



РОССИЙСКИЕ КОСМИЧЕСКИЕ СИСТЕМЫ

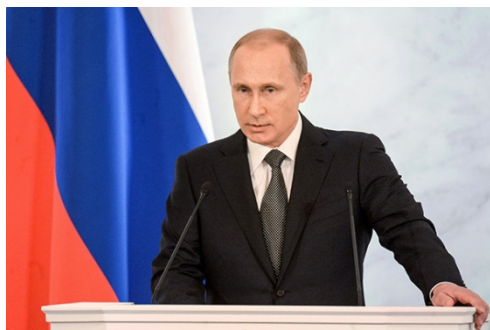
**Training of specialists in Russian Space Systems as a groundwork of development and use of GLONASS in the interests of customers in different countries**

United Nations / Russian Federation Workshop  
on the Applications of Global Navigation Satellite Systems  
Krasnoyarsk, 18 – 22 May 2015



**RUSSIAN SPACE SYSTEMS, JSC**

**Pavel Kazakov**  
Deputy head of Department



"Joint use of Russian satellite system GLONASS in diverse fields: transportations, safety and security, agriculture turns to be much promising".

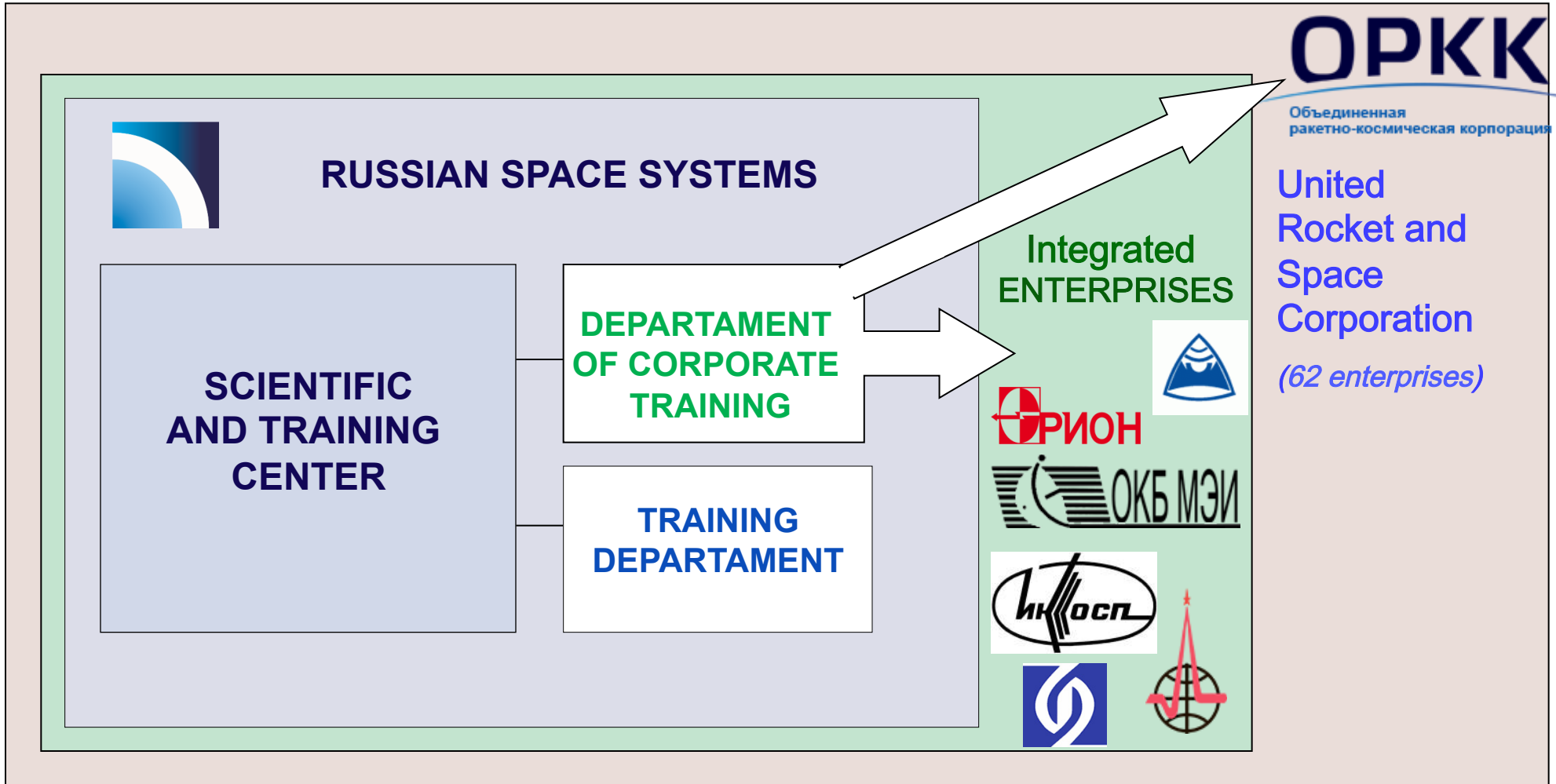
*(BRICS Summit, Fortalesa, Brazil, 15 July 2014)*



