Svilen Dobrev *making software - for people, by people*

g'day.

i've been making *software* for 33+ years, on 3 continents, as projects of all sizes and levels of impossibility. Seen many *different* terminals, languages, designs, projects, customers, teams, organisations and cultures, and have met even more different *attitudes*.

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So i found that the more interesting and difficult part is.. the *people*, while the technicalities are somehow solvable. Software is just a limited, twisted way of *communicating knowledge* between people, through space and time - and it's people who cause anything. Making software is a game of *cooperation*, now vs future-and-past, exercise in *correct thinking*, with all the participants being *translators* - and *Trust* being the most important feature.

And i found i can successfully *mediate* between the extremes - western and eastern thinking, technical & applied, experts & newbies, gears & art, real & virtual.. And i put *passion* in my work and do *care* for it. i do trust people.. and thus weigh them. i work With, not just For. i fight For, not Against. i do work, not time. Putting toys at github.com/svilendobrev.

Well.. i make (software) projects from ideas, people and software. Be it possible or not, regardless what has to *change* - software, organisation, people, or.. me. As Life is Change..

Shortage of people? No. Inefficient thinking, still trying to store human knowledge about reality in primitive languages. Reality.. is very complex. Complexity is fought with structure. Structure, within knowledge, means languages - specific for the notion, domain, product, project, task, and even people.

i love idea-generating, *nice* software, mentoring, team making, steep changes, cultural diversity, organisational building, improvisation. i can help to *efficiently* make *effective* software, and tune the community and *culture* to allow for it. i make *languages* that talk the patterns of the task. And *attitudes* that empower people. So one can start solving the real issues.

So.. *Hands-on* software mentor, leader, advisor, “playing-trainer”, architect, CTO, hacker... programmer. Friend? Could be. There’s more about me, software and Life at **www.svilendobrev.com**.

An Impossible Dream project? What about?

Personals

- now in *Varna, Bulgaria.* Bulgarian and Australian citizenship
- fluent Bulgarian, Russian, English
- born 1970 Bulgarian, family+kids; sworn non-smoker, mountaineer, biker

Specialties and interests

- the *Team* as live, self-tuning instrument for *translating knowledge* into software; *organisational* patterns, cultures and health ; leadership and empowerment; proximity + communication patterns, de-hierarchization
- *mentoring, teaching,* inside-trenches organisational analysis and coaching... and learning ; philosophy of software
- *knowledge* and technology management, *requirements* engineering, audit + analisys - of code, workflows or organisation
- methodologies, *agile* CrystalClear vs CMMi/formal process; outsourcing + distributed global development; mental gears, *cultural* differences, pair-programming, context-switching, *attention* to detail, selective stupidity
- *making languages*; using general languages as carriers of much higher-level *specific* ones; *generating* code; *self-interpreting* objects; grammars, compilers, interpreters, virtual machines; interfaces, protocols, frameworks and aspects
- *usability* engineering, use-cases; user experience, interaction, interfaces; analysis perspectives - technical + people, end-user + organisational; human-machine systems in general
- *testing* as art; version, configuration and project management, life-cycles, estimation, negotiation, risk and resistance-points; documentation workflows, traceability, trackability; licensing
- *business analysis* in many domains – software itself, media, content/metadata, finance/accounting, HR, chips-design, bureaucracy/paperwork, betting, CAD/CAM, mechanics, physics, banking, hardware, maps, graphics, DTP, simulation
- *modeling, architecture, flows* - data, code, events, *time*; analysis; optimisation; efficient-effective; persistency, databases, bitemporal data+code, durable execution, messaging, semantic relations; sync/async; client-server/ standalone/ distributed
- languages: *python 25y*, C/C++ *25y*, javascript 7y, java 3y, graphql, html/css *25y*; perl make sh; many many more.. from prolog to erlang/clojure to various assemblers and machine languages
- toolkits/frameworks: django flask fastapi react nodejs express ; qt wx gtk kiwi; sqlalchemy, STL; many more
- platforms: linux, android, web, desktop, dos; apache; many compilers, assemblers, .. ; docker
- paradigms: object-oriented, functional, event-, rule-, dependency-driven, markup, behavioral, ..

