FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
SAINT PETERSBURG STATE UNIVERSITY

REVIEW

head for the final qualifying work

IV course students **Irina Igorevna Usoltseva**

Leader : PHD, Associate Professor Pavel Petrovich Shcherbakov

The topic of the final qualifying work **"Creation of a mobile application (AR) and models for an illustrated presentation of a study guide"**

Contents __ Graduation work is devoted to the creation of a mobile augmented reality application and models for an illustrated presentation of the tutorial **"Gnome Innico - Coloring Fairy Tale in English / GNOM INNIKO - coloring fairy tale in English" by Inna Germanovna Kiyatkina**.

A mobile application with augmented reality (AR) technology was used to demonstrate the illustrations for the manual. This modern technology makes it possible not only to profitably present and convey information about the product (in this case, about some of the heroes of the book and their environment), but also to attract the attention of users and keep it due to the novelty and unusual presentation.

The work was carried out jointly with Laktionova Daria Dmitrievna.

The main stages of Irina Usoltseva's work were: collection and analysis of information, development and testing of a mobile application; creation of a 3d model of the main character of the book - the gnome Iniko; integrating models into the application and testing it in action.

In the process, Irina conducted a study of existing tools for developing applications using AR. Conducted a comparative analysis of the main characteristics of these instruments, tested and identified their positive and negative properties. Based on this analysis, she selected the most optimal tools for creating the required application (EasyAR SDK).

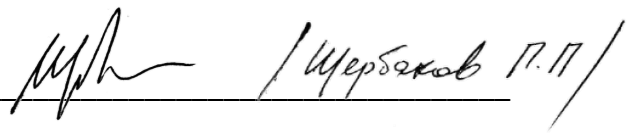
To create the model, prepare it for animation, scan and texturing, such editors of three-dimensional graphics and image processing were used, such as Autodesk Autodesk Maya, Pixologic ZBrush Substance Painter, Adobe Photoshop, Marmoset Toolbag. In addition, specialized plugins were used, such as Advanced skeleton (to create a character rig). The Unity 3D game engine was used to assemble the montage of animated scenes, transfer models and animation to the mobile application. The research and practical application of the tools of the applications used are described by Irina Usoltseva in three chapters of the WRC.

Irina Usoltseva mastered and applied in practice the basic principles of creating a mobile application using augmented reality technologies.

Demonstrated knowledge and proficiency in modeling, sculpting, texturing and animation tools. The created models were integrated into a mobile application, which was successfully tested.

Assessment Irina Igorevna Usoltseva proved to be a competent specialist who is able to solve complex technical and analytical problems. She will be able to successfully apply the acquired knowledge and skills in various areas of 3d technologies - computer animation, the development of computer games. The advantage of this work is partnership with colleague Daria Laktionova and work with the author of the textbook. Such experience is very important for further work in creative teams. The results obtained indicate a high professional level and creative potential of Irina.

The work of Irina Igorevna Usoltseva meets all the requirements for final qualifying work, and deserves a high assessment.

Signature 

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