

# MAXWELL SAYLES

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## FACEBOOK

SEP 2013 – SEP 2021

- Ownership Products (Hack, ES7/React/Relay, GraphQL): Engineering Lead on 3 teams of 11 engineers to build the product suite that manages the ownership life cycle of artifacts produced by Facebook employees. Work directly with PMs, TPMs, design, and content management to set direction and strategy. Work with EMs to hire and grow teams.
- Products for candidate evaluation, new hire, and career growth (Hack, ES7/React/Relay, GraphQL): Engineering Lead on a team of 6 engineers to build the product suite to enable candidate evaluation, employee mobility and growth, and team selection.
- Service auto-scaling and efficiency (Hack, Python, C++11): Engineer from the ground up a service to enable backend service auto-scaling based on load, host capacity, and redundancy.
- Key/Value Storage (C++11, Python, Hack): This is the common Paxos based DHT. Highly available, fault tolerant, persistent, and distributed globally available storage. Design and implement the multi-tenancy service and migrate existing single tenant services.
- Graph indexing framework (Hack, C++11): Engineering Lead for a team of 3 engineers to build the client framework for the graph indexing service at Facebook.
- Cross Site Lead for interviewer training and continuous calibration: Produce and maintain training material, and train others to present this material. Seattle group lead to assess calibrated interviewers who reverse shadow the interviewing process. Operate the interviewer feedback on feedback program to continuously evaluate interviewers and give constructive feedback to the interviewing population.
- Member of Loop Approval and Candidate Debrief: Evaluate candidate screening feedback to establish the interview loop structure. Active participant in the first level hiring committee.

## GOOGLE

FEB 2011 – AUG 2012

- YouTube media player and browser for devices (FLV and MP4 parsing for H.264 and AAC decoding, ActionScript 3, JavaScript, HTML5).
- Face blurring for YouTube video editor and Google maps street view (C++, MapReduce).
- YouTube transcoder backend (Python, C++, and Google Configuration Language).

## STANDARD INTEGRATED ELECTRONICS

NOV 2007 – DEC 2008

- Real time MPEG-4 video re-encoder as a network gateway device (C++).
- E-commerce back end using Moneris for point of sale (C++, PHP).
- Web deployed 3D simulations (C++, Ogre3D).

## SYMANTEC

FEB 2005 – JAN 2007

- Attack Quarantine System: honey pots to ensnare malicious code (VMware, Linux, Perl, and MS-SQL).
- LophtCrack 5: password auditing for Windows LM passwords and Linux MD5 passwords (C++, x86 Assembler).
- Datafeeds: MS-SQL data replication using differential journals, XML, and Web services (C#).
- Threat Management Systems: an early warning system (Web services, C#, MS-SQL).

## NINTENDO OF AMERICA

AUG 1995 – JUN 1999

- *The New Tetris* for the Nintendo 64, released on August 4, 1999.
- *Tetrisphere* for the Nintendo 64, released on August 17, 1997.

## EDUCATION

### UNIVERSITY OF CALGARY

SEP 1999 – MAY 2005, JAN 2008 – MAY 2013

- Master of Science in Computer Science. Focus on computational number theory, with thesis and defense. *Improved Arithmetic in the Ideal Class Group of Imaginary Quadratic Number Fields with an Application to Integer Factoring*.
- Bachelor of Arts with distinction in 2005: majored in Philosophy, with a minor in Religious Studies and Anthropology. Received the medallion for highest academic proficiency (GPA) in the department of Philosophy.

## AWARDS

- 2011 – NSERC CGS-D (\$105,000 CAD) and department research award (\$8,000 CAD) – both awarded but declined.
- 2009 – NSERC CGS-M (\$17,500 CAD), iCORE top-up (\$12,300 CAD), and department research award (\$8,000 CAD).
- 2008 – Teaching award for *Design and Analysis of Algorithms I* (CPSC413) in Fall 2008.
- 2006 – Four A++ awards (\$10,000 CAD) at Symantec.
- 2005 – Award for highest academic proficiency (GPA) in the department of Philosophy at the University of Calgary.
- 2004 – First place (\$3000 CAD) at the Annual Calgary Technology Center Programming Competition.
- 2003 – Rhoda F. Blythe Philosophy Undergraduate Scholarship (\$1800 CAD).
- – Owen Family Scholarship (\$500 CAD).
- 2000 – Jason Lang Scholarship (\$1000 CAD).

## PUBLICATIONS

- *Improved Arithmetic in the Ideal Class Group of Imaginary Quadratic Number Fields with an Application to Integer Factoring*. **M. Sayles**. Master's thesis, University of Calgary, May 2013.
- *SwarmArt: Interactive Art from Swarm Intelligence*. J. Boyd, G. Hushlak, C. Jacob, **M. Sayles**, P. Nuytten. Leonardo. Volume 40, Number 3, June 2007: 248-254.
- *SwarmArt: Interactive Art from Swarm Intelligence*. J. Boyd, G. Hushlak, C. Jacob, **M. Sayles**, P. Nuytten. Proceedings of the 12th ACM International Conference on Multimedia, October 12-14, 2004, New York, NY, USA. ACM Press: 628-635.
- *Internet broadcasting of hockey: a scale prototype*. J. Boyd, **M. Sayles**, L. Olsen, P. Tarjan. SPIE Internet Imaging V, January 2004, Santa Jose, CA: 193-201.
- *Content Description Servers for Networked Video Surveillance*. J. Boyd, **M. Sayles**, L. Olsen, P. Tarjan. ITCC (1) 2004: 798-803.
- *Camera Interaction through CaML Video Information Sensors*. J. Boyd, N. Kendrick, L. Olsen, **M. Sayles**, P. Tarjan. IS 2003 - 13th Annual Canadian Conference on Intelligent Systems: 28.
- *CaML: Camera markup language for network interaction*. **M. Sayles**, X. Wu, J. Boyd. SPIE Internet Imaging IV, Vol. 5018, January 2003, Santa Clara, CA: 248-256.
- *Real-Time Video Phase-Locked Loops*. J. Boyd, **M. Sayles**. ICCV 2001: 742.