Curriculum vitae

Name	Alexey Martyushenko
Position	Senior engineer
Education	1996 PhD in Micro- and nanoelectronics, Moscow Institute of Physics and Technologies
	1992 MS in Physics, Moscow State University, Department of Physics

FIELD OF COMPETENCE

IT architecture, project management, Research & Development, programming.

EXPERIENCE/SKILLS

Alexey is a self-organized and result oriented person. He is adaptable, works well both independently and in a team. Able to find solutions for complex technical and communication problems. Has been working for many years as a project manager. Has good ability to manage, communicate with customers, keep detailed overview of complex projects with multiple products.

Alexey has a thorough knowledge and experience in computer and system: high-and low-level design, architecture, documentation, programming, testing, maintenance, troubleshooting.

Eleven years experience in telecom R&D: packet/circuit switched data, real time operating systems, GSM general, GSM inter-working function (IWF), GPRS general, GPRS protocol stack, fixed network protocols (TCP/IP, ATM), multimedia communication (H.323), video over IP (H.264), video transport networks, video broadcasting and distribution.

TECHNOLOGIES/TOOLS

Strong background in C/C++, Java, Perl, Python, JavaScript, XML, JSP, SQL, non-SQL databases, TCP/IP, Sockets, RPC, ATM, STREAMS, CORBA, RCS/CVS, SVN, ClearCase, Erlang, Python, UML, Expect, SIP, VoIP. Broad experience with open source products. Experienced in C#/ASP.NET, SharePoint, EpiServer, Windows Presentation Foundation.

Hardware	Pentium/x86, HP 9000/715, HP 000/735, Sun sparc4, Ultra-5, PPC; (x86-based) AM186CC; (ARM-based) AT91RM9200, AT91SAM7S64, PXA270; (8051-based) P89C51RD; special purpose uC and DSP: PEB20560, OakDSPCore; (Blackfin family) ADSP-BF532, ADSP-BF533, video routers.

OS	Linux 2.2-2.4-2.6, Windows95/98/NT/2000/Xp/Vista/7, SunOs 5.6, HP-UX9.05, HP-UX 10.20. Real time and embedded OS: OSE Delta, VxWorks, Nucleus, ucLinux.
Programming languages	C/C++, Java, C#, SQL, Perl, FORTRAN, Pascal, Erlang.
Network	TCP/IP, GSM IWF protocol stack, AAL2/ATM, GPRS SGSN/GGSN
Tools and technologies	JSP, Ant, RCS, CVS, SVN, XV, GhostScript, Tools.h++, Sockets, SOA, Apache, Tomcat, Glassfish, OpenSSO, MinId, PostgreSQL, XSD/DTD, XSLT, SAX/DOM, gcc/g++, HP C++, Island Software, APStools, ClearCase, DejaGnu, Expect, Rational Rose, CC86/As86/Link86, Keil uVision, C51/A51/BL51, GNU-ARM, gdb, ASP.NET, SharePoint, Windows Presentation Foundation, EpiServer, MSSQL etc.
GUI tools	Eclipse, JavaScript, Raphael, Delphi, Microsoft Visual Studio 2005/2008, Microsoft Visual C++.
PM methodology	Scrum

EXPERIENCE

10/2010-	**Senior Engineer, Nevion Europe AS**
10/2010-	Video Network Management Application (VideoIPath)
Project/roles	This application provides Nevion customers with an intuitive tool for management and monitoring of connections in Broadcasting, Contribution and IP Distribution networks.
project manager developer	The project is jointly developed by two teams: one making an IP networking management part of the application, another one creating a fiber network auto-configuration, management and monitoring tool. Responsible for the second team started as a separate project 10.2010. First version of the tool has been demonstrated at the NAB Show in Las Vegas 04.2011.
10/2010-	Multicon, integrated system controller for vide transport chain
architect, developer	Has been involved in the project first due to needs of another project (see above) – to formulate and design changes needed in Multicon for the sake of Network Management Application to be able control switching in video routers (and other network units) and monitor signal presence at junction points. Afterwards participated in troubleshooting of several complex faults, which in turn needed a thorough analysis of the system architecture, real time performance and signaling sequences. Besides fixing the problems, has proposed and implemented a set of improvements in the system architecture.
11/2008-09/2010	**Senior Engineer (consultant) at Computas AS**
03/2010-09/2010	Adverse Event Database v.1.4 for Norwegian Medicines Agency
Project/roles	New version of Adverse Event Database for Norwegian Medicines Agency.
project manager architect developer	Development of Adverse Event Database version 1.4 accordingly to changes in EMA (European Medicines Agency) regulations. Development of an automated (regression) test (Junit, CubicTest). Updating applications libraries and environment (Java 6, Tomcat 6.0.26, and PostgreSQL 8.4), migration from (JDO) persistence library by Triactive (TJDO) to DataNucleus (JDO/JPA). PM methodology: SCRUM.
01/2010-09/2010	Adverse Event Database maintenance for Norwegian Medicines Agency
Project/roles	Maintenance of Adverse Event Database.
project manager consultant developer	Adverse Event Database is based on JSP technology and contains rich and abundant SQL logics. Complex data structure and logics together with multitier architecture which is spread over several locations and environments, makes experienced consultancy an important part of Adverse Event Database projects.