*State Plan of qualified personnel training (having secondary professional and higher education) for industrial and defence organizations 2016-2020 is adopted by Russian Government (Resolution #192, 5 March 2015). Based on demands of Roscosmos, Trade Ministry, Rosatom.*

★ **The future of GNSS use are highly qualified professionals and... information!**

## Specialists training in Russian Space Systems and integrated structures: organization chart



+ GNSS informing and popularization activities



Cooperation with universities for target training

Work of basic subfaculties in universities

Involving young people to participate in programs, grants, schools, workshops

Postgraduate study in Company

### Profile subfaculties



Aerospace and geographic information systems and information technology; Electronic-computing devices and informatics



Information technology rocket telemetry



Physical and mathematical methods of designing complex technical systems of space technologies



Space industry



Space and aviation industry



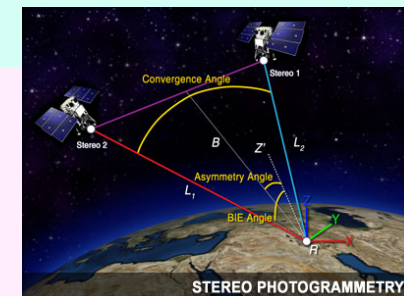


Radio engineering, including systems and TV devices



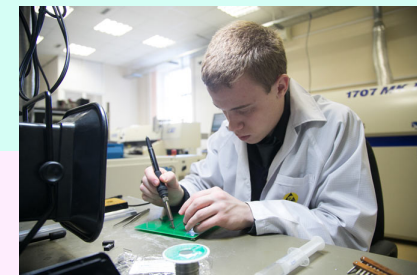
Radiolocation and radio navigation

System analysis, management and information processing  
(on branches: engineering science, physics and mathematics)



Solid-state electronics, radio-electronic components, micro-  
and nano- electronics, devices based on quantum effects

Aerospace research of the Earth, photogrammetry



Personnel recruitment

Methodological materials, reference  
manuals

E-learning

Trainings and seminars

Testing



**ОРКК**

Объединенная  
ракетно-космическая корпорация





## International School on Satellite Navigation GNSS popularisation and the advanced training course



- Navigation signals
- Accuracy characteristics of user equipment
- The integrated use of satellite navigation and remote sensing in various areas (transport, fleet monitoring structures, surveying)
- Metrology, cartography
- Features of the satellite technologies market, practical solving of technical and organizational problems



Since 2011:  
176 students  
from Russia, Kazakhstan,  
Moldova



**Students of various fields of work are wellcomed! Course in English is possible!**



**Objectives:**

Providing services based on GLONASS for customers of Southeast Asia, establishment of mutually beneficial cooperation.

**8 – 9 April 2015:**

19 representatives of Cambodia, Indonesia, Thailand, Vietnam, Laos, Malaysia, Brunei, Philippines, Myanmar

**Programme in brief:**

- State and perspectives of GNSS and augmentation systems;
- Use of GNSS for positioning, car and fleet navigation and monitoring, the state of the Earth's crust, engineering structures, geodesy, mining, environmental protection;
- Practical training: performing a navigation tasks with modern precise equipment, processing of satellite data.



## *Conclusion*

The system of specialists training in "Russian Space Systems" is aimed at ensuring the quality and reliability of ground and space equipment of GLONASS system

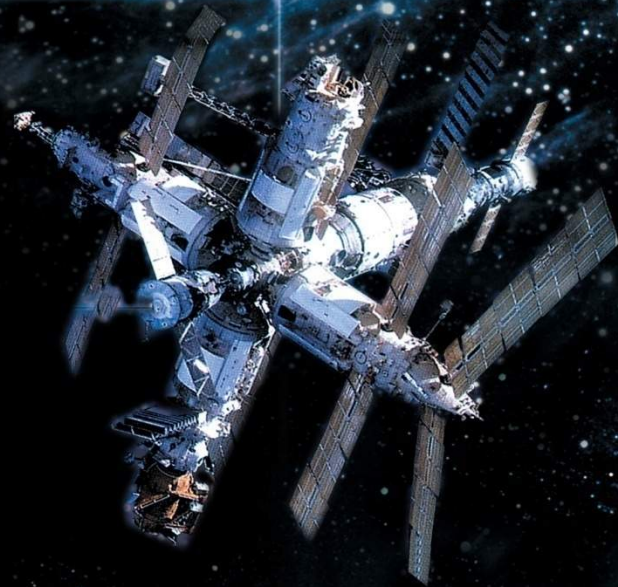
In the frame of international cooperation, "Russian Space Systems" working actively to inform customers about the fields of GLONASS technologies use

It is offered to recommend interested universities, information and education centers and other educational organizations to participate in international information events held by Russian Federation, such as International School on Satellite Navigation and Workshop "Practical use of GLONASS/GPS satellite navigation technologies"



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**Thank you for your time!**



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**RUSSIAN SPACE SYSTEMS**