- persistency: xtdb, couchdb/mongo, sql - sqlite postgresql ; rdf, sparql, key-value; corba
- tools of the trade: vim, linux, vcs: bzr/git/hg/svn/cvs; e2e testing,selenium; Jira,redmine, wikis in general
- my *own* python course (~90+ people in last 10 years), a coding style, methodology, UIs, python clone, tools..
- www as runtime env - service vs library; api-design; digital signatures, smartcards; search, accessibility, multi-linguality
- devOops.. or more. Get job *done*, be part of it - software, hardware, or psychology; fix the dripping tap, machine, drivers or paperwork; teach, hack, negotiate, *find* a way, *fight* for it.. It's all one jazz.. *Engineering*
- *reverse engineering*; search, anonymity; protections; social nets, digital identity
- reflecting, exchanging ideas, having opinions, Do-It-Yourself, repairing stuff
- artistic design and layout; apply knowledge across fields; making toys and playing
- *caring* about what i do. With extreme attention to detail – which assumes freedom + no noise... and nothing fake..

Motto-s and favorite thoughts

- Find a *friend* to be your senses.
- Software is actually *about people*, not about machines.
- *Languages* are your tools. Make them if no suitable ones.
- One can't make decent tool/thing if has never been *user* of it.
- Do not try to outsmart the user.. which can be yourself.
- If you make something usable by idiots, only idiots will use it.
- Association is a great thing - trust your common intuitional sense.
- Trust is the *essence* of software. Machines *trust* 100%, while people.. don't. How much trust or distrust can you handle?
- www is *global* village, anyone at *near-zero* distance.. but never zero. And one needs just that - warm touch - or good kick.
- First rule of Leadership: it's all *your* fault.
- Manager's choice: change *People* or.. *Change* people.
- With time, places *change* people. Other way happens noticeably only while *coming in* - or *switching on*.
- Stop coding Reality into bytes, grow up and empower yourself with *domain-task Specific Languages*.
- Software is a (twisted) way of *communication*. Sometimes to yourself from Tuesday.

Experience

CTO / Chief Architect - eCollect.org, Varna/remote, 2021-Present

• receivables management startup.. FinTech.. ~8-12 ppl software department, remote, 4y-old in-house node.js/vue.js Event-sourcing micro-serviced software.. Somewhat chaotic.. "software-mirrors-the-org".. No more coding (?). Just.. other 90%. Try develop the team.. and "educate" management and other depts. Find out development and system bottlenecks, "buy" time+resources to fix, automate, turn into apps. Play product-owner. Stop everybody-telling-tech-do-that-now. Streamline work, bring reviews, testing, CI/CD, UX studies. Reverse-engineer, visualize event-flow maps. Even architect sometimes..

- acquired recently. New project, more bureaucracy. Completely refactoring the system, for huge volumes - with durable execution and bitemporal data. Some code: py-xtdb-datomic @github..
- Lesson so far - Remote does not help teaming.. in-person meetings once-in-a-while are not enough.

CTO, mentor, team lead, architect, main coder - Resolve,Varna.bg + FleetPal, NJ.us, 2017-2021

• small startup with friends ; Dutch and American customers, *also* friends. One about dental-insurance B2B workflow, other about truck-maintenance housekeeping. Doing all the technical hats.. machinery, product road-maps, frontend and UX, methodology, workflows, team of 3-7. Seeking maximum possible efficiency-per-teammate.. python, django, drf-replaced-with own django-orm-over-graphql, UI as React+Blueprint single page application via browser/editor generative framework. Mentoring 2-3 younger colleagues into better persons. (~ 90k python + 90k javascript and up)

software expert and methodologist, leader of software group .bg - ZMDI / IDT Varna, 2014-2017

• branch of German semiconductors company. Caring for software teams in Varna and Sofia (8 people) and their capabilities and good "health"; representing software perspective in complex projects; mentoring and teaching people from various departments and backgrounds; pushing cultural, methodological and technological improvements - group- or company-wide, helping hands-on. Deeply embedded or application software, from assemblers to python, requirements engineering tools, chip-description and chip-testing tools, functional safety, methodology, organisation, management.