09/2009-01/2010	Adverse Event Database – system for patient report registration (Norwegian Medicines Agency)
Project/roles	Norwegian Medicines Agency (www.legemiddelverk.no) is responsible for approval and monitoring of drugs (medicines), both for people and animals. Adverse Event Database is an application which allows adverse events reports to be registered and exchanged between Norwegian medical centers and European Medicines Agency (EMEA). Adverse events can be reported both by medical personnel and by private persons. The latter possibility is introduced by " Adverse Event for patients": https://pasientskjema.Norwegian Medicines Agency.no/edit.aspx. Patient report application has a distributed architecture with authentication via MinId (OpenSSO federation). User interface is based n .NET and runs Windows2003 server; main application run on two servers, one Linux end one Windows2003, with Apache Tomcat web server, PostgreSQL, and JSP GUI for Norwegian Medicines Agency's and RELIS (regional center for free and manufacturer independent drug information for medical personnel in Norway www.relis.no. The reports are DTD based XML structures. List of drugs approved for use in Norway is available from another server in Norwegian Medicines Agency via WEB service (SOA). PM methodology: SCRUM.
project manager, architect, developer	Development of patient report registration system for Adverse Event Database, server side. Responsible for coordination of the entire project with three other teams (from other companies) developing GUI, MinId authentication/federation and operation. Has came to the project first as a developer, afterwards has taken the project manager role (continued as an architect as well). Headed the project during development phase, unit, system and acceptance tests, setting into operation. Entire project cycle has taken 40 hours less than the target price.
02/2009-05/2010	CODIO
Project/roles	CODIO is a research project for Oil & Gas industries. Its purpose is to optimize oil drilling process by providing necessary information at correct the time and structuring the decision making process in order to make it more efficient. The project is a joint effort of Computas, ConocoPhillips, IFE, Kongsberg Intellifield, Odfjell Drilling, IRIS, UiO and UiS.
consultant, developer, architect	As a member of an expert group has performed a comprehensive analysis of business processes both on- and offshore, existing IT tools and infrastructure. Based on the results of this analysis a set of proposals has been made. Parts of the developed approach have been implemented as a pilot program demonstrated to customers in their living environment. The program is based on K2 package, ASP.NET and Microsoft SharePoint. PM methodology: SCRUM.

01/2009-02/2009	NVIS, ”Integrated database for Aliens, Macedonia”
Project/roles	NVIS is an effort to generalize Norvis visa issue/processing system which would be relevant for other countries than Norway. Norvis is developed for Norwegian Directorate of Immigration and is based on Web Services and SOA, .NET 3.5, WCF and SQL Server 2008.
developer, architect	Participated in development of new architecture and redesign of NVIS accordingly to international IT market demands. Performed a linguistic analysis of the existing solution domain and developed a set of tools to convert/translate old code to a new one, based on English.
12/2008-01/2009	X516101 (consultancy project) for Norwegian Patent Agency
Project/roles	Evaluation of IT system and infrastructure at Norwegian Patent Agency, which has been suffering from instability and performance problems.
Consultant	Has fulfilled together with one more person a thorough analysis of most of the customer’s IT system: network, Oracle based databases, ASP.NET BPM system developed by a third-party firma for faults and performance bottlenecks. Based on a report from this study substantial improvements have been made to the IT systems (accordingly to the feedback from the customer).
11/2008-12/2008	MIMESIS for Computas AS
Project/roles	MIMESIS is Computas intranet, based on ASP.NET and EpiServer.
Developer	Maintenance and further development of MIMESIS. Has investigated performance problems in the intranet, localized those most heavy ones and proposed a solution for those to fix. Changed look and feel of some parts of the system.
Project technology	Scrum, EPiServer CMS 5 R1, Windows 2003 Server, IIS Server, Microsoft SQL Server, Microsoft ASP.NET 2.0, .NET 3.0, .NET 3.5, C#, Silverlight, ASP.NET MVC, Microsoft Visual studio 2008, Microsoft SharePoint Server 2007 and Microsoft Dynamics CRM, MS Enterprise search, MS Exchange Server, Active Directory, Confluence, Ajax, Wiki, Blog, JIRA, Agresso.
03/2003-10/2008	**Senior SW engineer, Jotron Phontech AS**
Projects/roles	Development of communication equipment for maritime and offshore: http://www.jotron.com/Kategori/Phontech-Communication-Systems/479.php.
architect, developer	Development of an intercom central (a telecom switch central with functions and demands specific to maritime and offshore industries) DICS 6100. Central application distributed over up to 3 CPUs (frames), running Nucleus Plus kernel. Control peripheral boards over IOM interface.

