

# François-René Rideau

ARCHITECTING THE SOFTWARE DEVELOPER EXPERIENCE

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French national, US permanent resident

## Work Experience

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*2019–2020+* Mutual Knowledge Systems (MuKn.io), Co-Founder and CEO (Cambridge, MA; Ongoing)

*2018–2019* Legilogic.com, Alacris.io, Co-Founder and Chief Architect (Cambridge, MA; Stopped, Dormant)

*2017–2020+* Metafore Hyperpost, Founder and CEO (NYC, NY; Ongoing)

Co-founded four companies to build Blockchain-Agnostic solutions for Decentralized Applications that are portable, scalable, secure, usable, affordable, non-custodial, using advanced programming languages and computer science concepts.

*2016–2017* Bridgewater Associates, Senior Cloud Developer (Wilton, CT; 9 months)

Secure reproducible cloud deployment on Amazon AWS. Refactored the existing build and configuration system using Buildbot, Make, Python, Jsonnet and Terraform; then redesigned it using Scala, Nix, Pants and Terraform.

*2013–2016* Google, Developer Experience Designer (New York, New York; 3 years)

DX Design for Software at Scale. Partook in the deterministic distributed build system `bazel.build`. Refactored the design and implementation (in Java) of its extension language Skylark. Also added GC to the `git` support of the `code` hosting platform.

*2005–2013* ITA Software, Senior Software Engineer (Cambridge, Massachusetts; 8 years)

Airline shopping and reservation (acquired by Google in 2011). Build, test, deployment infrastructure. Schema upgrade and better types for an ORM atop Oracle. Code security audit. Intersystem Messaging. Legacy data migration with a distributed cluster. Port to 64-bit. Free software curation. All in Common Lisp. Managed up to five people.

*2003–2004* CRPGL, Researcher (Luxembourg; 18 months)

Public Research Center. Developed web-based collaborative tools in Common Lisp.

*2000–2001* IDEALX, Consultant (Paris, France; 8 months)

Open Source Engineering Consultancy. Consulted on B2B middleware, real-time high-level languages, secure terminals.

Proved formal correctness (in Coq) of a centralized e-cash payment protocol.

*1997–2000* France Telecom, Research Engineer (Paris, France; 36 months)

Researched under Jean-Bernard Stefani. Experimented with distributed calculi.

## Technical Skills

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*Cybernetics* Interaction design for creative processes. Software development toolchain and team organization. User Experience and Developer Experience. Controlling overall man-machine system complexity to achieve flexibility and maintainability, robustness and security — ultimately end-user satisfaction at sustainable costs.

*Infrastructure* Design and implementation of distributed agent systems, programming languages, operating systems, cryptographic protocols, transactional object persistence, cryptocurrency blockchains, real-time memory allocation, resource management with or without a kernel.

*Operating Systems* System Administration for Linux (NixOS, Debian, RedHat), BSD, Solaris; macOS, Windows.

*Programming Languages* Scheme, OCaml, Javascript, Common Lisp, Racket, Clojure, Scala, Shell, Java, C, Haskell, Agda, Python, Perl, PL/SQL, Smalltalk, C++, Erlang, FORTH, Assembly (x86, 6502, ARM), BASIC, Prolog, etc.

*Blockchain* DApps (including Smart Contracts) on Ethereum, Cardano, Bitcoin Cash, Tezos. Solidity.

*Networking* Distributed programming. Multiparty computations. Firewall, VPN, routing, TCP/IP, DNS, SMTP, etc.

*Special Skills* Formal logic, proofs. Metaprogramming. Object-Oriented, Logic and Functional Programming. etc.

*“Artificial Intelligence”* Search strategies and heuristics, declarative programming, inference engines. Reflection for monitoring and metaprogramming. Basic statistical text analysis, fuzzy logic. Algorithmic complexity, with notable applications to Data compression or PAC-learning. Knowledge bases and data representation. Human-Computer Interaction and software usability.

