# PAVEL POLYANSKIY

36 years old
Living in Moscow

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GitHub: https://github.com/ilkz

Willing to relocate: Europe, USA.

Expected involvement: full-time

Ready/willing to accept remote work: no

Language proficiency: writing

Married, have a daughter.

## SKILLS

**Management:**

I can plan almost any project from idea to breakdown into specific tasks for people, count time, find a critical path, calculate budget and draw up a risk map.

Organization and leading Scrum-process in different teams (5-8 engineers each).

I know the principles of Agile, Scrum, Kanban, I studies PMBoK in due time.

Fluent in task management tools like Redmine, Trello, etc.

In addition to the above, I have some activities include such tasks as:

- Calendar and resource planning;

- Direct team leading;

- Procurement management;

- Procurement management;

- Organization of interaction between departments;

- Recruitment, interviewing;

- Organization of business processes.

I can easily organize and conduct an interview of almost any complexity. I have real experience conducting interviews with more than 500 candidates.

I easily find a common language with anyone (thanks to my experience in interviewing). Solve any potential conflict situation in a business manner, without spilling it to personal space.

I never stop frowning my skill in new tools and technologies.

Attend thematic events, exhibitions.

I keep in touch with a number of Chinese manufacturers and suppliers. It helps to save time through direct contact.

I use following stack of tools and technologies: MS Project, MS Excel, Mindjet, Redmine, Trello, Agile, Scrum, Kanban, board.

**Developing:**

I know very well the principles of FPGA operation, the principles of FPGA design, debugging and project optimization. I am good at giving lectures.

Can develop and write firmware in C for any controller.

I am skilled in taking measurements with various equipment.

I am interested in 3D printing and have my own printer: deeply customized FlyingBear Tornado. I can use Simplify, Cura, and know a lot of 3D printing techniques.

I have good soldering skills.

I use following stack of tools and technologies: Quartus II, System Console, Vivado, Modelsim, Matlab/Simulink, Altium, SolidWorks, Keil, Eclipse, NIOS II, uC/OS II, RTOS.

Programming languages: verilog, matlab, tcl, c, python (as of recently), other languages as needed.

Some code examples can be viewed here: https://github.com/ilkz

## ACHIEVEMENTS, AWARDS, CERTIFICATES

2009 – Gratitude from FSUE CNIRTI “For significant personal creative contribution to the implementation of space programs and projects, many years of conscientious work”

2009 – Certificate of advanced training under the program "Design Technology for Programmable Logic Integrated Circuits by Altera" at MSTU Bauman’s Institute

2010 – Diploma of participation in the International conference of young professionals "New materials and technologies in rocket-space and aviation technology", Kommetprom

2010 – Publication on the topic “Formation of a false target image on the screen of synthetic aperture radars using a universal signal conditioning device based on a semi-custom VLSI 1879VM3. Methods for digital analysis of parameters of radar signals in real time" (https://docplayer.ru/docview/61/45462455/#file=/storage/61/45462455/45462455.pdf)

**Co-author of the following patents:**
RU 2522853 (20.07.2014) - Method and device for detecting and identifying objects hidden under clothing on the human body

RU 149591 (10.01.2015) - Security inspection cabin in access control systems (ACS)

RU 2693272 (02.07.2019) - Carrier recovery device for high-order QAM demodulator

**Author/co-author of the following software:**
RU 2013613244 (20.06.2013) - FPGA (Programmable Logic Integrated Circuit) program of the central control unit of the radar scanning system

RU 2019617268 (05.06.2019) - Dynmond v1.0 (Seismological software)

## ABOUT ME

I want to move further toward project management. It is interesting to manage teams, plan work, search for new directions.

Drive in work is important. I can't stand idling.

# CAREER

## 2016 – OMSK POPOV PRODUCTION ASSOCIATION, HEAD OF HARDWARE DEVELOPMENT DEPARTMENT

**PROJECT: STM-16 Multiplexer**

Realized FPGA project of STM-16 multiplexer that can route STM-1/4/16 streams, Ethernet-10/100/1000, E1. It contain various algorithms like VC-4 matrix, GFP framing, and other.

