

Oleg Sergeev

(remoting, part-time or full-time

Translator/Code Analyzer (Java/.Net/C/C++/Go/JavaScript) Developer)

Date of birth: 02.01.1964
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Key knowledge areas:

- More than 25 years in IT in various positions (Analyst, Architect, Development, QA, Team Lead, ...), in all stages of the life cycle of systems (local and distributed), for software and information products that provide real-time operation of the functions of collecting, processing, displaying, archiving and documenting information about the monitoring or control object (SCADA), both on the Customer's side and on the Contractor's side;
- Recent projects are mainly related to the transfer (copying, emulation) of functions of systems or software products (including data) to another (different from the first) operating environment **using lexical and syntax recognizers of formal grammars**.
- Freelancer since 2002.

Technical skills:

- Languages: C/C++, Java, JavaScript, Perl, Python ...;
- Tools: Eclipse, Docker, STM32CubeIDE ...;
- **Parser generators: Antlr, Lexx/Yacc ...;**
- Assembly systems: Make, CMake, Ant;
- Operating systems: Linux, Windows, Solaris, QNX, RTOS, SCO;
- Data storage systems: Redis, MongoDB, Memcached, SQLite ...;
- Protocols: TCP, UDP, WebSocket, HTTP, Socket, ENet ...;
- Source control systems: Git;

List of places of work (recent projects):

1. Software Service Team Lead

Company: South Ukraine Nuclear Power Plant, full-time
February 1989 - present

Operation of software and information software of control systems (SCADA) of NPP power units (Solaris, Linux, Windows, SCO).

2. Software Development Engineer, Test, Technical Writer

Company: Ekatra.io, part-time
March 2021 - October 2021

Participation in the project to create an autonomous device with artificial intelligence elements based on microcontrollers.

Transfer Python code to C/C++ code, which implements digital processing of accelerometer signals, formation of input tensors and launch of multiple neural networks using X-CUBE-AI and TFLite-micro expansion packets on microcontrollers STM32.

3. Software Development Engineer, Test, Technical Writer

Company: WSC INTERNATIONAL, LLC, part-time
August 2019 - May 2021.

Participation in the HMI/SCADA local application transfer project of the non-nuclear thermal power plant training simulator to the Web environment.

Applications are developed, that simulate the functions of preparing and displaying SCADA Ovation, video frames in the Web browser. Was used the ANTLR+Java tool to develop the Ovation text file translator in JavaScript language programs and 2D WebGL visualization technology (Pixi JS). Some applications are designed in the form of Docker images (Linux, Windows, translator, proxy service for WebSocket, Perl, Python, C/C++ ...).

Initially, ActionScript were used in similar projects (until 2011), then the Raphael JS JavaScript framework (SVG, until 2019).

4. Software Architect, Development Engineer, Test, Technical Writer

Company: ESP CONSULTING sp. Z o.o., part-time
May 2019 - July 2019

Participation in the project to modernize the technical interface of the simulator and SCADA of the full-scale simulator of the power unit.

Developed a data link application (UDP Multicast, ENet) from Shared Memory Simulator (Linux) in Shared Memory SCADA (Windows). Perl, Python, C/C++ tools were used.

5. Technical Consultant, Technical Writer

Company: RPC "Radiy", part-time
November 2018 - May 2019

Documentation of technical issues in solving problems related to tender procedures for the modernization of SCADA for the power unit.

6. Software Architect, Development Engineer, Test, Technical Writer

Company: GSE Systems, part-time
December 2015 - November 2017

Participation in the project of transferring SCADA applications from the real power unit to the environment of the full-scale simulator of the power unit.

Applications (Linux) have been developed that simulate the functions of the WDPF// (Solaris) SCADA distributed collection and processing controllers, alarm subsystems, video frame and trend display subsystems. A downlink analyzer generator for formal languages (ANTLR+Java) is used to implement a translator from the IEC 61131-3 logic controller programming language to C/C++ programs.

Education:

1981 - 1987

Tomsk Polytechnic University,
Faculty of Automation and Computer Engineering,
Specialty "Robotic systems".

Knowledge of the English language

Pre-Intermediate.