

Marco Trecate

Senior Embedded Software Engineer



Date & place of birth:

February 4 1976, Milano, Italy

Nationality:

Italian

Location:

Milano, Italy

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Enthusiastic Embedded Software Engineer and Project Leader with over 13 years of experience and a proven record of team leadership, customer relationship, system analysis, design and development. Demonstrated expertise in leading-edge software methodologies applied to embedded systems including model-driven software development and Agile project management, coupled with extensive background in safety-critical regulated domains (Medical and Avionics) along with consumer products.

Recognised for excellent communication skills and ability to coordinate and motivate developers and mentor junior resources. Valued for the capacity to bridge the gap between software, electronics and production engineers in manufacturing settings and to implement and lead new initiatives in an organisation.

Developed intercultural sensitivity having lived and worked abroad for 2+ years. Lifelong programming enthusiast with varied experience in different languages and technologies and a keen eye for new developments in software engineering at large.

Areas of expertise and skills

PROJECT MANAGEMENT

- Agile estimation and planning using Scrum and Kanban
- Customer facing and team leadership

ANALYSIS

- Use cases and user stories
- IEEE-style SRS and SDD
- UML "4+1" views

REGULATIONS AND STANDARDS

- Familiar with IEC 62304 (medical) and DO-178B (avionics)
- MISRA C rules

SOFTWARE ENGINEERING

- Model-driven SW development, automatic code generation
- UML, design patterns

EMBEDDED HARDWARE

- ARM Cortex M0/M0+, 8051
- UART, SPI, I2C. ARINC 429, MIL-STD-1553

EMBEDDED OPERATING SYSTEMS

- Linux based on LTIB and U-Boot
- FreeRTOS, uC/OS-II, MQX

M2M AND WIRELESS CONNECTIVITY

- Definition and development of custom Bluetooth LE profiles
- RESTful APIs

PROGRAMMING LANGUAGES

- C, C++, Ada95
- Working knowledge of Java SE, Delphi, PHP, HTML, SQL, bash

APIs AND LIBRARIES

- Qt5, Quantum Leaps
- POSIX, Sockets

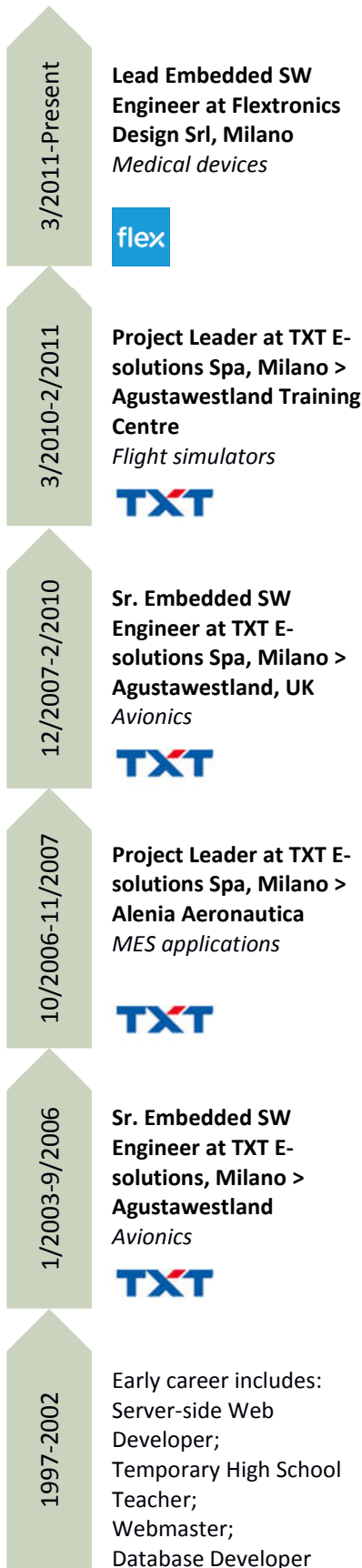
TOOLS

- Keil, IAR, KDS, Eclipse, AdaMULTI, Qt Creator,
- Modelio, ARTiSAN Real-Time Studio, QP Modeler
- SVN, Bugzilla, Doxygen, PC-Lint, RequisitePro, Trello

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Career at a glance



Education

- Università degli Studi di Milano - 2005: Master degree (“laurea magistrale”) in Computer Science, grade 100/110
- ITIS Molinari, Milano - 1995: High school certificate in Computer Science, grade 60/60

Strengths and selected accomplishments

EXPERIENCED

- Over 13 years’ experience implementing and leading challenging software projects within time and quality constraints.

ACHIEVER

- Quickly built up a strong skill set and reputation on multiple industry domain changes (medical devices, avionics, etc).

SKILLED

- Subject matter expert providing advice and guidance to management and colleagues (Bluetooth LE, avionic HMIs).

