

## References

- ADLER, P.S. and WINOGRAD, T. (1992). The usability challenge. In: P.S. Adler and T.A. Winograd (eds.), *Usability: turning techniques into tools*. Oxford: Oxford University Press.
- ANDRIOLE, S. and ADELMAN, L. (1995). *Cognitive Systems Engineering for User-Computer Interface Design, Prototyping and Evaluation*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- APPLE (1987). *Human Interface Guidelines: the Apple desktop interface*. CA: Addison-Wesley.
- APPLE (1989). *HyperCard Stack Design Guidelines*. Wokingham: Addison-Wesley.
- BAILEY, R.W. (1996). *Human Performance Engineering: designing high quality, professional user interfaces for computer products, applications and systems*. 3rd Edition. New Jersey: Prentice-Hall.
- BAILEY, R.W., ALLAN, R.W. and RAIELLO, P. (1992). Usability testing vs. heuristic evaluation: a head-to-head comparison. *Proceedings of the Human Factors Society 36th Annual Meeting, 1992, 1, 409-413*. Human Factors Society.
- BARCLAY, P. (1986). Human Factors in Design: dialogue design standards. ICL Technical Publication R50213/01. Letchworth: ICL Printing Services.
- BARNARD, P.J. (1987). Cognitive resources and the learning of human-computer dialogues. In: J.M. Carroll (ed.), *Interacting Thought: cognitive aspects of human-computer interaction*. London: MIT Press.
- BASTIEN, J.M.C. and SCAPIN, D.L. (1992). A validation of ergonomic criteria for the evaluation of human-computer interfaces. *International Journal of Human-Computer Interaction, 1992, 4(2), 183-196*.
- BASTIEN, J.M.C. and SCAPIN, D.L. (1995). Evaluating a user interface with ergonomic criteria. *International Journal of Human-Computer Interaction, 1995, 7(2), 105-121*.
- BASTIEN, J.M.C., SCAPIN, D.L. and LEULIER, C. (1996). Looking for usability problems with the ergonomic criteria and with the ISO 9241-10 dialogue principles. In: M.J. Tauber, V. Bellotti, R. Jeffries, J.D. Mackinlay and J. Nielsen (eds.), *Common Ground: CHI '96 conference proceedings. Conference Companion (Interactive Posters)*. ACM conference on human factors in computing systems, Vancouver, April 1996. Association For Computing Machinery.
- BASTIEN, J.M.C., SCAPIN, D.L. and LEULIER, C. (1999). The ergonomic criteria and the ISO/DIS 9241-10 dialogue principles: a pilot comparison in an evaluation task. *Interacting with Computers, 1999, 11(3), 299-322*.
- BEVAN, N., KIRAKOWSKI, J. and MAISSEL, J. (1991). What is usability? In: H.J. Bullinger (ed.), *Human Aspects in Computing: design and use of interactive systems and work with terminals*. Proceedings of the 4th international conference on human-computer interaction (INTERACT), Stuttgart, September 1991. Vol. 1. (Series: Advances in Human Factors / Ergonomics, No. 18A). Amsterdam: Elsevier Science Publishers B.V.
- BIAS, R. (1991). Walkthroughs: efficient collaborative testing. *IEEE Software, September 1991, 8(5), 94-95*.
- BIAS, R.G. and MAYHEW, D.J. (eds.) (1994). *Cost-justifying Usability*. Boston: Academic Press.
- BODART, F. and VANDERDONCKT, J.M. (1993). Expressing guidelines into an ergonomical style guide for highly interactive applications. In: S. Ashlund, K. Mullet, A. Henderson, E. Hollnagel, and T. White (eds.), *INTERCHI '93: bridges between worlds*. Adjunct Proceedings. INTERACT '93 and CHI '93 Conference on human factors in computing systems. Amsterdam: IOS Press.

- BODART, F. and VANDERDONCKT, J.M. (1995). Using ergonomic rules for evaluation by linguistic ergonomic criteria. In: Y. Anzai, K. Ogawa and H. Mori (eds.), *Symbiosis of Human and Artifact: human and social aspects of human-computer interaction*. Proceedings of the 6th international conference on human-computer interaction (HCI International '95), Tokyo, July 1995. Vol. 2. (Series: Advances in Human Factors / Ergonomics, No. 20B). Amsterdam: Elsevier Science Publishers B.V.
- BRODBECK, F.C., ZAPF, D., PRÜMPER, J. and FRESE, M. (1993). Error handling in office work with computers: a field study. *Journal of Occupational and Organizational Psychology*, 1993, **66**, 303-317.
- BROWN, C. M. (1988). *Human-Computer Interface Design Guidelines*. New Jersey: Ablex Publishing Corporation.
- BROWN, C. M., BROWN, D. B., BURKLEO, H. V., MANGELSDORF, J. E., OLSEN, R. A., and PERKINS, R. D. (1983). *Human Factors Engineering Standards for Information Processing Systems* (LMSC-D877141). Sunnyvale, CA: Lockheed Missiles and Space Company. [Cited in Smith & Mosier 1986.]
- CARD, S.K., MORAN, T.P. and NEWELL, A. (1980). The keystroke-level model for user performance time with interactive systems. *Communications of the ACM*, **23**, 396-410.
- CARD, S.K., MORAN, T.P. and NEWELL, A. (1983). *The Psychology of Human-Computer Interaction*. London: Lawrence Erlbaum Associates.
- CARROLL, J.M. (1991). Introduction: the Kittle House manifesto. In: J.M. Carroll (ed.), *Designing Interaction: psychology at the human-computer interface*. Cambridge: Cambridge University Press.
- CARROLL, J.M. (1997). Human-computer interaction: psychology as a science of design. *International Journal of Human-Computer Studies*, 1997, **46**, 501-522.
- CHRISTIE, B., SCANE, R. and COLLIER, J. (1995). Evaluation of human-computer interaction at the user interface to advanced IT systems. In: J.R. Willson and E.N. Corlett (eds.), *Evaluation of Human Work: a practical ergonomics methodology*. 2nd Edition. London: Taylor & Francis.
- CLEGG, C., WARR, P., GREEN, T., MONK, A., KEMP, N., ALLISON, G. and LANSDALE, M. (1988). *People and Computers: how to evaluate your company's new technology*. Chichester: Ellis Horwood Ltd.
- COCKTON, G. and LAVERY, D. (1999). A framework for usability problem extraction. In: M.A. Sasse and C. Johnson (eds.), *Human-Computer Interaction - INTERACT '99*. Proceedings of the 7th IFIP TC.13 international conference on human-computer interaction, Edinburgh, August-September 1999. Amsterdam: IOS Press.
- COLE, I., LANSDALE, M. and CHRISTIE, B. (1985). Dialogue design guidelines. In: B. Christie (ed.), *Human Factors of Information Technology in the Office*. Chichester: John Wiley & Sons.
- CONNELL, I.W. (1991). *An Observational Study of Three Public Access User Interfaces: London Underground and British Rail ticket vending machines*. Design Evaluation Project for MSC in User Interface Design, London Guildhall University. Completed October 1991. Unpublished manuscript.
- CONNELL, I.W. (1993). *Simulation of a Public Access Hypermedia System*. Design Solution Project for MSC in User Interface Design, London Guildhall University, September 1993. Unpublished manuscript.
- CONNELL, I.W. (1998). Error analysis of ticket vending machines: comparing analytic and empirical data. *Ergonomics*, 1998, **41(7)**, 927-961.
- CONNELL, I.W. and HAMMOND, N.V. (1999). Comparing usability evaluation principles with heuristics: problem instances versus problem types. In: M.A. Sasse and C. Johnson (eds.), *Human-Computer Interaction - INTERACT '99*. Proceedings of the 7th IFIP TC.13 international conference on human-computer interaction, Edinburgh, August-September 1999. Amsterdam: IOS Press.

- COX, K. and WALKER, D. (1998). *User Interface Design*. 2nd Edition. New York: Prentice-Hall.
- CUOMO, D.L. and BOWEN, C.D. (1992). Stages of user activity model as a basis for user-system interface evaluations. *Proceedings of the Human Factors Society 36th Annual Meeting, 1992, 2, 1254-1258*. Human Factors Society.
- CUOMO, D.L. and BOWEN, C.D. (1994). Understanding usability issues addressed by three user-system interface evaluation techniques. *Interacting with Computers, 1994, 6(1), 86-108*.
- DAVIS, G.D. and SWEZEY, R.W. (1983). Human factors guidelines in computer graphics: a case study. *International Journal of Man-machine Studies, 1983, 18, 113-133*.
- De SOUZA, F.L., LONG, J.B. and BEVAN, N. (1990). Types of error and difficulty in using human-factors guidelines: the case of interface menu design. In: E.J. Lovesey (ed.), *Contemporary Ergonomics 1990*. Proceedings of the Ergonomics Society 1990 Annual Conference. London: Taylor & Francis.
- DEC (1986). *SUS - A "quick and dirty" Usability Scale*. Created by John Brooke, User Information Architecture AD Group, Digital Equipment Co. Ltd. Reading: Digital Equipment Co.
- DENLEY, I., HEDMAN, L.R., HILL, B., WHITFIELD, A., PAPADOPOLOUS, K., CLARKE, A. and HINE, N. (1993). Usability principles for service design. In: P.F. Byerley, P.J. Barnard and J. May (eds.), *Computers, Communication and Usability: design issues, research and methods for integrated services*. Amsterdam: Elsevier Science Publishers B.V.
- DESURVIRE, H.W. (1994). Faster, cheaper !! Are usability inspection methods as effective as empirical testing ? In: J. Nielsen and R.L. Mack (eds.), *Usability Inspection Methods*. New York: John Wiley & Sons.
- DESURVIRE, H.W. and THOMAS, J.C. (1993). Enhancing the performance of interface evaluators using non-empirical usability evaluation methods. *Proceedings of the Human Factors and Ergonomics Society 37th Annual Meeting, 1993, 2, 1132-1136*.
- DESURVIRE, H.W., KONDZIELA, J.M. and ATWOOD, M.E. (1992). What is gained and lost when using evaluation methods other than empirical testing. In: A. Monk, D. Diaper and M.D. Harrison (eds.), *People and Computers VII*. Proceedings of HCI '92, York, September 1992. British Computer Society Conference Series 5. Cambridge: Cambridge University Press.
- DESURVIRE, H.W., LAWRENCE, D. and ATWOOD, M. (1991). Empiricism versus judgement: comparing user interface evaluation methods on a new telephone-based interface. *ACM SIGCHI Bulletin, October 1991, 23(4), 58-59*.
- DIX, A., FINLAY, J., ABOWD, G. and BEALE, R. (1998). *Human-Computer Interaction*. 2nd Edition. London: Prentice-Hall.
- DUMAS, J., SORCE, J. and VIRZI, R.A. (1995). Expert reviews: how many experts is enough ? *Proceedings of the Human Factors and Ergonomics Society 39th Annual Meeting, 1995, 228-232*.
- DUMAS, J.S. and REDISH, J.C. (1993). *A Practical Guide to Usability Testing*. Norwood, NJ: Ablex.
- DUTT, A., JOHNSON, H. and JOHNSON, P. (1994). Evaluating evaluation methods. In: G. Cockton, S.W. Draper and G.R.S. Weir (eds.), *People and Computers IX*. Proceedings of HCI '94, Glasgow, August 1994. Cambridge University Press.
- ENGEL, S.E. and GRANDA, R.E. (1975). *Guidelines for Man/Display Interfaces* (Technical Report TR 00.2720). Poughkeepsie, NY: IBM. [Cited in Smith & Mosier 1986.]
- FOLEY, J.D. and VAN DAM, A. (1982). *Fundamentals of Interactive Computer Graphics*. Reading, MA: Addison-Wesley.
- GALITZ, W.O. (1985). *Handbook of Screen Format Design*. 2nd Edition. Amsterdam: North-Holland.

