

European Research Council

ERC Starting Grant – Stage 1 Research proposal

Proposal Full Title

PROPOSAL ACRONYM EGS

Principal Investigator: Ognian xxxxxxxxxxx Bobchev
Hosting Institution: Primary School xxxxxxxxxxx – Rousse
Project full name: Electronic Game School
Project duration in months: 36

Aims/Objectives:

Electronic game school is an exploration mission for understanding if a computer game can rise the general knowledge and cultural level of a person, especially the youngster. Also it aims to motivate the children to be more eager to learn inquiring, not using the computer only for leisure but for education. Intended to be available for every school computer hall and home in ES and beyond.

Tasks/Achievements:

We design the computer games in categories and bring them to the attention of people and education institutions through an Internet site www.e-gameschool.net. The games are tested in the computer hall of PS Vasil Aprilov for playability, accurate information, bugs and misunderstandings. We explore the surrounding world, reading books, surfing Internet, peeking at the pupils notebooks, observe the overall technology advance level and present all this information in a simple and fun form, like an educational computer game!

Our games:

- do not need translation, they are designed with two languages, English and Bulgarian;
- include a lot of pictures and animations, which attract the children;
- emphasize interaction, which challenge the person;
- can be used as manual or reference, which is useful even for elders;
- are updated every year, which makes the information always accurate;
- can be used for valuation and testing, which is in help for the overall Educational sphere;
- are under 5 MB each and does not take much time to play;
- they are easily downloaded, transferred, saved and multiplatform compatible;
- and we want they to be free, so everyone can enjoy them

A. Principal Investigator (PI)**i. CV**

<i>Personal Data</i>	
Name	Ognian xxxxxxxx Bobchev
Birth date	xxxxxxx. Rouse
Address	Bulgaria, Rouse city, xxxxxxxxxxx
Telephone	
e-mail	xxxxxxx@gmail.com ;

<i>Education</i>	
Primary	1984 - 1991 y. PS "P.K. Iavorov"
Secondary	1992 - 1997 y. Technolog - TGS "Asen Zlatarov"
University	1999 - 2004 y. Master of Engineering Design - RU "Angel Kanchev"
	2005 - 2007 y. Master of Informational and Educational Technologies - RU "Angel Kanchev"
PhD	

<i>Public Activities</i>	
Competitions:	2003 y. 3th place web competition for interactive application - flashbg.org ;
Science:	2004 y. RU "Angel Kanchev" scientific report "The game in the informational era"
	2005 y. RU "Angel Kanchev" scientific report "Didactic Games"
	2005 y. Participation in TV forum about education games.

ii. Self Evaluation

I'm exploring the computer game since 1988 y. During these years the computer have taken a major place in the mankind life, especially the youngster. In my firs university degree as designer, I put all my efforts in searching and exploring different ways of making applications for education. The most simple, fun and the most compatible way of giving knowledge, using a computer. After a long debate, the decision was this applications to be games. With my design knowledge and passion I developed 3 education games for my both graduation work as bachelor and master degree. During these years I took part in every science sessions in our university with reports for my observations and results. When I had the idea and the skills I change course to educational institutions and undertaken second master degree in pedagogics. Beside, I work in my hosting institutions and I have the opportunity to observe the effect of the developed games. I do not pretend my games to be the only education games, but my aim is these games to be compiled for the school needs. As conclusion, my skills in design field, my knowledge of pedagogics and programming assistance of my team, are a precondition for developing a wonderful and very helpful game database, which will be accessed trough Internet.

iii. Funding ID

None

B. Research Project

i. State-of-the-art and objectives

Objectives:

1. *Rising the knowledge and culture level of a person, during leisure* – the computer games will be developed in categories for every base science field. For example an Astronomy games for the Solar system contains the latest information about all planets and space bodies. Our task is to explore what information is available on internet sites like Discovery.com Nasa.org Nationalgeographic.com, books and notebooks. Compile the information and make it fun and challenging. Then release the game and observe what effect it will have:
 - a. A surprising test may tell us if the kids have remembered something, if they haven't been forced to learn something during the play.
 - b. If a child have played one game, we observe if after finishing it, he/she will launch another education game from the package.
 - c. We make a forum.
2. *Motivation for eager to learn inquiring for youngster* – an analysis will be made for one allegation, if a strategic game makes person to play more strategic games, will an education game will do the same. Also we rely on our skills to implement the knowledge with interactive and interesting concept, so the person will be inspired to seek more knowledge, eventually.
3. *Supplying educational database for every primary and secondary school computer hall in ES and beyond, if they need one.*
4. *Screenshots:*



Fig. 1. Web frame of the project <http://www.planeta42.com>

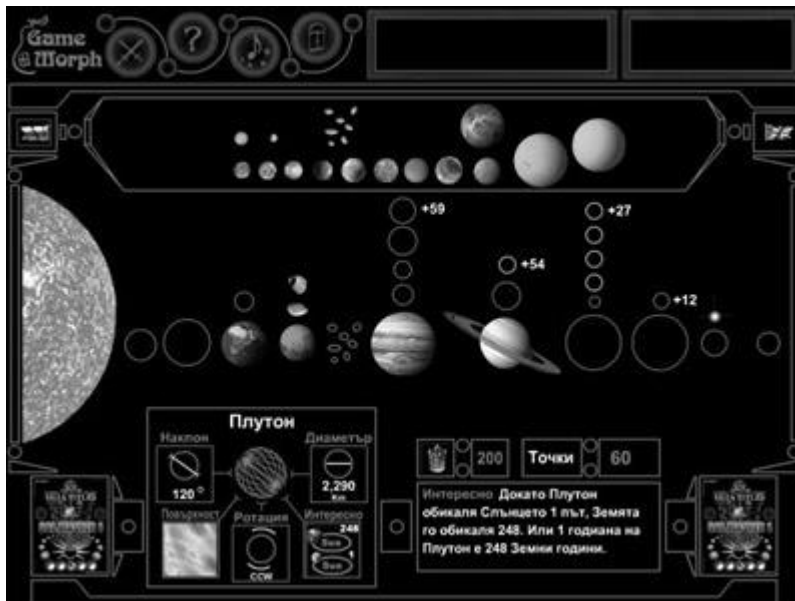


Fig. 2. One of the developed games. Now they are 5. Until 2014 y. they will be 12(categories)x3(games/tests) = 36 games!

<http://atemi.pip.digsys.bg/media/download/SolarPuzzle.html>

(In the upper right corner of the game there is a temporal picture, if the project is funded, there will be, for example, the logo of Europa Go <http://europa.eu/europago/>)

Here is the development project of this game(only in BG)

<http://www.planeta42.com/DidacticGames2006.pdf>



Fig. 3. One of the developed games. Now they are 5. Until 2014 y. they will be 12(categories)x3(games/tests) = 36 games!

<http://netgroup.dynup.net/media/download/GeographyPuzzle.html>

Here is the development project of this game(only in BG)

