

Jean Renard Ward: Curriculum Vitae

Jean Renard Ward
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Independent technical and software development consultant, February 1993 to present.
Currently doing business as Rueters-Ward Services.
Prior to 1993, various positions as noted.

2008

2006/2007/2008

Expert witness for plaintiff in major patent case: gesture-based user interface in the Tablet PC. Testimony in three depositions and at trial in San Diego Federal Court. Case decided favorably at trial.

2007

Bluesocket Inc., Burlington Massachusetts

Software development and engineering program management for a distributed wireless network controller product with integrated security features. Lead engineer for certification of engineering process and product.

2005/2006:

Principal engineer, Cylant Security.

Computer security technology: Multi-platform product for malware/virus detection, including techniques of behavioral analysis. Two patent filings on novel techniques (violation of invariant conditions) for detection of rootkits and malware

2004:

Expert witness for defendant in patent case: optical pattern technology for stylus digitizers (Anoto). Testimony at deposition, case resolved favorably by summary judgment prior to trial based on expert reports.

2003/2004:

Digimarc, Burlington Massachusetts

Consultant: Application of PKI technology in the fabrication and production of secure identity documents and manufactured items: one patent filing on a unique application of PKI signatures in manufacturing and production of security documents such as passports.

2002/2003:

Three projects involving secure Web development in high-availability, high-performance applications, and international certification of a life-critical annunciation system.

Prior-art technical research for defendants in two patent cases involving pen-computing and on-line character recognition technology.

2001:

Expert witness report for defendant for a patent case involving hardware controllers for digitizing tablets (WINTAB). Case resolved by settlement.

1999/2002: (Staff: PKI Systems Architect)

CertCo Incorporated, Cambridge Massachusetts

Distributed web applications involving proprietary PKI in e-commerce: patent filing on a novel infrastructure model for distributed authentication involving cryptographic and other authentication means for electronic signing. Development in ColdFusion, Tomcat/JSP, and C++.

1998 to 1999: Siemens-Nixdorf USA, LCP Business Unit, Burlington Massachusetts

Custom PKI/security technology for electronic licensing of documents and materials distributed without restriction over the public Internet.

1996 to 1998: Electronic parcel service (“e-parcel”), Division of Mitsubishi Electronics America, Newton Massachusetts

Group Leader: Development and implementation of secure, encrypted proprietary document and software delivery systems for automatic dissemination and delivery over the public internet.

1995/1996: FAX International, Burlington Massachusetts

Development and implementation of an automatic Email-to-FAX gateway, with routing of fax document traffic over a private TCP/IP network

1994/1995: Digital Equipment Corporation, VXT Division, Marlboro, Massachusetts

Development of a WindowsNT-based graphics/applications terminal product using ALPHA technology.

1994: DMR Group, Eastern USA Division, Waltham, Massachusetts

Design and implementation of a proprietary application scripting language, associated compilers, debuggers, and tools.

1993/1994: Phoenix Technologies Ltd., PAGE Division Cambridge, Massachusetts

Implementation of firmware for an embedded controller for a multiple-language, multiple-resolution network printer.

1993: Termiflex Corporation, Merrimac, New Hampshire

Compiler, linker, interpreter, and related tools for an object-based programming language for applications in a hand-held industrial terminal.

1992, 1993:

Session chair and instructor for tutorial seminars on touchscreen/pen interfaces and digitizer technology at the 1992 and 1993 annual conferences for the Society for Information Display.

Consultant to various clients on digitizer technology and pen computing interfaces

1991 to 1993: Developer, Slate Corporation, Newton Massachusetts
Development of innovative tablet and pen computing applications products for the Microsoft PenWindows and GO/PenPoint pen-computing operating systems.
Company representative and technical co-chair of an industry standardization effort ("JOT") for electronic ink data format and compression for storage, interchange, and embedding in "foreign" data formats and applications.

1989 to 1991: Senior Software Architect, Wang Laboratories, Lowell Massachusetts
Lead developer for digitizer and controller/driver software to provide enhanced functionality to a portable computer as part of the "Freestyle" digitizer-based computer applications family.
Company technical representative to early Pen Windows discussions with Microsoft. Design of an electrostatic tablet digitizer. Patents on novel pen-based UI involving virtual devices.

1987 to 1989: Director of Software Engineering, Teledyne/TAC, Woburn Massachusetts
Group manager for software development for computer-controlled industrial automation for IC wafer fabrication and testing.

