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I am interested in contracts as a freelancer, especially in tasks about the software development cycle (including analysis, design, development, test and maintenance). I consider myself a fast learner and a team player. I feel that I can make a contribution to any challenging development task.

**Name Peter Gschwendtner**

**Birthday** 06.01.1959

**Birthplace** Lindau (Germany)

**Nationality** German

**Education/academic** Diploma in mathematics

1989-1997 Ulm University (major mathematics, minor computing science)

**Skills / experiences (some of them can be considered to be ancient)**

**Programming Languages:** C / C++, C#, Javascript, PHP, Ruby, R, Python, Java, Basic,

diverse assembler, Pascal, Modula and other

**Meta languages** Yacc (Bison), Lex (Flex)

**Standards** ISO 9000, ASN.1 (X.208), GDMO, standards for GSM & ISDN, FDT/DTM

**Data formats** XML, HTML, Postscript, HPGL, Dxf, Gerber, (HP) PCL

**Protocols** GSM, UMTS, ISDN and TMN protocols as defined by ETSI, ITU-T, 3GPP etc.

**Interfaces** USB, HMI, CAN, Bluetooth, Fieldbus, SCSI, RS232, Temex-B, Q-Interface

**Databases** SQL, Access, Ctree, Dbase III

**User interfaces** Qt, WPF, Windows Forms, GDI++, MFC, X-Windows

**Design methods** OOA, OOD, OOP, UML

**Process methods** Scrum, V-Model, Waterfall, Automotive Spice

**Tools** Git, Subversion, Doxygen, Perforce, Clearcase, Visual Source Safe, MKS

**Hardware** x86, ARM, Renesas H8 (MicroC/OS-II), Motorola 56300 (24 Bit), 68000, Perkin Elmer, PDP11, PDA

**Experience**

| **Period** | **Project** |
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| 10/11- | Consulting and development for a contrast agent injector  especially communication with computer tomographs  Industry: medical engineering  Customer: ulrich medical  Jobs:   * Analysis, adaption, merge and test of software for linux and embedded systems for various applications focus: communication with CT scanner confomant to CAN in Automation CiA 425 * Adaption of unit tests * Documentation (interfaces, design, test) * Problem analysis and adaptions of additional software tools mainly on windows * Adaption and development of test scripts for a proprietary test system * Setup and execution of tests * Participation in a workgroup for ongoing development of a CANopen profile   Skills: C++/Qt, C#/DOTNET, Suse/Ubuntu Linux, MicroC/OS-II, UML, XML for tests: ruby/python Bus systems/protocols/interfaces: CAN/CANopen, USB, SocketCAN, D-Bus  Hardware: ARM (Linux), Renesas H8 (MicroC/OS-II)  Tools: Visual Studio, KDevelop, Eclipse, Enterprise Architect, Plant UML, Doxygen, Subversion, Git, JIRA, Bitbucket, Confluence  Standards: software development for medicine devices (e.g. IEC 62304), CAN in Automation (z.B. CiA 301), Automotive Spice, DIN ISO 9000 |
| 12/98-03/18 | Development, maintenance and support for an EDA software product  Industry: Electronic Design Automation  Customer: CAD-UL GmbH  Issues:   * Build a MFC-Frameworks, combine it with existing software and establish synchronization between formerly separate applications based on multithreading and DLL technology * Development of converters (IDF, GenCAD) * Incorporated an USB Dongle, Development of software for license management * Development of new functionality such as library browser, attribute browser, snap to midpoint functionality.   Jobs:   * Requirement analysis * Development of proposals * Design, implementation, test and documentation * Reworking online help with reverse compilation of compiled help files * Consulting and support * Porting software from Visual Studio 6 to Visual Studio 2008 * Introduction of version control system subversion   Skills: C++, MFC, dxf, IDF, GenCAD, Gerber  Tools: Visual Studio 6/2008, CAMCAD Vision, MS Help Compiler, Subversion |
| 08/09-12/10 | Integration of voice recognition software for automotive applications  Industry: Automotive, Infotainment  Customer: Cerence (former Nuance)  Jobs:   * Integration and restr Restructuring of software and build process * System tests, unit tests, analysis of bugs and source code for windows and QNX * Adaption of software tools and build process, Anpassen von Softwaretools und Buildprozess, Making of a build script |
| 10/07, 2/09 | Porting of.NET software to display device data on pocket PC  Industry: industrial it  Customer: wetcon GmbH / industrial it  Skills: C#/.NET, Windows Mobile  Tools: Visual Studio 2005 |
| 11/06-03/09 | Consulting, development, maintenance and support for embedded software for infotainment applications in automotive environment  Industry: Automotive, Infotainment  Issues:   * Analysis and redesign of parsers (vCard, vCalendar) * Image conversion * Analysis, test, simulation and enhancement of a flash file system * Diagnostics, qualifikation and preparation of production of a freehand phone device with speech recognition, bluetooth interface and GSM module   TJobs:   * Analysis and specification of requirements * Specification of implementation details including a protocol * Development oft test tools * Implementation of diagnosis component for the target * Supervision of qualification and preparation of production * Unit test, code analysis, system test, error analysis, code analysis   Skills: UML, C, CAN-Bus, Bluetooth, Motorola DSP56300, RTXC, QNX, Nand-Flash technology, (Lex/Yacc), (Flex/Bison), Eclipse, Image data formats  Tools: Together, Visual Studio, Doxygen, Perforce, Procom, Doors, Vector CANoe |
