COMPANY'S LEADING EXPERTS

Sergei Abramov

Project Executive, Director, Doctor of Theoretical Computer Science, Corresponding Member of the Russian Academy of Sciences (RAS). Primary employment: Ailamazyan Program Systems Institute of RAS, Researcher, Head of Laboratory, Head of Research Center (since 1986), Director (since 2005). Secondary employment: Ailamazyan Pereslavl University, Rector (since 2003); Botik Technologies, LLC, Co-founder and Chief Executive Officer (since 2005).

Yury Shevchuk

Development Manager, Chief Software Development Officer, Ph.D. in Engineering Science. Primary employment: Ailamazyan Program Systems Institute of RAS, Engineer, Senior Researcher, Head of Laboratory (since 1986). Secondary employment: Botik Technologies, LLC, Co-founder and Senior Software Development Officer (since 2006).

Nikolay Kondratiev

Chief Technical and Marketing Adviser. Primary employment: Since 1989, has been living and working in Germany as software developer and project manager. Joint owner and Senior Developer of TOLUS Informations-Systeme GmbH (Germany, Stuttgart). Ailamazyan Program Systems Institute of RAS, Head of Laboratory (1984–1989), Programmer, Project Manager (since 2014).

Alexander Ponomarev

Development Manager, Chief Hardware Development Officer. Primary employment: Ailamazyan Program Systems Institute of RAS, Senior Research Engineer, Head of Laboratory (since 1986). Secondary employment: Botik Technologies, LLC, Co-founder and Senior Hardware Development Officer (since 2006).

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Please feel free to contact us if you need any further information
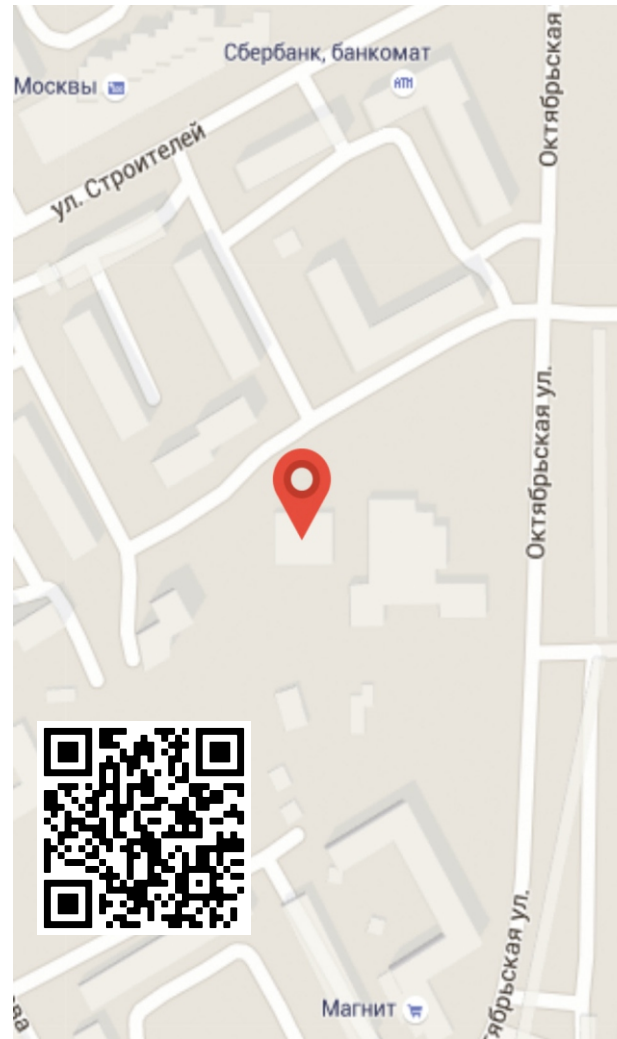
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The CHUDOM® company (Sensitive Home)

The company was established in 2014.
The name CHUDOM® comes from Russian «Чут-кий дом» which means "The Sensitive Home". The Sensitive Home does not claim to be smart but it tries to be sensitive to the home equipment problems and attempts to relieve the owners from their worries.

- **Company Profile:** research and development, commercialization of R&D.
- **Our main goal:** designing, developing and introducing the CHUDOM® product into the market.
- **The original idea**, core personnel and startup experience of the CHUDOM® company emerged out of Ailamazyan Program Systems Institute of the Russian Academy of Sciences and Botik Technologies, LLC.

Sk Resident The CHUDOM® company is a classic startup company. Since March 27, 2015, the company became a resident of Skolkovo.

