# SCIENTIFIC PRODUCTION ASSOCIATION ANDROID TECHNICS

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Dear!	

For 10 years, scientific production association "Android technics" has implemented more than 100 R&D projects for public and private customers, as a result of which more than 90 robotic systems and complexes for various purposes have been developed.

We offer to perform for you qualitatively, efficiently, on time complex survey, research and development work in the field of robotics and mechatronics; development, design of complex robotic solutions with a guaranteed result: creating a prototype / mock-up / pre-production sample with the parameters specified in a technical specification with a full package of design and software documentation.

Results of cooperation:

- The technical specification will be implemented efficiently, within the specified budget, and on time.
- The project will be performed by SPA "Android Technics" with a minimum number of specialists of the Customer in the subject areas.
- Upon completion of the project, the customer receives a complete set of the working design documentation, working software, the required prototype and mock-up samples of the product with the parameters and characteristics provided in the technical specification.

Effects of cooperation:

- 1. Guaranteed completed R&D program;
- 2. Saving money on R&D up to 40% and reducing the R&D performance period up to 2 times, from doing it on your own;
- 3. The reputation of the enterprise / department / department of the Customer, successfully and effectively implementing innovative projects.

More detailed information is provided on the website https://npo-at.com/ and in the attachment to the letter. If you have any questions, please contact the contacts listed below.

Attachment:

1. Experience of SPA "Android Technics" and key successful projects

General Director

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## **Experience of SPA "Android Technics"**

More than 100 R&D projects have been implemented for public and private customers, as a result of which more than 90 robotic systems and complexes for various purposes have been developed over the 10 years of the company's existence.

Scientific production association "Android technics" is:

- ✓ an enterprise that has the most significant technology advance in the Russian Federation for the development of service robotics;
- ✓ a research center, which includes more than 70 employees under the leadership of the Candidate of Technical Sciences, laureate of the Russian Government Prize in the field of science and technology E.A. Dudorov;
- 2 Doctors of Engineering, 4 Candidates of Technical Sciences, 17 scientific and technical specialists, 12 design engineers, 10 software engineers, an industrial designer, electronics engineers, mechanics, hydraulics;
- o more than 30 patents and know-how;
- o more than 50 scientific publications in the rating publications of the company's employees;
- o cooperation agreements with more than 110 universities of the Russian Federation and abroad. 16 universities of the Russian Federation have created research laboratories on robotics supplied by the enterprise;
  - ✓ The company performs services for customers which are the Ministry of Industry and Trade, the Ministry of Defence, Ministry of Education and Science of the Russian Federation, the Ministry of Health of the Russian Federation, Advanced Research Foundation, FSB of the Russian Federation, State Space Corporation ROSCOSMOS, State Corporation "Rostec", State Corporation "Rosatom";
  - ✓ Key partners: Advanced Research Foundation, ROSRAO, Gagarin Research&Test Cosmonaut Training Center, S.P. Korolev Rocket and Space Corporation Energia, TSNIIMASH, TSNIITOCHMASH, Pirogov Russian National Research Medical University, Institute of Higher Nervous Activity and Neurophysiology of RAS.

# Key successful projects:

In the field of operation of robotic complexes in harmful and dangerous conditions:

- 1. Development of a mobile robotic manipulator for operation in strong radiation fields. The customer is FSUE "ROSRAO" (2017-2019).
- 2. Development of a technology for creating a combined control system for robotic complexes, code Rescuer. The customer is Advanced Research Foundation (2016-2017).

#### In the field of space robotics:

1. Torso manipulator for operating on the ISS. Experimental studies of the gripper unit of an anthropomorphic robotic system (ARTS), its control and communication system, code Android-2.

The customer is Joint Stock Company «Central Research Institute for Machine Building» (JSC «TsNIIMash») (2010-2014).

- 2. Space experiment "Tester" at SOYUZ MS-14 TPK. The customer is S.P.Korolev RSC Energia (2019).
- 3. Development and creation of a universal computer stand for robotic systems. The customer is Gagarin Research&Test Cosmonaut Training Center (2018).
- 4. Scientific equipment "Robotic anthropomorphic multifunctional system". The customer is S.P.Korolev RSC Energia (2019-2020).

## In the field of dual-use robotic complexes:

- 1. Development of the basics of the technology for constructing an exoskeletal complex with an external drive for physical unloading of a serviceman. The customer is TSNIITOCHMASH (2017).
- 2. Experimental and theoretical research on the development of key technologies for ground-based robotic systems for military, special and dual-use. The customer is Advanced Research Foundation (2018-2020).

### In the field of medical robotics:

- 1. Development of a robotic complex for the rehabilitation of post-stroke and post-traumatic patients using brain-computer interface technology. The customer is Pirogov Russian National Research Medical University (2017-2019).
- 2. Development and organization of production of a software and hardware platform of robotic orthoses for post-stroke rehabilitation. The customer is Ministry of Industry and Trade of Russia (2017-2019).
- 3. Development and commissioning of a robotic transport software and hardware complex for social adaptation of persons with disabilities. The customer is Ministry of Industry and Trade of Russia (2018-2020).
- 4. Robots for autonomous disinfection, temperature measurement and determination of human condition. The code is Medbot. (2020).