	Advanced Public address system MPA 1600 development. Started from searching for an appropriate CPU and periphery device circuits, elaborating the overall structure of the system, electrical connections and communication protocols from physical layer and above, choosing the embedded OS and tools, via prototyping parts of the system on development boards, to the design implementation which is ended up with a complete product on the market. Developing drivers for such circuits as the WM8776 codec, XR16L788 octal UART, and other devices in AT91RM9200 uClinux 2.4.27 architecture, light-weight proprietary serial protocol for RS485 link, numerous improvements/adjustments in the Linux kernel, integrating the application with open-source audio conversion and audio analysis (like Maximum Length Sequence one); XML parsing and other off-the shelf open-source libraries. GUI configuration tools for DICS 6100, MPA 1600, and other Phontech products (mostly in Java). A Linux rack mount PC server for a centralized control over a set of Phontech communication systems, providing WEB-interface both to monitor and configure the systems under control.
10/2002-02/2003	**Senior SW designer, Teleca AS**
Project/roles	Continue the same activities in the same position as earlier at Ericsson (described in full in the next section).
01/2000-09/2002	**Senior SW designer, Ericsson AS**
Project/roles	Upgrades of Ericsson SGSN (Serving GPRS Support Node) application: developing a new functionality in the Ericsson SGSN, which included support of the latest version of protocols both in the user plane (rewritten the GTP functionality) and the control plane (Ril3). Maintaining the Ericsson SGSN (SGSN subset of the GPRS protocol stack: BSSGP, LLC, SNDCP, GTP-u, GTP-c, Ril3). A "back-to-back" tool simulating different types of mobile-to-mobile and mobile-to-PSTN calls (ISDN, modem, FAX). The tool was used for testing a MGW (Media Gateway), a part of Ericsson 3rd generation telecommunication solution (UMTS). Developing a test tool for the Ericsson SGSN, which is capable of generating signaling and traffic. The tool emulates a GGSN (GPRS Gateway Support Node), SGSN-mobile GPRS signaling and a data traffic. It is the payload handling functionality of the SGSN which is tested by the tool.
architect, developer	High and low level analysis, SW design, development, maintenance. Troubleshooting of high priority problems.
07/1998-12/1999	**SW designer, ERICSSON Inc. A/O Russia (permanent), Ericsson AS (consultant)**
Project/roles	One of the biggest telecommunication equipment vendor: http://www.ericsson.com

Developer

A tool for testing UMTS MGW functionality. The tool was a program emulating a UMTS RNC (Radio Network Controller) user plane for data calls. The program was developed mainly in C++, but it included also a few C modules, which were reused from an IWF (GSM interworking function) application. The program was running Linux on a desktop PC, equipped with an ATM NIC. The program among all included an ATM/AAL2 stack to communicate with the IWF (via an ATM connection to the Group Switch), and a serial interface for communication with a user terminal equipment (a mobile phone emulator).
A device driver for the ATM NIC (a part of the open source Linux kernel) has been rewritten to enable the program of handling AAL2.
The tool made it possible to perform the first Ericsson UMTS data call, at the time when no real RNC was available on the market

A real time debugger for the GSM IWF (Inter Working Function) application. The debugger contained two parts: one (server) "embedded" into the OS, IWF application is running in, another one (client) providing the user interface to the debugging facility. The two parts communicated via TCP. The debugger was deeply embedded into the SW platform, which was a complicated multilayered OS/API, on top of a distributed HW platform (including a main processor and a number of Digital Signal Processors).
Porting the debugger's client application to Windows 98 and Linux.
Development of a version of the client application that supports Perl scripting (allows using Perl, extended with a set of debugging commands, as the debugger's scripting language).