- GARDINER, M.M. and CHRISTIE, B. (1987) (eds.), *Applying Cognitive Psychology to User Interface Design*. Chichester: John Wiley & Sons.
- GARZOTTO, F., MAIMETTI, L. and PAOLINI, P. (1995). Hypermedia design, analysis and evaluation issues. *Communications of the ACM, August 1995*, **38(8)**, 74-86.
- GEORGE, H. (1995). *The Good Usability Handbook*. London: McGraw-Hill.
- GERRHARDT-POWALS, J. (1996). Cognitive engineering principles for enhancing human-computer performance. *International Journal of Human-Computer Interaction*, **1996**, **8(2)**, 189-211.
- GODDARD (1992). *Human-Computer Interface Guidelines*. Prepared for the Data Systems Technology Division, Software and Automated Systems Branch / Code 522, Goddard Space Flight Center.
- GOULD, J.D. (1988). How to design usable systems. In: M. Helander (ed.), *Handbook of Human-Computer Interaction*. Amsterdam: Elsevier Science Publishers B.V. (North-Holland).
- GOULD, J.D. and LEWIS, C.L. (1983). Designing for usability - key principles and what designers think. In: A. Janda (ed.), *Human Factors in Computing Systems*. ACM SIGCHI and Human Factors Society conference proceedings, Boston, December 1983. (Special issue of the SIGCHI Bulletin). New York: ACM Press.
- GOULD, J.D. and LEWIS, C.L. (1985). Designing for usability: key principles and what designers think. *Communications of the ACM*, **1985**, **28(3)**, 300-311.
- GRAMMENOS, D., AKOUMIANAKIS, C. and STEPHANIDIS, C. (2000). Integrated support for working with guidelines: the Sherlock guideline management system. *Interacting with Computers*, **2000**, **12**, 281-311.
- GRAY, W.D. and SALZMAN, M.C. (1998). Damaged merchandise? A review of experiments that compare usability evaluation methods. *Human-Computer Interaction*, **1998**, **13(3)**, 203-261.
- HAMMOND, N. and MCKENDREE, J. (1998). *Interactive Psychology: the PSYCLE* workbook. Oxford: Blackwell Publishers.
- HAMMOND, N., GARDINER, M.M., CHRISTIE, B. and MARSHALL, C. (1987). The role of cognitive psychology in user-interface design. In: M.M. Gardiner and B. Christie (eds.), *Applying Cognitive Psychology to User Interface Design*. Chichester: John Wiley & Sons.
- HAMMOND, N., HINTON, G., BARNARD, P., MACLEAN, A., LONG, J. and WHITEFIELD, A. (1984). Evaluating the interface of a document processor: a comparison of expert judgement and user observation. In: B. Shackel (ed.) (1985), *Human-Computer Interaction-INTERACT '84*. Proceedings of the first IFIP conference on human-computer interaction. Amsterdam: Elsevier Science Publishers B.V. (North-Holland).
- HASSENZAHL, M. (2000). Prioritising usability problems: data-driven and judgement-driven severity estimates. *Behaviour and Information Technology*, **2000**, **19(1)**, 29-42.
- HCI RN (HCI Resource Network) Jobs Index. <http://www.hcitrn.com/jobs/index.html>
- HECKEL, P. (1984). *The Elements of Friendly Software Design*. Warner Books.
- HENNINGER, S. (2000). A methodology and tools for applying context-specific usability guidelines to interface design. *Interacting with Computers*, **2000**, **12**, 225-243.
- HERTZUM, M. and JACOBSEN, N.E. (1999). The evaluator effect during first-time use of the cognitive walkthrough technique. In: H.-J. Bullinger and J. Ziegler (eds.), *Human-Computer Interaction: ergonomics and user interfaces*. Proceedings of the HCI International '99 conference, Vol. 1, 1063-1067. London: Lawrence Erlbaum.
- HERTZUM, M. and JACOBSEN, N.E. (2001). The evaluator effect: a chilling fact about usability evaluation methods. *International Journal of Human-Computer Interaction*, **2001**, **13(4)**, 421-443.

HIX, D. and HARTSON, H.R. (1993). *Developing User Interfaces: ensuring usability through product & process*. Chichester: John Wiley & Sons.

HOLTZBLATT, K. and JONES, S. (1993). Contextual inquiry: a participatory technique for system design. In: D. Schuler and A. Namikawa (eds.), *Participatory Design: principles and practices*. Hillsdale, NJ: Lawrence Erlbaum Associates.

HOWELL, D.C. (1997). *Statistical Methods for Psychology*. 4th Edition. Belmont, California: Duxbury Press.

IANNELLA, R. (1994). Heuristic user interface evaluation: three case studies of dialog design. In: S. Howard and Y.K. Leung (eds.), *Proceedings of OZCHI '94*, the CHISIG annual conference on human-computer interaction, Melbourne, November-December 1994.

IANNELLA, R. (1995). hyperSAM: a management tool for large user interface guideline sets. *SIGCHI Bulletin*, April 1995, **27(2)**, 42-45.

IBM (1992). *Object-Oriented Interface Design: IBM Common User Access guidelines*. IBM.

ISO 9241-10 (1996). *Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs)*. Part 10: Dialogue principles. EN ISO 9241-10: 1996. Brussels: European Committee for Standardisation (CEN).

ISO 9241-11 (1998). *Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs)*. Part 11: Guidance on usability. EN ISO 9241-11: 1998. Brussels: European Committee for Standardisation (CEN).

JACOBSEN, N.E. and JOHN, B.E. (2000). *Two Case Studies in Using Cognitive Walkthrough for Interface Evaluation* (CMU Technical Report No. CMU-CS-00-132). Pittsburgh, PA: Carnegie Mellon University.

JACOBSEN, N.E., HERTZUM, M. and JOHN, B.E. (1998a). The evaluator effect in usability studies: problem detection and severity judgements. *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting*, 1998, 1336--1340. Human Factors and Ergonomics Society.

JACOBSEN, N.E., HERTZUM, M. and JOHN, B.E. (1998b). The evaluator effect in usability tests. In: C-M. Karat and A. Lund (eds.), *Making the Impossible Possible: CHI 98 conference proceedings*. Summary (Late-Breaking Results). ACM conference on human factors in computing systems, Los Angeles, April 1998. New York: ACM Press.

JEFFRIES, R. and DESURVIRE, H. (1992). Usability testing vs. heuristic evaluation: was there a contest? *SIGCHI Bulletin*, October 1992, **24(4)**, 39-41.

JEFFRIES, R., MILLER, J.R., WHARTON, C. and UYEDA, K.M. (1991). User interface evaluation in the real world: a comparison of four techniques. In: S.P. Robertson, G.M. Olson and J.S. Olson (eds.), *Reaching Through Technology: CHI '91 conference proceedings*. ACM conference on human factors in computing systems, New Orleans, April-May 1991. New York: Addison-Wesley.

JOHN, B.E. and MARKS, S.J. (1997). Tracking the effectiveness of usability evaluation methods. *Behaviour & Information Technology*, 1997, **16(4/5)**, 188-202.

JOHN, B.E. and MASHYNA, M.M. (1997). Evaluating a multimedia authoring tool. *Journal of the American Society for Information Science*, 1997, **48(11)**, 1004-1022.

JOHNSON, P. and NEMETZ, F. (1998). Towards principles for the design and evaluation of multimedia systems. In: H. Johnson, L. Nigay and C. Roast (eds.), *People and Computers XIII*. Proceedings of HCI '98. London: Springer.

JORDAN, P.W. (1998). *An Introduction to Usability*. London: Taylor & Francis.

KARAT, C-M. (1994). A comparison of user interface evaluation methods. In: J. Nielsen and R.L. Mack (eds.), *Usability Inspection Methods*. New York: John Wiley & Sons.

- KARAT, C-M., CAMPBELL, R. and FIGGEL, T. (1992). Comparison of empirical testing and walkthrough methods in user interface evaluation. In: P. Bauerfeld, J. Bennett and G. Lynch (eds.), *CHI '92 Conference Proceedings: striking a balance*. ACM conference on human factors in computing systems, Monterey, California, May 1992. Reading, MA: Addison-Wesley.
- KARAT, J. (1997). User-centered software evaluation methodologies. In: M. Helander, T.K. Landauer and P. Prabhu (eds.), *Handbook of Human-Computer Interaction*. 2nd Edition. Amsterdam: Elsevier Science B.V.
- KELLEY, T. and ALLENDER L. (1995). Why choose ? A process approach to usability testing. In: Y. Anzai, K. Ogawa and H. Mori (eds.), *Symbiosis of Human and Artifact: human and social aspects of human-computer interaction*. Proceedings of the 6th international conference on human-computer interaction (HCI International '95), Tokyo, July 1995. Vol. 2. (Series: Advances in Human Factors / Ergonomics, No. 20B). Amsterdam: Elsevier Science Publishers B.V.
- KIERAS, D. (1997). A guide to GOMS model usability evaluation using NGOMSL. In: M. Helander, T.K. Landauer and P. Prabhu (eds.), *Handbook of Human-Computer Interaction*. 2nd Edition. Amsterdam: Elsevier Science B.V.
- KIERAS, D. and POLSON, P.G. (1985). An approach to the formal analysis of user complexity. *International Journal of Man-Machine Studies*, 1985, 22(4), 365-394.
- LANDAUER, T.K. (1991). Let's get real: a position paper on the role of cognitive psychology in the design of humanly useful and usable systems. In: J. M. Carroll (ed.), *Designing Interaction: psychology at the human-computer interface*. Cambridge: Cambridge University Press.
- LANDAUER, T.K. (1995). *The Trouble With Computers: usefulness, usability and productivity*. Cambridge, MA: MIT Press (Bradford Books).
- LEE, W.O. (1998). Analysis of problems found in user testing using an approximate model of user action. In: H. Johnson, L. Nigay and C. Roast (eds.), *People and Computers XIII*. Proceedings of HCI '98. London: Springer.
- LEWIS, C., POLSON, P., WHARTON, C. and RIEMAN, J. (1990). Testing a walkthrough methodology for theory-based design of walk-up-and-use interfaces. In: J.C. Chew and J. Whiteside (eds.), *Empowering People: CHI '90 conference proceedings*. ACM conference on human factors in computing systems, Seattle, April 1990. (Special issue of the SIGCHI Bulletin). Seattle: Addison-Wesley.
- LEWIS, J.R. (1993). Problem discovery in usability studies: a model based on the binomial probability formula. *Proceedings of the Fifth International Conference on Human-computer Interaction*, 1993, 1, 666-671.
- LEWIS, J.R. (1994). Sample sizes for usability studies: additional considerations. *Human Factors*, 1994, 36(2), 368-378.
- LIM, K.H., BENBASAT, I. and TODD, P.A. (1996). An experimental investigation of the interactive effects of interface style, instructions, and task familiarity on user performance. *ACM Transactions on Computer-Human Interaction*, March 1996, 3(1), 1-37.
- LONG, J. (1989). Cognitive Ergonomics and Human-Computer Interaction. In: J. Long & A. Whitefield (eds.), *Cognitive Ergonomics and Human-Computer Interaction*. Cambridge: Cambridge University Press.
- LONG, J. and WHITEFIELD, A. (1989). *Cognitive Ergonomics and Human-Computer Interaction*. Cambridge: Cambridge University Press.
- MACK, R. and MONTANIZ, F. (1994). Observing, predicting and analyzing usability problems. In: J. Nielsen and R.L. Mack (eds.), *Usability Inspection Methods*. New York: John Wiley & Sons.
- MACK, R.L. and NIELSEN, J. (1994). Executive summary. In: J. Nielsen and R.L. Mack (eds.), *Usability Inspection Methods*. New York: John Wiley & Sons.

MACLEOD, M. (1992). *An Introduction to Usability Evaluation*. National Physical Laboratory report DITC 102/92, commissioned by the Information Technology Division of the Department of Trade and Industry in support of *Usability Now!*, the DTI technology transfer programme in human-computer interaction. Teddington, Midsx: National Physical Laboratory.

MAGUIRE, M. (1982). An evaluation of published recommendations on the design of man-computer dialogues. *International Journal of Man-Machine Studies*, 16, 237-267.

MARSHALL, C., NELSON, C. and GARDINER, M.M. (1987). Design guidelines. In: M.M. Gardiner and B. Christie (eds.), *Applying Cognitive Psychology to User Interface Design*. Chichester: John Wiley & Sons.

MAYHEW, D.J. (1992). *Principles and Guidelines in Software User Interface Design*. New Jersey: Prentice-Hall.

MICROSOFT (1995). *The Windows Interface Guidelines for Software Design*. Microsoft Press.

MIL-STD-1472C, Revised (1983). *Military Standard: Human Engineering Design Criteria for Military System, Equipment and Facilities*. Washington, DC: Department of Defence. [Cited in Smith & Mosier 1986.]

MILLER, J.R. and JEFFRIES, R. (1992). Usability evaluation: science of trade-offs. *IEEE Software*, September 1992, 9(5), 97-102.

MOLICH, R. (1994). Preventing user interface disasters. *Behaviour & Information Technology*, 1994, 13(1&2), 154-159.

MOLICH, R. and NIELSEN, J. (1990). Improving a human-computer dialogue. *Communications of the ACM, March 1990, 33(3)*, 338-348.

MOLICH, R., BEVAN, N., CURSON, I., BUTLER, S., KINDLUND, E., MILLER, D. and KIRAKOWSKI, J. (1998). Comparative evaluation of usability tests. *Proceedings of the Usability Professionals Association 1998 Conference*, 189-200. UPA.

MOLICH, R., THOMSEN, A.D., KARYUKINA, B., SCHMIDT, L., EDE, M., van OEL, W. and ARCURI, M. (1999). Comparative evaluation of usability tests. In: *CHI '99 Conference Proceedings: the CHI is the limit*. Extended Abstracts (Panels). ACM conference on human factors in computing systems, Pittsburgh, May 1999. New York: ACM Press.

MONK, A.F. (1998). Experiments are for small questions, not large ones like "What usability evaluation method should I use?" Commentaries on "Damaged Merchandise?". *Human-Computer Interaction*, 13, 263-323.

MONK, A.F., WRIGHT, P., HABER, J. and DAVENPORT, L. (1993). *Improving Your Human-Computer Interface: a practical technique*. (British Computer Society Practitioner Series). London: Prentice-Hall.

MOSIER, J.N. and SMITH, S.L. (1986). Application of guidelines for designing user interface software. *Behaviour and Information Technology*, 1986, 5(1), 39-46.

MULLER, M.J., MCGILARD, A., BELL, B., DOOLEY, S., MEISKY, L., MESKILL, J.A., SPARKS, R. and TELLAM, D. (1995). Validating an extension to participatory heuristic evaluation: quality of work and quality of work life. In: I. Katz, R. Mack and L. Marks (eds.), *Human Factors in Computing Systems: mosaic of creativity*. CHI '95 Conference Companion (Interactive Posters). ACM conference on human factors in computing systems, Denver, May 1995. New York: Association for Computing Machinery.

MURPHY, E.D. and MITCHELL, C.M. (1986). Cognitive attributes: implications for display design in supervisory control systems. *International Journal of Human-Computer Studies*, 1986, 25, 411-438.

NICKERSON, R.S. and LANDAUER, T.K. (1997). Human-computer interaction: background and issues. In: M. Helander, T.K. Landauer and P. Prabhu (eds.), *Handbook of Human-Computer Interaction*. 2nd Edition. Amsterdam: Elsevier Science B.V.

NIELSEN, J. (1989). Usability engineering at a discount. In: G. Salvendy and M.J. Smith (eds.), *Designing and Using Human-Computer Interfaces and Knowledge-Based Systems*. Amsterdam: Elsevier Science Publishers B.V.

NIELSEN, J. (1990a). Big paybacks from 'discount' usability engineering. *IEEE Software*, May 1990, **7(3)**, 107-108.

NIELSEN, J. (1990b). *Hypertext and Hypermedia*. San Diego: Academic Press.

NIELSEN, J. (1990c). Paper versus computer implementations as mockup scenarios for heuristic evaluation. In: D. Diaper, G. Cockton, D. Gilmore and B. Shackel (eds.), *Human-Computer Interaction-INTERACT '90*. Proceedings of the third IFIP international conference on human-computer interaction, Cambridge, UK, August 1990. Amsterdam: Elsevier Science Publishers B.V. (North-Holland).

NIELSEN, J. (1990d). Three medium-sized hypertexts on CD-ROM. *ACM SIGIR Forum*, **24(1)**, 2-10.

NIELSEN, J. (1990e). Traditional dialogue design applied to modern user interfaces. *Communications of the ACM, October 1990*, **33(10)**, 109-118.

NIELSEN, J. (1992). Finding usability problems through heuristic evaluation. In: P. Bauerfeld, J. Bennett and G. Lynch (eds.), *CHI '92 Conference Proceedings: striking a balance*. ACM conference on human factors in computing systems, Monterey, California, May 1992. Reading, MA: Addison-Wesley.

NIELSEN, J. (1993). *Usability Engineering*. Boston: Academic Press.

NIELSEN, J. (1994a). Enhancing the explanatory power of usability heuristics. In: B. Adelson, S. Dumais and J. Olson (eds.), *CHI '94 Conference Proceedings: celebrating interdependence*. ACM conference on human factors in computing systems, Boston, April 1994. New York: ACM Press.

NIELSEN, J. (1994b). Estimating the number of subjects needed for a thinking aloud test. *International Journal of Human-Computer Studies*, 1994, **41**, 385-397.

NIELSEN, J. (1994c). Guerrilla HCI: using discount usability engineering to penetrate the intimidation barrier. In: R.G. Bias and D.J. Mayhew (eds.), *Cost-Justifying Usability*. Boston: Academic Press.

NIELSEN, J. (1994d). Heuristic evaluation. In: J. Nielsen and R.L. Mack (eds.), *Usability Inspection Methods*. New York: John Wiley & Sons.

NIELSEN, J. (1994e). Usability inspection methods. In: C. Plaisant (ed.), *CHI '94 Conference Proceedings: celebrating interdependence*. Conference Companion (Tutorials). ACM conference on human factors in computing systems, Boston, April 1994. New York: ACM Press.

NIELSEN, J. (1994f). Usability laboratories. *Behaviour & Information Technology*, 1994, **13(1&2)**, 3-8.

NIELSEN, J. and LANDAUER, T.K. (1993). A mathematical model of the finding of usability problems. In: S. Ashlund, A. Henderson, E. Hollnagel, K. Mullet and T. White (eds.), *Human Factors in Computing Systems: INTERCHI '93*. Proceedings of the INTERCHI '93 Conference on human factors in computing systems, Amsterdam, April 1993. Amsterdam: IOS Press.

NIELSEN, J. and MOLICH, R. (1990). Heuristic evaluation of user interfaces. In: J.C. Chew and J. Whiteside (eds.), *Empowering People: CHI '90 conference proceedings*. ACM conference on human factors in computing systems, Seattle, April 1990. (Special issue of the SIGCHI Bulletin). Seattle: Addison-Wesley.

NIELSEN, J. and PHILLIPS, V.L. (1993). Estimating the relative usability of two interfaces: heuristic, formal and empirical methods compared. In: S. Ashlund, A. Henderson, E. Hollnagel, K. Mullet and T. White (eds.), *Human Factors in Computing Systems: INTERCHI '93*. Proceedings of the INTERCHI '93 Conference on human factors in computing systems, Amsterdam, April 1993. Amsterdam: IOS Press.

References

- NIELSEN, J., BUSH, R.M., DAYTON, T., MOND, N.E., MULLER, M.J. and ROOT, R.W. (1992). Teaching experienced developers to design graphical user interfaces. In: P. Bauerfeld, J. Bennett and G. Lynch (eds.), *CHI '92 Conference Proceedings: striking a balance*. ACM conference on human factors in computing systems, Monterey, California, May 1992. Reading, MA: Addison-Wesley.
- NORMAN, D.A. (1981). Categorisation of action slips. *Psychological Review*, 1981, **88**(1), 1-15.
- NORMAN, D.A. (1983). Design rules based on analyses of human error. *Communications of the ACM*, April 1983, **26**(4), 254-258.
- NORMAN, D.A. (1986). Cognitive engineering. In: D.A. Norman and S.W. Draper (eds.), *User Centred System Design*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- NORMAN, D.A. (1988). *The Psychology of Everyday Things*. New York: Basic Books.
- NORMAN, D.A. (1998). *The Invisible Computer*. Cambridge, MA: MIT Press.
- PAYNE, S.J. and GREEN T.R.G. (1986). Task-Action Grammars: a model of the mental representations of task languages. *Human-Computer Interaction*, 2, 93-133.
- POLSON, P.G., LEWIS, C., RIEMAN, J. and WHARTON, C. (1992). Cognitive walkthroughs: a method for theory-based evaluation of user interfaces. *International Journal of Man-Machine Studies*, 1992, **36**, 741-773.
- POTTER, S.S., COOK, R.I., WOODS, D.D. and McDONALD, J.S. (1990). The role of a human factors guidelines in designing usable systems: a case study of operating room equipment. *Proceedings of the Human Factors Society 34th Annual Meeting*, 1990, 1, 392-395. Human Factors Society.
- PREECE, J., ROGERS, Y., SHARP, H., BENYON, D., HOLLAND, S. and CAREY, T. (1994). *Human-Computer Interaction*. Wokingham: Addison-Wesley.
- PRÜMPER, J., ZAPF, D., BRODBECK, F.C. and FRESE, M. (1992). Some surprising differences between novice and expert errors in computerized office work. *Behaviour & Information Technology*, 1992, **11**(6), 319-328.
- RASMUSSEN, J. (1982). Human Errors. A taxonomy for describing human malfunction in industrial installations. *Journal of Occupational Accidents*, 1982, **4**, 311-333.
- RASMUSSEN, J. (1986). *Information Processing and Human-machine interaction: an approach to cognitive engineering*. North-Holland Series in System Science and Engineering, (A.F. Sage, ed.), Vol. 12. Amsterdam: North-Holland.
- RASMUSSEN, J. (1987). The definition of human error and a taxonomy for technical system design. In: J. Rasmussen, K. Duncan & J. Leplat (eds.), *New Technology and Human Error*. New York: John Wiley & Sons.
- RATNER, J.A., GROSE, E., and FORSYTHE, C. (1996). Traditional vs. Web Style Guides: how do they differ? *Proceedings of the Human Factors and Ergonomics Society 40th Annual Meeting*, 1996, 365-369. Human Factors and Ergonomics Society.
- RAVDEN, S.J. and JOHNSON, G.I. (1989). *Evaluating the Usability of Human-Computer Interfaces: a practical manual*. Chichester: Ellis Horwood.
- REASON, J. (1987a). A preliminary classification of mistakes. In: J. Rasmussen, K. Duncan and J. Leplat (eds.), *New Technology and Human Error*. New York: John Wiley & Sons.
- REASON, J. (1987b). Generic Error-Modelling System (GEMS): a cognitive framework for locating common human error forms. In: J. Rasmussen, K. Duncan and J. Leplat (eds.), *New Technology and Human Error*. New York: John Wiley & Sons.
- REASON, J. (1990). *Human Error*. Cambridge: Cambridge University Press.
- ROWLEY, J.R. and SLACK, F. (1998). *Designing Public Access Systems*. Aldershot: Gower.
- RUBENSTEIN, R. and HERSH, H. (1984). *The Human Factor: designing computer systems for people*. Burlington, Mass.: Digital Press.

