Jason Catena

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To produce better code more quickly, I strive consistently to exercise craftsmanship principles, and better tool and automate my process and those around me.

Motorola work history in iDEN, WiMax, and LTE Trial.
http://www.linkedin.com/in/jasoncatena

Design process and architect tool set

Designed and guided evolution of two build systems, for several telecommunications products in three major systems (iDEN, WiMAX, LTE), over 6.5 and 3.5 years of development.

Ported serial build system to parallel make with ElectricAccelerator by Electric Cloud from 2007 to 2009.

Promoted and implemented daily build and continuous integration practices since 1999.

Collecting academic and web discussion explicitly on programming as theory building.

https://dl.getdropbox.com/u/502901/naurtf.pdf

Code and debug

Wrote 90% of all code for each of the two build systems from 1999 to 2009. Root-caused all significant problems and implemented all architectural updates and extensions. Continue to review changes.

Added lex to refactor a special-purpose tool in C-and-expect into a script-driven automation utility, to send commands from WindRiver Linux platform to WindRiver VxWorks and FPGA MMI interfaces.

Wrote in Ruby a tic-tac-toe game which does not lose, and finds forks to force wins when it can. Used the test-driven style to ensure that it meets its requirements and to allow more assured refactoring.

http://github.com/catenate/tictestrue

Rewriting in Java a Perl program I expanded to find signatures of known defects in logs captured from WiMax base stations.

Contributing to the open-source Plan 9 research operating system and Go programming language.

Contributions to Plan 9 port
http://codereview.appspot.com/user/jdc

Fluent in shell scripts, makefiles, and C with lex. Learning Haskell, Ruby, and Go. Familiar with yacc, SQL, C++, UML models, and Java.

Messages to 9fans
http://9fans.net/archive/?q=from:jason.catena&go=Grep

Wrote in 2009 a presentation layer to graph and report key performance indicator statistics, and improve collection within real-time modem software of an LTE 4G base station and server gateway.

Messages to golang-nuts
http://j.mp/7eDOXx

Improved build system and wrote tests for interface between subscriber and base radio in 1998. Implemented Van Jacobsen header compression in the iDEN subscriber unit, and other improvements to the same, from 1994 to 1997.

Manage people and software

My experience with master-craftsman teams.

http://swtools.wordpress.com/2009/04/02/my-experience-with-master-craftsman-teams/

Integrated and reviewed ten years of contributions to two multiple-product build systems, from dozens of team members and hundreds of developers at a dozen sites world-wide.

Designed branching schemes for two dozen parallel branches in a half-dozen concurrent releases for more than 500 engineers at a dozen sites world-wide.

Controlled versions with ClearCase. Tracked defects with Bugzilla, ClearQuest, and DDTs.

Communicate and organize

Technical solutions, writing, and interests.

http://swtools.wordpress.com/
http://www.evernote.com/pub/catena/public/
http://catenate.github.com/

Prototyped second major build system in LaTeX with noweb to create a series of literate programs. These contain both code and documents in one source file, organized for learning and maintenance, and extracted to proper arrangement for execution.

Automatically collected and presented key performance indicators with gnuplot as either real-time data, or a static graph with muted borders, or as a set of sparklines. Minimized marks on data points to observe trends in data, as recommended by Edward Tufte.

Reputation 200 from 18 answers on Stack Overflow. 1386 bookmarks on programming, Haskell, Twitter, programming languages, design, management, and programmers.

http://stackoverflow.com/users/27685/jason-catena
http://delicious.com/swtools

Tufte-influenced Twitter client design

https://dl.getdropbox.com/u/502901/twient.pdf

Research and learn

Prototyped a functional, literate, and aspect-oriented parallel build system, to replace one developed over ten years of practice. Studied academic papers on these techniques to implement new methods of implementing and varying shell scripts and makefiles.

Learning functional idioms by working through examples and exercises in *Real World Haskell*. Updating C-family idioms by working through Go tutorials.

Rewrote recursive and fold versions of Prelude list functions.
https://dl.getdropbox.com/u/502901/haskell.pdf

Member of ACM since 2007. Subscribe to ACM Digital Library.

Completed most graduate work toward MS in Computer Science. Studied advanced topics in concurrent computing systems, distributed computing systems, object-oriented programming languages and environments (C++ and Smalltalk), user interface design, comparative computer architecture, and concurrent programming.

University of Illinois at Chicago
1994–1998

Earned BS in Computer Engineering from The Pennsylvania State University in 1994, and initiation to HKN Epsilon.

Illinois Institute of Technology
1995 and 1996