mentor, coach, analyzer – python, teamwork, organisation – Strypes.eu, Sofia, 2014/contract

• Dutch nearshoring company. Doing python courses for 20+ people - beginners, intermediate, advanced, noticed fast-growth pains.. so.. Did a study, interviewing in trenches or management, on ways of work, culture, technology, relations, teaming, pains, funs, etc, and suggested a few changes towards healthier agile patterns, attitudes and culture.

python team mentor – Ericsson software campus, Athlone, Ireland, 2013/contract

• dozen new people, most straight from the uni... to become (python) programmers.. and a real software Team.. in about 4 months. Impossible? depends.. As long as proper mentality gets in, the rest is.. up to them. Maybe i did it. Meanwhile, auditing some core software and translating various APIs into python. (update 2019: they are all seniors now)

architect-maker - distributed personal places+discussion platform - messaging via couchdb. 2012-2013 Varna-Tokyo

• Put data in database. As is. Let it flow wherever, on its own. React on changes. Focus on user-stuff.. Personal and Usability - centralization is a tool, not goal. Two of us - a friend doing iphone app, and me doing architecture, protocols (weird "http-rpc-with-memory" over couchdb replication), the servers+web-app (17k python), rich android app (12k java)

...dreaming - a software house-school, for making real projects and learning by doing so - and other way around. 2012 Varna

• wanna learn? have projects? call. It will be interesting. All software making is actualy *learning* - just noone admits it.. (didn't work. A chicken-and-egg - eventual students want ready+paid projects, companies with projects want ready teams)

senior pythonista, someones.com, Melbourne, Australia, 2012 (short contract)

• social- python-backend-integration framework (FB, twitter, etc. Flask, nose, selenium). in place/team that opposes change.

hands-on CTO/ Dev-Lead/ architect/ all-thats-needed, Woosha.it; 2010-2012 - risk-it-all startup, Amsterdam+Varna

• redefine *search* and *decision* in human terms.. Tech lead, philosophy, analisys, invention; mentoring young entrepreneur

• brightBird.com - movie search+notification *social* service. Match+import metadata, user patterns, group+classify. Architecture, backend design+coding, data handling; 3ppl, 5months; 10k python/django, SQL, SPARQL

• notionery: wild idea- a garden to grow *your personal notions* - remember, learn, express yourself, in your own terms - and translate to and from all else, incl. past versions. Few months of concept digging.. Semantical web5.. Too far fetched

• moodyTV: *content-discovery* platform, many metadata sources; shown IBC2010-Amsterdam. Multi-platform app: Android thick on/off-line, web, desktop/qt; generated api. Personal channels, profiles+suggestions, manual faceted filters, sharing saved filters/searches. (3ppl, 6months, 8k python, 20k java).

mercenary senior dev at Wyplay.com, Marseille, France; 2009 (short contract)

• UI-engine in python, embedded, linux/gentoo, media-player device; medium company, very entangled work / repository structure.. A bit extreme independence - Viva la liberte! - yeah, but without communication, software ain't edible..

owner, Svilen Dobrev Consulting; 2008-... - advisor, methodologist, architect, programmer

• my site (html php css javascript python/generation, shared apache, mod_rewrite)

• desktop end-user client for official Customs.bg B2B document flow and exchange protocols - message threading, templates etc (python, 7k, 4 months, FSMs, soap, XML-signatures, smartcards, windows/gtk)

linuxteam leader, SIStechnology.com, Varna; 2003-2008 – team-lead, architect, methodologist, manager, mentor, programmer

• HOR - enterprise Human Resources + payroll management system, 90k python, sql, wxpython; 8 people 2+years; replace old legacy and represent an *ever-changing*, complicated and entangled legislation and relations, expected product life >10 years – hence max flexibility and expressive power. Domain notions like values and payflows, *bi-temporal* data *and* code, multilingual values,.. made several internal languages. *Leading it all*.. extreme Agile Crystal-Clear methodology; architecting, requirements, mentoring, project-management, inventing, coding..

