process. Consequently it is vital that also research projects will be more user-oriented in the future. This means that in addition the needs of the companies trying to exploit research results also the needs of the end-consumers have to be taken into account. It is also important that research itself is adapting similar user-driven models in order to maximize its impact.

How constituencies are the most important to maximize the impact of research and innovation?

The Finnish Tekes has actively broadened the definition of innovation from purely technological innovation to innovation related to content, services and business models. As the success of Finnish games industry demonstrates (e.g. Angry birds developed by Rovio), all these four elements are closely intertwined and only together can enable the emergence of a successful European digital content industry, competitive on a worldwide scale. In addition, from the success of Tekes, it can be clearly noted how games industry is one of the most potential constituencies maximizing the impact of the research and innovation.

How should research developments in network technologies in HORIZON2020 be measured?

As in the Digital Era innovation happens in small entities instead of large corporations. Therefore it is crucial that public support is directed to many small projects with about four consortium partners (two at the minimum and five at the maximum) and a clear a SME-quota is set for EU RTD projects so that at least 50% of the funding goes to SMEs.

In Helsinki, 14th of May, 2012

Dr. Malte Behrmann

Secretary General European Games Developer Federation (EGDF)
www.egdf.eu, malte.behrmann@egdf.eu