<http://www.planeta42.com/EducationMultimedia2004.pdf>

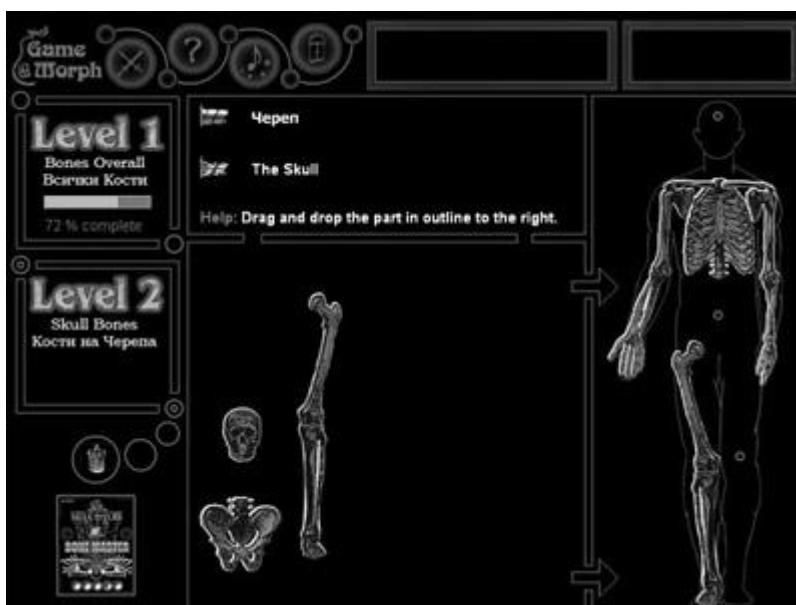


Fig. 3. One of the developed games. Now they are 5. Until 2014 y. they will be 12(categories)x3(games/tests) = 36 games!

<http://netgroup.dynup.net/media/download/BioPuzzleBones.html>

Here is the development project of this game(only in BG)

<http://www.planeta42.com/DidacticGames2006.pdf>

ii. Methodology

The games will be developed in 5 stages:

1. *Aiming scientific field* – There are 12 base science fields (see the project base frame at www.planeta42.com/indexEN.html) :
 - a. Biology – ideas for this category in stage 2
 - b. Physics and Astronomy – ideas for this category in stage 2
 - c. Math and Logic – ideas for this category in stage 2
 - d. Sports – ideas for this category in stage 2
 - e. Languages – ideas for this category in stage 2
 - f. Painting and Music – ideas for this category in stage 2
 - g. Geography and Tourism – ideas for this category in stage 2
 - h. Chemistry – ideas for this category in stage 2
 - i. Informational Technologies – ideas for this category in stage 2
 - j. History and Tourism – ideas for this category in stage 2
 - k. Psychology – ideas for this category in stage 2
 - l. Archeology and Paleontology – ideas for this category in stage 2
2. Research and information gathering:
 - a. Internet;
 - b. Books;
 - c. Textbooks;
 - d. Team calculations and analysis.
3. Interface design and concept – this stage include the implementation of creative work and the idea.

4. Pictures and graphic development – recreating the background of a specific science field.
5. Compilation – preparing the game for playability and accessibility.

iii. Resources.

1. Team:

- Ognian Bobchev - specialist "Engineering Design" and "Pedagogics":
Lead Research, Lead Compilation, Game Concepts, Photography, Hand Art, Graphics Design, Sound, 3D Modeling, Actionscript

- Veselin Bobchev - specialist "Computer Systems And Technologies":
Research, Programming, Languages, Compatibility

- Nikolai Tzolev - eurospecialist "Europeistics":
Research, Web Programming, Server Maintenance, Testings

- Veselin Nikolaev - specialist "Graphic Design":
Research, Compilation, Lead Graphics Design, Lead 3D Modeling, Lead Hand Art

2. Equipment:

For achieving full independence we need the following:

- Software: Latest version of Macromedia Flash, 3d Max and Photoshop;
- Hardware: for mobility we need one laptop ~ 2000 Mhz, 1000 MB RAM, 80 GB HDD.

iv. Project progress reports

The project progress status will be available directly trough the website.

C. Research Environment

i. Transition to independence:

Everything from the idea to the sources are under PI's control. The analysis for playability will be carried and by teachers, but the conclusions will be made by the research team. Also if the software and hardware are funded, we will achieve infrastructural freedom, else we must use the hosting institution products and space.

ii. Hosting institution

Primary school xxxxxxxxxxxxxx is a modern school with over 500 pupils. There is a very well maintained computer hall for lessons and free access. The school is connected to NEN – National Education Network, which is the latest huge project of the Ministry of Education for modernising the educational quality in Bulgaria.

Address: Rouse, Bulgaria, xxxxxxxxxxxxxx

Internet Site: none, we will use the budget surplus to make one.

iii. Budget

Article		Costs per month (in Euro)
Research	Include designing and compiling the program until becoming an education game	300
Development	1 game per month for 36 months	300
Infrastructure	Include software and hardware one time cost	3 000 one time
Travels	Include travels about gathering information and photos. And administrative costs	100
Overall for 36 months		28 200

iv. Additional participants