**Aris Game Presentation- Florence**

**September 2015**

Game Title : Construction of a Birds Conservatory in Polyfytos Lake

Game Id : 3689

Files : <http://arisgames.org/server/gamedatav2/3689/>

Honorable Ladies and Gentlemen, conference participants and European fellow-students,

 In the school year of 2014-2015, we wanted to do something different and original in respect to the environment, taking advantage of the area we live in and of the Informatics Technology (IT). So, after some discussion we ended up in designing an environmental program.

 A program with which we participated in the Involen competition. We decided to create a video about the effects of the construction of the Rymnio bridge, on the area and mostly on the population and the species of the birds. After some discussion and research on the histories or our grandparents, we decided to pursue the creation of a *video* and an *audio interview* with them. The aim of this action was to record the experiences and stories from the construction of the bridge in the area. To this extend we used our own mobile phones and the material we collected was processed in the Informatics Lab of our school. From their stories we learnt initially that the area consisted of a river and the nearby fields, as in that time there were no birds in the area. They also told us that the construction of the bridge happened Sowith the construction of the dam and the creation of the artificial lake. The aim of the construction was to retain the present road communication, while the lake was constructed in order to produce electricity via the hydroelectric stations. The artificial lake led to the creation of a water habitat which evolved to an important and unique biocommunity as today there are 131 different kinds of birds. At the same time, as our grandparents told us, the usual human activity started, like fishing and hunting. Activities that disturb the life of this biocommunity. What our grandparents told us, inspired us to focus on this area, so as to make it widely known and to protect the water habitat.

So, originally, we contacted the local authorities and scientists, studied the morphology of the area and located possible sites that could be used and promoted.

 After having studied the material we collected, we proceeded to the planning of our actions towards the successful outcome of the project. After pinpointing the exact place, we thought if we put our work only in paper, there was the danger that it would be lost in oblivion and paperwork. We tried to rectify the problem by creating a location based game of enhanced reality entitled “Construction of a Birds Observatory in Polyfytos Lake” which is open and free so that everybody can use it wherever they are, so as to get a first impression of the area and motivate them to visit it. That was the basic aim of our participation in the Involen competition and the creation of the game.

**Platform Selection**

We thought thoroughly regarding the platform selection. So, first we started by getting acquainted with some game development platforms (Huntzz, Enigma, QR Codes) and finally we selected the ARIS platform because of its being handy and complete as it offers us various possibilities like the introduction of image, sound, video, links etc.

**Creation stages of the ARIS game**

Initially, a research field trip took place by the teachers-coordinators in the greater area of Polyfytos Lake to define the suitable space to construct a Birds Observatory and then a second, group field trip followed in the defined location. We measured the dimensions of the construction site of the Observatory, we took photos and videos of the birds, made a tour around the area, located problems and suggested solutions.

Then, in a latter meeting, a presentation took place and the possibilities of the ARIS platform were highlighted by the teachers-coordinators. Taking in mind all the information and the stimuli acquired in the field trip, we recorded our ideas and suggestions on the content and the structure of the game via the techniques of brainstorming and discussion. Our suggestions were focused on the discovery and the promotion of the local fauna, the protection of the environment and the utilization of the area for educational purposes.

Thus, we concluded that the game will aim at the player’s being aware of the fauna of Polyfytos Lake, to develop a feeling of respect towards the ecosystem and to realize that it is our personal responsibility to take action in order to protect the environment and the ecosystem.

Having defined the aim of the game, we also set the role of the players. They are given an “assignment”. To help in the construction of a Birds Observatory, so that everybody can visit the area without disturbing the life of the birds.

Then came the planning of the structure of the game. First of all we created the characters of the game which are : the host called Tsiou, its 6 bird friends, the Mayor, the fisherman and of course the player and we decided the three basic stages every player has to pass through in order to complete the game were set :

- The stage of acquaintance with the local birds. The player is lead to discover six different kinds of birds living in the area, s/he is given information in the form of a text, sound and video and earns “bonuses” necessary for the Observatory construction.