- RUBIN, J. (1994). *Handbook of Usability Testing: how to plan, design, and conduct effective tests*. New York: John Wiley & Sons.
- SALMINEN, S. and TALLBERG, T. (1996). Human errors in fatal and serious occupational accidents in Finland. *Ergonomics*, 1996, **39(7)**, 980-988.
- SCAPIN, D.L. (1987). Guide ergonomique de conception des interfaces homme-machine. *Rapport de Recherche INRIA No. 77*. [Cited in Scapin 1990.]
- SCAPIN, D.L. (1990). Organizing human factors knowledge for the evaluation and design of interfaces. *International Journal of Human-Computer Interaction*, 1990, **2(3)**, 203-229.
- SCAPIN, D.L. and BASTIEN, J.M.C. (1997). Ergonomic criteria for evaluating the ergonomic quality of interactive systems. *Behaviour & Information Technology*, 1997, **16(4/5)**, 220-231.
- SCHULER, D. and NAMIOKA, A. (1993). Preface. In: D. Schuler and A. Namioka (eds.), *Participatory Design: principles and practices*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- SEARS, A. (1997). Heuristic walkthroughs: finding the problems without the noise. *International Journal of Human-Computer Interaction*, 1997, **9(3)**, 213-234.
- SEARS, A. and HESS, D.J. (1999). Cognitive walkthroughs: understanding the effect of task-description detail on evaluator performance. *International Journal of Human-Computer Interaction*, 1999, **11(3)**, 185-200.
- SHACKEL, B. (1984). The concept of usability. In: J. Bennett, D. Case, J. Sandelin and M. Smith (eds.), *Visual Display Terminals: usability issues and health concerns*. New Jersey: Prentice-Hall.
- SHNEIDERMAN, B. (1987). *Designing the User Interface: strategies for effective human-computer interaction*. Wokingham: Addison-Wesley.
- SHNEIDERMAN, B. (1998). *Designing the User Interface: strategies for effective human-computer interaction*. 3rd edition. Reading, MA: Addison-Wesley.
- SMITH, S.L. (1986). Standards versus guidelines for designing user interface software. *Behaviour & Information Technology*, 1986, **5(1)**, 47-61.
- SMITH, S.L. and MOSIER, J.N. (1984). *Design Guidelines for User-System Interface Software*. Technical Report ESD-TR-84-190, Hanscom Air Force Base, MA. USAF Electronics Division, NTIS No. AD.A154 907.
- SMITH, S.L. and MOSIER, J.N. (1985). The user interface to computer-based information systems: a survey of current software design practice. In: B. Shackel (ed.) (1985), *Human-Computer Interaction - INTERACT '84*. Proceedings of the first IFIP conference on human-computer interaction. Amsterdam: Elsevier Science Publishers B.V. (North-Holland).
- SMITH, S.L. and MOSIER, J.N. (1986). *Guidelines for Designing User Interface Software*. Technical Report ESD-TR-86-278, MTR 10090. Mitre Corporation, Bedford, MA.
- STEWART, T. (1980). Communicating with dialogues. *Ergonomics*, 1980, **23**, 909-919. [Cited in Smith & Mosier 1986.]
- STORY, M. F. (1998). Maximizing usability: the principles of universal design. *Assistive Technology*, 1998, **10(1)**, 4-12.
- SUTCLIFFE, A. (1995). *Human-Computer Interface Design*. 2nd Edition. Basingstoke: Macmillan Press.
- SUTCLIFFE, A.G., RYAN, M., DOUBLEDAY, A. and SPRINGETT, M. (2000). Model mismatch analysis: towards a deeper explanation of users' usability problems. *Behaviour and Information Technology*, 2000, **19(1)**, 43-55.
- TAUSCHER, L. and GREENBERG, S. (1997). How people revisit web pages: empirical findings and implications for the design of history systems. *International Journal of Human-Computer Studies*, July 1997, **47**, 97-137.