| 03/06-06/06 | Development of a GUI control for pactware (http://www.pactware.com)  Industry: industrial it  Customer: wetcon GmbH / industrial it  Jobs:   * Behavior analysis of available devices * Design, implementation and test of the control   Skills: C#/.NET, XML, FDT/DTM  Tools: Visual Studio 2003, Pactware |
| 10/05-10/06 | Development support for a GUI component  Industry: medical engineering  Tasks:   * Feasibility evaluation of requirements * Enhancement of a GUI component to meet new requirements * Preparation for automated tests * Consulting   Skills: C++, STL, gdi+  Tools: Visual Studio 2005, MS-SQL, Subversion, QTPro |
| 09/02-09/05 | Design and implementation of user interfaces (GUI) of a medical technology device with touchscreen interface, device control, image and video processing functions and patient management. Look and feel of the GUI realized according to corporate design.  Industry: medical engineering  Tasks:   * Analysis of graphics design requirements and interface definitions * Contribution to specification * Conception based on design patterns * Adaption of VBA macros for source code documentation by doxygen * Implementation, documentation and test of a COM component * Supervision of subcontractors * Test specifications * Further development for consecutive releases * Implementation of a software component for controlling a battery backup   Skills: C++, COM, ATL, STL, GDI+, IDL, HMI, VBA-Macros, UML, HMI, software design patterns  Tools: Visual Studio 6, Visual Studio 2003, Visio, Doxygen, Access |
| 04/04-10/04 | Design and implementation of an on-the-fly file system converter (proprietary format to FAT). The software was designed for a PCMCIA card drive without operating system. A PC based simulation facilitated full functional test of the software.  Industry: shipbuilding  Tasks:   * Analysis of requirements and development of conversion algorithms * Technical specification, design, implementation, test and documentation * Enhancement for flash updates   Skills: C++, C, Mororola 68040 (CPU32) assembler, Flash programming  Tools: Visual Studio 6, GNU compiler, BD32 |
| 10/02-06/03 | Development of software for an automated laboratory  Industry: laboratory automation  Issues:   * Development of a weighing system based on a laboratory automation framework * Analysis, development and test of a pH dosage software   Jobs:   * Creating new versions to incorporate updates of components * Revising dosage   Skills: C++, MFC, SPS  Tools: Visual Studio 6, Doxygen |
| 12/01 - 04/02 | Development of an USB driver based on the windows driver model  Industry: Medical enginieeringMedizintechnik  Customer: R=I+S Rapp Informatik Systeme GmbH  Aufgaben:   * Analysis of reference driver software for linux * Development of an equivalent USB driver for Windows * Solving timing problems by restructuring * Creating an installation script for driver installation   Skills: C++, USB, WDM  Tools: Visual Studio 6, Windows 2000 DDK |
| 03/99-09/01 | Development, support and training for protocol analysis (GSM, ISDN, UMTS, TMN)  Industry: telecommunication  Issues:   * Maintenance of a TMN protocol analysis system * Development of protocol descriptions   Jobs:   * Creating new versions to incorporate updates of components * Adapting installation * Customer support * Analysis of problems in provided descriptions * Product training in English * Analysis of protocol specifications * Development and test of descriptions used to decode protocol data   Skills: TMN, Q3-Interface, GDMO, ASN.1/BER, ISO/OSI model, CMIP, FTAM, MMS, TCP/IP, GSM, UMTS, ISDN  Tools: Q-Monitor, Visual Studio 6, Installshield, Powerpoint, Clearcase |
| 04/88 - 09/98 | Development and development manager for an EDA CAD system  Industry: Electronic Design Automation  Customer: CAD-UL GmbH  Issues:   * Developments for a PCB (printed circuit board) layout system * Developments for a SCM (schematic circuit diagram) system * Developments for a CAM viewer/editor for postprocessing data * Integration of autorouter software * Develoment of a database management system (component management)   Jobs:   * Requirement analysis * Development of proposals for new features, algorithms, reports, GUI * Design, implementation, test and documentation * GUI development using MFC, GDI, formerly proprietary graphic libraries * Management of outsourced development * Development of automated tests * …   Skills: C, C++, Win32, MFC, GDI, Ctree, Gerber, HPGL, PCL, postscript, dxf, pspice  Tools: Polymake, Pharlap Linker, DOS, Windows 3.1/95/NT, Unix; diverse compilers |
| 07/87-03/88 | Development of a test system for dynamic behavior of communication protocols.  Industry: telecommunication  Issues:   * Compilation of interaction diagrams from a specific textual language * Interpretation of the generated structures * Simulation of activities and responses of a communication partner * Reporting of results.   Jobs:   * Design, development, test, docmumenation of an application * Development of a DOS based GUI   Skills: C, RS232, Temex-B, BSC  Tools: C-Compiler, yacc, lex, Make |