

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

head for the final qualifying work

IV course students **Daria Dmitrievna Laktionova**

Leader: PHD, Associate Professor **Pavel Petrovich Shcherbakov**

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

Contents \_\_ Graduation work is devoted to the creation of models and animation for the illustrated presentation of the tutorial "**Gnome Innico - Coloring Fairy Tale in English / GNOM INNIKO - coloring fairy tale in English**" by Kiyatkina Inna Germanovna.

A mobile application with augmented reality (AR) technology was used for the presentation. This state-of-the-art technology allows for an effective and attractive presentation of the material of the manual.

The work was carried out jointly with Irina Igorevna Usoltseva. The mobile application and the model of the hero of the book - the gnome Inniko (based on the sketches of Daria Laktionova) were made by Irina Usoltseva.

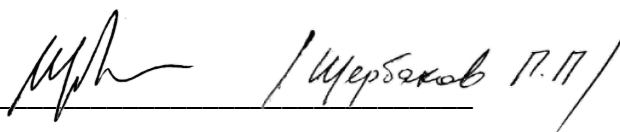
The main stages of Daria Laktionova's work were: development of character and environment design; creation of 3d models of the hero of the book - Goose, elements of architecture and environment; texturing models; preparation and animation of the Gooseneck character. The book "GNOM INNIKO" is a coloring book for children, where most of the illustrations consist of outline black and white sketches, and the colors on the flyleaf and ersatz look too laconic. To add color, texture and flavor to the project, Daria did a thorough job of collecting and analyzing references similar to the subject of the book. Daria Laktionova paid great attention to character design, based on the illustrations in the manual, but adapted for the tasks of 3d graphics. Shapes have been made more rounded and more characteristic for animation, and proportions have been changed. Concept art of the characters was made in two projections - full face and profile. When creating a 3d model, this allows you to maintain the desired proportions. The sketch of the hero, the dwarf Inniko, was then handed over to Irina Usoltseva for modeling. A vivid example of interaction between an artist and a 3d modeler. Daria created architecture models. She paid a lot of attention to textures, which added a fairytale atmosphere to the whole project. In addition to architecture, Daria made a model of a gosling. Textured and animated it. She then transferred all the received models to Irina Usoltseva to integrate them into a mobile application.

3D graphics and image processing editors such as Autodesk Maya, Pixologic ZBrush Substance Painter, Adobe Photoshop, Marmoset Toolbag were used to create models, prepare for animation, scan and texturing. In addition, specialized plugins were used, such as Advanced skeleton (to create a character rig). The practical use of the tools of the applications used is described by Laktionova Daria in three chapters of the WRC.

Laktionova Daria mastered and applied in practice the basic principles of modeling, texturing and animation, demonstrated knowledge and mastery of tools.

Assessment Laktionova Daria demonstrated the ability both for creative search and for mastering new, modern technical tools. The experience of working with a partner and teamwork was also important. She will be able to successfully apply the acquired knowledge and skills in various areas of 3d technologies - computer animation, modeling, graphics, when creating 3d animated films. The results of the work speak of Dasha's high professional level. The work of Daria Dmitrievna Laktionova meets all the requirements for final qualifying work, and deserves a high assessment.

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May 22, 2021