D A N O D E L L , P h . D . , C P E

SUMMARY

- Blending research, ergonomics, user experience, mechanical engineering, and human-computer interaction skills to create device interactions that are desirable, effective, and make people smile.

RELEVANT SKILLS

- Expert at designing experiments and applying qualitative and quantitative research and analysis tools to answer relevant research questions. Led more than 100 studies.
- Creative thinker with 7 awarded patents and more than 20 patent disclosures.
- Team leader and facilitator with the ability to reframe problems and generate successful solutions.
- Expert in ergonomic factors that drive physical and mental comfort, fatigue, and injury risk and use of this knowledge to design innovative form factors.
- Designer of human-device interfaces with experience in multitouch, haptic, and bimanual interfaces.
- Engineer of parts in CAD for production via short-run and full-scale production processes (DFM).

PROFESSIONAL EXPERIENCE

Synaptics *Principal User Experience Researcher* **11/**2012 – present

- Deliver compelling applications for new computer input technologies
- Inform the design of new products to provide excellent user experiences
- Evaluate prototypes and execute research to identify opportunities for improvement
- Present new concepts to internal and external customers
- Generate intellectual property
- Build strategic roadmaps for new product lines
- Responsible for all aspects of the ThinTouch user experience
- Synaptics global hackathon winner January 2013

Nokia Research Center *Principal Researcher* **2/**2012 – lab closure, 9/2012

- Generated intellectual property and created prototypes that embodied and validated new concepts.
- Designed and executed high-quality research with a focus on producing peer-reviewed publications.
- Evaluated new technologies and found forward-looking applications for them.
- Transferred information, concepts, and designs to product teams to improve products.

Microsoft Corp. *User Experience Researcher/ Design Ergonomist* **10/**2004 – 1/2012

- Generated the concepts for the Sculpt Ergonomic Desktop and pitched the products to get them on the roadmap
- Led UR for Surface tablets, MS's first computer hardware - defined smart cover layout, improved usability to insure good input experience, provided ergonomic information to enhance tablet design.
- Improved the Win8 soft keyboard design and the 'thumbability' of the interface.
- Led User Experience development through entire lifecycles from insights-driven concept incubation through to refined manufacturing. Shipped 20 products plus over 30 concept explorations.
- Moved the ergonomics state-of-the-art forward and incorporated these advances into Microsoft's award winning Natural keyboards and mice. Leveraged the knowledge from Natural products to improve comfort across all products. This work yielded the worldwide best selling wired keyboard, the Natural Ergonomic Keyboard 4000, winner of the HFES User Centered Design Award.
- Informed and refined gestural multi-touch devices and interfaces (e.g. the Arc Touch mouse).
- Drove product research to inspire innovation, evaluate opportunity, inform design, and assess performance using various User Research techniques, including: contextual inquiry, focus groups, conjoint analysis, surveys, OOBE, usability testing, emotive measures, performance measures, etc.
- Delivered 3-year product strategy plans and roadmaps. Advocated for user focus at decision points while understanding different viewpoints to provide holistic solutions. Ensured that products were delightful and delivered lasting user value in addition to shelf appeal.
- Created, standardized, and improved research processes to improve project cost, time, and output.
- Managed teams and projects to deliver successful products on time and in budget.
- Served as the face of Microsoft ergonomics in the press.

UC-Berkeley *Graduate Student Researcher* 1999 – 2004

- Designed and built a new bimanual computer workstation with novel interaction techniques based on tenets of ergonomics, HCI, and mechanical design.
- Evaluated bimanual system performance through a series of human-based experiments.
- Served as Graduate Student Instructor for 'High-Tech Product Design and Rapid Manufacture.'

Icon Health and Fitness *Mechanical Design Engineer* 1996 – 1999

- Designed exercise equipment through full cycle – from concepts, solid models and prototypes, though to release prints, BOMs, and full production. Utilized skills in DFM / DFA to reduce costs.

EDUCATION

- Ph.D., MS, Mechanical Engineering, UC Berkeley: 2004
    - Major: Design, Minors: Manufacturing and Business - Management of Technology cert.
- BS, Mechanical Engineering, University of Utah: 1995
- Board Certified Professional Ergonomist (CPE) - #1511

PROFESSIONAL POSITIONS AND AFFILIATIONS

- **President** – Puget Sound Human Factors and Ergonomics Society 2008 – 2010
- **Director** – Office Ergonomics Research Committee 2004 – 2012
- **Member** – Human Factors and Ergonomics Society, Association for Computing Machinery, American Society of Mechanical Engineers, Tau Beta Pi, Phi Eta Sigma

SELECTED PUBLICATIONS

Young, J, Trudeau, M, Odell, D, Marinelli, K, Dennerlein, J (2012) Touch-screen tablet user configurations and case-support tilt affect head and neck flexion angles , Work, 41 (1), pp.81-91
Asundi, K, Odell, D, Luce, A, Dennerlein, J (2012) Changes in posture through the use of simple inclines with notebook computers placed on a standard desk , Applied Ergonomics, 2012 Mar, 42(2), pp. 400-7
Asundi, K, Odell, D (2011) Effects of keyboard keyswitch design: A review of the current literature ,Work 39(2) 151-9
Odell, D, Lee, D (2010) Redesigning the keyboard spacebar can improve wrist posture while typing , PREMUS 2010
Asundi, K, Odell, D, Luce, A, Dennerlein, J (2010) Notebook computer use on a desk, lap and lap support: effects on posture, performance, and comfort , Ergonomics, Volume 53, Issue 1 January 2010 , pages 74-82

Houwink, A, Oude Hengel, K, Odell, D, Dennerlein, J, (2009) Providing ergonomic instructions enhances the biomechanical improvements of an alternative computer mouse design. Human Factors, 51(1): 46 -55.

Rempel, D, Nathan-Roberts, D, Chen, BY, Odell, D (2009) The effects of split keyboard geometry on upper body postures. , Ergonomics, Volume 52, Issue 1 January 2009 , pages 104 – 111

Kimmerly, L, Odell, D (2009) Children and computer use in the home: Workstations, behaviors, and parental attitudes , Work: A Journal of Prevention, Assessment and Rehabilitation, Vol 32, Number 3, pages 299-310

Odell, D, Johnson, P, (2007), Evaluation of a Mouse Designed to Improve Posture and Comfort , WWCS 2007

Odell, D, Barr, A, Goldberg, R, Chung, J, Rempel, D, 2007 Evaluation of a dynamic arm support for seated and standing tasks: a laboratory study of electromyography and subjective feedback , Ergonomics, V. 50, #4, pp. 520-535

The Importance of Ergonomic Input Devices in the Workplace (The Scope of Computer-Related Repetitive Strain Injuries and Methods for Their Prevention) , Microsoft white paper, 2005

Odell, D, Davis, R, Smith, A, Wright, P, Toolglasses, Marking Menus, and Hotkeys: A Comparison of One and Two-Handed Command Selection Techniques , Graphics Interface, 2004, May 17-29, pp. 17-24

Winner of the 2003 Literati Club Highly Commended Paper Award
Ahn, S, Montero, M., Odell, D, Roundy, S, and Wright, P, 2002, Anisotropic Material Properties of Fused Deposition Modeling (FDM) ABS, Rapid Prototyping Journal, Vol. 8, Number 4, pp. 248-257