- TETZLAFF, L. and SCHWARTZ, D.R. (1991). The use of guidelines in interface design. In: S.P. Robertson, G.M. Olson and J.S. Olson (eds.), *Reaching Through Technology: CHI '91 conference proceedings*. ACM conference on human factors in computing systems, New Orleans, April-May 1991. New York: Addison-Wesley.
- THIMBLEBY, H. (1984). User interface design: generative user engineering principles. In: A. F. Monk (1984), *Fundamentals of Human-Computer Interaction*. London: Academic Press.
- THIMBLEBY, H. (1991). Design of interactive systems. In: McDermid, J.A. (ed.), *Software Engineer's Reference Book*. Oxford: Butterworth & Heinemann.
- TRENNER, L. and BAWA, J. (eds.) (1998). *The Politics of Usability: a practical guide to designing usable systems in industry*. London: Springer.
- TYLDESLEY, D.A. (1988). Employing usability engineering in the development of office products. *The Computer Journal*, 1988, **31(5)**, 431-436.
- VAN NES, F. L. (1986). Space, colour and typography on visual display terminals. *Behaviour and Information Technology*, 1986, **5(2)**, 99-118.
- VAN WELIE, M., van der VEER, G.C. and ELIENS, A. (1999). Breaking down usability. In: M.A. Sasse and C. Johnson (eds.), *Human-Computer Interaction - INTERACT '99*. Proceedings of the 7th IFIP TC.13 international conference on human-computer interaction, Edinburgh, August-September 1999. Amsterdam: IOS Press.
- VAUGHAN, M.W. (1998). Testing the boundaries of two user-centered design principles: metaphors and memory load. *International Journal of Human-Computer Interaction*, **10(3)**, 265-282.
- VIRZI, R.A. (1990). Streamlining the design process: running fewer subjects. *Proceedings of the Human Factors Society 34th Annual Meeting*, 1990, 291-294.
- VIRZI, R.A. (1992). Refining the test phase of usability evaluation: how many subjects is enough? *Human Factors*, 1992, **34(4)**, 457-468.
- VIRZI, R.A. (1997). Usability inspection methods. In: M. Helander, T.K. Landauer and P. Prabh (eds.), *Handbook of Human-Computer Interaction*. 2nd Edition. Amsterdam: Elsevier Science B.V.
- VIRZI, R.A., SORCE, J.F. and HERBERT, L.B. (1993). A comparison of three usability evaluation methods: heuristic, think-aloud and performance testing. *Proceedings of the Human Factors and Ergonomics Society 37th Annual Meeting*, 1993, **1**, 309-313.
- VP-Lab (1999). <http://citi-pc.york.ac.uk/vplabprototype>.
- WERN, Y. (1989). *Cognitive Aspects of Computer Supported Tasks*. Chichester: John Wiley & Sons.
- WHITEFIELD, A., WILSON, F. and DOWELL, J. (1991). A framework for human factors evaluation. *Behaviour & Information Technology*, 1991, **10(1)**, 65-79.
- WHITESIDE, J., BENNETT, J. and HOLTZBLATT, K. (1988). Usability engineering: our experiences and evolution. In: M. Helander (ed.), *Handbook of Human-Computer Interaction*. Amsterdam: Elsevier Science Publishers B.V. (North-Holland).
- WIKLUND, M.E. (ed.) (1994). *Usability in Practice: how companies develop user-friendly products*. Boston: Academic Press.
- WILLIAMS, G. and MCCLINTOCK, M. (1997). Usability at Microsoft. In: S. Howard, J. Hammond and G. Lindgaard (eds.), *Human-Computer Interaction: INTERACT '97*. Proceedings of the 6th IFIP TC.13 international conference on human-computer interaction, Sydney, July 1997. London: Chapman & Hall.
- WILLIGES, B.H. and WILLIGES, R.C. (1984). Dialogue design considerations for interactive computer systems. In: F.A. Muckler (ed.), *Human Factors Review*, 1984, 167-208. Santa Monica, CA: Human Factors Society.

- WIXON, D. and WILSON, C. (1997). The usability engineering framework for product design and evaluation. In: M. Helander, T.K. Landauer and P. Prabhu (eds.), *Handbook of Human-Computer Interaction*. 2nd Edition. Amsterdam: Elsevier Science B.V.
- WIXON, D., HOLTZBLATT, K. and KNOX, S. (1990). Contextual design: an emergent view of system design. In: J.C. Chew and J. Whiteside (eds.), *Empowering People: CHI '90 conference proceedings*. ACM conference on human factors in computing systems, Seattle, April 1990. (Special issue of the SIGCHI Bulletin). Seattle: Addison-Wesley.
- WRIGHT, P. and MONK, A.F. (1989). Evaluation for Design. In: A. Sutcliffe and L. Macaulay (eds.), *People and Computers V*. Proceedings of the fifth conference of the British Computer Society human-computer interaction specialist group, Nottingham, September 1989. Cambridge: Cambridge University Press.
- WRIGHT, P.C. and MONK, A.F. (1991). A cost-effective evaluation method for use by designers. *International Journal of Man-machine Studies*, 1991, **35**, 891-912.
- WRIGHT, S.J., PACEBUSH, S.J. and MITTA, D.A. (1993). Software interface evaluation: modelling of human error. *Proceedings of the Human Factors and Ergonomics Society 37th Annual Meeting*, 1993, **1**, 453-455. Human Factors and Ergonomics Society.
- ZAPF, D., BRODBECK, F.C., FRESE, M., PETERS, H. and PRÜMPER, H. (1992). Errors in working with office computers: a first validation of a taxonomy for observed errors in a field setting. *International Journal of Human-Computer Interaction*, 1992, **4(4)**, 311-339.
- ZETIE, C. (1995). *Practical User Interface Design*. London: McGraw-Hill.