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Strengths

- Over twenty years of information technology and security experience including research, development and management.
- XML and Industry Standards Committees (MISMO, HL7, ASTM, OMG).
- Patent Review and Expert Witness.
- Representing paper documents electronically.
- Technologies for electronic/digital signatures.
- Strategic XML consulting and training in the health care, publishing and financial services.
- Project management of large, federally funded research projects.
- Natural Language Processing (NLP), linguistic and foreign language products
- Print to electronic document strategies and analysis, text retrieval and structured reporting.

Significant Projects

- **Financial Services System Reviews** for regulatory, investor and legal compliance.
- **Electronic Mortgage Standardization** projects for Fannie Mae, Wells Fargo, First American, Freddie Mac, and MISMO.
- **Patent Review and Expert Witness** for a patent litigation suit for DocuSign, Inc.
- **National electronic Note (eNote) Registry** project for MERS and MISMO.
- **Instructor for CampusMBA** of the Mortgage Banker's Association.
- **SGML and XML** project, Massachusetts Medical Society, consulting and software development to **integrate XML into the print publishing** process of the *Journal Watch* and the *New England Journal of Medicine* publications.
- **Co-chair, ASTM E31.25**, providing leadership for uses of XML technologies for health care paper documents in the medical transcription industry.
- **Co-chair, Health Level 7 (HL7)**, XML Special Interest Group and Structured Document Technical Committee, providing leadership for uses of XML technologies within the health care industry.
- **Principal investigator**, system architect, and project manager of "Open, Voice-Enabled, Structured Medical Information", a two-year research grant from the National Institute of Standards and Technology (NIST) Advanced Technology Program (ATP). **\$2,000,000 project initiated in 1995. Co-principal investigator** on the "Physician's Assistant for Continuous Transcription" a large vocabulary continuous speech system that electronically transcribed medical data in a structured format. **\$1,900,000 project initiated in December 1997.**
- **Consultant and project lead for on-line dictionary and thesaurus** as well spelling correction, hyphenation, and readability software products.

Education

Smith College, Northampton, MA

B.A., Mathematics

Patents

1. "Method and Apparatus for Text Analysis" Patent Number 04773009, Houghton Mifflin

Experience

Treliant Risk Advisors
1250 24th St. NW Suite 250
Washington, DC 20037

Senior Director Technology Strategies and Information Management Services

(August 2010-present)

Extensive background in financial services and the health care industries providing advice to mortgage banking lenders, technology vendors, GSEs, insurance companies, private and public health care organizations and automotive finance companies.

Over twenty-five years experience with paper to electronic strategies, information security and integrity policies, industry standardization, integration issues with legacy systems, electronic and digital signatures, business-to-business information exchange, electronic mortgages (eMortgages), health care information systems, record retention policies, systems for text processing, indexing and structuring and patent applications and litigation. Extensive experience in electronic and digital signatures and in residential and commercial loan technology platforms from origination and closing to vaulting and servicing. Major contributor to the mortgage banking industry standards organization, MISMO. Designed the eMortgage specifications for creation, signing and archival of electronic loan documents, electronic closing systems, the exchange loan information between systems and developed the XML architecture for the MERS® eRegistry. In March of 2006, was designated the Mortgage Banking Magazine a "MISMO All-Star."

Special expertise with developing strategies for transitioning print documents to electronic presentations while utilizing industry standards. Patent research, review and expert witness.

Magnolia Technologies, LLC
3 Chickadee Lane
Truro, MA 02666-0968

President

(December 1998-present)

XML and SGML consulting for the mortgage banking and health care industries. Consulting services include high-level XML/SGML strategies, training, project planning, DTD/Schema/Schematron architecture and authoring, software development and testing, XML industry standards (MISMO, HL7, ASTM, OASIS, W3C), technologies for electronic documents, electronic and digital signatures and XSL stylesheet development.

Major contributor to MISMO and architect and system designer of many of the eMortgage specifications: the SMART Document, the eMortgage Package and the XML architecture for the MERS® eRegistry. Projects include the design and architecture for MISMO XML transactions for electronic closing rooms and the development of the Version 3 MISMO standards for enveloping and interface architectures. Leading author of the use of SOAP in electronic mortgage messages and past Chair of the MISMO Enveloping/ Interface Architectures workgroup.

eMortgage projects with large lenders, vendors and GSEs have included:

- Solving integration issues with legacy systems and imaging
- Designing conversion processes from proprietary information to industry standard representations
- Review of eMortgage applications, vendor offerings and documents to MISMO specifications
- Review of MERS electronic Registration/eVaulting systems to investor requirements
- Design of eClosing rooms with electronic signatures
- Assistance with implementations and requirements for tamper evident signatures, MERS eRegistry and investor delivery
- In-house training to help staff understand the requirements for eMortgages.

A representative client list of Magnolia Technologies includes: Fannie Mae, Freddie Mac, Open Health Data, Wells Fargo, MERS, First American, the Massachusetts Medical Society, Putnam Investments, The Medical Records Institute, and WebMD.

xmlexpress, inc.
8 Central Street
Arlington MA 02476

CEO and CTO
(May 1999-March 2001)

Chief Executive and Technical Officer of **xmlexpress, inc.** a software development firm. **xmlexpress** offered patent pending software that reduced the need for human intervention when converting information to XML. The products offered by xmlexpress converted HTML web pages, text and Microsoft Office documents into XML. Presenter at the Springboard Mid-Atlantic Women's Venture Capital Forum in 2000.

iTrust
101 South Park
San Francisco CA 94107
(January -December 1998)
Chief Scientist and Vice President of Research

SGML/XML architect of iTrust's product line. Researched, reviewed, recommended and prototyped new and emerging technologies for: Java, SGML/XML, DSSSL, parsing, SGML groves, software agents, natural language processing, speech recognition, digital signature, scanning and OCR. Responsibilities included developing and maintaining the iTrust DTDs and style sheets, auto-generation of DTDs and DSSSL style sheets for initial product release. Researched and recommended emerging XML and Java products. Promoted business development

and strategic partnerships. Analyzed interface development for HL7. Actively participated in HL7 and ASTM standards organizations.

