Multimedia in training of specialists in GNSS: Russian experience

Tokyo, 4-9.09.2011

Pavel Kazakov
Russian Space Systems
Learning Programs in Russian GLONASS Education Center

**CONSTRUCTION, MONITORING OF ENGINEERING STRUCTURES**

**TRANSPORTATIONS**

**CIVIL AVIATION**

**GEODESY**

**Status and development of GNSS**

**GNSS applications**

**Satellite navigation management**

**DISTANT LEARNING SYSTEM**

Information-Analytical Complex: planning the work of ACDL

Automated Complex of Distant Learning: learning process organizing

Complex of Scientific, Technical and Methodical Supply
Learning-methodical complex

- Theoretical courses
- Practical courses
- Graduate test tasks
- Multimedia

To apply the learning programs it was designed the interactive multimedia facility on GLONASS system «Generation of the Future»
Objectives for multimedia facilities on GNSS

Learning and information dissemination on GNSS

Multimedia platform: «RSS RAD Technologies» by «Russian Space Systems»
Development environment: Unity3D
How it may be used

Information dissemination on GLONASS: technologies, subsystems, services

Presentation tool on GLONASS

Near-real-time monitoring of GLONASS navigation information

Learning tool

On the base of «RSS RAD Technologies», multimedia facilities on any GNSS may be designed, and even in any other field!
«Generation of the Future» as presentation tool

Easy to engage and play video, audio, photo, pdf, ppt… content
Near-real-time monitoring of navigation information

GLONASS availability at www.sdcm.ru and in «Generation of the Future»

«Generation of the Future» may update data from special online monitoring websites
Learning part of «Generation of the Future»

Theoretical courses

Practical courses

«Generation of the Future» is the facility of Distant Learning System developed in JSC "Russian Space Systems“ commissioned by Roscosmos
06-07.2011
Ryazan State Radio-technical University
Successful distant learning of 32 specialists

01-02.06.2011
The 5th International Satellite Navigation Forum

16-21.08.2011
The International Aviation and Space salon MAKS
«Generation of the Future» aroused great interest among specialists and visitors
Upload to http://spacecorp.ru
Demonstration and promotion

Adapt for the tablets, PDA, smartphones (iOS, Android), propose on Apple Store, Android Market

Learning tools on satellite navigation for schools and universities

Translate the content of «Generation of the Future» into English, Arabic, Spanish, French and Chinese respecting to the recommendations of the ICG

Cooperation on the development of interactive multimedia may be promising in the dissemination of information on GNSS and training of specialists in satellite navigation
Conclusion

Interactive multimedia is convenient and perspective tool for GNSS popularization and e-learning

To enhance international exchange of informational, learning, scientific and methodical facilities, «Generation of the Future» may be published on ICG Portal

On the base of «RSS RAD Technologies» platform, «Russian Space Systems» is ready to design interactive multimedia for UN – affiliated Regional Centers curriculum respecting to ICG recommendations
Thanks for your attention!
Мультимедийные интерактивные обучающие курсы, презентации, тренажеры, игры.
Прямой конкурент Torque3D для экспорта продукта на другие платформы требует наличие у разработчика своего SDK под каждую платформу. В Unity3D это реализовано в рамках доступных лицензий, что для нас имеет первостепенную важность.

Поддержка портирования приложений на PC, Mac, iPad, Android, возможность портирования презентаций на игровые приставки Wii, XBox, SPS, может исполняться в современных браузерах через сеть интернет

Административная часть ИМС не использует никаких баз данных. В качестве формата передачи данных от сервера к ИМС выбран XML

Качественное отображение 3D-объектов, используя высокополигональные модели.
Пример: Flash: 25000 полигонов на сцену, Unity3D – 16000 полигонов на один объект, т.е. на отображении космического сегмента — около 1,5 млн. полигонов.