• STC- *Singapore* Turf Club's betting terminals+kiosks renovation – *global outsourcing* effort; 2 end-user-apps: 130k C++, 15k python, 2k java, 6people, 2+years; the team spent ~6 months overall onsite in Singapore, ~2 in Germany. CORBA, payments, realtime. Being core dev, architect, *team* leader+manager, all relations to other teams - WN-Konstanz, WN-Singapore, STC; difficult cultural mix + communication.. e.g. Requirements gathering via 3 hops which don't talk to each-other. Future-proofing, refactoring, wrapping and code/documentation generation. Most difficult + rewarding project - Hey, my team survived crossing 4 cultures, and "end-users said they like your software"! (upd 2018: 1000+ machines live)

senior software engineer, Vintech, Varna, Bulgaria; 2002-2003

• topological parametric modeling language + control of mechanical technology - in CAM/CAE plant system; python

• graphical 2D backend API from python into C++; fix + wrap equation-solver cassowarypy

senior software analyst, Petrosys, Adelaide, Australia; 2000-2002 - small, fast company (geophysical maps)

• a drawing framework - 2D hierarchy, MVC, polygon-processing, C++,python; visualise GIS map-data from arcSDE

• organisational patterns - success in changing company culture - both as technology and people communication

tech lead/ test lead, Motorola, Adelaide, Australia; 1999-2000 - EDA - multi-cultural env in huge global corp...

• new compiler for analog/mixed-signal Verilog-A/AMS, merge and maintain legacy compilers; testing and automate build; C, C++, sh,perl,make, lex,yacc,pccts; sun hp linux; full waterfall, requirements, autogenerate documentation - framemaker

• tasting another language-culture-continent-society

• learning about software made industrially - "pipelines"+ CMM4, and teaching about software made efficiently

software engineer/consultant, Vintech, Varna, Bulgaria; 1997-1998 - small company in a narrow, chaotic market

• made personalizable *accounting* engine, in *human* terms+documents, user *languages* for reports, templating, operations, access-control. wave-calc. 70k C++ btrieve novell, 3 ppl. Sometimes reworking human-workflows. Still used.

• prototypes of statewide medical record system, doctor's workplace. “obj-oriented” structural documentation flow

sysadmin/ software+accounting analyst, Biochim Bank; 1995-97 - strategical midsize branch of a big state bank

- accounting software - rule-based correctness, ledger conversion, account-scheme on-the-fly-translation, automation
- LAN maintenance - PCs, novell/dos/win/os2, Clipper, C/assembler

lead programmer, Inmeco & Navel, Varna; 1992-1994 - small international companies, naval & military stuff

- Missile-launcher simulators - 3D real-time animated simulation of combat for soldier training - real weapon, overhead projecting on huge screen, airplane/vehicle models, trajectories, trainer workplace; C++, assembler, physics, 3ppl
- large accurate digital maps: make, compress, view, radar/GPS; i386/penpad
- Danube river map+radar – GUI+map technology; prototype for Gabchikovo channel navigation

publisher+programmer, 1991-93 – many books, papers, cards, art and:

- DTP software+Fonts - reverse-engineer, customize, use various DTP systems, make fonts+tools.. make all work in cyrillic

partner, Specialized Intelligent Systems, Varna 1990-92

- with 2 schoolmates: accounting over modems, clipper, C, i86 asm

in university..

- set-based unification and Prolog interpreter - thesis, 500Loc prolog ; Editor in C/asm and other stuff (PC i86)

in school..

- statistical trends graphical analyzer-visualizer ; simple run-length graphics-compression lib (M6502 Basic + asm)

Education

Technical university Varna (VMEI), 1986-1990

- M.Sc. in Electrical Engineering / Computer Science
- advancing course: 5 years taken in 4, twice more disciplines - all excellent

Mathematical High college - Varna (2 MG), 1983-1986

- "advancing education" class of 4 students, 7 years taken in 4, gold medal

Some community projects

- curated collection of audio records of tales, songs, theaters from LPs, CDs, radio.. and all the machinery behind it.. some old frozen version at http://gramofonche.chitanka.info
- making and hosting a community forum of Sladka voda alternative school and supporting the school
- see the code-link below for my open-source software
- do-it-yourself.. the machinery of my site, and my home - www.svilendobrev.com/napravisam
- teaching reverse-engineering/analysis – a few essays – lookup +svd, deadlisting, +fravia

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