

SAINT PETERSBURG STATE UNIVERSITY

REVIEW

of the academic supervisor for graduate qualification work of

Ivanova Darya Sergeevna

Head of graduate qualification work

Doctor of Physical and Mathematical Sciences, Professor Borisov Nikolay
Valentinovich

The theme of the final qualifying work

**“Creation of a fragment of the animated film "The First Artist" in the
UnrealEngin5 game engine”**

Content

The work is devoted to creating a fragment of an animated film using
RealTimeRender technology. The work was divided into three main stages.

Ivanova Darya Sergeevna did a lot of preparatory work. On the basis of the
author's idea, the plot of the film was developed, the references of the protagonist
and the environment, necessary for the subject, were selected. A storyboard and
animatics of the main scenes and animation positions were created.

The second stage was the production of models of the environment (elements of
architecture, a boat, a barrel, a brush, etc.) and the main character of the film - the
first artist. For this, such relevant 3d applications as Blender, Autodesk Maya,
Pixologic ZBrush were used. The models have been textured (Substance Painter).
The protagonist model was prepared and equipped with controllers for animation.
According to the previously developed animatics, character animation was
performed for each scene (Blender). A location with a landscape (World Creator 2)
and procedural objects of plants, trees, etc. was created in the game engine.
Cameras and light sources are placed. Three-dimensional models with animation
were imported there and the main scene was assembled. The final stage was the
addition of special effects, visualization and video editing, sound overlay by means
and tools of the game engine. A distinctive feature of the project is the use of one
location for two dramatically different scenes. According to the plot, as a result of
the actions of the artist, the atmosphere and landscape of the scene changes greatly.

A gloomy, empty area turns into a blooming and sunny land. To show this metamorphosis and create a unique atmosphere of the film, the special effects settings of the UnrealEngine5 game engine helped. The built-in weather system is able to simulate natural lighting and natural phenomena such as rain, sun, clouds, lightning.

All stages are described by Ivanova D.S. in the report of the final qualification work in 3 chapters, introduction and conclusion.

Practical significance

As a result of the work done, a fragment of an animated film with sound accompaniment was obtained. The use of such latest technologies as Real-time Rendering made it possible to complete the whole range of works on creating a fragment of an animated film on time and at the proper level. The resulting fragment materials are of high quality. In the future, it will be possible to continue working on the project and create a full-length animated film.

Disadvantages

As a recommendation, we can advise Darya Sergeevna, in further work on the film, to diversify the musical accompaniment.

Characteristics of the student's work

At all stages of work, Darya Sergeevna Ivanova showed high professionalism and a creative approach in solving the tasks. The acquired knowledge and skills, as well as the skills of independent work on a large project, will help Daria Sergeevna in her future work in the field of multimedia, the 3d graphics and animation industry.

Doctor of Physical and Mathematical Sciences, Professor Borisov Nikolay Valentinovich

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