THE CHUDOM® SYSTEM IS OUR MAIN PRODUCT

The CHUDOM® system (Sensitive Home), currently under development, is a self-learning home automation system designed for detecting anomalies and malfunctioning of equipment and proactively determining fault probabilities. The CHUDOM® system is sensible of house problems.

The system comprises a sensor network of a house, a cloud service for collecting and analyzing sensor data, web services, and mobile applications.
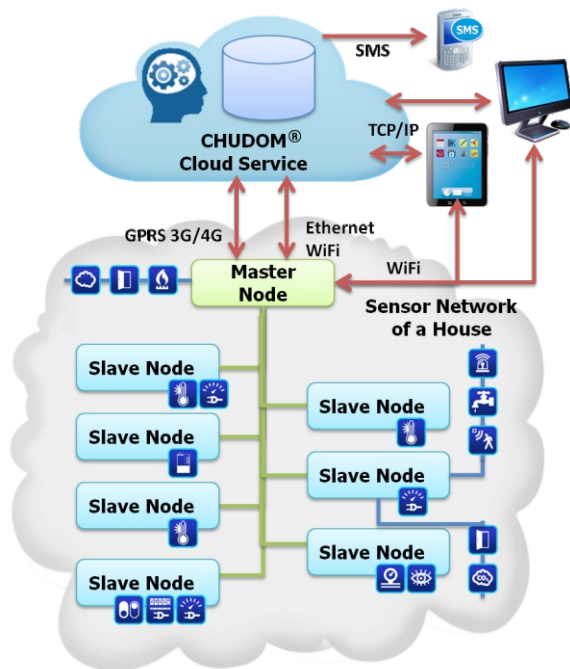
COMPANY'S EXPERIENCE AND KEY TECHNOLOGIES

Our key experience and competencies are connected with sensor networks, machine learning, cloud technologies, web services and technologies. Although many teams are working in these directions, our developments permit us to find better solutions to some specific issues.

Sensor Networks

Our modular architecture for network sensor nodes offers the following competitive advantages, while still remaining within average market prices:

- Simultaneous use of different connectivity protocols, such as Ethernet, WiFi, LoWPAN, PLC, Bluetooth 4.0 LE, ZigBee, Z-Wave, in a sensor network and provision of information security at the appropriate level.
- Connection of third party sensors of various types to the sensor network.
- It is possible to remotely redefine the logic of every sensor node. Every sensor node may be configured to make a decision locally and respond to different events, which makes it possible to respond to threats in case of total or partial loss of connectivity.

Machine Learning

Our team has the following developments and experience in the field of machine leaning:

- Technologies and tools for building systems based on artificial neural networks;
- We have gained a successful experience in using artificial neural networks for classifying signals (images, image streams) with various applications (diagnosis of engines based on their noises, identification of disease markers on medical images);
- Identification of system health: "system operates normally/there is an anomaly;" proactive determination of fault probabilities. We also have experience in building sensor data analysis systems, self-leaning systems and recognizing "behavior templates" (fault-free or faulty) of complex system nodes or complex systems themselves, specifically, detection of network attacks, proactive determination of failure probabilities in nodes and subsystems of supercomputer clusters, traffic analysis in telecommunication networks.

PARTNERS AND CLIENTS

Ailamazyan Program Systems Institute of RAS was established in 1984. The research activities of the Institute are in the field of high performance computing, artificial intelligence, telecommunication systems, sensor networks, and medical informatics.

The **Botik Technologies** company was founded in 1997 by the staff of the Ailamazyan PSI of RAS. The company is a network provider (Internet access, TCP/IP networks) and its distinctive feature is that it does not use any third-party off-the-shelf solutions for network providers. Botik Technologies designs, develops and produces virtually all software and a vast majority of hardware for communication services. A number of company's developments are well suited for the CHUDOM® project and will be used in it.

Skolkovo Foundation is a scientific and technological center for the development and commercialization of advanced technologies. Skolkovo Foundation is responsible for the Russian Skolkovo Innovation Center (Federal Law No. 244-FZ of September 27, 2010, On the Skolkovo Innovation Center) providing R&D infrastructure and mechanisms for interaction between the Project participants, which form the Skolkovo ecosystem. The CHUDOM® company is a resident of Skolkovo. To work closely with the Skolkovo IT Cluster is good fortune and honor for us.

Deus, LLC is the first in Russia and one of the first companies in the world producing wireless LED luminaire drivers and wireless control modules for lighting systems based on cloud networking.