Personal

Name:
Eric van Orsouw
Email:
eric@whitemagic.it
Cell:
+31 6 57200060
Residence:
's-Hertogenbosch

Skills

C, C++, Java, C#, OO, shell, UML, Hatley&Phirbai, HTTP, Rest, DVB, TVA, XML, XSD, JSON, JSON Schema, Cassandra, Zookeeper, Ansible, Qt, Wamp, Lucene, Visual Studio, Netbeans, CLion, IntelliJ, Jenkins, Gitlab-CI, Assembler, RS232, I^2C, CAN, TCP/IP, FPGA, Jira, SVN, Git, scrum-master, requirements, Windows, Linux, Unix, Office, Docker, Podman, Robot framework, OpenCV, FPGA, VHDL, Claude-Code

Hobby's

- Working with wood
- 3D printing
- Electronics
- Coding
- Retro computers

Eric van Orsouw

Education, courses

Polytechnic Electronics **1985-1990**
HTS Den Bosch

AI – MOOC Stanford 2019, Java **EE** – Infosupport 2016, **Scrummaster** – Zilverline 2014, **MCD Web Development** – self-study 2013, **Projectmatig werken** – Schouten Nelissen 2009, **Embedded Systems Architect** – ESA 2006, **OO Design/Analysis** – Datasim 2001, **Hatley&Phirbai** – ASML 2000

BHV – G4S 2016, **VCA-VOL** 2020

About me

Perfectionistic but pragmatic software engineer with an eye for usability in general. I like to think out-of-the box and strive towards solutions that can easily be reasoned about. I am proficient in working out ideas and requirements and have demonstrated experience in writing performant and maintainable code. I can perfectly operate alone with little input but also enjoy working as part of a team. My personal interest is to discover mechanisms over specials and software that functions predictably in degrading or resource-constrained environments.

Experience overview

OMRON **2025-2026**
Roles: Senior developer R&D
Linux based remote Device Management, Secure Bootloader and A/B firmware updates.

Besi **2022-2024**
Roles: Senior developer
Improve a C# based control application for a chip sorting machine.

OMRON **2020-2021**
Roles: Senior developer, Team lead
We take automation of production lines to the next level.

de JONG DUKE **2018-2019**
Roles: Senior developer
Design and create an online control API for a new coffee machine.

AXON **2017-2018**
Roles: Senior developer
Design and implement a MPEG multi-viewer for the broadcast industry.

SeaChange **2008-2017**
Roles: Software Architect, Lead developer, Team lead
As architect I analyze the impact of new requirements. As a developer I cooperate in the ground-up development of Java/NOSQL backend.

P.T.S. PHILIPS NXP ASML Delem **1999-2007**
Roles: Senior developer, Team lead
Outsourcing period with development in C/C++.

SPC/Company **1991-1998**
Roles: Developer, Senior developer
C/C++/assembler development of vision-based inspection software.

Senior Developer **Omron R&D (2025)**

Omron has industrial PCs in their portfolio, and they wish to provide customers with a Device Management service that allows customers to remotely install software, check status and update firmware.
My task is to make an Alpine Linux based client that is tweaked for its purpose and includes all scripts and functionality for deployment, encryption, basic monitoring, onboarding and upgrading.
Secondly, I was tasked to further develop an existing secure bootloader to support A/B upgrade with automatic roll back. Development in C, C++, shell, UEFI.

Senior Developer **Besi (2022-2024)**

Besi makes back-end machines for the semiconductor industry. I work in a small team that develops and improves a machine called device-sorter-2 which is part of a chip-sawing-line. This machine inspects and sorts separated chips from a carrier into a tray using 2 concurrent pick-and-place heads. Development is primarily in C#. On the side, I work out the software aspects for new planning features at both device and machine level in documentation and prototypes.

Senior Developer, Team Lead **Omron manufacturing (2020-2021)**

Omron Manufacturing has production lines to produce various electronic products. To remain competitive, much of the work is automated. Over time automation shifted from PLC to software. Together with a small team, I bring consistency and uniformity in existing software.
One specific automation tool I worked on was called pick-to-beamer that assists an operator, using a camera and projector, in picking the right parts during assembly. Keywords here are simplicity and easy-of-use. Development is primarily in .Net Core and C#.

Senior Developer – Rest API **De Jong Duke (2018-2019)**

De Jong Duke develops and produces B2B coffee machines and strives towards continuous improvement. My task is the development of an online API on top of the current control software to facilitate the outsourcing of a new GUI. I collect requirements and formally document these. I assure that the API is generic and free of machine specific elements. I implement the API in C++ and integrate these into the existing control software. During my period I helped the team to depart from Rhapsody and introduce a new toolchain using C++11, CMake, Gitlab and Docker. This allows the developers to more efficiently work together as a team.

Senior Developer - Multiviewer **Axon (2017-2018)**

Axon wants an improved and scalable multi-viewer for the compressed domain that had to execute both on Windows and Linux and be written in C++/Qt. My task is to create a requirements document and implement the multiviewer as part of a 2-man team. I designed the new multi-viewer to be fully on-the-fly configurable and controllable via json files and rest interfaces. The result of one-year development was a drop-in replacement multiviewer that performed beautifully, was scalable and ready for new features.