1982 to 1987, Director of Software/Lead Engineer, Pencept Inc., Waltham Massachusetts
Group leader for Pencept's handwriting recognition, and pen-computing digitizers and controllers. Patents on handwriting input to standard applications, data filtering for digitizers, related technologies.

1987:

Panel organizer: "Issues Limiting the Acceptance of User Interfaces Using Gesture Input and Handwriting Character Recognition", CHI+GI Conference on Human Factors in Computing Systems and Graphics Interface, Toronto.

1986:

Organized multi-company presentation to PHIGS standardization committee on pen computing and handwriting-recognition input devices.

1981 to 1982. Member of Technical Staff, Telesys Systems Corporation, Chelmsford, Massachusetts
Software and application design for an enhanced light-pen-digitizer interface controller for a family of CAD application products; integration of high-level functions in the controller with the associated graphics controller

1979 to 1982, Senior Development Engineer, Pencept / Penverter Partners, Waltham, Massachusetts
Original development of the Pencept technology. The implementation put all functionality, including character recognition algorithms, as part of an extended device driver / daemon for the DEC RSX-11M operation system.

1977 to 1979, Senior Engineer/Analyst, Dynatron Corporation, Waltham, Massachusetts
Early work as consultant for Penverter Partners. Also design and implementation of specialized software tools and automated test systems for real-time digital audio signal processing.

1974 to 1977, Senior Systems Programmer, Data General Corp., Westboro Massachusetts
Development and implementation of compilers for a variety of programming languages, and related technologies.

1973 to 1974, Programmer, Bolt Beranek and Newman, Cambridge, Massachusetts
Member of the development staff for an early object-based programming system for graphical applications in biomedical and pharmaceutical research

Partial list of publications as author or co-author

"UNIX as a development tool for a non-UNIX microprocessor", CommUNIXations, Vol. V No. 5, August/September 1985.

"Interactive Recognition of Handprinted Characters for Computer Input", IEEE Computer Graphics and Applications, Vol. 5 No. 9, September 1985.

"Under the Hood: Digitizer Technology and Pen Computing", BYTE Magazine, January, 1993.

"Digitizer technology: Performance characteristics and the effects on the user interface", IEEE Computer Graphics and Applications, April 1987.

"Issues in the validity of testing protocols and criteria for on-line recognition of handwritten text", presented at the 3rd International Conference on Handwriting and Applications, July 1987.

"A model for variability effects in hand-printing, with implications on the design of on-line character recognition systems", IEEE Trans. on Systems, Man, and Cybernetics, May 1988.

"One view of outstanding problems in handwriting recognition systems", 3rd International Conference on Handwriting Recognition and Applications, Montreal, Quebec, April 1990.

"Pen computing -- fad or revolution?," Information Display, pp. 14-19, March 1992.

Partial list of published patent applications

US Published Patent Application 20030163686, August 28, 2003
"System and method for ad hoc management of credentials, trust relationships and trust history in computing environments"

US Published Patent Application 20050132194, June 16, 2005
"Protection of identification documents using open cryptography"

US Published Patent Application 20070067623, March 22, 2007
"Detection of system compromise by correlation of information objects"

US Published Patent Application 20070169192, June 19, 2007
"Detection of system compromise by per-process network modeling"

Partial list of granted patents

US 4,534,060

"Method and apparatus for removing noise at the ends of a stroke"

Inventor: Ward, Jean R.

Date: Aug. 6, 1985

US 4,562,304

"Apparatus and method for emulating computer keyboard input with a handprint terminal"

Inventors: Ward, Jean R.; Nilssen, Andrew H.

Date: Dec. 31, 1985

US 4,608,658

"Method and apparatus for removing noise at the ends of a stroke caused by retracing"

Inventor: Ward, Jean R.

Date: Aug. 26, 1986

US 5,148,155

"Computer with tablet input to standard programs"

Inventors: Ward, Jean R.; Martin, Patricia A.; Huntington, II, Jonathan T.; McNally, J. Michael; Barrett, David M.

Date: Sep. 15, 1992

US 5,491,495

"User interface having simulated devices"

Inventors: Ward, Jean R.; Barrett, David M.; Martin, Patricia A.; Mokoski, Christopher D.

Date: Feb. 13, 1996

European Patent Application EP693724A1

"A method of reconfiguration of a simulated keyboard device in a computer system"

Inventors: Ward, Jean R.; Barrett, David M.; Martin, Patricia A.; Mokoski, Christopher D.

Date: Jan. 24, 1996