Was engaged in the launch and debugging of similar telecom products.

Worked with SDH-network analyzers (Anritsu).

After this project, switched to project management tasks and began to actively develop new directions, including below projects:

**PROJECT: SDR digital radiomodem**

Used for transparent transferring Ethernet traffic up to 40 km distance. This project was finished with two prototypes.

Role in this project:

Writing tech specs, testing methodic, organization and management of tests, doing tests.

Tasks planning: calendar, resource, budget planning.

Team leading (FPGA developer, embedded programmer, hw designer, etc).

Work with contractors, procurement control.

**PROJECT: IoT technology developing project**

Supervised the developing of the following products: LoRaWAN gateway, LoRaWAN and NB-IoT gas flow meter, LoRaWAN micromodule for the common usage, lot of SmartHome ZigBee devices – home smart hub, gas sensor, temperature/humidity sensor, wired signals concentrator, curtains driver, smart AC socket. The lead time from idea to prototypes is from 1 to 4 months, depending on the device.

Leading the developing if the “Domoved” software complex, a web service that is automated control system that provides support, management and monitoring of gas, electricity, and water meters for management and supply companies.

In this project I play a leadership role, which includes:

- Markets and technology analysis, writing of analytical materials;

- Architecture developing, choosing the key solutions;

- Tasks planning, writing project docs;

- Preparation of reporting documentation – references, reports, presentations, etc.;

- Leading the developers team: programmers, hw designers, electrical engineers.

During the work, I proposed a number of initiatives that results to some partner agreements, for example:

- Agreement of intents with GoodWAN company (Radioteh LLC) in the LPWAN solutions;

- Agreement of intents with Vymplekom company in the NB-IoT solutions;

**PROJECT: IoT dynamical demo stand**

Used to show demonstrations of our IoT system and devices.

Role in this project:

Planning, developing architecture, choosing key tech solutions, tasks control and management.

The project is being carries out under tight deadlines and budget constraints.

**PROJECT: Thermometrical access control system**

Used for access control for employees with temperature measuring features, face recognition and other features.

Role in this project:

Market analysis, developing architecture, choosing key tech solutions, tasks management and control.

This project was done in hard deadline (2 months from idea to MVP).

As result, work demo system was mounted. After this, some successfully demonstrations were carried out, and preparations for launching into production are currently underway.

At the moment I am supervising the creation of an expert committee on the basis of the MIREA University.

In addition to the above, I have some activities include such tasks as:

- Calendar and resource planning;

- Direct team leading;

- Procurement management;

- Procurement management;

- Organization of interaction between departments;

- Recruitment, interviewing;

- Organization of business processes.

## 2019 – SPLIT LLC, PROGRAMMER (part-time, remote work)

**PROJECT: Seismic station SplitMultiSeis.**

Supporting and evolution the FPGA firmware (Xilinx, Verilog), and embedded software (embedded Linux, plain C).

This project is interesting as a means of keeping myself in good shape so as not to lose development skills.

## 2015 – MEDMASH LLC, LEADING ENGINEER

**PROJECT: Automated hematology analyzer**
Developing from scratch DSP mathematical model of processing and detecting a blood cells (erythrocytes, platelets, leukocytes). Used Matlab/Simulink.

After this, I realized it in Cyclone III FPGA in schematic mode.

Developing native PC—Device data transfer protocol using Cypress FX2LP chip and FPGA. On the FPGA side I run the NIOS II with uC/OS-II RTOS.

**PROJECT: Semi-automatic biochemistry analyzer**
Developing from scratch STM32F407 firmware for the 16-channel photometer module. Developing native PC—Device data transfer protocol using USB HID-device.

**Project management:**

Drove integration of a Redmine issue tracker into the project.

