

# Thomas J. MacTavish

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## Professional Experience:

Chief Design Officer, entigenlogic, Schaumburg, IL April 2018 to present  
Established a design research and strategy practice for an emerging technology company focused on natural language processing and understanding. Also, I am a member of their technology advisory committee.

Research Assistant Professor, Institute of Design (ID), Chicago, IL August 2011 to present  
Conducting seminars, workshops, and research in Interaction Design. Current courses taught include: Interaction Design for Embedded Devices, Immersive Systems, History of Interaction Design, Persuasive Interaction Design, and Interaction Design Workshops. I am an active member in the worldwide Persuasive Technology research community.

Visiting Associate Professor, Institute of Design (ID), Chicago, IL August 2008- August 2011  
Developed curriculum for interaction design and persuasive design research and developed and conducted the courses listed above.

Vice President and Director, Motorola Labs, Human Interaction Research Lab, Schaumburg, IL June 1999-May 2008  
Responsibilities included strategic and operational accountability for directing labs at three principle locations (Phoenix, Schaumburg, and Shanghai) that were focused on inventing human/computer interaction technologies that could be used in Motorola product lines. I was responsible for an annual budget of \$10 to \$12M with 79 full time employees and 60 interns in three Class A office facilities with various specialized laboratories. Also, I directed research strategies for teams located in other Motorola research laboratories (Sydney, Basingstoke)

Vice President, NCR Human Interface Technology Center, Atlanta, GA July 1992 to June 1999  
Responsibilities included strategic and operational accountability for directing the research lab focused on inventing human/computer interaction technologies that could be used in NCR product lines. This center transformed itself from a research organization to a professional services group using their research technologies for core value creation.

Director of Engineering, NCR Systems Engineering-Utrecht November 1987 to June 1992  
Responsible for a 100-person engineering workforce focused on communications software, hardware, and radio frequency transceiver development. This is the team that created spread spectrum technology that drove the ubiquitous 802.11 standard that we know as "Wi-Fi."

Product Manager, Dayton, OH June 1986 to Oct 1987  
Responsible for wide area network telecommunications software products that connected IBM mainframe computers with NCR point of sales systems. This was a profit and loss accountable position.

System and Software Development Management positions at various NCR facilities in Clemson, SC, Millsboro, DE Nov 1978 to May 1986

## Papers/Books Published:

1. Jaime Rivera and Tom MacTavish, "Research through provocation: a structured prototyping tool using interaction attributes of time, space and information" in The Design Journal, An International Journal for All Aspects of Design, Volume 20, 2017 - Issue sup1: Design for Next: Proceedings of the 12th European Academy of Design Conference, Sapienza University of Rome, 12-14 April 2017, DOI: 10.1080/14606925.2017.1352902
2. MacTavish, T. and Basapur, S, Editors, Proceedings of the 10th International Conference on Persuasive Technology, June 3-5, 2015, Chicago, IL, USA
3. "Structured Controlled Reflexivity Prototyping as a Way to Improve the Design of Persuasive Technologies," 9th International Conference on Persuasive Technology, 2014. Padova, Italy, May 2014, Adjunct Proceedings.
4. Design Integrations, Chapter 6, "The Synthesis of Design, Technology, and Business Goals" 2009
5. "Intelligent Interaction: Adapting Device Capabilities to User Goals", was available online at [http://www.motorola.com/mot/doc/6/6115\\_MotDoc.pdf](http://www.motorola.com/mot/doc/6/6115_MotDoc.pdf), 2008
6. Personalization: Reducing Complexity for Easier More Intuitive Experiences, was available online at [http://www.motorola.com/mot/doc/6/6462\\_MotDoc.pdf](http://www.motorola.com/mot/doc/6/6462_MotDoc.pdf), 2007

