## The 7th International Conference "Distributed Computing and Grid-technologies in Science and Education" (GRID 2016)



Contribution ID: 50

Type: Sectional reports

## Operating system Plan9 as the implementation of the GRID ideology

Tuesday, 5 July 2016 14:45 (15 minutes)

When we organize parallel computations on a cluster system, the computer system structure is not hidden from the user, and should be taken into account while writing parallel programs. GRID ideology introduces an additional level of abstraction and makes it possible to link together heterogeneous computing systems. In fact, the inability to control the operating environment makes developers to create superfluous infrastructure at the application level.

We offer to go down to the below level and to implement the necessary functionality within the operating environment kernel. Plan9 operating system has the immanent structure necessary for the implementation of GRID ideology. The main architectural elements of the operating system allow you to use all the resources of the remote computer as the local resources.

The work is partially supported by RFBR grants No's 14-01-00628, 15-07-08795, and 16-07-00556.

**Primary author:** Dr KULYABOV, Dmitry (PFUR & JINR)

Co-authors: Prof. GOSTEV, Ivan (JINR LIT); Prof. SEVASTYANOV, Leonid (PFUR); Mr GEVORKYAN, Migran

(PFU)

**Presenter:** Dr KULYABOV, Dmitry (PFUR & JINR)

Session Classification: 1. Technologies, architectures, models of distributed computing systems

Track Classification: 1. Technologies, architectures, models of distributed computing systems