Redesign and debugging of Multimedia Proxy, a prototype program based on H.323 stack, intended to provide a mobile user (having a limited bandwidth for data transmission due to scarce radio interface) with the ability to use a video conferencing facility (like NetMeeting) on a (notebook) PC to connect to a LAN or other mobile users with both video- and audio connection. The program was written in C++. Compilers used: gcc 2.95.1. Another tools used: Microsoft NetMeeting 3.01, MMTS (Ericsson Multimedia Telephony System).

Testing the GSM inter-working function (IWF). Fulfilling the task required a good knowledge of the IWF protocol stack, including RLP, L2RCOPP, V.42bis, HDLC, LAPM, V.110, other protocols.

05/1996-06/1998

Project manager, SOFT-TEC, Moscow

Project/roles

SOFT-TEC http://soft-tec.ru/ has been an R&D company established in from one of departments of Russian Academy of Sciences Institute for Physics and Technology http://www.ftian.ru/.

Project manager

Project management (6-9 engineers). Negotiating with customers (developing product specifications based on a customer request). Building short and long term strategy for the project, project tracking and scheduling. Participating in the high level design of all the products. Doing low level design and coding for some of the products. (Below only those applications are listed, which were developed by Alexey.)

The project covered a number of separate tasks, one-two products per task. The rate of deliveries varied for different products, with the overall rate of one delivery per 3-4 months for all the products. The products' life cycles were varying from 1 to 4 years with 1-2 major updates (for one product) per year.

Participated in the CMM (ISO 9001) model implementation in the company (started in early 1998).

Application/roles: FESOR (Finite Element Solution Reconstruction) package development. Distributed calculations support to FESOR.

A set of programs implementing mathematical algorithms (Proper Orthogonal Decomposition), for an approximate but very fast numerical solution of the gas dynamics equations in two or three-dimensional space domain. To provide user with a possibility to utilize the power of all workstations in the LAN, and to develop friendly user interface, FESOR have been redesigned to support distributed calculations. The data obtained after calculation run could be stored on a disk and displayed by a two-dimensional graphical visualization tool

05/1996-06/1998 **Research and programming fellow, SOFT-TEC, Moscow**

Project/roles

Performed high and low level design of gas dynamics solvers using object-oriented approach. Coded and supported the solvers, ported FORTRAN programs into C++. Adapted existing programs to object oriented design and implemented the Interposes Communication code for exchanging information with GUI through shared memory. Application/roles: CVD (Chemical Vapor Deposition) solver development.

04/1992-04/1995 **Postgraduate study, Institute of Physics and Technology, Moscow**

LANGUAGES

English: fluent
Norwegian: fluent
Russian: native

SELECTED PUBLICATIONS

[1] A.F. Erofeev, A.V. Kolpakov, T.M. Makhviladze, A.V. Martjushenko, A.V. Panjukhin, O.S. Volchek, M. Orlowski, Comprehensive RTP Modeling and Simulation, 3d International Rapid Thermal Processing Conference, Amsterdam, August 30-September 1, p.181-197, 1995.

[2] A.F. Erofeev, T.M. Makhviladze, A.V. Martjushenko, A.V. Panjukhin, O. Adetutu, Modeling of Silicon Deposition in Cylindrical RTCVD System, 4th International Conference on Advanced Thermal Processing of Semiconductors, Boise, Idaho, US, September 11-13, p.372-380, 1996.

[3] T.M. Makhviladze, A.V. Martjushenko, About possibility of a gas preheating usage in LPCVD of silicon, Russian Academy of Sciences Proceedings, Institute of Physics and Technology, Moscow, 1997.

[4] T.M. Makhviladze, A.V. Martjushenko, A.S. Vladimirov, Development of low dimensional models development for RTP and RTCVD reactors, Russian Academy of Sciences Proceedings, v.13, pp. 59-74, Institute of Physics and Technology, Moscow, 1997.

[5] T.M. Makhviladze, A.V. Martjushenko, Several Aspects of the Return Flows Formation in Horizontal CVD Reactors, International Journal of Heat and Mass Transfer 41 (16) (1998) pp. 2529-2536.