**Scansoft, formerly Lernout and Hauspie Speech Products,
formerly Kurzweil Applied Intelligence
52 Third Avenue
Burlington MA, 02108**

(1995-1998) *Principal Investigator and Project Manager*

Principal investigator, system architect, and project manager of two federally funded research grants. "Open, Voice-Enabled, Structured Medical Information", was a two-year research grant awarded from the National Institute of Standards and Technology (NIST) Advanced Technology Program (ATP) and was funded in 1995. The project focus was to integrate discrete speech recognition, structured reporting, SGML/XML and databases. A second project, "Physician's Assistant for Continuous Transcription" (PHACTS) was a two-year research grant also awarded from NIST ATP and was funded in 1997. The focus of PHACTS was to integrate continuous speech recognition, natural language processing and SGML/XML. The end result of the projects was a voice-enabled structured medical reporting prototype.

Prior to assuming responsibility for the NIST ATP projects, led the design and architecture of the port from MSDOS to Microsoft Windows of the VoicedMed product line, a voice-enabled structured reporting system. Responsibilities included the GUI design, re-use of the existing knowledge base representations, integration of SGML, and usability and human factors.

**Lightbridge Inc., formerly Credit Technologies, Inc.
281 Winter Street
Waltham, MA 02145**

(1993- 1995) *Manager of Software Development*

Full project responsibility including technical contribution for a new software development product to automate the sales process for cellular professionals. Conducted market research and field interviews to generate system requirements and graphical user interface for the cellular sales process. Researched new technologies for mobile professionals (PDAs, pen-based computers, wireless modems and scanners). Wrote the product definition, functional specification and project plan.

(1989 - 1991) *Senior Software Development Engineer*

Individual contributor for the expert system module of an on-line credit decision client/server product. Responsible for maintaining, optimizing and upgrading the system and its interface to other components. Major design projects included adding a business credit decision system to the consumer model, statistical analysis tools and a policy maintenance program.

Houghton Mifflin Company
1 Memorial Drive
Cambridge, MA 02142

*Lead Software Development
Engineer*

(1984-1993)

Technical contributor and supervisor. Responsible for the design, development and release of the Reference Engine (on-line access to textual data in SGML format such as *The American Heritage Dictionary, Roget's Thesaurus and Almanacs*). Team member for the CorrecText grammar correction system (grammar correction system included in Microsoft Word since 1987). Responsible for the design, implementation and maintenance of three modules: sentence parsing, pattern matching, syntactical grammar checking. Frequently provided sales and technical support for all products. Individual efforts included integration of parts of the grammar correction system into a readability analysis product (Patented). Project engineer for porting all C products from the UNIX and MS-DOS platforms to VAX/VMS and the Macintosh OS.

Community Service

Vice Chair, Finance Committee, Town of Truro, 2007-present
Board Member, Friends of Menotomy Rocks Park, 1999-2005
Board Member, The New England Women's Fund, 2001-2003

Testimony

"XML and Healthcare", *Testimony to the National Committee on Vital and Health Statistics*, Department of Health and Human Services, Washington D.C. March 1999

Standards Organizations

- Contributor, Version 3 of the Mortgage Industry Standards Organization (MISMO) Standard for the 2010 HUD Settlement Statement
- Contributor, Version 3 of the Mortgage Industry Standards Organization (MISMO) Standard including integration of SOAP/WS
- Contributor, Architect and Editor, electronic Mortgage Closing Interface Transactions (eMCIT), MISMO (2005-2008)
- Contributor and Editor, The SMART Document Specification and Implementation Guide, MISMO (2001-present)
- Contributor and Editor, The eMortgage Package Specification and Implementation Guide, MISMO (2001-present)
- Contributor and XML Architect, The MERS® eNote Registry and Implementation Guide, MISMO (2003-2004)
- Co-chair, Health Level 7 (HL7) XML Special Interest Group and Structured Document Technical Committee (January 1997 -2001)
- Co-chair, ASTM Committee E31 on Healthcare Informatics, subcommittee 25 on XML Standards to Address Content and Structures of Medical Record Documents (November 1998 - 2002)

Papers and Publications

Sokolowski R, "What's SMART About eTitle Documents?", *Title News*, September/October 2005 Vol. 84 No. 5, American Land Title Association

Sokolowski R. Dudeck, J., "XML and its Impact on Content and Structure in Electronic Health Care Documents", *Proceedings of the AMIA 1999 Annual Symposium*, November 1999, Washington, D.C., American Medical Informatics Association.

Sokolowski R., "XML Makes its Mark", *Journal of AHIMA*, November-December 1999, American Health Information Association, 70/10, p. 21.

Sokolowski R., "Expressing Healthcare Objects in XML", *Proceedings of the Eighth IEEE International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises*, June 1999, Stanford, California, IEEE Computer Society Press