## Formal Training

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1997–2000 PhD candidate in Computer Science at École Nationale Supérieure des Télécommunications (Paris).

Thesis subject: “the semantics of reflective systems, as applied to building distributed systems”.

Research interrupted to pursue professional opportunities. Completed long afterward but still undefended.

1996–1997 DEA d’Informatique at the ESSI (University of Nice). [Equivalent to Masters in Computer Science]  
+ Teacher in Mathematics in a high-school (Professeur Agrégé).

1992–1996 Student at the École Normale Supérieure (rue d’Ulm, Paris). [Best school for scientific research in France]  
Various university diplomas and titles from examinations and competitive examinations in Mathematics and Computer Science.  
Specialized in the Formal Semantics of Computer Programs under Patrick Cousot.  
Teaching assistant in Computer Science and Mathematics in introductory university-level classes.

1987–1992 High-school then university-level studies at the Lycée Louis-Le-Grand (Paris).  
Baccalauréat C (Maths) 1990. Classes Préparatoires.

## Mission Statement: Contributing Vision to Software Development

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I will study your problem domain and distill its essence in a domain-specific language; around this language I can then design, implement and evolve radically simple solutions that are robust and maintainable, secure and efficient.

I enjoy getting my hands dirty, but first I want to understand where we are going. I will pick the low-hanging fruits first, but as part of a plan to pick all marginally affordable fruits. I will use sound theory to achieve massive practical gains — and avoid predictable pitfalls.

Many development teams have a narrow horizon that leads them to code bloat and bad quality, with diminishing returns and accumulated technical debt. Our team will keep a broad horizon to maintain a sustainable development environment. Many teams are blinded by focus on hardware devices and software artefacts and end up sacrificing the ends to the means; our team will include user experience and developer experience in our designs, and optimize the interactions that matter.

## Miscellaneous

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*Languages* Native FRENCH speaker. Fluent in ENGLISH. High-school SPANISH. Basic VIETNAMESE.

*Hobbies* Maintainer of Common Lisp build tools. Contributor to many free software projects, mostly in Lisp.  
Co-organizer of monthly Lisp meetings. Secretary of the Association of Lisp Users.

Wrote essays and spoke at conferences on Free Software. Wrote essays and spoke at conferences on Economic Liberty.

Previously: Was CTO for an off-shore software development consultancy, <http://meta.ph/or>.

Founded the TUNES project for a free reflective computing system. <http://tunes.org/>

Blogging about Computing at <http://ngnghm.github.io/>, otherwise at <http://fare.livejournal.com/>

Tweeting as @ngnghm (software), @phanaero (cryptocurrencies), @fare (other) — Also, composing songs.

## Select Peer-Reviewed Publications

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- [1] François-René Rideau. Metaprogramming and free availability of sources, January 1999. Translated from the french article “Métaprogrammation et libre disponibilité des sources” published in conference “Autour du Libre 1999”. <http://fare.tunes.org/articles/1199/index.en.html>.
- [2] François-René Rideau and Robert P. Goldman. Evolving ASDF: More Cooperation, Less Coordination. In *International Lisp Conference*, 2010. <http://common-lisp.net/projects/asdf/>.
- [3] François-René Rideau. LIL: CLOS reaches higher-order, sheds identity and has a transformative experience. In *International Lisp Conference*, 2012. <http://github.com/fare/lil-ilc2012/>.
- [4] François-René Rideau. ASDF 3, or Why Lisp is Now an Acceptable Scripting Language. In *European Lisp Symposium*, 2014. <http://github.com/fare/asdf3-2013>.
- [5] François-René Rideau. From Software Creationism to Software Evolutionism. In *Salon des Refusés*, April 2017. <http://github.com/fare/evo2017>.
- [6] François-René Rideau. Climbing Up the Semantic Tower — at Runtime. In *Off the Beaten Track Workshop at POPL*, January 2018. <http://github.com/fare/climbing>.