Software Architect **SeaChange (2016-2017)**

SeaChange has a complex VOD back-office that is sold to operators like BBC and Ziggo to provide video-on-demand functionality to their subscribers. The back-office is very configurable and consists of dozens of components and 100+ proprietary interfaces. Due to the relatively small installed base, every customer wants new features to be fitted. As an architect I am responsible for investigating these requests and coming up with a set of modifications to implement the new features. For each request I investigate the solutions options, document the pros, cons and affected components/interfaces. Using reviews I decide on the most effective solution. Afterwards, interfaces are unambiguously extended with syntactic and semantic changes and for the implementations, I create a detailed description of new/changed functionality while explicitly leaving out implementation details.

Lead Developer Back-end, Scrum master **SeaChange (2014-2015)**

The SeaChange software-suite includes BMS, a web-based product to manage and productize a VOD catalog. BMS evolved from an ASP-based demo product and needed a complete overhaul to become useful. My task was to provide a new back-end rest API to provide all required metadata and actions on which a new Javascript GUI was developed. I investigated the requests needed by the GUI team to fulfill their (new) need, described the API in terms of mechanisms that could be combined to query arbitrary results. To address backend scalability, I choose an identifier-only relational memory model combined with Lucene for searching and sorting. The result of this endeavor was a flexible API that allowed UI developers to customize arbitrarily and to achieve for example complex scenarios like virtual scrolling through large data sets.

Lead Developer, Team lead - Publisher **SeaChange (2010-2013)**

A critical component in SeaChange's VOD back-office is the publisher that hosts the public API serving millions of client devices (Settop-Box, PC, Tablet). SeaChange already had a SQL-based Publisher written in

C# hosting an XML/Rest API and another publisher in C++ hosting a low-bandwidth binary interface. My task is to develop a Java version that is better scalable by using Cassandra and that could replace both existing publishers. I designed the publisher core as a library that provided all functionality using pluggable managers. I wrapped this library with a Rest layer to provide the XML/Rest interface. A separate team wrapped the library to provide the binary interface. I put a lot of effort into designing mechanisms to overcome the lack of transactions in Cassandra. For example, to do predictable and concurrent logging from different publishers. The result was a well-performing and scalable publisher that is currently executing at several customer sites.

Lead Developer – MPEG TS Analyzer **SeaChange (2008-2009)**

SeaChange missed a component to validate MPEG transport streams. The metadata content and deviations needed to be visualized via a web interface. My initial task was to develop a real-time analyzer that determines timing and content aspects from transport streams and exposes the raw metadata via a TCP interface. The resulting C++ analyzer was extremely fast, stable and robust, doing 500MB sustained input 24/7. The follow up was exposing the data for analysis via a C# interface for rendering purposes. After inception interest from customers dropped and the product was discontinued. The C++ analyzer, being a standalone component, is still actively used for metadata extraction in other SeaChange products.

NXP – Developer – DVB-H/DAB generator **PTS (2006-2007)**

NXP developed a DVB-H receiver chip for reception on digital TV on mobile devices. To verify variations in input and burst-error behavior a test stream generator was needed. My task was to develop such a generator and the analyzer counterpart. A subsequent task was a similar DAB test generator for a software defined radio project. I developed all tools iteratively in C++ separating stream processing as separate re-usable components. The result was a set of flexible script-driven commandline tools.

Philips – Developer – Driver generator **PTS (2005)**

Philips semiconductors has the Hercules chip that formed the heart of analog TVs. My initial task was maintenance work on the very limited 8052-based Hercules core. As I worked on change requests, I noted that driver support for the numerous chip variations was tedious and error prone. I suggested the creation of a generator-tool that generates C driver code based on the meticulous excel-sheets describing the chipset's registers and behavior. My task then moved to developing the generator. I created a design in OO/UML and implemented the tool in C++. After that I supported rolling it out within the department. The resulting tool generated very readable C-code including comment. This significantly reduced the effort to support new chip variations and limited resulting bugs.

ASML– Developer, Team lead **PTS (1999-2000, 2003-2004)**

ASML produces extremely complex wafer stepper machines. During these periods my task was both maintenance work on the component AT (wafer alignment) as well as new development of component FM (Firmware Download) and MI (Metrology Interferometers). I created all designs in Hatley and Phirbai and implementations in C. The resulting code was integrated into the central codebase.

Developer / Senior developer **SPC/Company (1991-1998)**

SPC Company creates mostly vision-based inspection machines. The projects included a library robot, coat-hanger sorting system, blue berry sorter, crop-measuring system and the creation of an HMI library for machine human interaction. I started all projects by creating a functional and technical design using mostly common sense. I coded all software using C, C++ and for vision performance I often resorted to 80x386 assembler. The results of all these projects were functioning machines that were a real joy to work on and to see operating.

Personal projects

Various private projects are usually a combination of bare metal development on own developed hardware. This hardware includes amongst others 8bit microcontrollers, the ESP32 and ICE40 FPGAs and a variety of I2C, SPI and CAN devices. Software for these is mostly written in C/C++ optionally combined with FreeRTOS and the FPGAs developed in VHDL. At home I have a barebone system running Linux with Docker hosting amongst others a Gitlab deployment to manage progress and repositories.