Proposed role of Russian Education Centre in constituted world GNSS centers network

ICG-7
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Russian Education Center GLONASS performs the tasks of WG C

- Additional learning and training of specialists from different countries
- Information dissemination on GNSS and its applications
- Proposals of GLONASS Learning Centre are taken into account by ICG in 2009, 2010, 2011.
Learning concept

Cross-university System of Distant Learning

- GNSS state and development
- GNSS Applications
- Management of GNSS technologies

More than 1000 h. of theoretical and practical training
More than 200 h. of laboratory works
25 learning modules
6 multimedia facilities

consumers

CONSTRUCTION, MONITORING OF ENGINEERING STRUCTURES
TRANSPORTATIONS
AGRICULTURE
GEODESY

Learning System is developed and supported by Roscosmos
Cooperation with universities
Modules of Distant Learning System

- GNSS history, principles and structure, projects
- GNSS applications in modern on-board navigation systems
- Construction of geodesic networks and special-purpose
- GNSS applications to improve safety, productivity and quality of transport
- Differential systems, integrity, control methods
- Creation of digital navigation maps
- Consumer equipment, particularly the implementation of real-time measurements, communications
- The introduction of ICAO CNS / ATM in civil aviation
- Coordinate-time operation of the GNSS
- The use of GNSS for geodetic support the construction and operation of aerodromes
- Construction of geodesic networks and special-purpose
- The use of GNSS to control unmanned aerial vehicles
- GNSS history, principles and structure, projects
- GLONASS/GNSS-oriented technologies (ADS, TAWS, TCAS, RVSM)
- Global, regional and local geodynamics
- GLONASS/GNSS equipment in avionics
- Organization of field work in cadastral surveys, geodetic software inventory
- The use of GNSS to perform tasks in building and managing construction machinery
- Geodetic work in land management
- Monitoring of the deformations of engineering structures
- GNSS use in the underground work and work carried out in quarries
- Use of GNSS in laying pipelines, taking the bottom topography and underground utilities
- The use of GNSS in rail and road transport
- Goniometric navigation equipment for operational control during construction and operation
- Use of satellite navigation equipment in intelligent transportation systems
- GNSS applications in the mining industry
Multimedia facilities of GLONASS Learning Center

Popularization
Distant learning

Availability from any computer, gadget
Near-realtime monitoring of satellite constellation
Universal multimedia platform

Multimedia is highly perspective in specialists learning
Proposals for International Learning

Universities, enterprises

ICG Regional Information Centers

National Universities

ASEAN-RUSSIA JOINT PROJECT

Access, realization

Curriculum on GNSS

courses lectures seminars

Experts
International School on Satellite Navigation

Additional learning in basics of satellite navigation, its perspectives and applications

**Students:** specialists of organizations which use GNSS

2011: Course «Satellite navigation technologies and its applications”

- 30 students

2012: Course «Practical use of integrated GNSS and Remote Sensing data»,

- 56 students

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Summary:
proposals for the WG C recommendations

Support the cooperation of learning centers of different countries (UN-affiliated and independent) due to develop and fulfill the learning courses and facilities

Recommend to leading universities which take initiatives in international education, to cooperate with ICG assistance due to provide consumers of different countries equal opportunities in access to learning courses, tools and facilities, as well as relevant information on GNSS technologies and its applications

Activate the work under the Curriculum on GNSS with coordination of WG C
Thank you for your attention!

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