* The stage of the Observatory construction. In order for the player to be able to use the “bonuses” received, s/he will have to answer correctly in six questions related to anything s/he has learnt and also to help in the calculation of the perimeter of the Observatory so as to construct it.
* The stage of pinpointing the problems of the area and offering solutions. The player, enjoying the view from the Observatory, which has been constructed with her/his help, finds out the problems that exist in the area and is asked to give solutions.

After designing the structure of the game, we selected 6 out of the 131 different bird species living in the area, in order to stress the biodiversity of the bird fauna of the lake and we searched and found information (text, images, sound, video) related to them. Then followed the familiarization with the platform and the content introduction to the game.

During the game creation, the contact with the educators-coordinators was in vivo and via e-mail to exchange ideas regarding any additions or alterations to the game. Because of the limited time given for the creation and the completion of the game, it was necessary to have the teachers’ contribution in the content introduction, mainly in the dialogues and in the correction of the adjustments especially in the locks of the plaques so that the flow would be smooth and the game layout valid.

***(Start the game presentation with the Ipad or with screenshots in the Power Point)***

**Game Evaluation**

The game evaluation has shown that the advantages that came up for the students and the teachers were multiple. Environmental awareness, skills in IT used in order to create location-sensitive educational games, intergenerational cooperation, the awareness of the merit of volunteering and the cooperative group learning. Also this activity offered joy and enthusiasm to all of us.

**Application – Game Usage**

This game has already been officially presented to the University of the Technical School of Western Macedonia, Technical High School of Western Macedonia, to the Municipality of Kozani, to the Ecological Movement of Kozani, the Center for Environmental Education in Velvedos-Siatista, the Center for Environmental Education in Corfu, to the Advisory Committee of Environmental Education Centers in Western Macedonia and to the Environmental Department of Western Macedonia. Also, the game was presented to the ARIS Global Conference in the USA where it received a lot of attention as we were asked permission to upload our work in the ARIS website.

Also, we intend to utilize it

a) as a good tool in the fringe of the National Thematic Network called “Sustainable Technology” in the Center for Environmental Education in Corfu.

b) as a complete program of Environmental Education from the Center for Environmental Education in Velvedos-Siatista with a parallel publication to all school units and Centers for Environmental Education nationally so as to schedule school educational visits to the Observatory area from all over Greece.

c) as a model in the educational teaching of Informatics courses wherever possible e.g. IT courses in Secondary Education (Informatics Applications, PC Programming etc) and in the National Technical Institutes in the Informatics Specialty (Practical Application in the Specialty of Multimedia Applications, PC Programming etc).

As for the materialization of the construction of the Birds Observatory in the specific area (Rymnio, Kozani), we have already sent an official proposal to the Municipality of Kozani with a simultaneous proposal of incorporating it in a funded development program in the Prefecture of Western Macedonia thus launching the necessary bureaucratical procedures of acquiring and using land. The land owners are the Municipality of Kozani, the National Electricity provider and the Ministry of Finance.

Also, there is the intention to enrich the game with information on more bird species of the area as well as the extension of the geographical area covered by the game with the addition of Environmental routes and other actions to be developed in the nearby area including the Plane tree Forest which is 500 m away and the Hydroelectric Station which is 4km away.

We wish you enjoy the game and we are waiting for you to come and experience in vivo what we have experienced ourselves. Thank you very much.

**The team that cooperated for the creation of the game comprises of the following;**

Vasiliadou Polukseni- Head of the Informatics and New Technology Center of Environmental Education in the Secondary Education in Kozani.

Κourous Ioannis – Head of School Activities of Environmental Education in the Secondary Education in Kozani.

Mastranestis Apostolos- Informatics teacher in the Junior High School of Eani, Kozani.

Plakoutsi Ekaterini- Student in the Junior High School of Eani, Kozani.

Stamou Alexandra- Student in the Junior High School of Eani, Kozani.

Trobouki Vasiliki- Student in the Junior High School of Eani, Kozani.

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