PROACTIVE

- Leveraged expertise and computer science background to pioneer software methodologies and techniques.

ACCOUNTABLE

- Selected to supervise software and firmware projects from initial capture of requirements to successful delivery.

TEAM PLAYER

- Acknowledged for facilitating teamwork despite internal conflicts.
- Always displays a “can do” attitude.

CUSTOMER FOCUSED

- Earned praise for technical knowledge and understanding of business needs, helping to increase customers’ loyalty and satisfaction.

BUSINESS FOCUSED

- Helped landing new contracts and forming partnerships through effective presentations and technical proposals.

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Detailed work history

Lead Embedded Software Engineer at Flextronics Design Srl, Milano (part of Flex) - March 2011-to date

- Owned all aspects of firmware design and development for medical devices up to IEC 62304 class C
- Successfully coordinated software engineers in a cross-functional environment, including offshore resources. Provided hands-on leadership and technical expertise
- Utilized Kanban practices to plan and complete tasks on-time
- Engaged prospects to help determine product feature sets and wrote technical proposals
- Efficiently directed software/firmware topics related to production and Design For Testability
- Co-authored internal Agile SW Development Work Instruction for using Scrum in medical software projects
- Oversaw technology investigation project and proof of concept in the IoT and M2M fields that resulted in new customer acquisitions
- Team's subject matter expert for topics related to Bluetooth Low Energy connectivity
- Consistently worked to enhance the processes and quality of the software team's work through research on topics related to embedded software design and devices interoperability, championing Agile methodologies, sponsoring development of a custom "lean" tool to automate requirements traceability, helping to standardise technical interview questions

Project Leader at TXT e-solutions Spa, Milano - seconded to the AgustaWestland Training Centre in Sesto Calende, Varese - March 2010-February 2011

- Spearheaded team of four software engineers in developing an automatic test system for a full-flight helicopter simulator according to JAR-FSTD H spec level D. Defined tasks and techniques necessary to achieve project goals
- Composed software requirements and test cases
- Directed requirements, design and test reviews with the customer
- Contributed to architecture and algorithms of the test system
- Conducted root causes analysis for critical issues and refactored code to improve performance and stability

Senior Embedded Software Engineer at TXT E-solutions Spa, Milano - seconded to AgustaWestland in Yeovil, UK - December 2007-February 2010

- Supervised reuse and extension of an existing avionic HMI editor and code generator that improved the software development flow enabling rapid UI prototyping and reducing paperwork
- Liaised with the customer to help TXT winning new contracts. Made initial contact with UK companies to form partnerships and land joint contracts
- Designed and developed airborne software for helicopters according to DO-178B level A, using object-oriented design and model-driven development

Project Leader at TXT E-solutions Spa, Milano - seconded to Alenia Aeronautica in Grottaglie, Taranto - October 2006-November 2007

- Successfully directed a team of five programmers and testers to implement subsystems of a Manufacturing Execution System for building aircrafts
- Interviewed end users on-site to gather product requirements. Designed UI prototypes and assessed priorities according to users' needs in a high-velocity environment. Composed software requirements specification and test cases
- Contributed to software architecture and database design
- Trained end users and wrote user manuals
- Mentored new team members

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Senior Embedded Software Engineer at TXT E-solutions Spa, Milano - seconded to AgustaWestland in Cascina Costa, Varese - January 2003-September 2006

- Initially hired as Software Developer and swiftly increased expertise and responsibilities from programming to technical leadership. Supervised up to four software engineers and mentored new hires
- Designed and developed airborne software for helicopters according to DO-178B level B, using object-oriented design and model-driven development
- Composed high-level and detailed software design documents
- Served as focal point for topics related to avionic HMI based on ARINC 739
- Created avionic Human-Machine Interface editor with integrated code and documentation generator that enabled rapid UI prototyping and was reused for later projects

Server-Side Web Developer at Effects Srl, Milano - January 2001-December 2002

- Designed and developed server-side components of popular Flash-based web applications on former Italian portals Jumpy, Libero and MTV i.e. one chat-room and one multimedia e-cards editor. Defined custom “chat” protocol over HTTP
- Installed and configured LAMP servers, including kernel customization and basic database administration

Early career includes: Temporary High School Teacher of Computer Science (ITIS Molinari, Milano - 1999-2001); Webmaster (Progres Technologie Srl, Milano - 1999); Database Developer (Mediolanum Farmaceutici Spa, Milano - 1997-1998)

English language

CEFR level C1: Effective Operational Proficiency

- Cambridge Certificate in Advanced English grade A, June 2009, Yeovil College, UK

Additional information

- 10/2007-2/2011: NATO security clearance (Italian “Nulla Osta Sicurezza”) for working on military projects
- 1994-2007: Volunteered as Emergency Medical Technician certified by the local health authority “COEU 118” of Milano
- Driving license (Italian “type B”)