

SERGEY BAIGUDIN

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Date of birthday: April 1, 1982
Children: son



OBJECTIVE

Embedded Software Developer

EDUCATION

1999 — 2004 — The Bonch-Bruевич Saint Petersburg State University of Telecommunications
Saint Petersburg, Russian, www.sut.ru/eng

Department: Radio Reception, Broadcasting and TV
Specialty: Engineer

EXPERIENCE

Luxoft
Saint Petersburg, Russia, www.luxoft.com

August 2018 — till present

Department: Automotive

Position: Lead C/C++ Software Developer

- Participating in AUTOSAR Adaptive Platform consortium.
 - ✓ Code Owner of Function Clusters of Execution Management & OS, and Identity and Access Management of AUTOSAR Adaptive Reference Platform.
 - ✓ Participated in AUTOSAR Central Coding Team and Execution Management working groups.
 - ✓ Developed AUTOSAR Adaptive Platform Demonstrator in scope of validation of Execution Management requirements.
 - ✓ Developed requirements and specification of Execution Management functional cluster.
- Participating in BMW Body R&D project.
 - ✓ Implemented supporting of FreeRTOS for TI AM65x/DRA80xM Cortex-R5F MCU based on TI Jacinto 7 SoC.

- ✓ Developed and integrated low level drivers for FreeRTOS.
- ✓ Integrated TCP/IP stack for FreeRTOS.
- ✓ Developed a brief description of program design for customer target system.

Baigudin Software
Saint Petersburg, Russia, www.baigudin.software/en

July 2014 — August 2018

Position: Founder, Software Developer

Designing, implementing, and maintenance software solutions of the project.

- Embedded Object Operating System (EOOS) – an object-oriented real-time operating system (RTOS) for critical embedded systems based on single or multi-core microprocessors.
 - ✓ Reserved copyrights in Rospatent.
 - ✓ Designed an architecture of the operating system.
 - ✓ Implemented the operating system kernel and its services.
 - ✓ Implemented drivers of the operating system.
 - ✓ Implemented API of the operating system.
 - ✓ Implemented a template class library.
 - ✓ Analyzed MISRA C++ rules violations.
 - ✓ Implemented TI 66AK2x (TMS320C66x DSP + ARM Cortex-A15 MPU Cores) processors supporting.
- BOOS Core – an object-oriented real-time operating kernel for embedded microprocessor-based systems.
 - ✓ Designed an architecture of the operating kernel.
 - ✓ Implemented the kernel and its services.
 - ✓ Implemented user and system libraries.
 - ✓ Implemented drivers of hardware modules for the kernel.
 - ✓ Implemented TI TMS320C64x+ DSPs, TI TMS320C64x DSPs, TI TMS320C28x DSCs, TI AM18x ARM MPUs processors supporting.
 - ✓ Finalist of Kaspersky Start 2017 accelerating program.
- BOOS Microbe Core – real-time operating kernel for critical embedded systems based on 8-bit microprocessors.
 - ✓ Designed an architecture of the operating kernel.
 - ✓ Implemented the kernel and its services.
 - ✓ Implemented drivers of hardware modules for the kernel.
 - ✓ Implemented SL C8051F90x MCUs processors supporting.
 - ✓ Analyzed MISRA C rules violations.
- Implemented a Pulse-width modulator (PWM) driver for TI TMS320C28x3x DSCs.

- Implemented an Analog-to-digital converter (ADC) driver for TI TMS320C28x3x DSCs.

**The Fort Regional Centre for Information Protection
Saint Petersburg, Russia, www.rczifort.ru/en**

May 2008 — August 2018

Position: Chief of Laboratory of System Software Development, Chief of Department of Operating System Development, Senior Developer, Developer

Developing embedded software solutions for cryptographically protecting computer network information.

- Implemented FAT32/16 file systems.
- Implemented USB device drivers of mass-storage, printer, keyboard, and mouse devices.
- Implemented a USB bus driver.
- Implemented USB host controller drivers of Philips ISP 176x, and NEC μ dp720150 chips.
- Implemented LCD displays, keyboards, chip card, and RNG device drivers.
- Implemented an operating system kernel for TI AM1808 ARM microcontroller.
- Implemented multi-processors and multi-threads software for booting operating system, testing data integrity, and controlling hardware environment.
- Implemented cryptographic algorithms in TI TMS320C64x assembler programming language.
- Implemented software tests for debugging hardware.
- Designed specialized inter-board exchange communication protocols.

**Syntacs Web Studio
Saint Petersburg, Russia, www.syntacs.ru**

December 2010 — June 2014

Position: Technical Director

Developing Internet solutions.

- Implemented Content Manager System for tasks of the studio.
- Implemented PHP DOM Builder library for generating valid HTML documents and those operating.
- Implemented commercial web sites.
- Implemented MySQL database structures.
- Implemented web animation algorithms.
- Implemented user interfaces included asynchronous algorithms.
- Implemented W3C validated HTML markup of web pages.
- Operated with customers.

NPO Impuls
Saint Petersburg, Russia, www.npo-impuls.ru

November 2006 — May 2008

Position: Engineer

- Implemented software in TI TMS320c50 assembler for operating a multiplexed channel controller.
- Implemented software procedures in TI TMS320c25 assembler for embedded systems.

Russian Army

October 2004 — October 2006

Position: Senior Military Officer

NPO Impuls
Saint Petersburg, Russia, www.npo-impuls.ru

January 2004 — September 2004

Position: Engineer, Internship

- Implemented software procedures in TI TMS320c25 assembler for embedded systems.
- Had an internship.

SKILLS

- **Programming languages:** C/C++, Assembler, PHP, JavaScript, MySQL.
- **Web expertise:** HTML, XHTML, XML, CSS, jQuery, AJAX.
- **Standards:** AUTOSAR Adaptive, MISRA C/C++.
- **IDE and tools:** Yocto, BitBake, CMake, CCStudio, IAR Workbench, Eclipse, PCAD.
- **Processors:** TI AM65x/DRA80xM Jacinto 7 SoC, TI 66AK2x, TI TMS320C6000, TI TMS320C2000, TI AM18x ARM, SL C8051F90x, ATMEL SAMA5D3x, ST STR91xFA, TI TMS320c5x.
- **System buses:** USB, Ethernet, RGMII, GMII, MII, MDIO, RapidIO, ISA, I2C, 1-wire, RS-232.
- **Protocols:** Ethernet, IP, TCP, UDP, Socket.
- **Other:** work with oscilloscope, read and analyze electric circuits.
- **Languages:** Native Russian, Advanced English (preparing for the FCE exam).