7. "Design Information Framework (DIF) Knowledge Management System: Bridging Viewpoints for Interactive System Design", Eui-Chul Jung, Keiichi Sato, Yong Chen, Xiaoshan He, Tom MacTavish, Deborah Cracchiolo in Proceedings for Human Computer Interaction International Conference, Las Vegas, NV 2005
8. Driver Performance Improvement through the Driver Advocate: A Research Initiative toward Automotive Safety, Don Remboski, Judy Gardner, Motorola Automotive and Industrial Electronics Group David Wheatley, Joshua Hurwitz, Motorola User-Center Research Lab; Tom MacTavish, Robert "Mike" Gardner, Motorola Human Interface Lab in Proceedings for Convergence 2000 Conference, Detroit, Michigan
9. "Mobile Human/Computer Interaction" in *Wireless Communications, The Future* by William Webb, John Wiley & Sons, 2007, Pg 79-82
10. Motorola Board of Directors Quarterly Technology Highlights Report, Editor, 2004-2006
11. Human Interaction Research, Monthly Newsletter, Contributing Editor, 2000-2008

## Patent Related:

Motorola Human Interaction Strategy Technology Patent Committee, Exec Sponsor and Reviewer

## Three Awarded Patents

- Method for Leveraging In-Vehicle Resources, US 6,721,635 B2
- Method for Modification of Vehicular Navigation Information, US 6,636,799 B2
- Method and apparatus for providing feedback of vocal quality to a user US 8,019,050

## Industry Awards

- October 2007, Motorola Innovation Conference, "Big Ideas for Innovation" Top Ranked Program for OCR Bi-Lingual Talking Dictionary
- October 2007, Consumer Electronics World digital weekly selects the ROKR E6 for HWR experience
- September 2007, Technology Breakthrough Award, Motorola China Innovation Award for Voice UI, Fingerwriting, Handwriting, and Business Card Reader technologies.
- October 2006, Wall Street Journal Asia Innovation Award – finalist, Business Card Read.
- September 2006, Chicago Sun-Times Innovation Award, Finger Writing Recognition
- October 2005, WSJ Asia Technology Innovation Awards, Gold Award for FingerWriting Recognition
- 2005, Search Mobile Product of the Year (for A780 User Interaction)

## Professional contributions

- a. Persuasive Technology, Annual Conferences
  1. Scientific Program Committee Member 2010-present
  2. Best Paper Selection Committee 2012, 2018
  3. Session Moderator 2012 - present
  4. Panel Member/reviewer for Doctoral Consortium 2014
  5. Panel Member/speaker on the future of Persuasive Technology, 2014
  6. Organizing Chair, Annual Conference held in Chicago, 2015
- b. Design and Emotion International Conference
  1. Paper Review Committee Member 2010, 2012, 2014, 2016
- c. Design and Emotion Society, Chicago Chapter
  1. Participant, presenter, and host for monthly meetings – Sep-Dec 2010
- d. International Association of Societies of Design Research (IASDR)
  1. Paper Review Committee Member 2011-2013

## Education:

Master of Arts, School of Information, University of Michigan  
 Master of Arts, Department of English, University of Iowa  
 Bachelor of Arts, English/French, Central Michigan University

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Office Hours: Mon and Tuesday 10:00am to 12:00pm

Phone Number 1.847.668.5292

Fax Number:

Website: N/A

Area(s) of expertise: Interaction Design, Human/Computer Interaction

Area(s) of Research: Behavioral Design, Persuasive Technologies

Selected Publications: See Resume

Books: N/A

Professional Societies and/or Memberships: Association of Computing Machinery

Selected Awards/Honors: See Resume

Selected Projects:

Grants: N/A

Patents: 3

Method for Leveraging In-Vehicle Resources, US 6,721,635 B2

Method for Modification of Vehicular Navigation Information, US 6,636,799 B2

Method and apparatus for providing feedback of vocal quality to a user US 8,019,050

Community Service: N/A

Editorial Boards: N/A

Professional Activities:

International Conference on Persuasive Technology, Scientific Committee

Affiliations