Developing from scratch business processes for procurement, task monitoring and control process. Successfully integrated it into Redmine.

Developed and implemented project management flow based on MS Project, which includes calendar planning (Gantt), resource planning, budget planning, and control.

On my own initiative, I established business relationships with a lot of Chinese electronic manufacturing companies. This make it possible to organize purchases/deliveries much faster than through dealer networks.

Quit from the company due to company downed.

## 2010 – NTMR LLC, LEADING ENGINEER

**PROJECT: Radiowave cabin for human examination**

Developing FPGA projects for MCU (Microcontroller Control Unit) module based on Cyclone III EP3C120 FPGA), RX/TX module based on Cyclone III FPGA, RF-Switch based on MAX II CPLD, and some other FPGA-based modules. All project are developed on Verilog, simulated in Modelsim.

During the work, I had to understand in detail how to build systems on a chip using SOPC Builder tool. When analyzing one of the Altera examples, a good diagram was born, which is still available in Intel wiki (previously it was in Alterawiki):

https://www.intel.com/content/dam/altera-www/global/en_US/uploads/d/d9/UDP_SOPC.png

After finishing FPGA developing, I switched to the system integration and project management.

**Integration:**

Selection, search and ordering of equipment for various purposes, interact with suppliers/dealers, includes foreign.

Doing installation and configuration of equipment (dosimetry complex TSRM-82, thermal camera FLIR A615, weight control complex, fingerprint readers, video surveillance complex, etc.).

**Project management:**

Developing from scratch business processes for procurement, developing workflow for different teams (programmers, testers, hw developers, mathematicians). Successfully integrated this processes into Redmine.

Organization and leading Scrum-process in different teams (5-8 engineers each).

Developed my own tool in Excel for conveniently generating tasks cards for Scrum task board.

Conduct planning of project tasks, which included:

- Interaction with the customer, analysis of technical specifications, formulation of goals, development of project documentation (project charter, project description, Gantt chart planning, writing risk register, etc.);

- Goals to tasks decomposition;

- Calendar and resource planning using MS Project;

Also, had the following experience:

- Search, organization and doing negotiations, establishment of cooperation with outsource companies;

- Writing and supporting technical documentation;

- System engineering (developing architecture, tech requirements, etc.);

- Conduct demonstrations of developed equipment;

- Employee training;

- Field works: organization and managing.

Quit from the company due to extremely wage delay and company went bankrupt.

## 2007 – FSUE CNIRTI, LEADING ENGINEER

**PROJECT: 4-Channel DRFM receiver**

Developing from scratch DSP mathematical model of processing and detecting parameters of various input RF-signals: carrier frequency, amplitude, time of arrival, difference time of arrival, type of emission. Used Matlab/Simulink.

After this, I realized it in Altera Stratix II FPGA in schematic mode. Clock frequency has been 150 MHz.

**PROJECT: False targets simulator**

Developing from scratch DSL mathematical model of false targets generation.

After this, I realized it in Altera Stratix II FPGA in schematic mode. Clock frequency has been 150 MHz.

**OTHER:**

Was engaged in organization and management of product testing.

I writed from scratch technical specifications for the product, test program and methods, and manage full document flow for acceptance this items.

By personal initiative, I build a computing cluster for a running the DesignSpace Explorer tool from Quartus II.

Quit from the company due to lack of new projects and poor salary growth.

## EDUCATION

**2001** – MIREA (Russian Technological University) student, Radiotechnical systems faculty.

**2003** – Participation in limited production of railway FM-receivers.

**2004** – Taught students self-developed courses on:

- radio engineering basics – theory, simple circuits, principles of their work, practical lessons (soldering and building schemes);

- internet-applications developing with HTML, CSS, PHP – theory, pages design in CSS, PHP basics, practical lessons.

**2006** – I read course “Modems and codecs” discipline to 5th course students.

**2007** – Graduated with a master’s degree.

It is all at this moment.

Thanks for read it.