

MICHAEL L. BRUNDAGE

CONTACT michaelb@qbrundage.com

SKILLS Excellent speaking and technical writing skills.
Expert in C/C++, C#, Java, XML, XQuery, and XSLT.
Adept in Perl, JavaScript, HTML, x86 and PPC assembly, SQL, and many others.
Proficient in Windows, Mac OS, Xbox, and Unix development.
Experienced in the design and development of operating systems, emulators, web sites, programming languages and APIs, collaborative virtual environments, query processors, media codecs, and scientific computing.

EXPERIENCE

Emulation Ninja Nov, 2005 – Present
Xbox Console & Consumer Software Microsoft Corporation

- Responsible for the Xbox 360 kernel and operating system.
- Xbox performance lead.
- Shipped three system updates and four updates to backwards compatibility.
- Implemented MP4 support for Xbox Live Video Marketplace.
- Implemented parts of Zune/Xbox 360 connectivity.

Software Design Engineer May, 2004 – Nov, 2005
Xbox Software Team Microsoft Corporation

- Responsible for major parts of Xbox backwards compatibility, including file systems, networking, Xbox Live, and performance.
- Shipped the Xbox 360.
- Created the Xbox backwards compatibility beta program.
- Wrote the FAQ, customer support articles, and other pages on xbox.com.
- Implemented parts of the Xbox 360 Dashboard and Guide.

Technical Lead Jan, 2002 – May, 2004
WebData XML Team Microsoft Corporation

- Invented the .NET XML query architecture and System.Xml.Query namespace.
- Responsible for Microsoft's XML query optimizer for XQuery and XSLT.
- Shipped SQL Server 2000 & 2005, Visual Studio 2005, Windows XP, and Office 2007.
- Advised many other Microsoft teams and external customers.
- Presented on Microsoft technologies at major industry conferences.

Software Design Engineer Oct, 1999 – Jan, 2002
SQLXML Team Microsoft Corporation

- Responsible for XPath to SQL translation.
- Shipped SQL Server 2000 and four SQLXML updates.
- Prototyped early XQuery functionality.

- EXPERIENCE** **Senior Software Engineer** Sep, 1998 – Sep, 1999
(continued) **NASA Interferometry Science Center (ISC)** Caltech / JPL
- Managed the ISC software development team.
 - Responsible for software supporting the Keck Interferometer in Hawaii and the Space Interferometer Mission, and also contributed to the Spitzer Space Telescope.
 - Implemented terabyte-scale data archives, user interfaces, and numerical algorithms.
 - Created the ISC software development environment and processes.
- Computing Analyst** Jun, 1996 – Sep, 1998
Infrared Processing Analysis Center (IPAC) Caltech
- Responsible for astrophysics simulation software still in use today.
 - Implemented parts of AstroVR, a pioneering and influential early Internet project.
 - Created the IPAC software technology seminar series.
 - Contributed to the 2-Micron All-Sky Survey (2MASS) project.
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BOOKS **XQuery: The XML Query Language**

Michael Brundage.
Addison-Wesley, 2004.

Professional XML Databases

Kevin Williams, Michael Brundage, et al.
Wrox Press, 2000.

**OTHER
PUBLICATIONS**

The Circumstellar Structure of the Class I Protostar TMC-1

Susan Terebey, David Van Buren, Michael Brundage, and Terry Hancock.
The Astrophysical Journal, volume 637, part 1 (2006), pp. 811-822.

Microsoft SQL Server 2000 XML Features

Michael Brundage. TechEd Europe, Barcelona Spain, 2001.

Developing XML-Driven Applications with SQL Server 2000

Michael Brundage, Andrew Conrad.
TechEd Atlanta, GA and TechEd Europe, Barcelona, Spain, 2001.

XML Views in SQL Server 2000

Michael Brundage. XML DevCon Fall, San Jose, CA, 2000.

A Candidate Protoplanet in the Taurus Star Forming Region

Susan Terebey, Dave Van Buren, T. Hancock, D. L. Padgett, and Michael Brundage.
Astrophysical Journal Letters, August, 1998.

10 Micron Search for Cool Companions of Nearby Stars

Dave Van Buren, Michael Brundage, Michael Ressler, and Susan Terebey.
The Astronomical Journal, August, 1998.

Near-infrared Hubble Space Telescope Images of Nearby Protostars

Susan Terebey, Dave Van Buren, T. Hancock, D. L. Padgett, and Michael Brundage.
Bulletin of the American Astronomical Society, Vol. 30, May, 1998.

An Object-Oriented Approach to Radiative Transfer in Arbitrary Media

David Van Buren, Michael Brundage, Susan Terebey.
Bulletin of the American Astronomical Society, Vol. 29, December, 1997.

From the Even Cycle Mystery to the L-Matrix Problem and Beyond

Michael Brundage.
Thesis, University of Washington, 1996.

PUBLICATIONS **AstroVR, An On-line Collaborative Environment for Research in Astrophysics**
(continued) Dave Van Buren, Michael Brundage, Pavel Curtis, and Dave Nichols.
Proceedings of the 1994 ADASS Conference, Baltimore. November, 1994.

EDUCATION Internet Multicast and Multimedia Technologies Feb, 1998
University of California, Los Angeles

M.S. in Mathematics Aug, 1994 – Jun, 1996
University of Washington

B.S. in Mathematics Aug, 1990 – Jun, 1994
Caltech

- Elected Vice President of the incorporated undergraduate student body
- Elected Chairman of the Board of Control (the Honor System executive committee)

AWARDS Microsoft Gold Star 2006

US Patent 7146352, **Query Optimizer System and Method** 2003

Microsoft Gold Star 2003

US Patent Pending 10/601445, **Common Query Runtime System and API** 2003

US Patent Pending 10/601480, **Query Intermediate Language Method and System** 2003

US Patent 6853997, **System and Method for Viewing Relational Data Using a Hierarchical Schema** 2002

NASA Grant NRA-96-10-OSS-055, **A Collaborative Environment for the Space Interferometer Mission** 1996

Caltech Hinrichs Leadership Award (outstanding graduating senior) 1994

Caltech Don Shepard Essay Contest Winner 1993

Caltech Robert Andrews Millikan Scholar (distinguished underclassman) 1992

Caltech Robert Andrews Millikan Scholar (distinguished underclassman) 1991

National Merit Scholar 1990