

## **Press-Release of the MeraLabs company**

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The researchers of the MeraLabs company, an affiliate of the MERA group of companies, have developed the concept of the "Cognitive Internet". As the Chief Technology Officer of the MeraLabs, Vladimir Krylov said: "The future Internet will become cognitive, i.e. any device connected to the global network will automatically discover other network resources using different search criteria, depending on the task given to it and the current situation context. All the devices and network resources on the Internet would be grouped into so-called virtual networked communities and configured automatically to enter a community and provide it with all the necessary information about themselves. Such a community of networked devices will be built using the creation principles of social networks which can be reflected by the data structure called "metrized small world" created by our researchers. Eventually, the whole Internet will be organized as an aggregation of such communities, not just of autonomous systems as it is today.

"Our approach allows integrating such important Internet processes as the semantic search of information resources, network address resolution and network traffic routing", - says Nikolay Mikhaylov, the Project Leader of the "Cognitive Internet" project, - "Instead of a conventional IP address, each network resource will be assigned a unique descriptor - a so-called "cyber passport" in the form of an XML document which will contain all the essential properties, both networking and informational. Generally our approach is aimed at solving both the addressing problem under the condition of an explosive Internet growth which happens mostly because of "unmanned" automatic networked devices connected to the global network and the problems of the DNS system and global routing".

The technological basis for the Cognitive Internet concept is the Ubiquitous Plug and Play (UbiPnP) technology that was developed by research engineers of the MeraLabs. The UbiPnP technology allows electronic devices and online services of different functional purposes to discover each other in the Internet, establish dynamic cooperation sessions, monitor or control each other and potentially give an opportunity to coordinate cooperation automatically, i.e. with no direct human participation. Besides, the Cognitive Internet technology will include new communication models for networked devices based on context-aware behavior and self-learning approaches.

