

Summary

I am an experienced CTO, software engineer and architect with 39 years of experience.

I enjoy providing technical leadership and remaining involved in the development process.

I have led international development teams including remote worker and distributed team contexts.

I have spent my career innovating and developing creative new technologies. I have been employed as a consultant on this basis by both state and federal Australian governments, the Australian Department of Defence, as well as many public and private companies.

I have extensive experience in a wide variety of programming languages and paradigms, development and delivery platforms, technologies, toolkits, and problem domains, and both practical and theoretical knowledge of many areas of computer science.



20 years of experience as CTO of software development companies, both product and service based, including as founder and CTO of software developer 'N-Space' that grew from 3 to 30 people over 4 years, with multiple angel and venture funding rounds.

38 years of customer interaction, requirements gathering, product conceptualization and design, and pre-sales and marketing support.

20 years of experience of remote work in nationally and globally distributed teams.

Experienced international consultant.



30 years of commercial experience with C family languages. Early adopter of both Objective-C and C++. Current experience with C++11, especially new features such as move semantics and lambdas.

20 years commercial experience with :

- Java for both desktop and server applications
- Javascript for both client and server side applications
- Functional programming, now concentrating on Haskell and the functional facilities in Swift and C++.
- Lisp-family languages, including Clojure, Common Lisp and Scheme.

20 years experience and innovation in all aspects of front-end Web development, including Graphic Design, HTML, CSS, and back-end Web development, focussing on REST architectures. Most recently focussed on using ClojureScript and Purescript with React.

5 years commercial experience developing with:

- Ruby, including Ruby-on-Rails
- Smalltalk, both VisualWorks and Squeak/Pharo
- Erlang
- Prolog

5 years of devops experience, currently using Vagrant, Packer, VMWare, Chef and Ansible, primarily in the context of automation for build, test and deployment/packaging of both cross-platform desktop applications as well as distributed enterprise systems.

Experienced using XP/Agile development techniques including TDD, pair programming, short iterations, and user stories as a means of modelling requirements.

Experienced user of SQL, NoSQL and Object-Oriented databases, such as Oracle, PostgreSQL, MySQL, CouchDB, MongoDB, and Versant.

Development on a variety of platforms: Win32, MacOS, Unix, X11, NeXTStep, OS X, iOS, and bare metal/embedded systems.

Experienced designer and implementer of stream-based discrete time reactive and dataflow systems.

Experience with machine-learning techniques, including the development and application of machine-learning toolkits, and the associated feature-extraction tasks.

Experience with ontology/epistemology development, knowledge representation, and automated reasoning.



2012 +	Cincom	SENIOR ENGINEER
	Designed and developed:	
	<ul style="list-style-type: none"> • a dramatic improvement to the VisualWorks Smalltalk UI on OS X, Win32 and X11. • a new technique for UI construction and cross-platform layout control • a UI/model integration framework based on reactive/dataflow techniques. • numerous Swift and F# ancillary test applications to prove the cross-platform compliance of VisualWorks Smalltalk. 	
2011 – 2012	Moveitnet	SENIOR ENGINEER
	Hired as a specialist research consultant, responsible for transitioning an always-available online international transport logistics management system from the Versant Object-Oriented Database to an object-relational environment based on JEE.	
2001 +	Linkuistics	FOUNDER/CTO
	Designer and lead developer of:	
	<ul style="list-style-type: none"> • a suite of educational applications for iOS. • an abstracted cross-platform UI toolkit (Cocoa, Win32, X11), initially targeting Swift, Scheme (Racket), Common Lisp (CCL), and OCaml. This is based on architectures I have been gradually refining for the last 25 years, some of which have been most recently utilized in my work on VisualWorks Smalltalk. • extensions to the “Kinetic” CMS and Workflow management product with a variety of tools written in Scala in a purely functional style. • a GIS-integrated intelligent document authoring, workflow and publication system that allows urban planning departments to design constrained prose documents that can be queried using a geographic document query language to answer specific planning enquiries. • a product for the management of remote and distributed systems, initially in Haskell, later ported to OCaml. • a nationally distributed/replicated curriculum authoring and delivery system, using a mixture of Clojure, Smalltalk and Ruby, including extensions to CouchDB, written in Erlang. • integration of the Clang/LLVM compiler and code generator framework into VisualWorks Smalltalk, enabling methods to be written in C/C++ and dynamically compiled and linked into the running image. • a suite of applications that apply machine learning techniques to the creation of stylistically distinctive performances of sequenced/notated musical phrases. 	
	Principal contributor to the effort to bring Maven 3 support to Clojure. Developed IDE tooling for NetBeans to allow the use of Maven with Clojure on that platform.	

- | | | |
|-------------|--|------------------|
| 1995 – 2001 | N-Space | FOUNDER/CTO |
| | <p>Adapted the core SGML architecture, developed at Metaphor, for web delivery, enabling seamless cross-media delivery, which was used to revolutionize Australia's second-largest annual government publishing project. This project included multiple print and web versions, including a Java version that according to Sun was the first significant use of Java on the web. Converted our technology to use XML, which had just been standardized.</p> <p>Sponsor of webdav.org, and contributor to those specifications, which form the basis of Subversion.</p> <p>Involved in the development of further XML standards such as SAX.</p> <p>Designed and led development of:</p> <ul style="list-style-type: none">• a large CMS and Workflow management product "Kinetic", used by both large (\$1 billion+) and small organizations, as well as government and international clients.• a dependency-algebra-based build support, and versioned artifact tool suite that was used in our primary development infrastructure.• a production-line website development system, written in Scheme, including several Scheme compilers. This allowed us to achieve significant automation and production economies.• an automated provisioning and deployment system for our web hosting facility, which greatly lowered the cost of operations and provided transparent fail-over and automated load. | |
| 1994 – 1995 | Metaphor | SENIOR DEVELOPER |
| | <p>Designed and developed:</p> <ul style="list-style-type: none">• a NeXTStep-based toolset to streamline the asset development process for the SGML publishing architecture originally developed at Boxes Objects Links Design.• a Scheme-based mobile code system for network deployment to touchscreen information kiosks | |
| 1992 – 1994 | Boxes Objects Links Design | FOUNDER |
| | <p>Designed and developed an SGML-based multimedia publishing and cross-platform delivery system that radically changed the economics of CDROM publishing. I demonstrated this technology to Microsoft, who subsequently adopted the same techniques for their multimedia titles.</p> | |
| 1988 – 1990 | Repertoire | FOUNDER |
| | <p>Designed and developed extensions to the Music Publisher application to incorporate real-time music input and sophisticated text-layout linked with notation.</p> | |

1987 – 1988 **Graphic Notes** DEVELOPMENT COORDINATOR

Lead developer of a large music typesetting application “Music Publisher”, written using ObjectPascal/MacApp. This was the first use of MacApp (closely followed by Adobe Photoshop), which was one of the first consumer-platform object-oriented frameworks. Music Publisher was a successful global product used extensively in the production of session charts and educational materials, and included a custom keyboard to speed note entry.

1977 – 1987 **Ceepha Computing** DEVELOPER

Designed and developed:

- a Z80 based midi sequencer, based on a structural model of musical phrases and transformations. Sold both to Universities and performers. Used in a live context by a number of Australia bands in the electro-pop genre during the 80s.
- a Prolog-based accounting system, that was subsequently used for the consulting practice’s accounting requirements.
- systems to integrate handheld stock-taking devices and COBOL ERP systems using C.
- a self-hosted source-code management and program library toolset for COBOL programs.
- a 4GL for business applications that was subsequently used to replace some of our COBOL development.

Maintained and enhanced of a variety of ERP and manufacturing support systems, running on NCR mainframes.



University of Adelaide Honours Computer Science
1991

University of Adelaide BSc. (Ma.) (Computer Science, Philosophy, Music)
1983 – 1987



Email antony.blakey@gmail.com

Skype antonyblakey

Mobile +61 438 840 787



Australian citizen