СЕКЦИЯ 3
IT-АУТСОРСИНГ В ОБЕСПЕЧЕНИИ РАБОТЫ ГОСУДАРСТВЕННЫХ ОРГАНОВ УПРАВЛЕНИЯ

USE OF 3D MODELING SOFTWARE FOR DESIGNING INFORMATION FACILITY WITH TYPE OF PROTECTED SPACE

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Nowadays 3D-Modeling software is highly applicable in science, engineering and everyday life starting from entertainment sphere with animation and cinema to medical and engineering sphere with precise visualizations and mechanical simulations. In this work I want to pay attention on some 3D-Modeling software that could be used for modeling propagation of electromagnetic radiation from computer electronics.

Based on software license type all kind of software could be divided into such general categories as proprietary, free and open source. Proprietary modeling software would often contain a huge set of tools for professional engineers. A great choice will be Autodesk 3ds Max that provides a comprehensive 3D modeling for various spheres of engineering and art. However proprietary software can often be executed only on proprietary operating systems such as Windows or rarely Mac.

In modern science we often use community knowledge and products that provide us with free or open source 3D modeling applications. Of course such kind of software would probably contain less integrated tools but will often be more flexible and better for prototyping. At the same time open source and free software perfectly fit a spirit of science. These would be BRL-CAD and FreeCAD that are predominantly distributed under LGPL, GPL or BSD based licenses and are totally free to use. A great advantage of free and open-source software is variety of operating systems applications can be executed on. This feature makes linux users available to use an application and contribute to community knowledge base with new ideas and products.

Considering 3ds Max, BRL-CAD and FreeCAD applications in modeling propagation of electromagnetic radiation from computer electronics the third application is most suitable for newbies. It is enough simple and flexible. Its functionality and modules can be extended with Python scripts. This is a kind of software not only Windows users but also linux fans like. 3ds Max is a well-

known application for 3D modeling that already proved its advantages to huge community of professional users. It can be extended with plug-in written with use of C++ programming language or .NET framework. BRL-CAD is somewhere between these two applications. It is available for extensions written in C and can be executed on a huge variety of operating systems. This is also a great tool for professionals that already proved its advantages with more than twenty years history in solid modeling.

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МЕТОДЫ ОЦЕНКИ СТОИМОСТИ ПРОГРАММНОГО ОБЕСПЕЧЕНИЯ

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По итогам исследований компании The standish group в 2012 году около 43% IT- проектов превысили сроки, рамки бюджета и/или были поставлены заказчику с меньшей функциональностью, а 18% из них потерпели неудачу (отменены или завершены, но не используются). Поэтому оценка стоимости и трудоемкости разработки программного обеспечения (ПО) является достаточно актуальным вопросом.

В настоящий момент в мире для оценки стоимости ПО наиболее часто используются следующие подходы: сравнительный, доходный, затратный.

При сравнительном (рыночном) подходе используется метод сравнения продаж программ - аналогов. В этом случае к вниманию не принимаются затраты, понесенные при создании продукта, а рассматриваются потребительские качества программного обеспечения. Но сравнительный подход к оценке ПО применяется достаточно редко, т.к. возникает ряд фундаментальных проблем, кроющихся в сложности ПО: