# Exhibit 1

# CURRICULUM VITAE ALAN HEDGE, PhD, CPE, FHFES, FIEHF, FIEA, AFBPsS, CCSF Faculty Fellow

Nationality American & British (European)

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Internet: http://ergo.human.cornell.edu

Academic Positions: Professor

Department of Design and Environmental Analysis

2415 Martha Van Rensselaer Hall NYS College of Human Ecology

Cornell University Ithaca, NY 14853-4401

and

Research Professor

Department of Mechanical and Aerospace Engineering

121 Link Hall Syracuse University

Syracuse, NY 13244-1240

## UNIVERSITY EDUCATION

Bachelor of Science (First class) Special Honors in Zoology.

Subsidiary subjects Physiology and Biochemistry.

University of Sheffield, 1970. Master of Science, Zoology University of Sheffield, 1971.

Master of Science, Applied Psychology.

Aston University, 1972.

Doctor of Philosophy, 1972-74.

Submitted and awarded for thesis in Cognitive Psychology

University of Sheffield, 1979.

# **CURRENT PROFESSIONAL BODIES**

Certified Professional Ergonomist (CPE), Board of Certification of

Professional Ergonomists (2003)

Fellow, International Ergonomics Association (IEA)

Fellow, The Human Factors and Ergonomics Society (U.S.A.) (FHFES) Fellow, The Institute of Ergonomics and Human Factors (U.K.) (FIEHF)

Associate Fellow of the British Psychological Society (AFBPsS) Founding Member, International Society of Indoor Air Quality and

Climate

Member, Illuminating Engineering Society of North America

# PROFESSIONAL ACTIVITIES

IEA Representative for Environmental Design (2011-)

Atkinson Center for Sustainable Futures Faculty Fellow (2009-)

Co-leader, Human Health and Performance Research Theme, Star Center

for Environmental Quality Systems (http://eqs.syr.edu/)

Member, Advisory Council, The National Ergonomics Conference and

Exposition (1999 - onwards)

# PAST PROFESSIONAL ACTIVITIES

Member, Scientific Advisory Committee, Applied Human Factors and Ergonomics 3<sup>rd</sup> International conference, 2010

Member, Healthy Buildings 2009, Technical Program Committee

Member, International Conference on Research into Design (ICoRD'09)

Member, American Psychological Association (1987-2008)

Member, Association for Psychological Science

Member, ODAM 08 program committee

Member, NASA Space Human Factors: Super Problem Resolution Team

Member, NASA Space Human Factors Engineering Science &

Technology Working Group (200-2007)

Member, ASID Technical Review Board (TRB) of the Clearinghouse for Design and Human Behavior Research (2002-2005)

Chair, International Ergonomics Association Technical Group on

Work Environment Ergonomics (Work Environment Design) (1993-)

Chair, TAG to ISO TC 159/SC5 (1995-1997, 2003 – onwards)

Chair, Organizational Design and Management Technical Group,

The Human Factors and Ergonomics Society (HFES) (1995)

Chair, Work Environment Subcommittee

ANSI/HFS 100 VDT Standard Revision Committee

The Human Factors and Ergonomics Society (HFES) (1992-1995)

Member, New York Academy of Sciences, (1996/97).

Chair, ASTM Task Group (E06.25.02) on Behavioral Tools for Assessing Facility Design and Productivity, American Society for Testing and Materials (1990-1993)

Executive officer (Past President), Division of Environmental Psychology International Association of Applied Psychology (IAAP), (1986-1990).

Executive officer (President), Division of Environmental Psychology

International Association of Applied Psychology (IAAP), (1982-1986).

Past Member (IAPS), International Association for their Study of People in their Physical Surroundings (1984-1988).

Past Member, Organizing Committee, International Society of Facilities Executives, (1990-1993).

#### **CURRENT EDITORIAL ACTIVITIES**

Consulting Editor, Ergonomics

Editorial Board, WORK: A Journal of Prevention, Assessment & Rehabilitation

Editorial Board, Theoretical Issues in Ergonomics

Editorial Board, International Journal of Human Factors and Ergonomics

Editorial Board of the Journal of Environmental Psychology

Editorial Board of the Journal of Architectural and Planning Research.

Editorial Board of the Journal of Human Environment Systems

Editorial Board of Occupational Safety and Health: Workplace

**Ergonomics** 

Editorial Board of SpineUniverse.com (http://www.spineuniverse.com)

Editorial Board of HealthyComputing.com

(http://www.healthycomputing.com)

Editorial Board of the Open Ergonomics Journal

(http://www.bentham.org/open/toergj/)

#### CONSULTING REVIEWER

Behavior and Information Technology

International Journal of Industrial Ergonomics

**Applied Ergonomics** 

Psychological Bulletin

Psychological Reviews

Current Psychological Research

Perceptual and Motor Skills

**Human Factors** 

Indoor Air

**Environment International** 

Journal of Work and Stress

Journal of Aerosol Science

#### AWARDS REVIEWER

Workers Compensation Board, B.C., Canada

NSERC, Canada

NZ Institute for Health

**US Environmental Protection Agency** 

Center for Indoor Air Research

Royal Institute of British Architects Research Awards

College of Human Ecology

#### ADVISORY BOARDS

Ergoweb Media Advisory Board (www.ergoweb.com)

Co-leader, Human Health and Performance Theme, STAR Centre for

Environmental Quality Systems, Syracuse University

(http://eqs.syr.edu/organization.asp)

Technical Review Board, InformeDesign, Clearinghouse for design and

behavior research (Univ. Minnesota/ASID, 2001-2005.

http://www.informedesign.com/) (2002-)

NASA Science and Technology Working Group (Human Factors) (2001)

National Ergonomics Conference and Exposition (1999-)

NY Indoor Environmental Quality Center, Syracuse University (2001-)

Carpet and Rug Institute Technical Advisory Board (1993-1998)

## PROFESSIONAL EXPERIENCE

### SOUTH YORKSHIRE METROPOLITAN COUNTY COUNCIL

Research and Intelligence Unit (1974-1975)

Research Assistant (Grade AP5)

Work included extensive analysis of data from a large Public Attitude Survey, various public participation exercises (e.g. structure plan kits, County Headquarters Survey, Environmental Attitudes Survey, monitoring of social indicators). Analysis of public policy options.

WEST MIDLANDS METROPOLITAN COUNTY COUNCIL

Statistical and Information Unit (1975-1976)

Principal Officer (Grade PO1B)

Work included management of research team and design of research projects, including public attitude survey, housing survey, community identification for emergency planning, county management information system. Involvement in policy committee work. Management of research team and budget.

APPLIED PSYCHOLOGY DEPARTMENT

UNIVERSITY OF ASTON (1976-1987)

Lecturer (tenured)

Course Tutor for the MSc Course in Applied Psychology (1977-1981, 1983-1984).

OPEN UNIVERSITY TUTOR, Part-time.

Introductory Psychology Course (DS261/DS262) 1976-1983.

Cognitive Psychology Course (D303) 1983-1985.

Cognitive Psychology Course (D309) 1985-1986.

SABBATICAL LEAVE (April-July 1982)

Institute of Personality Assessment and Research,

University of California, Berkeley, USA.

ASSOCIATE PROFESSOR (Human Factors)

Aug. 1, 1987-1994, (tenure awarded, 1991). Dept. DEA, NYS College of

Human Ecology, Cornell University, Ithaca, NY 14853-4401

SABBATICAL LEAVE (August 1992 - July 1993)

Institute of Occupational Health, Birmingham Medical School,

University of Birmingham, Birmingham, UK. Invited to teach

Environmental ergonomics course (16 hours) University of Nottingham,

Department of Manufacturing Engineering and Operations Management,

Graduate Program in Ergonomics. (January - March, 1993). Invited to teach Human-Computer Interaction (6 hours) University of Nottingham,

Department of Manufacturing Engineering and Operations Management,

Graduate and Undergraduate Programs in Ergonomics and in Computer

Science. (March, 1993).

Director, Human Factors and Ergonomics Laboratory, Jan. 1 1994 –

DEA, NYS College of Human Ecology, Cornell University,

Ithaca, NY 14853-4401

PROFESSOR (Human Factors) Jan. 1, 1995

DEA, NYS College of Human Ecology, Cornell University,

Ithaca, NY 14853-4401

Co-Director, Design Concepts Laboratory, Jan. 1 2005 –

DEA, NYS College of Human Ecology, Cornell University,

# Ithaca, NY 14853-4401

AWARDS AND SELECTED ACTIVITIES	
O. Keith Hansen Outreach Award,	
Human Factors and Ergonomics Society	2009
Alexander J. Williams Jr. Design Award for	
"outstanding human factors contributions to	2003
the design of a major operational system",	
Human Factors and Ergonomics Society.	
Program leader "Environmental Effects on Health and	2003-
Human Performance", Environmental Quality Systems	
Center, Syracuse University EQS Consortium	
International Who's Who of Professionals: the	2000
Ultimate Directory	
Institute of Business Designers (IBD)/Contract Magazine	1992
Bronze Award, for ergonomic design work on the	
PROTEX Work Envelope System.	
Industrial Design Excellence Awards (Business Week)	1992
Gold Award - Furniture category, for ergonomic design	
work on the PROTEX Work Envelope System.	
Honorary Research Fellow,	
Institute of Occupational Health, Birmingham	
Medical School, University of Birmingham,	
Birmingham, U.K.	1990-1993
Elected to Membership of the Graduate Field in	
Design & Environmental Analysis	
Cornell University	1987
British Council Travel Grant to Canada	1984
British Council Travel Grant to Italy	1983
Royal Society Travel Grant (UK) to U.S.A	1983
NATO Travel Scholarship (Human Factors) to U.S.A.	1982
Scientific Program Organizer - Environmental Psychology	
20th Congress of the International Association of	
Applied Psychology	1982
COMPETITIVE STUDENTSHIPS	
Science Research Council Research Studentship	1972-1974
Aston University Studentship	1971-1972
Science Research Council Research Studentship	1970-1971
MILITARY/SECURITY EXPERIENCE	
Scientific Advisor (C,B & N weapons), U.K. Home Office	1976-1986
British Territorial Army Royal Officers Training Corp'	1967-1970

# OTHER ACTIVITIES

Member, Textiles Graduate Field

Cornell University	2006
Member, Information Science Graduate Field,	
Cornell University	2003 -
Member, Cognitive Psychology Graduate Field,	
Cornell University	1997 –
Member, Institute for Comparative Environmental	1995 -
Toxicology, NYS College of Agriculture and Life Science,	
and Environmental Toxicology Graduate Field,	
Cornell University	
Member, Biology & Society Undergraduate field,	1995 -
Cornell University	
Stephen H. Weiss Presidential Fellowship Nominee	
for excellence in teaching.	1998
Scientific Advisory Board Member	
The Carpet and Rug Institute	1993 -
Professional Media training (Washington, DC; Atlanta)	1993
Nominee for SUNY Chancellor's award for	
Excellence in Teaching.	1992
Annual State legislative functions	1991, '92, '94

### **EXTERNAL ASSESSOR**

Faculty promotions examiner- typically 2 per year	2000 -
PhD Examiner (external) – typically 2 per year	1987 –

# ACADEMIC ACHIEVEMENTS AND RESPONSIBILITIES AT CORNELL

**Current Position** 

• Professor and Director of the Human Factors and ergonomics

Laboratory

Teaching:

• Human Factors: Applied Ergonomic Methods (DEA4700, DEA6700)

• Human Factors: Ambient Environmental Conditions (DEA3500,

DEA6520)

• Human Factors: Ergonomics, Anthropometrics and Biomechanics

(DEA3250, DEA6510)

(DEA 6000 level graduate study)

• Frequent invited presentations to M&AE 2250, PAM 3200, Arch 3620,

H ADM 4550.

Undergraduate theses: • 8 (Honor's theses graduated)

Graduate theses: • 37 (Master's graduated), 4 PhD committee member (3 graduated)

Internet: • CUErgo web site (http://ergo.human.cornell.edu) (1993 to present)

• Department web master (1997-2001)

Current Committees: • College Grants Committee

• Cornell Center for a Sustainable Future (CCSF) Educational Sub-

committee

Past Committees: • College Academic Integrity Committee

• Committee on Academic Status

• College Grants Committee.

• College Honors Committee.

• Cornell Abroad Committee.

• Statewide Workforce Task Force Committee, Cooperative Extension.

- College Extension Construction/Budget Group
- College Steering/Budget Committee: the "Cornell Life Course Institute".
- Committees on the Cornell Center for Environment.
- SUNY Chancellor's Award Selection Committee
- Mann Library committee
- Finance:
- Experience of tactical financial planning in local government and academic settings
- Experience of strategic planning activities in local government and academic settings
- Senior managerial training and experience (Aston University)
- Responsibility for research budgets, laboratory construction budget, laboratory equipment and operations budget, media budget, teaching and support budget (Cornell University).

# **Previous Position** Teaching: Cornell

- Introduction to Human-Environment Relations: Introduction to Human Factors (DEA1500, co-taught with 3 colleagues, 1987-1991)
- Department, Director of Graduate Studies (1994)
- Environmental Ergonomics Workplace design, Thermal comfort
- Human Factors in IT Office Automation; societal impact
- Cognitive Psychology Thinking; knowledge representation
- Perspectives on Psychology
- Advanced Research Methods Factor Analysis; Repertory Grid; Facet analysis
- Current Developments in Psychology
- Systems and Theories in Psychology
- History of Psychology
- Survey Methods Questionnaire Design
- Introduction to Psychology

## Graduate theses:

- 20 (Master's graduated, UK), 3 (PhD's, UK).
- Past Responsibilities Director of Graduate Studies, DEA Field, Cornell University, (1996/97)
  - Chairman, Academic (Faculty) Assembly, Aston University, Birmingham, U.K. 1985-1987
  - Course Tutor for the MSc Course in Applied Psychology (1977-1981, 1983-1984)

Management training • Senior Academic Management Training Program conducted by Stanford Business School at Aston University, Birmingham, U.K. 1986

#### ACADEMIC RESEARCH: FUNDED PROJECTS SINCE 1987

Research interests in scientific visualization research; new multimedia technologies; human factors approaches to work environment design; workplace automation and intelligent buildings; sick building syndrome

Funded projects:

Principal Investigator Personal Control Effects on Indoor Air Quality and User Comfort, Health And Performance DoE (\$89,998)

2010-

**Educational Computing Award** 

	Intel (\$37,000) Principal Investigator	2006
·	Educational Computing Award	
	Intel (\$37,000)	2006
	Co- Principal Investigator	2000
	Passive textile systems for indoor air quality improvement	
	NYS College of Human Ecology (\$50,000)	2006
•	Principal Investigator	
	"Indoor Environmental Quality and Productivity". US EPA (\$190,000)	2005-2007
•	Principal Investigator	
	"Indoor Environmental Quality and Productivity". US EPA (\$200,000)	2004-2006
•	Principal Investigator	
	"New Ways Of Working: Experimental Evaluation of Electronic	
	Height Adjustable Work Surfaces, Keyboard Trays	
	and Alternative Input Device Designs.". Humanscale (\$18,737)	2004-2005
•	Cornell Laboratory for Human Factors and Ergonomics,	2003-2004
	NY State. (\$200,000)	
•	Principal Investigator	
	"Thermal Comfort and Ergonomic Chairs". Cornell Univ. (\$3,500)	2003
•	Principal Investigator, "Hotel Ergonomics". NIOSH (\$2,275)	2002
•	Principal Investigator	
	"Pesticide concentrations in house dust in residences in central New	2000 2001
_	York State". The Carpet and Rug Institute. (\$257,000)	2000-2001
•	Principal Investigator "Transportion of the effects of anti-clare computer filters"	
	"Ergonomic evaluation of the effects of anti-glare computer filters". 3M. (\$37,337)	2002
•	Principal Investigator	2002
•	"Pesticide concentrations in carpet floor coverings in rural homes in	
	central New York State." USDA Hatch. (\$40,000)	1999-2003
•	Principal Investigator	1777 2003
	NYS College of Human Ecology, "Development and	
	evaluation of a web-based ergonomics course" (\$5,500)	1998
•	Principal Investigator	
	"Sick building syndrome and office	
	ergonomics - a targeted work environment analysis?"	
	Center for Indoor Air Research. (\$111,758)	1997
•	Principal Investigator.	
	"The effects of two different task lighting systems on employee comfort	
	and health in a windowless office",	
	Peerless Corp., Berkeley, CA, (\$49,440)	1995
•	Principal Investigator:	
	"Scientific Visualization Research"	
	National Science Foundation. Supercomputing award (50 units)	1995-1996
•	Principal Investigator	
	"The effects of smoking room design on indoor air quality and	
	employee comfort and health in offices."	1005
•	Center for Indoor Air Research. (\$107,371)  Principal Investigator with Dr. Rod Diotect Institute for	1995
•	Principal Investigator with Dr. Rod Dietert, Institute for	

	Comparative Environmental Toxicology,	
	"The Effects Of Carpet Emissions On Indoor Air Quality And Health:	
	A Critical Review." The Carpet and Rug Institute. (\$49,613)	1994
•	Principal Investigator:	
	"Development of Computerized Database of Advising	
	Materials and a Directory of International Education	
	Opportunities in Human Factors and Ergonomics".	
	Cornell President's fund. (\$1,950)	1994
•	Cornell Laboratory for Human Factors	1994
	and Ergonomics, NY State. (\$70,000)	1,,,
•	Principal Investigator (continuation)	
	"The effects of restrictive smoking policies on employee comfort	
	and health in offices."	
	Center for Indoor Air Research. (\$110,029)	1994
_	Principal Investigator (continuation)	1774
•	1 ,	
	"The effects of steam humidification on indoor air quality and	
	psychosocial variables on employee comfort and health in offices."	1002
	Center for Indoor Air Research. (\$78,052)	1993
•	Principal Investigator	
	"The effects of changing smoking policies on indoor air quality	
	and employee comfort and health in offices."	1000
	Center for Indoor Air Research. (\$168,118)	1992
•	Principal Investigator	
	"The effects of synthetic mineral fibers in office	
	dust on the sick building syndrome in offices."	
	Center for Indoor Air Research. Supplemental grant (\$6,100)	1991
•	Principal Investigator (continuation)	
	"The effects of smoking regulation and building ventilation on	
	indoor air quality and employee comfort and health in offices."	
	Center for Indoor Air Research. (\$162,018)	1991
•	Principal Investigator	
	"The effects of smoking regulation and building ventilation on	
	indoor air quality and employee comfort and health in offices."	
	Center for Indoor Air Research. (\$249,869)	1989-1990
•	Principal Investigator	
	"The long-term effects of direct versus indirect lighting	
	on office workers."	
	Peerless Lighting Corp. (\$16,992)	1990-1991
•	Principal Investigator	
	"The effects of direct versus indirect lighting on office workers	
	in enclosed and open-plan offices."	
	Peerless Lighting Corp. (\$74,338)	1987-1989
•	"Instrumentation for a Human Factors/	
	Ergonomics Teaching Laboratory."	
	National Science Foundation. (\$37,815 plus \$37,815 matching funds)	1987-1989
•	Principal Investigator	-, -, -, -, -,
	Research on the 'Sick Building' Syndrome	
	N.Y.S. College Research Grant. (\$4,950)	1987
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Corporate Gifts for the Cornell Human Factors and Ergonomics Laboratory:		
•	Barnes & Noble (\$1,500)	2010
•	Humanscale (\$15,000)	2010
•	Humanscale (\$15,000)	2009
•	Humanscale (\$12,000)	2006
•	Linak (\$4,000)	2004
•	Humanscale (\$10,000)	2004
•	Linak (\$15,000)	2002
•	Stokke (\$10,000)	2002
•	Stokke (\$5,000)	2001
•	Magnitude Information Systems (\$8,000)	1999
•	Humanscale (\$2,000)	1999
•	Steelcase (\$20,000)	1999
•	Ergonomic-Interface Keyboard Systems (\$15,000)	1998
•	Softview (\$12,000)	1995
•	Workplace Designs (\$12,000)	1995
•	Ergonomixx: (\$10,500)	1994
•	Proformix:(\$11,000)	1994
•	Proformix:(\$5,000)	1991
•	Tate Access Floors (\$3,000)	1987-1989
Corp	porate Equipment Donations Educational Program PCs (Intel)	2007
•	Lapdawg	2007
•	Logitech	2006
•	Hoverstop	2006
•	Typematrix	2006
•	WOW Technologies	2006
•	Perific	2005
•	Humanscale	2005
•	Kensington	2004
•	Humanscale	2004
•	Aeron chair (Herman Miller)	2003
•	Electronic sit-stand workstations (WorkRite)	2003
•	Fingerworks	2003
•	Stokke	2003
•	Educational Program Software (Microsoft)	2001
•	Educational Program PCs (Intel)	2001
•	Ergonomic Freedom chairs (Humanscale)	1998
•	Ergomax 200 chair (American Ergonomics)	1998
•	Criterion and Leap chairs (Steelcase)	1998
•	Exos Gripmaster system + IBM laptop computer (Proformix)	1994

# **PUBLICATIONS:**

#### **Books**

- 4. Hedge, A. (2012) Human Factors and Ergonomics for Designers. Wiley (in preparation)
- 3. Khalid, H., Hedge, A. and Ahram, T.Z. (2010) <u>Advances in Ergonomics Modeling and</u> Usability Evaluation, Boca Raton, CRC Press.
- 2. Stanton, N., Hedge, A., Brookhuis, K, Salas, E. and Hendrick, H. (2004) <u>Handbook of</u> Human Factors and Ergonomics Methods, Boca Raton, CRC Press.
- 1. O'Reilly, J.T., Hagan, P., Gots, R. and Hedge, A. (1998) <u>Keeping buildings healthy:</u> <u>How to monitor and prevent indoor environmental problems</u> New York: J. Wiley & Sons.

# **Book Chapters**

- 35. Hedge, A. (2011) Alternative Workstations May Be New But Are They Better? In M. M. Robertson (ed.) <u>Ergonomics and Health Aspects of Work with Computers</u>, Springer, Heidelberg, 190-198.
- 34. Hedge, A., Feathers, D.J. and Rollings, K.A. (2010) Ergonomic comparison of five mouse designs: Performance and posture differences. In Khalid, H., Hedge, A. and Ahram, T.Z. (Eds.) <u>Advances in Ergonomics Modeling and Usability Evaluation</u>, Chap. 47, 436-445, Boca Raton, CRC Press.
- Feathers, D.J., Hedge, A. and Rollings, K.A. (2010) Ergonomic assessment of pronating-reducting mouse designs: Anatomical compliance in three-dimensional space. In Khalid, H., Hedge, A. and Ahram, T.Z. (Eds.) <u>Advances in Ergonomics Modeling and Usability Evaluation</u>, Chap. 46, 426-435, Boca Raton, CRC Press.
- 32. Pavlovic-Veselinovic, S., Hedge, A., and Grozdanovic, M. (2010) An expert system for risk assessment of work-related musculo-skeletal disorders In Khalid, H., Hedge, A. and Ahram, T.Z. (Eds.) <u>Advances in Ergonomics Modeling and Usability Evaluation</u>, Chap. 43, 403-411, Boca Raton, CRC Press.
- 31. Hedge, A. (2010) Interior Design: Satan or Savior? In Martin C. & Guerin, D. (Eds.) The State of the Interior Design Profession, Fairchild Books, 181-186.
- 30. Hedge, A. (2009) Indoor Environmental Quality, Health and Productivity, R.G. Harris and D.P. Moore, (eds.), <u>Indoor Work and Living Environments</u>, Chap. 6, Nova Science Publishers, 247-262.
- 29. Hedge, A. (2009) The Role of Carpet in Sustainable Design, R.G. Harris and D.P. Moore, (eds.), <u>Indoor Work and Living Environments</u>, Chap. 5, Nova Science Publishers, 223-245.
- 28. Hedge, A. and Lueder, R. (2008) Classroom furniture, In Lueder, R. & Rice, V. (eds). Ergonomics for Children: Designing products and places for toddlers and teens, Chap. 21, pp. 721-751. CRC Press. Boca Raton, FL.

- 27. Hedge, A. (2005) Kids and computers, In Anshel, J. (ed.) <u>Visual Ergonomics Handbook</u>, Chapter 12, CRC Press, 137-157.
- 26. Hedge, A. (2004) Pen and Stylus Input, In Bainbridge, W.S. ed. (2004) <u>Berkshire Encyclopedia of Human Computer Interaction</u>, Berkshire Publishing Group, Vol. 2, 543-546.
- Hedge, A. (2004) Keyboards, In Bainbridge, W.S. ed. (2004)
   Berkshire Encyclopedia of Human Computer Interaction, Berkshire Publishing Group, Vol.1, 401-405.
- 24. Hedge, A. (2004) Environmental conditions, In Stanton, N., Hedge, A., Brookhuis, K, Salas, E. and Hendrick, H. (2004) <u>Handbook of Human Factors and Ergonomics</u>
  <u>Methods</u>, pp. 59-1 59-4, CRC Press. Boca Raton, FL.
- 23. Hedge, A. (2004) Physical methods, In Stanton, N., Hedge, A., Brookhuis, K, Salas, E. and Hendrick, H. (2004) <u>Handbook of Human Factors and Ergonomics Methods</u> pp. 2-1 2-4, CRC Press.
- 22. Hedge, A. (2004) Heat stress indices, In Stanton, N., Hedge, A., Brookhuis, K, Salas, E. and Hendrick, H. (2004) <u>Handbook of Human Factors and Ergonomics Methods</u>, pp. 62-1 62-8, CRC Press.
- 21. Hedge, A. (2004) Indoor air quality chemical exposures, In Stanton, N., Hedge, A., Brookhuis, K, Salas, E. and Hendrick, H. (2004) <u>Handbook of Human Factors and Ergonomics Methods</u>, pp. 64-1 64-11, CRC Press.
- 20. Hedge, A. (1999) Consumer Product Design, In Karwowski, W. (ed.) <u>Encyclopedia of Ergonomics</u>, Philadelphia, Taylor & Francis: 888-891.
- 19. Hedge, A. (1999) Environmental Ergonomics, In Karwowski, W. (ed.) <u>Encyclopedia of Ergonomics</u>, Philadelphia, Taylor & Francis: 959-999.
- 18. Hedge, A. (1999) Ergonomics, Encarta 2000, Microsoft.
- 17. Hedge, A. (1998) Introduction to Ergonomics, Chap. 1, In D. Murphy (ed.) <u>Ergonomics</u> and the Health Professional, New York: American Public Health Association, pp. 1-23.
- 16. Hedge, A. (1998) Case Study: Anchorage, Alaska, Chap. 16, In O'Reilly, J.T., Hagan, P., Gots, R. and Hedge, A. (Eds.) <u>Keeping buildings healthy: How to monitor and prevent indoor environmental problems</u>. New York: J. Wiley & Sons, pp. 257-260.
- 15. Hedge, A. (1998) Communicating results of the investigation, Chap. 7, In O'Reilly, J.T., Hagan, P., Gots, R. And Hedge, A. (Eds.) <u>Keeping buildings healthy: How to</u> monitor and prevent indoor environmental problems J. Wiley & Sons, pp. 163-176.
- 14. Hedge, A. (1998) Investigating health complaints: behavioral aspects, Chap. 6, In O'Reilly, J.T., Hagan, P., Gots, R. and Hedge, A. (Eds.) <u>Keeping buildings healthy:</u> <u>How to monitor and prevent indoor environmental problems</u> New York: J. Wiley & Sons, pp.137-162.
- 13. Hedge, A. (1998) What can we learn about indoor environmental quality concerns from studies, Chap. 5, In O'Reilly, J.T., Hagan, P., Gots, R. and Hedge, A. (Eds.) <u>Keeping buildings healthy: How to monitor and prevent indoor environmental problems</u> New York: J. Wiley & Sons, pp.119-136.

- 12. Hedge, A. (1998) Ergonomic design of hand operated devices, Chap. 12, In Stanton, N. (Ed.) Human Factors in Consumer Products Taylor & Francis, pp.203-222.
- 11. Hedge, A. (1996) A guide to evaluating indoor air quality, In Baird, G., Gray, J., Isaacs, N., Kernohan, D. And McIndoe, G. (Eds) <u>Building Evaluation Techniques</u>, Chap. 6.2, New York: McGraw-Hill, pp.115-118.
- 10. Hedge, A. (1995) Human factors considerations in the design of museums to optimize their impact on learning, In Falk, J. & Dierling, L. (Eds) <u>Public Institutions for Personal Learning: Establishing a Research Agenda</u>, American Association of Museums, Washington DC, 105-118.
- 9. Hedge, A. (1994) Environmental psychology. In: P. Spurgeon, D. R. Davies and A.J. Chapman (Eds.), <u>Elements of Applied Psychology</u>. Harwood Academic Publishers, Chap. 15, 297-319.
- 8. Hedge, A., Erickson, W.A., and Rubin, G. (1992) Effects of personal and occupational factors on sick building syndrome reports in air conditioned offices. In: J.C. Quick, L.R. Murphy, and J.J. Hurrell, Jr. (eds.) Work and Well-Being: Assessments and Interventions for Occupational Mental Health, Chap. 19, Washington, D.C. American Psychological Association, pp. 286-298.
- 7. Hedge, A. (1991) Design innovations in office environments. In: W.F.E. Preiser, J. C.Vischer, and E.T. White (Eds.), <u>Design Intervention: Toward a More Humane Architecture</u>. Van Nostrand Reinhold, New York. pp. 301-322.
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- 128. Hedge, A. (2012) Ergonomics and Healthcare Technology, American Society of Healthcare Engineering PDC Summit, International Summit & Exhibition on Health Facility Planning, Design and Construction, March 4-7, Phoenix, AZ. (Featured Speaker)
- 127. Hedge, A. (2011) Office Ergonomics, National Ergonomics Conference & Exposition, Las Vegas, NC, Nov 29-Dec. 2.
- 126. Hedge, A. (2011) Green Ergonomics Update, National Ergonomics Conference & Exposition, Las Vegas, NC, Nov 29-Dec. 2.

- 125. Hedge, A. (2011) Indoor air quality and productivity, International Conference for Enhanced Building Operations, Oct. 18-20, New York, NY.
- 124. Hedge, A. (2011) Facilities Issues and Healthcare IT Ergonomics, Healthcare Facilities Symposium & Expo, September 20-22, Navy Pier Chicago.
- 123. Hedge, A. (2011) Creating a resilient workplace, 2011 Healthways Well-being Summit, Dallas, TX, April 26-28.
- 122. Hedge, A. (2010) Ergonomics and Healthcare IT, National Ergonomics Conference & Exposition, Las Vegas, NC, Dec. 1-3.
- 121. Hedge, A. (2010) Green ergonomics: Advocating for the Human Element in Buildings, National Ergonomics Conference & Exposition, Las Vegas, NC, Dec. 1-3.
- 120. Hedge, A. (2010) The Future of Ergonomics in the USA, Italian Ergonomics Society Annual Conference, Rome, 10/27-29/10.
- 119. Hedge, A. (2010) Healthcare and Information Technology, Ergonomic Round Table of Sacramento, Sacramento, CA, October 12.
- 118. Hedge, A. (2010) Office Ergonomics, US Department of State Speaker Series, Washington D.C., Sept 8th.
- 117. Hedge, A. (2010) Green Buildings need Sustainable Ergonomics, NEOCON2010, Chicago, Ill., June 14-16.
- 116. Hedge, A. (2010) Office Ergonomics 2010 Workshop, University of Minnesota, Minneapolis, MN, March 1.
- 115. Hedge, A. (2010) Healthcare Ergonomics, Northwestern Memorial Hospital, Chicago, Ill., April 28.
- 114. Hedge, A. (2010) Healthcare Ergonomics, Rush University Medical Center, Chicago, Ill., April 28.
- 113. Hedge, A. (2010) Office Ergonomics 2010 Workshop, University of California Los Angeles, Los Angeles, CA, April 17.
- 112. Hedge, A. (2010) What is the State of Ergonomics Today?, Gensler, Santa Monica, CA, April 16.
- 111. Hedge, A. (2010) The State of Office Ergonomics, Ergonomics Roundtable, Minneapolis, MN, February 28.
- 110. Hedge, A. (2010) Office Ergonomics: New Ways of Working, SmithGroup Workplace National Practice, Phoenix, AZ, February 11.
- 109. Hedge, A. (2009) Ergonomics and Healthcare IT: Boosting patient care through caregiver comfort, National Ergonomics Conference and Exposition, Las Vegas, Nov. 21.
- 108. Hedge, A. (2009) Green Ergonomics, National Ergonomics Conference and Exposition, Las Vegas, Nov. 20.
- 107. Hedge, A. (2009) Office Ergonomics 2009 Workshop, Pratt, New York, Oct.3.
- 106. Hedge, A. (2009) The Future of Ergonomics, State Fund Advanced Ergonomics Seminar, Vacaville, CA, Sept. 23.
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- 104. Hedge, A. (2009) Office Ergonomics 2009 Workshop, Philadelphia University, Philadelphia, March 4.
- 103. Hedge, A. (2009) Office Ergonomics 2009 Workshop, Parsons, New York, Jan. 31.
- 102. Hedge, A. (2008) An Inconvenient Discipline: the Metamorphosis of Ergonomics, Puget Sound Human Factors and Ergonomics Society 2008 Occupational Ergonomics Symposium & Workshop, Seattle, WA, Sept. 17-18. (Keynote address).

- 101. Hedge, A. (2007) Ergonomics and the shape of things to come. National Ergonomics Conference and Exposition, Las Vegas, Nov. 27-30. (State of the Industry Keynote address).
- 100. Hedge, A. (2007) Children and computers past, present and future. New Zealand Ergonomics Society Conference, Waiheke Island resort, Nov. 7-9. (Workshop)
- 99. Hedge, A. (2007) Ergotecture an "inside-out" design process that integrates information from the micro-level of human requirements through to the macro-level of societal responsibility. New Zealand Ergonomics Society Conference, Waiheke Island resort, Nov. 7-9. (Keynote address).
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- 97. Hedge. A. (2007) Recent advances in office ergonomics. American Safety & Health Conference, Sept. 26, Corning, NY.
- 96. Hedge, A. (2006) Reading Room Ergonomics. National Ergonomics Conference and Exposition, November 28 December 1, Las Vegas, NV.
- 95. Hedge, A. (2006) Ergonomics: Essential for a Productive Workforce. National Ergonomics Conference and Exposition, November 28 December 1, Las Vegas, NV.
- 94. Hedge, A. (2006) Revisiting Sitting: cultural or other factors. HFES 50<sup>th</sup> Annual Conference, San Francisco, Oct.16-20.
- 93. Hedge, A. (2006) Overview of the USA bed market. Bedding Research Symposium, Melbourne, Oct. 16. (Keynote address).
- 92. Hedge, A. (2006) Impact of Ergonomics on Digital Healthcare Information and Management Systems (DIHMS), PACS 2006: Digital Healthcare Information and Management Systems (DHIMS), San Antonio, March 14-17.
- 91. Hedge, A. (2006) Ergonomic considerations for the Sedentary Digital Radiologist, PACS 2006: Digital Healthcare Information and Management Systems (DHIMS), San Antonio, March 14-17.
- 90. Hedge, A. (2006) Emerging Issues in IAQ, <u>Air Conditioning Contractors of America's</u> (ACCA-NCC) Conference & Indoor Air Expo., March 28-30, San Jose, Ca.
- 89. Hedge, A. (2005) Work and Workstation Design and Obesity Risks. <u>Ecology of Obesity</u>, June 6-7, Cornell University, Ithaca, NY.
- 88. Hedge, A. (2005) Best Practices for Site-Wide Hospital Ergonomics, National Ergonomics Conference and Exposition, November 30 December 3, Las Vegas, NV.
- 87. Hedge, A. (2005) A Guide to Ergonomic Solutions, National Ergonomics Conference and Exposition, November 30 December 3, Las Vegas, NV.
- 86. Hedge, A. (2005) Ergonomic Considerations in the Digital Healthcare Environment, PACS 2005: The Expanding Integrated Digital Healthcare Enterprise, March 9-12.
- 85. Hedge, A. (2005) Ventilating Healthy Homes: Emerging Issues in Residential IAQ, ComfortTech 2005, 9/16/05.
- 84. Hedge, A. (2004) Linking environmental conditions to productivity, <u>Eastern Ergonomics Conference and Exposition</u>, June 21-23, New York, NY.
- 83. Hedge, A. (2004) Economic Ergonomics: cost-effective proven office interventions, Canadian Facility Management & Design Expo and Conference, Canadian Facilities Management Association/Association of Canadian Ergonomists, April 6, Toronto (Keynote address).
- 82. Hedge, A. (2003) The Impact of Ergonomics Regulations: A Global Perspective, National Ergonomics Conference and Exposition, Las Vegas, December 9-11.
- 81. Hedge, A. (2003) "Economics of Ergonomics", International Interior Design

- Association Convention, Louisville, KY, November 62, 2003. Invited Keynote address.
- 80. Golkowski, C. & Hedge, A. (2003) "Nonthermal plasma an exciting new air filtration technology", Environmental Systems Symposium at Syracuse, Syracuse University, October 27.
- 79. Hedge, A. (2003) Office Ergonomics, California Association of Rehabilitation and Reemployment Professionals 21st Annual conference, San Diego, 9/19-21/03.
- 78. Hedge, A. (2003) Redefining the Work Sphere, Inter. Int. Design Assoc, San Francisco, 5/13/03.
- 77. Hedge, A. (2003) Effective Office Ergonomics 2003, Inter. Int. Design Assoc, Grand Rapids, 4/21/03.
- 76. Hedge, A. (2003) Creating a safe work environment 5th Annual Statewide and Training Resources Exposition, Worcester, MA, 4/9/03.
- 75. Hedge, A. (2003) Ergonomics: Past, Present and Future, Eastern Ergonomics Conference, National Ergonomics Conference and Exposition, New York, July 9-11. (Keynote address)
- 74. Hedge, A. (2003) Understanding Ergonomics National Correctional Industries Conference & Exposition 2003, Denver, 3/23/03.
- 73. Hedge, A. (2002) "Effective Ergonomics", National Ergonomics Conference and Exposition, Las Vegas, December 9-12. Keynote address.
- 72. Hedge, A. (2002) "Office Ergonomics 2002", International Facilities Management Association Mid-Western Chapter, Chicago, November 20, 2002. Invited presentation.
- 71. Hedge, A. (2002) "IAQ, Floor coverings and the elderly" American Association of Homes and Services for the Aging 2002 Annual Meeting & Exposition, Baltimore, MD, October 28-31, 2002.
- 70. Hedge, A. (2002) "School Floor Coverings and IAQ Effects on students well-being and learning", Association of School Business Officials International, 2002 Annual Conference, Phoenix, AZ, October 25-27, 2002.
- 69. Hedge, A. (2002) BOMA Study on Tenant Workplace Satisfaction and Retention, Interface Flooring Systems and Buildings Magazine, New York, October 15. Invited Panelist.
- 68. Hedge, A. (2002) "School Floor Coverings: Effects on students well-being and learning", Florida Educational Facilities Planners' Association, Inc. Annual Conference, Orlando, FL, July 8-11.
- 67. Hedge, A. (2002) "IAQ, Health and Productivity", Second Annual UTRC IEQ Workshop, Safe Buildings, Connecticut, June 6-7, 2002
- 66. Hedge, A. (2002) School Floor Coverings: Effects on Students Well-being and Learning, Florida Educational Facilities Planners annual conference, July, 9.
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- 64. Hedge, A. (2000) Ergonomic necessities of the workplace. Canadian Facility Management and Design Expo and Conference, Toronto, Ontario, Canada, April 13.
- 63. Hedge, A. (2000) Hotel ergonomics. Hotel Ezra 75<sup>th</sup> Annual Conference, Cornell University, Ithaca, NY, April 8.
- 62. Hedge, A. (2000) Workplace ergonomics and musculoskeletal disorders. Institute of Occupational Medicine, Curitiba, Brazil, March 20.
- 61. Hedge, A. (1999) Using computers to gather and provide ergonomic intelligence, <u>The National Ergonomics Conference and Exposition</u>, Anaheim, 7-9 December.
- 60. Hedge, A. (1999) Ergonomics and children: How to prevent injury in the classroom,

- The National Ergonomics Conference and Exposition, Anaheim, 7-9 December.
- 59. Hedge, A. (1998) Evaluating the benefits of two-component lighting methods for corporate offices a case study, <u>Design.y.c.</u>, New York, 29 October.
- 58. Hedge, A. (1998) Alternative officing: the human factors perspective, alt. office conference, San Jose, CA, August 13.
- 57. Hedge, A. (1998) Health and safety in the office, Liberty Mutual Symposium, Buenos Aires, Argentina, August 11-12.
- 56. Hedge, A. (1998) Improving productivity through computer ergonomics, The Institute of Directors, Pall Mall, London, July 16.
- 55. Hedge, A. (1998) Voodoo Ergonomics Gizmos that don't work!, 1998 Newspaper Association of America Newspaper Operations Superconference, January 11-16, Miami Beach, Florida.
- 54. Hedge, A. (1995) What is ahead for carpet? Carpet and Rug Institute annual conference, November 11 14, Amelia Island, Florida.
- 53. Hedge, A. (1995) Environmental comfort, Edificio Inteligente '95, July 17-18 Sao Paulo, Brazil.
- 52. Hedge, A. (1995) Future developments in air conditioning and illumination: Intelligent workspaces for intelligent workers, Edificio Inteligente '95, July 17-18, Sao Paulo, Brazil.
- 51. Hedge, A. (1995) A holistic approach to indoor air quality issues, Florida School Plant Management Association, May 31, St. Petersburg, FL.
- 50. Hedge, A. (1995) Effects of Carpet on Indoor Air Quality and Health, New England Environmental Expo., May 9-11, Boston.
- 49. Hedge, A. (1995) Sick building syndrome and legislative initiatives in the USA, First Latin American Conference on Indoor Air Pollution, May 5, Santiago, Chile.
- 48. Hedge, A. (1994) Sick Building Syndrome: Psychological factors, American Industrial Hygiene Society Annual Conference, May 22, Anaheim, CA.
- 47. Hedge, A. (1994) Psychological Aspects of Sick Building Syndrome The Fibers Society, May 15, Annapolis, MD.
- 46. Hedge, A. (1994) Carpet and Indoor Air Quality User Issues, CRI Annual Technical Conference, May 4, Dalton, Georgia.
- 45. Hedge, A. (1994) Risk factors for repetitive motion disorders, Ergonomics Conference, April 26-28, Atlanta, Georgia.
- 44. Hedge, A. (1994) Sick building syndrome: is it caused by poor indoor air quality? Indoor Air Pollution, 7th National Conference, Univ. Tulsa, March 14-16.
- 43. Hedge, A. (1993) Effects of restrictive smoking policies on indoor air quality and sick building: a study of 27 air-conditioned offices. The National Environmental Tobacco Smoke Conference, December 16-17, Washington, DC.
- 42. Hedge, A. and Mitchell, G.E. (1993) Beneficial effects of furniture-integrated breathing-zone filtration on indoor air quality, and worker comfort, health and productivity, 86th Annual Convention and The Office Building Show, BOMA International, Baltimore, June 27-30.
- 41. Hedge, A. (1993) Psychosocial factors and indoor air quality, Indoor Environment '93, Baltimore, April 21-23.
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- 39. Hedge, A. (1992) Environmental Illness, <u>The Carpet and Rug Institute Annual Technical Conference</u>, Oct. 1 3, San Destin, FL.

- 38. Hedge, A. (1992) Workstation environment factors, <u>International Society for Facilities</u>
  <u>Executives Annual Conference</u>, Sept. 30 Oct. 2, Cambridge, MA.
- 37. Hedge, A. (1992) Planning for the New "Global Work Force". Paper presented at the Forum on Business and Technology Conference, "New Cost-Effective Plans and Strategies", 8-9 April, Austin, TX.
- 36. Hedge, A. (1992) Stress and VDT work. Presentation. Bellcore VDT Safety Seminar IV, Altlanta, Georgia, February 7th, 1992.
- 35. Hedge, A. (1992) Alternative Input Devices. Panel presentation. Bellcore VDT Safety Seminar IV, Atlanta, Georgia, February 6th, 1992.
- 34. Hedge, A. (1992) IAQ and ventilation. AT&T Work Center Planning Semi-Annual Conference and Training Session, Pleasanton, CA, January 28th, 1992.
- 33. Hedge, A. (1992) IAQ and Sick Building Syndrome. AT&T Work Center Planning Semi-Annual Conference and Training Session, Pleasanton, CA, January 28th, 1992.
- 32. Hedge, A. (1991) Clearing the air. IDCNY panel presentation, 17 October.
- 31. Hedge, A. (1991) What really causes sick building syndrome? IFMA/BOMA Connecticut chapters, 17 October.
- 30. Hedge, A. (1991) Sick building syndrome: Causes and cures. IFMA Pennsylvania chapter, 17 September.
- 29. Hedge, A. (1991) Sick building syndrome: facts and fallacies. Carpet and Rug Institute Conference, Hilton Head, S. Carolina, 12-13 September.
- 28. Hedge, A. (1991) The holistic model of internal environment. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 27. Hedge, A. (1991) Health studies of buildings in the U.S.A. including the effects of different smoking policies on indoor air quality and sick building syndrome in air conditioned offices. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 26. Hedge, A. (1991) The stress model the psychology of the organization and its relationship to health. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 25. Hedge, A. (1991) Breathing zone filtration. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 24. Hedge, A. (1991) Effects on occupants of underfloor ventilation system. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 23. Hedge, A. (1991) Challenges to the future of lighting design in the office environment. Asia-Pacific Public Works Congress and Trade Show, Brisbane, Australia, 1-5 September, 1991.
- 22. Hedge, A. (1991) What really causes bad IAQ. National Air Duct Cleaners Association, Region 7 Seminar, Albany, NY, 23-25 August.
- 21. Hedge, A., Erickson, W., and Rubin, G. (1991) Smoking policy, indoor air quality and sick building syndrome in offices, British Occupational Hygiene Society Conference, Nottingham, U.K., 9-12 April.
- 20. Hedge, A., Erickson, W., and Rubin, G. (1990) The roles of job stress and job satisfaction in the etiology of the sick building syndrome in offices. Proceedings of the APA/NIOSH conference "Work and well-being: an agenda for the 90s", 15-17 November, Washington, D.C.
- 19. Wilkes, A. and Hedge, A. (1990) Diagnosing the sick building syndrome: computer-aided facilities diagnostics. Building Pathology '90, U.K.
- 18. Hedge, A. (1990) "Sick buildings, healthy buildings: Environmental Psychology and

- Workplace Design". Keynote address presented at 98th Annual Convention of the American Psychological Association at Boston, August 10-14, 1990.
- 17. Davis, G., Gray, J., Hedge, A. and Szigetti, F. (1990) Who evaluates for whom, and why? <u>Proceedings of the Environmental Design Evaluation Conference</u>, Paris, June 30 July 2.
- 16. Hedge, A. (1990) Indoor air quality and the sick building syndrome, Presentation to the Interdepartmental National Accommodation Panel (INAP), Public Works Canada, 16 January.
- 15. Hedge, A. (1989) Behavioural aspects of unhealthy buildings. <u>Building for Health and Well-being</u>, European Concern Centre in Europe Seminar, 4 December, Guilford, U.K.
- 14. Hedge, A., (1989) Computer-Aided Facilities Diagnostics. Presentation at the 33rd Annual Meeting of the Human Factors Society, Santa Monica: Human Factors Society.
- 13. Hedge, A. (1989) Worldwide innovations in workplace design. <u>FM'89: Preparing for</u> the Global Decade, M.I.T. Cambridge, Ma.
- 12. Hedge, A. (1989) The workplace: worldwide innovations. <u>IFEX'89</u>, International Design Center, New York.
- 11. Hedge, A. (1989) The sick building syndrome and cardiovascular disease. Proceedings of the Conference on <u>Work Environments and Cardiovascular Disease</u>, N.H.L.B.I., Univ. California Irvine, 2-5th April.
- 10. Hedge, A. (1989) Sick building syndrome: the problem worldwide. Proceedings of Conference on Healthy Buildings by Design, 10th April, Royal Society of Medicine, London, U.K.
- 9. Hedge, A. (1989) Environmental engineering: encouraging signs for the future. Proceedings of Conference on <u>Healthy Buildings by Design</u>, 10th April, Royal Society of Medicine, London, U.K.
- 8. Hedge, A. (1989) "Intelligent" ventilation systems. International Seminar on Intelligent Buildings, 7th April, Royal Institute of British Architects, London, U.K.
- 7. Hedge, A. (1988) Commentary and Analysis of the relevance of the NMB Bank Building for U.S. Projects. Presented at <u>The New NMB Bank Building</u>, Amsterdam. Design Briefing, Boston, MA., October, 5.
- 6. Hedge, A. (1986) Impact of new technology on office worker's health: Implications for office design. Paper presented at 21st Congress of the International Association of Applied Psychology, 13-18 July, Jerusalem, Israel.
- 5. Hedge, A. (1985) Psychological issues in office. Invited paper presented at the Golden Jubilee Conference of the Society of Occupational Medicine (Yorkshire Group), Rotherham General Hospital, Rotherham, 23 May 1985.
- 4. Donald, I. and A. Hedge. (1984) Office evaluation: Sterile research on a fertile topic? Paper presented at IAPS 8, West Berlin, August.
- 3. Hedge, A. (1984) Environmental psychology in the United Kingdom: A paedomorphic enterprise? Invited paper presented at the American Psychological Association Annual Conference, Toronto, Canada.
- 2. Hedge, A. (1983) Office design and office workers' health. Invited paper presented at The Design of Work Environments: Implications for Productivity and Health, 3rd Annual Irvine Symposium on Environmental Psychology, 28-29 April, University of California, Irvine.
- 1. Hedge, A. and N. Travis. (1979) User evaluation of Open-Plan Offices. Paper presented at an International Conference on Environmental Psychology, July, University of Surrey, Guildford.

## **Conferences**

- 4. Organizing panel (invited), National Indoor Air Quality, 1997 conference.
- 3. Co-organizer of 2.5 day conference on "Indoor Air Quality, Immunity and Health: Recent Advances in Environmental Toxicology and Psychoneuroimmuology", NC State Univ., Raleigh, NC. 1995.
- 2. Organizer a 2 day conference titled <u>Addressing the Employee Health Crisis in Today's Computerized Office</u>, Cornell University, Ithaca, June 24-25.
- 1. Member of the Planning Committee, "Workshop on Occupational Stress and cardiovascular disease", National Heart, Lung, and Blood Institute, 1988-1989

# Symposia and Panels

- 17. Hedge, A. (2005) Practical Solutions in Office Ergonomic: From the frugal to the flamboyant. National Ergonomics Conference and Exposition, November 29 December 3, Las Vegas, NV. Session Chair and Organizer.
- 16. Hedge, A. (2005) Best practices for site –wide hospital ergonomics. <u>National Ergonomics Conference and Exposition</u>, November 29 December 3, Las Vegas, NV. Session Chair and Organizer.
- 15. Hedge, A. (2005) Indoor Air Quality and Productivity Advisory Panel, US EPA, 10/25-26/05, Panel Chair and Organizer.
- 14. Hedge, A. (2004) "Future office trends: Ergonomic challenges and opportunities", National Ergonomics Conference and Exposition, Las Vegas, November 29-December 3, 2004.
- 13. Hedge, A. (2004) Session chair: Habitation Measurement, Habitation 04, Orlando, Florida, January 4-7.
- 12. Hedge, A. (2003) "The Impact of Ergonomics Regulations: A Global Perspective", National Ergonomics Conference and Exposition, Las Vegas, December 9-11, 2003. Session Chair and Organizer.
- 11. Hedge, A. (2003) "Dynamic sitting", Human Factors and Ergonomics Society 47<sup>th</sup> Annual Conference, Denver, October 13-17, 2003. Session Chair and Organizer.
- 10. Hedge, A. (2002) "Overcoming Challenges to Large-Scale Office Ergonomics Initiatives", ", National Ergonomics Conference and Exposition, Las Vegas, December 9-12, 2002. Session Chair and Organizer.
- 9. Hedge, A. (2002) "Choosing an Ergonomics Keyboard", National Ergonomics Conference and Exposition, Las Vegas, December 9-12, 2002. Session Chair and Organizer.
- 8. Hedge, A. (2001) "Promises and Pitfalls of Ergonomic Tools and Technologies", ", National Ergonomics Conference and Exposition, Las Vegas, December 8-11, 2001. Session Chair and Organizer.
- 7. Hedge, A. (1994) Organizing a session on "Work Environment 2000: Ecological Ergonomics and Workplace Design for the 21st Century".
- 6. Hedge, A. (1993) Panel Chair for "The Big Picture in Office Design",
- 5. Hedge, A. (1992) Conference organizer and chair for <u>Addressing the Employee Health Crisis in Today's Computerized Office</u>, Cornell University, Ithaca, June 24-25.
- 4. Hedge, A. (1989) Invited member of the panel on 'Impacts on the individual: ergonomics, comfort, health, and safety. <u>Tomorrow's Workplaces: facilities design and management and the new communications technologies</u> Univ. Montréal, 1-3 June.
- 3. Hedge, A. (1986) Office Design and New Technology. Symposium organized for 21st

- Congress of the International Association of Applied Psychology, 13-18 July, Jerusalem, Israel.
- 2. Hedge, A. (1982) Future developments in office environments. Symposium organized for 20th Congress of the International Association of Applied Psychology, 25-31 July, Edinburgh, Scotland.
- 1. Hedge, A. (1982) Issues of housing research. Symposium organized for 20th Congress of the International Association of Applied Psychology, 25-31 July, Edinburgh, Scotland.

# **Examples of Research Talks, Seminars or Workshops (selection)**

- 37. Hedge, A. (2011) Green Ergonomics: The Future of Green Buildings and Ecodesign, Schiavello, Mar 23, Melbourne, Australia
- 36. Hedge, A. (2011) Ergonomic Design of Computer Workspaces, Human Factors and Ergonomics Society of Australia, Sydney, Australia. ½ day workshop.
- 35. Hedge, A. (2009) The future of ergonomics. Advanced Ergonomics Course, State Fund (California) September 23, Vacaville, Ca.
- 34. Hedge, A. (2009) What makes a device ergonomic? Advanced Ergonomics Course, State Fund (California) September 23, Vacaville, Ca.
- 33. Hedge, A. (2009) Ergotecture, Faculty of Occupational Safety and health, University of Nis, Nis, Serbia. June 25.
- 32. Hedge, A. (2009) The need for computer ergonomics in healthcare IT, Evidence Based Hospital Design Forum, Georgetown University, January 29.
- 31. Hedge, A. (2008) Need a lift: Industrial Ergonomics and Material Handling, State Fund (California) October 22, Montebello, Ca.
- 30. Hedge, A. (2007) Office Ergonomics Workshop, State Fund (California), Oct. 17, San Diego, Ca.
- 29. Hedge, A. (2006) Research of the Human factors and Ergonomics Laboratory, 7<sup>th</sup> Annual Presidential Event, Cornell Silicon Valley, March 28, Mountainview, Ca.
- 28. Hedge, A. It's and ergonomic world or is it? Ergonomics, Human Factors and Ergonomics Society Western NY Chapter, Rochester Institute of Technology11/17/05
- 27. Hedge, A. Ergonomics for Everyone, Ergonomics Symposium, Cornell Campus Club, 10/20/05
- 26. Hedge, A. The science of Ergonomics, Colgate-Palmolive, 10/14/05
- 25. Hedge, A. The School Environment: Effects on Student Well-being and Learning, Connecticut School Buildings and Grounds Association, 12/15/04
- 24. Hedge, A. (2004) Advanced workstation designs, National Ergonomics Conference and Exposition, Las Vegas, November 29-December 3, 2004.
- 23. Hedge, A. (2004) Ergonomics benefits everyone! Invited Opening Keynote address, 40th Conference of the Human Factors and Ergonomics Society of Australia (HFESA) and the 7th conference of the Pan Pacific Council on Occupational Ergonomics (PPCOE), August 23, Cairns, Australia, 2004.
- 22. Hedge, A. (2004) The Modern Office, half-day workshop at the 40th Conference of the Human Factors and Ergonomics Society of Australia (HFESA) and the 7th conference of the Pan Pacific Council on Occupational Ergonomics (PPCOE) August 22, Cairns, Australia, 2004.
- 21. Hedge, A. (2004) Economics of ergonomics, Invited Keynote address, Canadian Facilities Management Conference, Toronto, 4/6/04
- 20. Hedge, A. Tomorrow's Workstations: Office ergonomics and the future, IIDA SF

- chapter, 6, 2003.
- 19. Hedge, A. Computer Ergonomics Bergen County Technical School, NJ, 5/2002
- 18. Hedge, A. Office ergonomics. NASA, Kennedy Space Center, Florida, 10/14/99.
- 17. Hedge, A. Factors predicting the sick building syndrome at the Individual and Aggregate Levels, Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, Berkeley, CA. 10/3/97.
- 16. Hedge, A. (1997) Future directions in office lighting, Toyota Motor Company, Torrance, CA, 9/20/97.
- 15. Shaw, G. and Hedge, A. (1997) Office Ergonomics. Presentation at the OSHA Regional Conference on Ergonomics, 9/15/97
- 14. Sick buildings: a problem for engineers or psychologists? Cornell Univ., Dept. Psychology, 12/6/96.
- 13. Musculoskeletal injuries associated with computer use. Central NY OSHA, Amer. Indust. Hyg. Assoc., and Amer. Assoc Safety Eng., Cortland, 11/21/96.
- 12. Do we really need a new ventilation standard? Central NY ASHRAE, Ithaca, 10/15/96.
- 11. Ventilation, air quality and sources of contamination, Southern Tier Builders Association, Ithaca, 9/7/95.
- 10. Indoor Air Quality and the sick building syndrome, Southern Tier Builders Association, Marathon, 3/8/95.
- 9. IAQ and Sick Building Syndrome Issues in Schools, Ithaca BOCES, 4/5/95
- 8. Sick Building Syndrome: a problem for Epidemiological statistics?, Seminars in Environmental Statistics, Cornell Theory Center, 3/10/95.
- 7. Issues in Indoor air quality and psychoneuroimmunology, Institute for Comparative Environmental Toxicology seminar, 3/10/95.
- 6. Biomechanics of computer use. Mechanical Engineering Biomechanics Seminar, Cornell University, 4/3/95
- 5. Hedge, A. (1993) Sick building syndrome, indoor air quality, and ETS? American Industrial Hygiene Association Syracuse Chapter, Syracuse, NY, October 19.
- 4. Hedge, A. (1993) What causes the Sick Building Syndrome? University of Birmingham, Institute of Occupational Health, Birmingham, U.K. March 23, 1993.
- 3. Principles of Lighting Design, University of Birmingham, Institute of Occupational Health, Fellowship in Occupational Medicine course. March 23, 1993.
- 2. Hedge, A. (1992) Sick Building Syndrome: are psychological factors important? University of Leeds, Dept. of Psychology, Leeds, U.K. December 1, 1992.
- 1. Hedge, A. (1992) Creating the 'highly pleasant environment': Ecological ergonomics investigates the sick building syndrome. Aston University, Organization Studies and Applied Psychology Division, Birmingham, U.K. December 3, 1992.

# Examples of Media Coverage of Research (selection) TV

Global National, Ottawa, Canada, Air Conditioning Blues, July 23, 2011 MSNBC, Desk jockeys rising up: putting chairs out of the job, October 17, 2011 Office ergonomics, NBC Today Show of March 12, 2006

Keeping Kids Healthy, Kids and Computer Ergonomics PBS, NY Friday March 5th @ 2:30pm on WNET (Channel 13 in NY)

Office Ergonomics, CBS, 'Early Show', September 28, 2002

Children's Chairs, CNN Jeanne Moos, June 4, 2002

'Ergonomic Chairs', American Architectural Review, hosted by Morley Safer, PBS,

July 2002.

Children and computers, MSNBC, 'Today Show', January 5, 2000

Children and computers, MSNBC, 'The Site', March 19, 1997

Computer Ergonomics, Fox, NY, 'On Trends', March 18, 1997

Children and computers, CNN Science News, August 24/25, 1996

Computer keyboard research, Channel 7 Health Report, 8/13/96

Computer glare screens, Channel 7 Health Report, 6/18/96

Carpal Tunnel Syndrome, Channel 7 Health Report, 5/28/95

Keyboard research: "New Media News", Mind Extension University channel, 4/29/95.

Carpet and Indoor Air Quality - Channel 2 News, Baltimore, 4/22/93

New Carpet Emissions and Health - Channel 12 News, Baltimore, 4/23/93

CNN Future Watch, Computer Keyboard Design, April, 1992.

"Why Buildings Make You Sick", BBC Horizon, 1989.

### Video

"The Mysteries of Ergonomics", Cornell Cybertower, April 2002

Office Ergonomics, DEA FM videos, 1998

"Carpet and Indoor Air Quality", CRI video, 1996.

"The Cornell/Honeywell Study: Beneficial Effects of a Preset Tiltdown Keyboard

System on Posture and Comfort in Offices", Cornell University. 1995.

"The Human Factor: Office Ergonomics", AT&T Ergonomics Video, 1993.

"Lighting the computerized office", 1993.

# Radio (selection of interviews on Ergonomics and Environmental Design issues)

WHCU, Air-conditioning & productivity, July, 23, 2011

Standing Workstations. NewsTalk 1010/Boom 97.3/99.9 Virgin Radio Astral Radio,

Toronto, December 27

Voice of America, Oct. 2004

CBS Radio News, Oct. 2004

The Health Show, Oct., 2004

"Ask Heloise" Show (12/13/03)

"Ask Heloise "Show (3/7/03)

Radio KGO Ronn Owens show (5/13/03)

The Health Show WAMC Public radio (June 19, 2002)

J-Wave – Tokyo, Japan (Jan. 2002)

National Public Radio, OSHA and Ergonomics, "Today Show", December, 1999.

Minnesota Public Radio, OSHA and Ergonomics, December, 1999

WBZ radio Boston - SBS, 2/25/98

Bloomberg Radio, NY - SBS, 3/2/98

Radio WROW radio, Albany, 2/8/95

Radio WTKL radio, Ithaca, 2/9/95

Floor Radio, Dalton, Georgia, 4/7/95 (2 separate interviews)

Radio KIRO, Seattle, 12/14/93

"Living on Earth", National Public Radio, 12/6/93

Radio WAMC, Albany, "Environment program", 11/30/93

Money Radio, Los Angeles, on "Cornell Office Ergonomics Conference", 6/15/92.

Radio WGR "News", Buffalo, on Carpal Tunnel Syndrome, 6/8/92.

Radio Brisbane, Australia, on Indoor Air Quality, 9/5/91.

Radio Sydney, Australia, "Particulars" on Indoor Air Quality, 9/7/91.

Radio WVBR, "This Sunday", Ottawa, on Indoor Air Quality, 7/7/91. Radio CKBY, Ottawa, on Indoor Air Quality, 7/7/91.

*Newspaper and magazine articles (selection)* 

Finding the moves for your best desk practices, The Globe and Mail (Canada),

December 19, 2011

Keyboard jockeys: perfect the art of healthy sitting, Independent.co.uk, September 14, 2011

So Many Gadgets, So Many Aches, The New York Times, September 11, 2011 Sunday, Section

It's possible to be too cool in summer; Green. The International Herald Tribune, August 29, 2011 Monday, Pg. 18,

Oh, to Be Warm In Summer's Heat, The New York Times, August 28, 2011 Sunday, Section, Pg 5

The Dominion Post (Wellington, New Zealand), July 16, 2011 Saturday, Pg. 10

Sitting targets, The Press (Christchurch, New Zealand), July 16, 2011

InDesign Magazine, 46, Green Ergonomics, Australia, 2011

Underground Construction magazine, Hand tool design, 2011

Semana, Injuries caused by Technology, Columbia, 2011

Womens Day, Carpal Tunnel Syndrome, 2011

Readers Digest, What you need to know about sleep, April 28, 2011

Macleans, A greener future, April 28, 2011

Slate, rethinking the school desk, October 26, 2011

Yahoo News, iPad's comfort factor questioned, April 2, 2011

Womens Day, The health Impact of Hi-tech, October 15, 2010

The New York Times, February 15, 2010

The New York Times, June 29, 2008

The Globe and Mail (Canada), December 27, 2007

The Globe and Mail (Canada), December 26, 2006

Employee Benefit News, October 1, 2006

Time, July 17, 2006

National Post (f/k/a The Financial Post) (Canada), February 19, 2005

The Scotsman, January 27, 2005

The New York Times, January 23, 2005

The Washington Post, December 4, 2004

The Toronto Sun, November 10, 2004

Los Angeles Times (2004)

Wall Street Journal (2004)

Toronto Globe & Mail (2003)

Wall Street Journal (2003)

NY Times (2003)

Parents Mag. (2003)

Men's Health (2003)

NY Times; Seattle Times; Los Angeles Times; Ithaca Times (2002)

Wall Street Journal (3 articles) (2002)

Readers Digest (2002)

Furniture Style (2002)

Parents Mag. (2002)

Fitness Mag. (2002)

IS Mag. (2002)

Newsday (2002)

Business Journal (2002)

Post Star; Daily News; Las Vegas Review Journal; Star-Telegram (2002)

NY State Bar Association Journal (2002)

Rehab. Continuum Report (2002)

Assembly Magazine, 5/95

Buffalo News, 5/9/95

Buildings: The Facilities Construction and Management Magazine, "ARI and Indoor

Air Quality: Breathing Easier", 11/92, p.76, 78

Chicago Sun-Times "Opinions split on preventing typing injuries", 1/12/97

Chicago Tribune, 3/12/95

Colorado Springs Business Journal, "New keyboard tray means better posture", 5/30/97.

Computers in Libraries, "Carpal Tunnel Syndrome Protection", 2/95

Cornell Chronicle, 11/18/94

Cornell Cooperative Extension News Service, "Poor lighting strains eyes in offices",

Putnam County, 1992, p.14.

Courier Journal, "Will 'ergonomic' computer.. 1/14/97

Edmonton Sunday Journal, 1/2/94

European Window on Industry, 3/93, p.14.

Daily Messenger, "Shed better light on your workplace", 10/30/97.

Des Moines Business Record, "Comfort Zone", 7/28/97.

Facility Planning News, "Towards a more healthy workplace", 9/92, p. 3,7.

Financial Times, "The answer might just be blowing in the wind", 9/8/92.

Grand Rapids Press, "Ergo experts have doubts about 'healthy' keyboards", 2/6/97.

Indoor Pollution Law Report, 1/1/94

Indoor Air Pollution News, "Filtration Systems Reduced Sick Building Complaints", vol.5, No.13, 7/10/92, p.2.

Indoor Air Review, "Job stress considered a possible marker for SBS complaints", 9/92.

Ithaca Journal, 9/1/94;11/17/94

Investor's Business Daily, 12/1/94

Materials Handling News, "Comfort is profitable", 5/93, p.19.

Milwaukee Journal, 12/5/94

New Haven Register, "New keyboard system may prevent injuries", 7/26/97.

News, "Do those funny shaped keyboards help", 1/9/97

New York Times, "Is a little mouse hurting you? Experts say try a bigger one."1/13/2000

Philadelphia Enquirer, 11/22/94

Popular Science, 7/1/94.

Post and Courier, "Carpet not environmental culprit of sickness in schools", 5/26/97.

Review, "Decor can be whimsical", 7/3/97.

San Antonia Express News, 1/10/94

Scientific American, November 1999

Science News, 144 (23), p.382, 1994 Star Tribune, "Therapist, surgeon target repetitive stress injury, 1/19/97

Sunday Sun-Times, "New designs the key for some", 1/12/97

The Atlanta Constitution, "Some computer jockeys are facing high risk of repetitive stress injury", 8/18/92.

Tennessean, "Potential problems for computer age kids", 5/20/97

Washington Post, 11/22/94, 5/96

Washington Post, "The 'Ergonomics' Boom", 2/25/97.

Woman's World, "Keep your computer from hurting your eyes", 8/19/97.

VDT News, 11/92; 5/95

Hobbies Squash, badminton, Nordic walking, guitar

Exhibit 2

# TESTIMONY HISTORY ALAN HEDGE, PhD, CPE, FHFES, FIEHF, FIEA, AFBPsS, CCSF Faculty Fellow 1/2007 – 1/2012

Case Caption	Law Firm	Testimony	Date
Metamorfyx, LLC v.	Perkins Coie	Arbitration	2010
Microsoft Corporation	1201 Third Avenue		
	Suite 4800		
	Seattle, WA 98101-3099		

Exhibit 3

# Exhibit 3

# Materials Considered by Dr. Alan Hedge

Apple Inc., v. Samsung Electronics Co., Ltd., Amended Complaint, U.S. District Court, Northern District of California, Case No.: 11-cv-01846-LHK ("Am. Compl.")

- U.S. Registration No. 3,470,983 (APLNDC-Y0000182302-182304)
- U.S. Registration No. 3,457,218 (APLNDC-Y0000182305-182306)
- U.S. Registration No. 3,475,327 (APLNDC-Y0000182307-182308)
- U.S. Registration No. 3,886,196 (APLNDC-Y0000182288–182289)
- U.S. Registration No. 3,889,642 (APLNDC-Y0000182290–182291)
- U.S. Registration No. 3,886,200 (APLNDC-Y0000182292–182293)
- U.S. Registration No. 3,889,685 (APLNDC-Y0000182294–182295)
- U.S. Registration No. 3,886,169 (APLNDC-Y0000182296–182297)
- U.S. Registration No. 3,886,197 (APLNDC-Y0000182298–182299)
- U.S. Registration No. 2,935,038 (APLNDC-Y0000182300–182301)
- U.S. Application Serial No. 85/041,463 (APLNDC-Y0000183090- 183097)

APLNDC-Y0000232557-232608

APLNDC-Y0000237387-237394

Alan Hedge, *Ergonomics and Design: Applying the Laws of Work*, 2 INFORMEDESIGN 3, http://www.informedesign.org/\_news/mar\_v02-p.pdf

I NT'L ERGONOMICS ASS'N, What is Ergonomics, http://www.iea.cc/01\_what?What%20is%20Ergonomics.html.

Alan Hedge, Consumer Product Design, in 2 ENCYCLOPEDIA OF ERGONOMICS AND HUMAN FACTORS 1555–1560 (W. Karwowski ed., 2d ed. 2006)

Timeline of Phone Product Trends (Exhibit 26 to the Opening Report of Peter Bressler, dated March 22, 2012, Case No.: 11-cv-01846-LHK)

Int'l Organization for Standardization, Ergonomics—General Approach, Principles and Concepts, ISO 26800:2011, available at <a href="http://www.iso.org/iso/iso\_catalogue/catalogue\_tc/catalogue\_detail.htm?csnumber=42885">http://www.iso.org/iso/iso\_catalogue/catalogue\_tc/catalogue\_detail.htm?csnumber=42885</a>

ERGONOMICS—GENERAL APPROACH, PRINCIPLES AND CONCEPTS (ISO 26800:2011)

Alan Hedge, *Ergonomic Design of Hand-Operated Devices*, in HUMAN FACTORS IN CONSUMER PRODUCTS 203-222 (N. Stanton ed., Taylor & Francis 1998)

J.R. Lewis, P.M. Commarford, P.J. Kennedy & W.J. Sadowski, *Handheld Electronic Devices*, 4 REVIEWS OF HUMAN FACTORS & ERGONOMICS 105, 106 (2008)

Expert Report of Mark Lehto Report, served March 22, 2012

Deposition Transcript of Daniele De Iuliis from N.D. Cal. 11-01846-LHK (PSG), taken October 21, 2011

Apple iOS Human Interface Guidelines, *available* at http://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/Mobile HIG/MobileHIG.pdf

T.M. Greiner, *Hand Antropometry of US Army Personnel*, Technical Report, Natrick/TR-92/011 (1991)

M.M. Sanders & E.J. McCormick, HUMAN FACTORS IN ENGINEERING & DESIGN 393 (7th ed. McGraw-Hill, NY 1993)

Emergency Department Intubation Checklist, *available at* http://emupdates.com/wp-content/uploads/2011/01/EDICTv121.pdf)

W.E. Woodson, B. Tillman & P. Tillman, Human Factors Design Handbook 419 (2d ed., McGraw Hill Inc. 1992)

http://www.amazon.com/Belkin-Grip-Silicon-Sleeve-BLACK/dp/B002K8MB3Y/ref=pd\_cp\_e\_2

http://www.amazon.com/AmazonBasics-Silicone-Verizon-iPhone-Black/dp/B003Y74AZ2

http://www.gsmarena.com

http://www.samsung.com/us/mobile/cell-phones/SCH-I100ZKAXAR

http://www.gsmarena.com/samsung\_i100\_gem-3738.php

http://www.gsmarena.com/samsung\_t669\_gravity\_t-3336.php

http://www.gsmarena.com/samsung\_m7600\_beat\_dj-2684.php

http://www.gsmarena.com/samsung\_w999-4660.php

http://www.gsmarena.com/casio\_g'zone\_commando-4550.php

http://www.gsmarena.com/nokia\_lumia\_800-4240.php

http://www.gsmarena.com/nokia\_lumia\_800-4240.php

http://www.phonearena.com/phones/Pantech-Crossover\_id5598

http://www.gsmarena.com/nokia\_x5\_01-3396.php

https://www3.tivo.com/store/accessories-remote.do

ANSI/HFES 100-2007, HUMAN FACTORS ENGINEERING OF COMPUTER WORKSTATIONS, Human Factors and Ergonomics Society, Santa Monica, CA

C.M. Hunter, P.R. Boyce & J.H. Watt, *Effect of Bezel Reflectance on People Using a Computer Monitor*, *in* 3 Human-Centered Computing: Cognitive, Social, and Ergonomic Aspects 58, 58–62 (Don Harris, Vincent Duffy, Michael Smith, Constantine Stephanidis eds., Lawrence Erlbaum Associates Inc. 2003)

P.A. Howarth & S.G. Hodder, Bezel Gloss and Glare, 25 DISPLAYS 77, 87

Sascha Segan, "Sony Tablet S," PCMag, Dec. 5, 2011, http://www.pcmag.com/article2/0,2817,2397089,00.asp (APLNDC-Y0000233713-APLNDC-Y0000233714)

CNET, "Sony Tablet S," http://reviews.cnet.com/tablets/sony-tablet-s-32gb/4505-3126\_7-35003724.html#reviewPage1. APLNDC-Y0000233702-233712

http://discover.store.sony.com/tablet/#design/ergonomics

CNET, "Barnes & Noble Nook Tablet," http://reviews.cnet.com/tablets/barnes-noble-nook-tablet/4505-3126\_7-35059751.html#reviewPage1

Sascha Segan, "Barnes & Noble Nook Tablet Review," Nov. 18, 2011, PCMag, http://www.pcmag.com/article2/0,2817,2396554,00.asp (APLNDC-Y0000233669-233670)

http://www.cobyusa.com/?p=prod&prod\_num\_id=10581&pcat\_id=3001

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- Samsung Gravity Touch SCH-T669
- LG Optimus T
- Pantech Crossover P8000
- Nokia Lumia 800
- Samsung Beat DJ M7600
- Sony Ericsson Xperia Arc S
- Samsung Gem SCH-I100
- Casio GzOne Commando 4500
- Barnes & Noble Nook
- Vinci Tablet
- Acer Iconia A500
- Coby Kyros MID8125
- Sony Tablet S
- Sony Tablet P
- Samsung Q1

Exhibit 4



## TO ALE TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

July 19, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: D593,087 ISSUE DATE: May 26, 2009

By Authority of the

**Under Secretary of Commerce for Intellectual Property** and Director of the United States Patent and Trademark Office



M. TARVER
Certifying Officer



LLS PATENT DOCUMENTS

# (12) United States Design Patent (10) Patent No.:

Andre et al.

**US D593,087 S** 

(45) Date of Patent:

\*\* May 26, 2009

# (54) ELECTRONIC DEVICE

# (75) Inventors: Bartley K. Andre, Menlo Park, CA (US); Daniel J. Coster, San Francisco, CA (US); Daniele De Iuliis, San

Francisco, CA (US); Richard P. Howarth, San Francisco, CA (US); Jonathan P. Ive, San Francisco, CA (US); Steve Jobs, Palo Alto, CA (US);

Duncan Robert Kerr, San Francisco, CA (US); Shin Nishibori, San

Francisco, CA (US); Matthew Dean Rohrbach, San Francisco, CA (US); Douglas B. Satzger, Menlo Park, CA (US); Calvin Q. Seid, Palo Alto, CA

(US); Christopher J. Stringer, Portola Valley, CA (US); Eugene Antony Whang, San Francisco, CA (US); Rico Zorkendorfer, San Francisco, CA (US)

(73) Assignee: Apple Inc., Cupertino, CA (US)

(\*\*) Term: 14 Years

(21) Appl. No.: 29/282,833

(22) Filed: Jul. 30, 2007

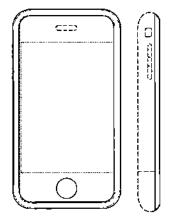
## Related U.S. Application Data

- (63) Continuation of application No. 29/270,880, filed on Jan. 5, 2007, now Pat. No. Des. 558,756.
- (51) LOC (9) Cl. ...... 14-03
- (52) U.S. Cl. ..... D14/341; D14/203.7; D14/138 G
- (58) Field of Classification Search ............... D14/137, D14/138, 147, 191, 218, 247-248, 341-347, D14/496, 138 R, 138 AA, 138 AB, 138 AC, D14/138 AD, 138 C, 138 G; D10/65, 78, D10/104; D13/168; D18/7; 455/556.1, 455/566, 575.1, 575.3; 345/169

See application file for complete search history.

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U.S. Appl. No. 29/324,262, Andre et al., Electronic Device, filed Sep. 9, 2008.

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Primary Examiner—Jeffrey D Asch Assistant Examiner—Bridget L Eland (74) Attorney, Agent, or Firm—Sterne, Kessler, Goldstein & Fox P.L.L.C.

## S7) CLAIM

The ornamental design of an electronic device, substantially as shown and described.

## DESCRIPTION

FIG. 1 is a front perspective view of an electronic device in accordance with the present invention;

FIG. 2 is a rear perspective view of the electronic device in FIG. 1;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a top view thereof;

FIG. 6 is bottom view thereof;

FIG. 7 is a left side view thereof;

FIG. 8 is a right side view thereof;

FIG. 9 is a front perspective view of another embodiment of an electronic device in accordance with the present invention;

FIG. 10 is a rear perspective view of the electronic device in FIG. 9;

FIG. 11 is a front view thereof;

FIG. 12 is a rear view thereof;

FIG. 13 is a top view thereof;

FIG. 14 is bottom view thereof;

FIG. 15 is a left side view thereof;

FIG. 16 is a right side view thereof,

FIG. 17 is a front perspective view of another embodiment of an electronic device in accordance with the present invention;

FIG. 18 is a rear perspective view of the electronic device in

FIG. 17;

FIG. 19 is a front view thereof;

FIG. 20 is a rear view thereof;

FIG. 21 is a top view thereof;

FIG. 22 is bottom view thereof;

FIG. 23 is a left side view thereof;

FIG. 24 is a right side view thereof;

FIG. 25 is a front perspective view of another embodiment of an electronic device in accordance with the present invention;

FIG. 26 is a rear perspective view of the electronic device in

FIG. 25;

FIG. 27 is a front view thereof;

FIG. 28 is a rear view thereof;

FIG. 29 is a top view thereof;

FIG. 30 is bottom view thereof;

FIG. 31 is a left side view thereof;

FIG. 32 is a right side view thereof;

FIG. 33 is a front perspective view of another embodiment of an electronic device in accordance with the present invention;

FIG. 34 is a rear perspective view of the electronic device in

FIG. 33;

FIG. 35 is a front view thereof;

FIG. 36 is a rear view thereof;

FIG. 37 is a top view thereof;

FIG. 38 is bottom view thereof;

FIG. 39 is a left side view thereof;

FIG. 40 is a right side view thereof;

FIG. 41 is a front perspective view of another embodiment of an electronic device in accordance with the present invention;

FIG. 42 is a rear perspective view of the electronic device in

FIG. 41;

FIG. 43 is a front view thereof;

FIG. 44 is a rear view thereof;

FIG. 45 is a top view thereof;

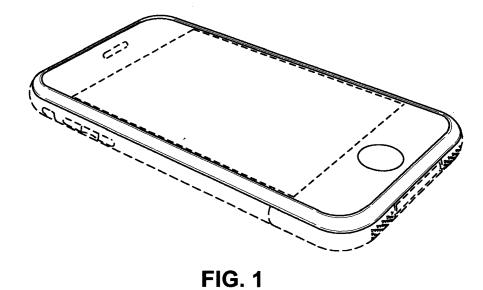
FIG. 46 is bottom view thereof;

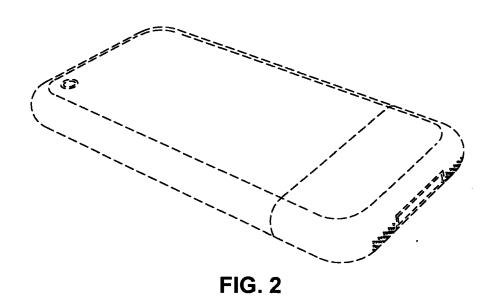
FIG. 47 is a left side view thereof; and,

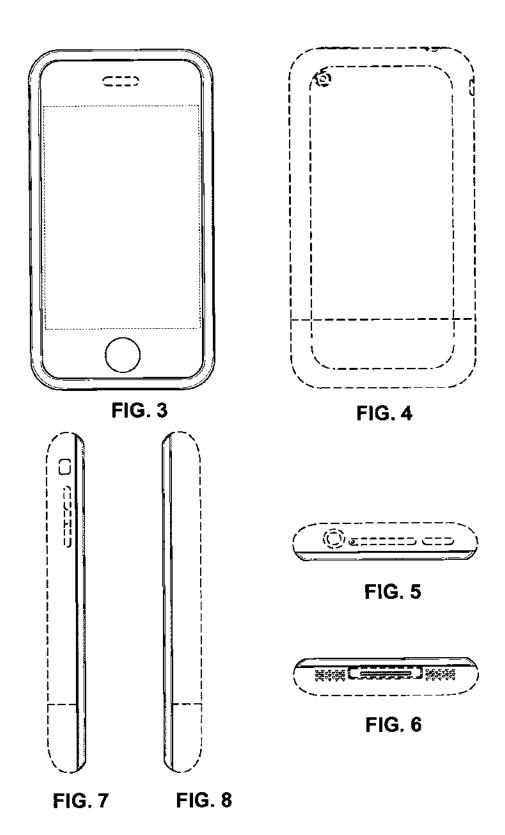
FIG. 48 is a right side view thereof.

The broken lines showing the remainder of the electronic device are directed to environment. The broken lines, within the claimed design, in embodiments 1, 2, and 4 that depict an elongated oval shape and the broken lines, within the claimed design, in embodiments 2, 3, and 6 that depict a circle shape are superimposed on a continuous surface and are for illustrative purposes only. The broken lines, within the claimed design, in embodiments 1, 3, and 5 that depict a large rectangular shape, indicate a non claimed shape below the continuous front surface and are for illustrative purposes only. None of the broken lines form a part of the claimed design.

## 1 Claim, 12 Drawing Sheets







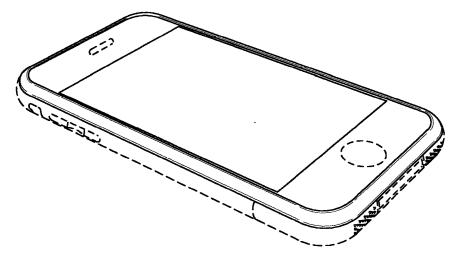
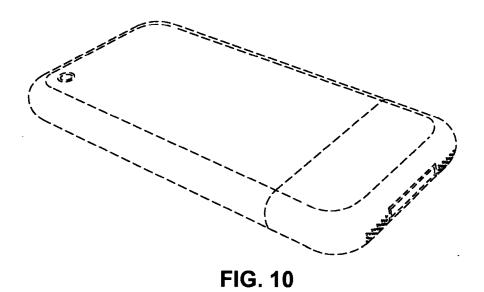
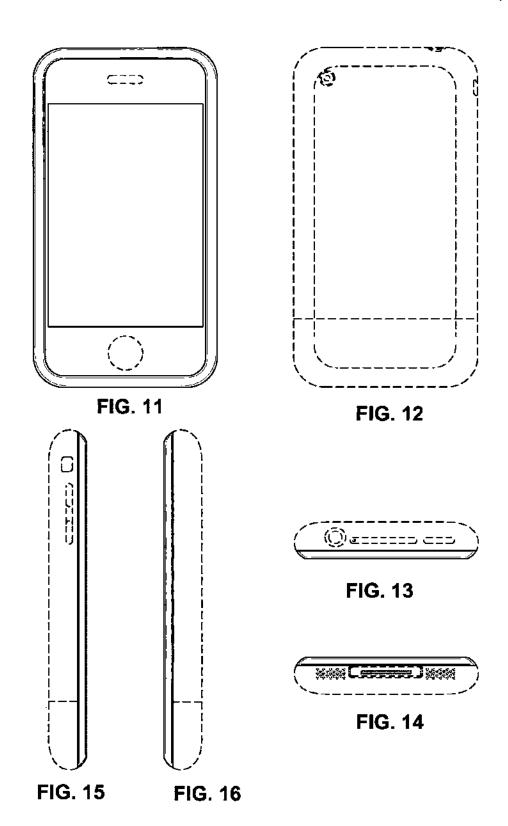


FIG. 9





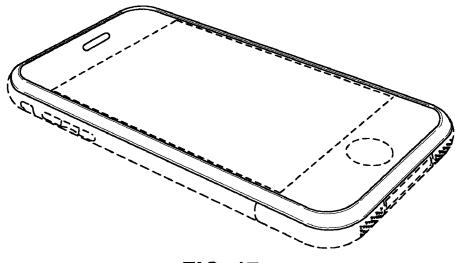


FIG. 17

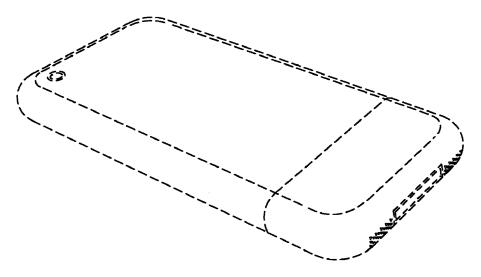
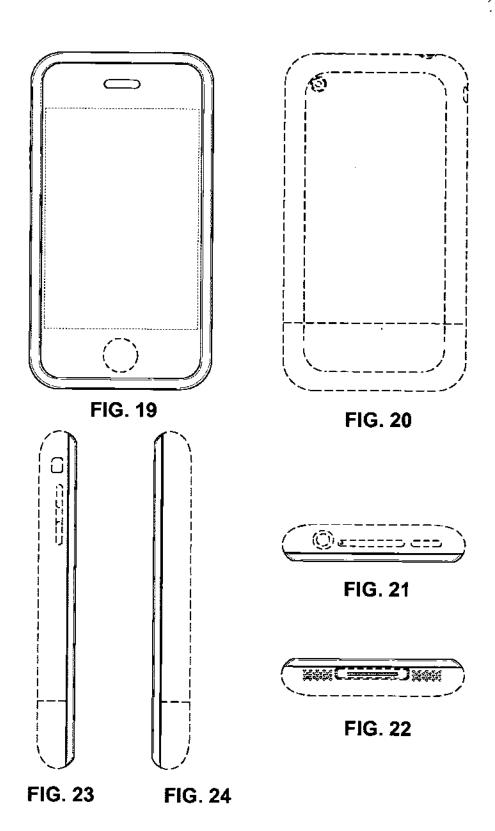


FIG. 18



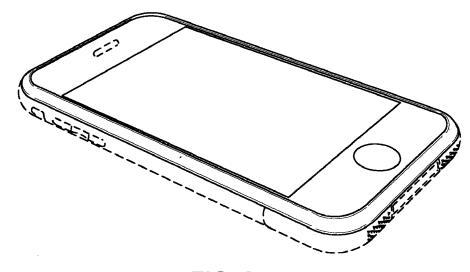


FIG. 25

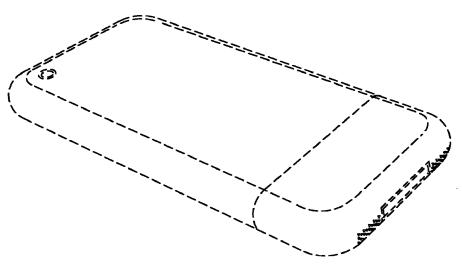
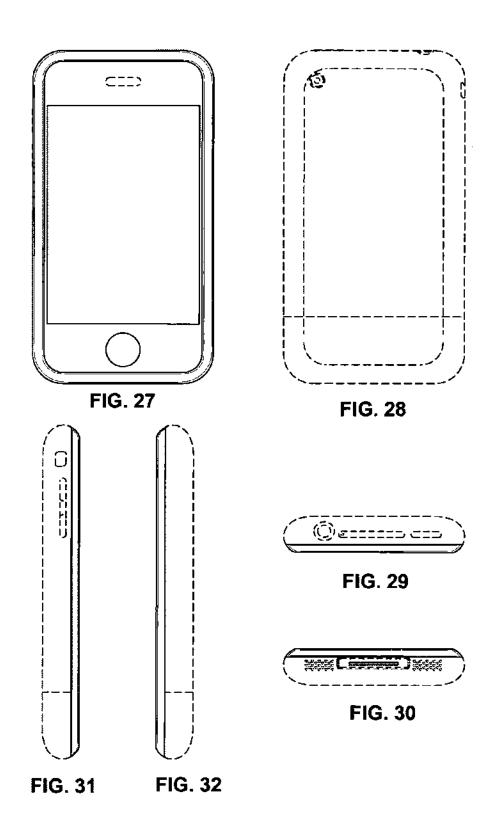
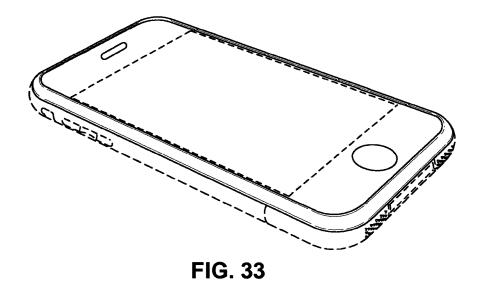
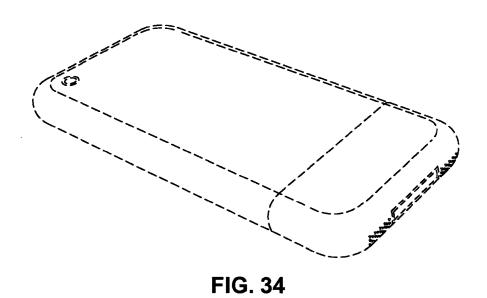
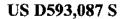


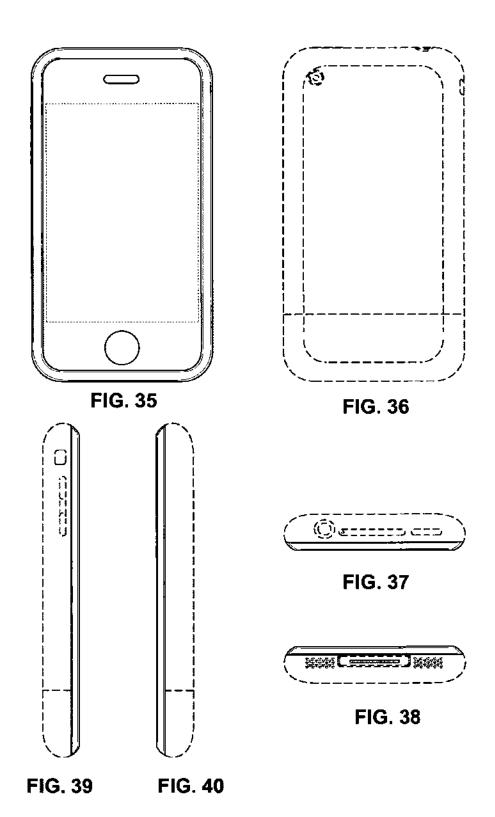
FIG. 26

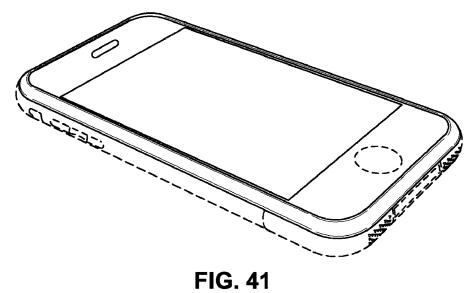




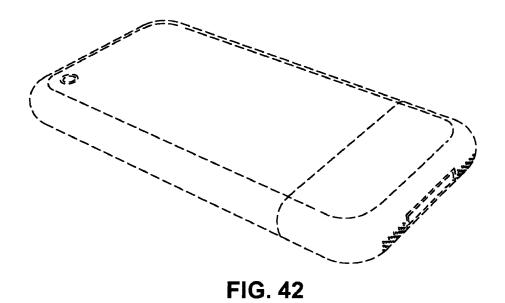




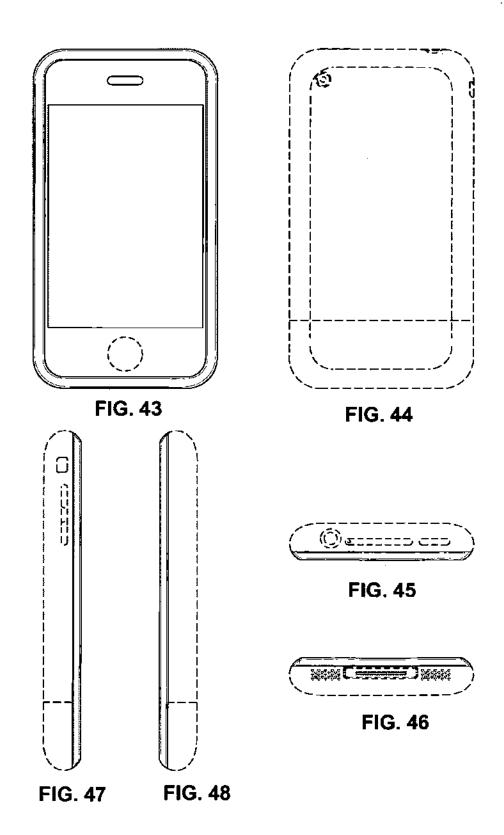


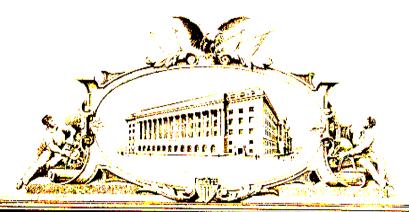






May 26, 2009





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#### TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office

April 26, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: *D618,677*ISSUE DATE: *June 29, 2010* 

By Authority of the

Under Secretary of Commerce for Intellectual Property and Director of the United States Patentiand Trademark Office

Certifying Officer

### (12) United States Design Patent Andre et al.

(10) Patent No.:

US D618,677 S

(45) Date of Patent:

\*Jun. 29, 2010

#### (54) ELECTRONIC DEVICE

(75) Inventors: Bartley K. Andre, Menio Park, CA (US); Daniel J. Coster, San Francisco, CA (US); Daniele De Iuliis, San Francisco, CA (US); Richard P. Howarth, San Francisco, CA (US); Jonathan P. Ive, San Francisco, CA (US); Steve Jobs, Palo Alto, CA (US); Duncan Robert Kerr, San Francisco, CA (US); Shin Nishibori, Portola Valley, CA (US); Matthew Dean Robrbach, San Francisco, CA (US); Douglas B. Satzger, Menlo Park, CA (US); Calvin Q. Seid, Palo Alto, CA (US); Christopher J. Stringer, Woodside, CA (US); Eugene Antony Whang, San

Francisco, CA (US); Rico Zorkendorfer, San Francisco, CA (US)

(73) Assignee: Apple Inc., Cupertino, CA (US)

Notice: This patent is subject to a terminal disclaimer.

Term: 14 Years Appl. No.: 29/328,018 (21) (22) Filed: Nov. 18, 2008

#### Related U.S. Application Data

(60) Division of application No. 29/282,834, filed on Jul. 30, 2007, now Pat. No. Des. 581,922, which is a continuation of application No. 29/270,888, filed on Jan. 5, 2007, now Pat. No. Des. 558,758.

(51) LOC (9) CL ...... 14-02 (52) U.S. Cl. ..... D14/341; D14/248; D14/203.7 D14/342, 343, 344, 345, 346, 347, 420, 426, D14/427, 432, 439, 440, 441, 448, 496, 125, D14/137, 129, 130, 138, 250, 389, 147, 218, D14/247, 248, 156; D10/65, 104; D13/168; D18/6, 7; D21/329, 686; 455/90.3, 556.1, 455/556.2, 575.1, 575.3, 575.4; 379/433.01,

379/433.04, 433.06, 433.07; 361/814; 341/22; 345/169, 173; D6/596, 601, 605 See application file for complete search history. (56)References Cited

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(Continued) Primary Examiner-Cathron C Brooks Assistant Examiner-Angela J Lee (74) Attorney, Agent, or Firm—Sterne, Kessler, Goldstein & Fox PLLC

(57) CLAIM

The ornamental design of an electronic device, as shown and described.

#### DESCRIPTION

FIG. 1 is a front perspective view of an electronic device in accordance with the present invention;

FIG. 2 is a rear perspective view thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a top view thereof;

FIG. 6 is bottom view thereof;

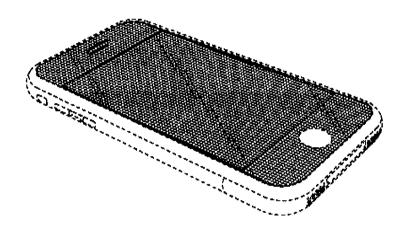
FIG. 7 is a left side view thereof, and,

FIG. 8 is a right side view thereof.

The claimed surface of the electronic device is illustrated with the color designation for the color black.

The electronic device is not limited to the scale shown herein. As indicated in the title, the article of manufacture to which the ornamental design has been applied is an electronic device, media player (e.g., music, video and/or game player), media storage device, a personal digital assistant, a communication device (e.g., cellular phone), a novelty item or toy.

#### 1 Claim, 2 Drawing Sheets



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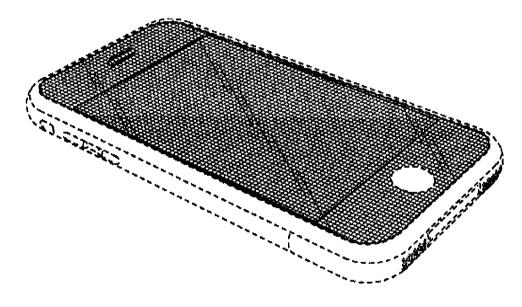


FIG. 1

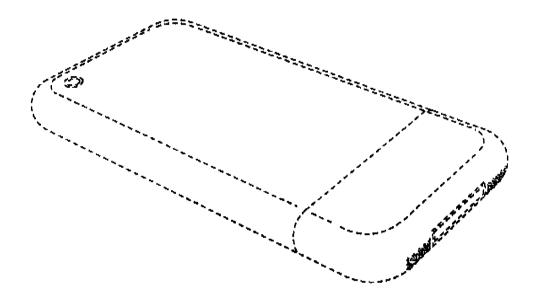


FIG. 2

FIG. 7

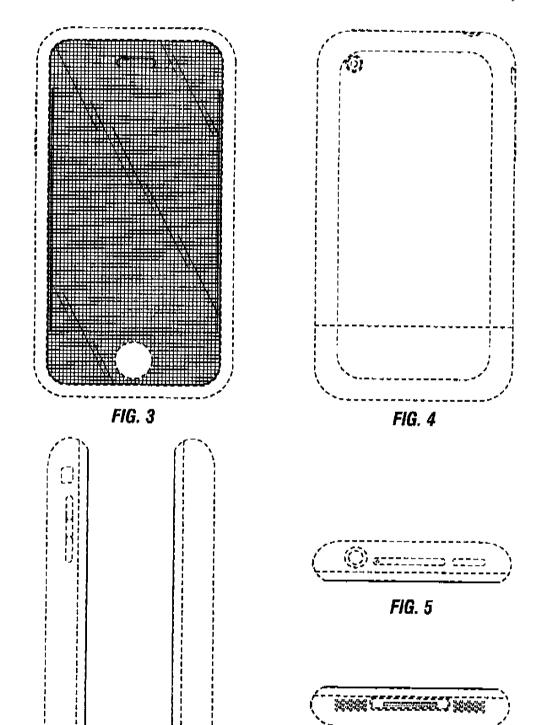
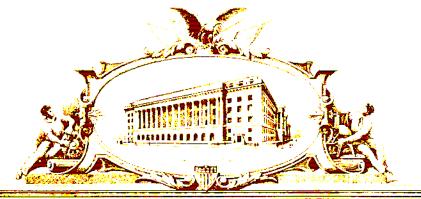


FIG. 8

FIG. 6



### HILD CIVING ( CHANNE ( 180 AAL)

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United States Patent and Trademark Office

July 20, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: D622,270

ISSUE DATE: August 24, 2010

By Authority of the

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office



M. K. CARTER
Certifying Officer



### (12) United States Design Patent (10) Patent No.: Andre et al.

(45) Date of Patent:

US D622,270 S \*\* Aug. 24, 2010

(54) ELECTRONIC DEVICE

(75) Inventors: Bartley K. Andre, Menio Park, CA (US); Daniel J. Coster, San Francisco, CA (US); Daniele De Iuliis, San Francisco, CA (US); Richard P. Howarth, San Francisco, CA (US); Jonathan P. Ive, San Francisco, CA (US); Steve Jobs, Palo Alto, CA (US); Duncan Robert Kerr, San Francisco, CA (US); Shin Nishibori, Portola Valley, CA (US); Matthew Dean Rohrbach, San Francisco, CA (US); Peter Russell-Clarke, San Francisco, CA (US); Douglas B. Satzger, Menio Park, CA (US); Calvin Q. Seid, Palo Alto, CA (US); Vincent Keane Seid, legal representative, Los Gatos, CA (US); Christopher J. Stringer, Woodside, CA (US); Eugene Antony Whang, San Francisco, CA (US); Rico Zorkendorfer, San Francisco, CA (US)

(73) Assignee: Apple Inc., Cupertino, CA (US)

(\*\*) Term: 14 Years

(21) Appl. No.: 29/344,620

(22) Filed: Oct. 1, 2009

#### Related U.S. Application Data

(63) Continuation of application No. 29/284,188, filed on Aug. 31, 2007, now Pat. No. Des. 602,486.

(51) LOC (9) Cl. ...... 14-02

(52) U.S. Cl. ..... D14/341

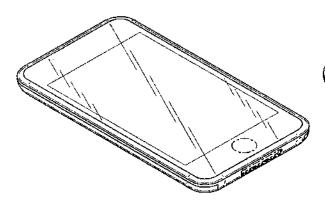
(58) Field of Classification Search ....... D14/341-347, D14/137, 138, 138.1, 138 AA, 138 R, 138 AB, D14/18 AC, 138 AD, 138 C, 138 G, 496. D14/203.1, 203.3, 203.4, 203.5, 203.6, 203.7, D14/402-411, 431, 417, 426, 427, 428, 432, D14/429, 129, 130, 420, 439-441, 448, 125, D14/147, 156, 218, 247-248, 250, 389; D10/65, D10/104; D21/324, 329, 330, 331; 455/556.1, 455/556.2, 566, 575.1, 575.3, 575.4, 90.3, 455/6.1; 379/433.04, 433.11, 433.12, 433.13, 379/910, 916, 433.01, 433.06, 433.07; 345/169, 345/901, 905; 361/814; 341/122; 346/173; 273/454-456, 459-461, 153 R, 148 R, 148 B, 273/259, 138.2, 237; 463/1, 46, 47, 47.3; D3/18, 19, 26, 200, 201, 203.1-203.8, 205, D3/207, 212, 218, 226-228, 247, 250, 265, D3/269, 272, 303, 304, 309, 315, 321; D9/700, D9/500, 414, 337; D28/5, 61, 73, 76, 78, D28/83

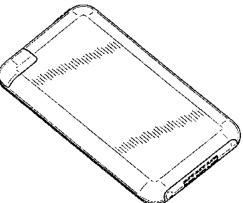
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•	008 Suketal.	(74) Attorney, Agent, or Firm—Sterne, Kessler, Goldstein &
	008 Hofer et al.	
	008 Fujisawa	Fox PLLC
•	008 Andreetal.	
•	008 Andre et al.	(57) CLAIM
•	009 Andre et al.	
	009 Andre et al.	The ornamental design for an electronic device, as shown and
	009 Andre et al.	described.
•	009 Andre et al.	
	006 Zuo et al.	DESCRIPTION
	007 Yoon et al.	
2008/0004085 A1 1/20	008 Jung et al.	FIG. 1 is a front perspective view of an electronic device
		. N

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FIG. 1 is a front perspective view of an electronic device showing our new design;

FIG. 2 is a rear perspective thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a left side view thereof;

FIG. 6 is right side view thereof;

FIG. 7 is a top plan view thereof;

FIG. 8 is a bottom plan view thereof; and,

FIG. 9 is an enlarged elevational view of a representative corner of the electronic device.

The broken lines show portions of the electronic device which form no part of the claimed design.

#### 1 Claim, 5 Drawing Sheets

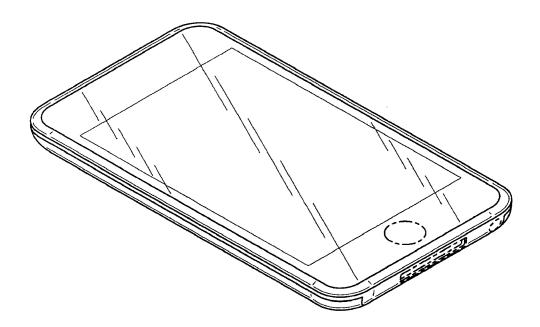


FIG. 1

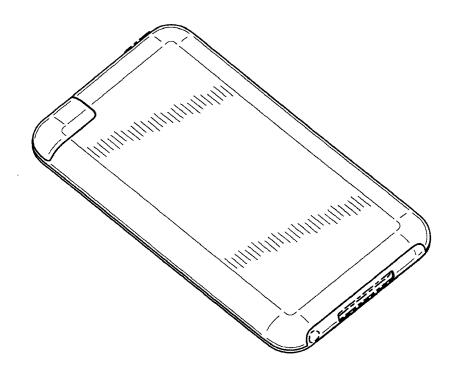


FIG. 2

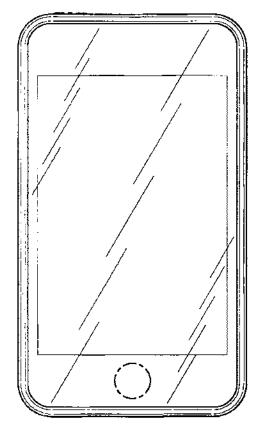


FIG. 3

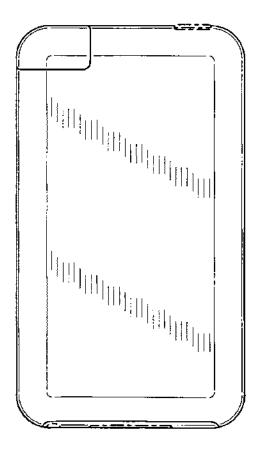


FIG. 4

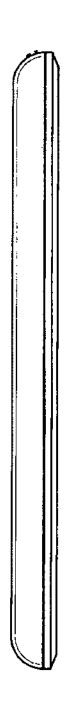


FIG. 5

FIG. 6



**FIG. 7** 



FIG. 8

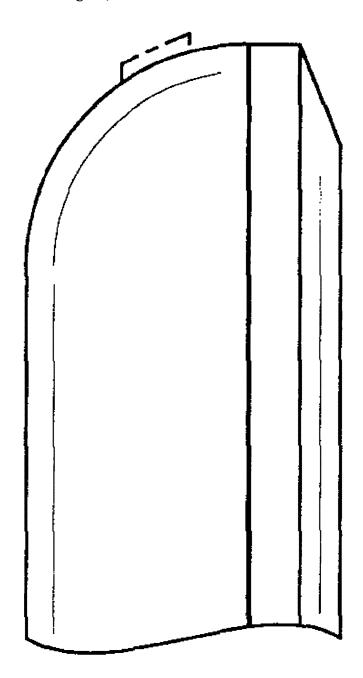


FIG. 9



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M. TARVER
Certifying Officer



## (12) United States Design Patent (10) Patent No.:

Andre et al.

US D504,889 S

(45) Date of Patent:

\*\* May 10, 2005

#### (54) ELECTRONIC DEVICE

(75) Inventors: Bartley K. Andre, Menlo Park, CA (US); Daniel J. Coster, San Francisco, CA (US); Daniele De Iuliis, San Francisco, CA (US); Richard P. Howarth, San Francisco, CA (US); Jonathan P. Ive, San Francisco, CA (US); Steve Jobs, Palo Alto, CA (US); Shin Nishibori, San Francisco, CA (US); Duncan Robert Kerr, San Francisco, CA (US); Matthew Dean Rohrbach, San Francisco, CA (US); Douglas B. Satzger, Menlo Park, CA (US); Calvin Q. Seid, Palo Alto, CA (US); Christopher J. Stringer, Portola Valley, CA (US); Eugene Anthony Whang, San Francisco, CA (US): Rico Zörkendörfer, San Francisco, CA (US)

(73) Assignee: Apple Computer, Inc., Cupertino, CA (US)

(\*\*) Term: 14 Years

(21) Appl. No.: 29/201,636

(22) Filed: Mar. 17, 2004

(51) LOC (7) Cl. ..... 14-02 (52) U.S. Cl. ..... D14/341 (58) Field of Search ...... D14/341-346, D14/374, 424; D19/26, 59, 60; 345/104,

156, 168, 173; 434/307 R, 308, 309, 317; 178/18.03; 349/12

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Primary Examiner-Freda S. Nunn

(74) Attorney, Agent, or Firm-Beyer Weaver & Thomas, ĹĽĖ

(57)CLAIM

We claim the ornamental design for an electronic device, substantially as shown and described.

#### DESCRIPTION

FIG. 1 is a top perspective view of an electronic device in accordance with the present design;

FIG. 2 is a bottom perspective view thereof;

FIG. 3 is a top view thereof;

FIG. 4 is a bottom view thereof;

FIG. 5 is a left side view thereof;

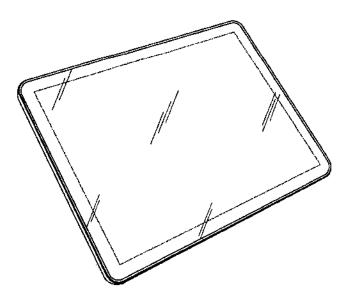
FIG. 6 is a right side view thereof;

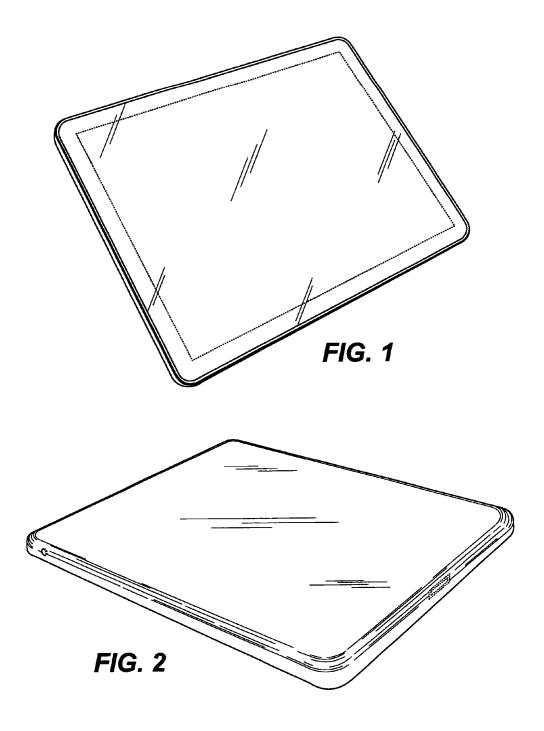
FIG. 7 is an upper side view thereof;

FIG. 8 is a lower side view thereof; and,

FIG. 9 is an exemplary diagram of the use of the electronic device thereof the broken lines being shown for illustrative puposes only and form no part of the claimed design.

#### 1 Claim, 4 Drawing Sheets





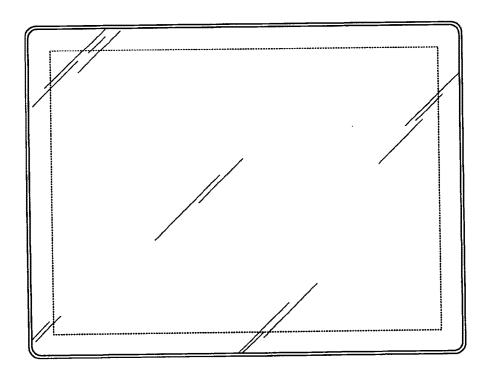


FIG. 3

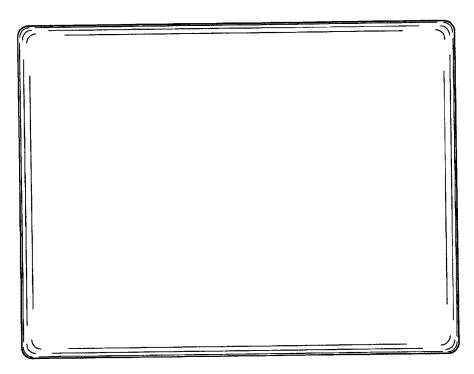


FIG. 4



FIG. 5



FIG. 6



FIG. 7

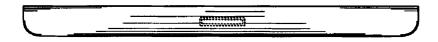
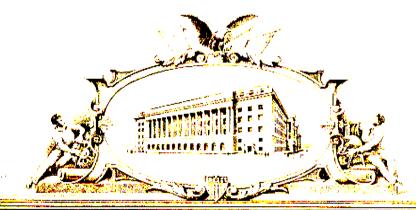


FIG. 8



FIG. 9



# THE SHOWING CHECKARY COLINARY COLLARS

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U.S. PATENT: D627,790

ISSUE DATE: November 23, 2010

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Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

P. SWAIN

Certifying Officer



### (12) United States Design Patent (10) Patent No.: Chaudhri

#### (54) GRAPHICAL USER INTERFACE FOR A DISPLAY SCREEN OR PORTION THEREOF

(75) Inventor: Imran Chandhri, San Francisco, CA (US)

(73) Assignce. Apple Inc., Cupertino, CA (US)

(\*\*) Term: 14 Years

(21) Appl. No.: 29/283,656

(22) Filed: Aug. 20, 2007

#### Related U.S. Application Data

(63) Continuation of application No. 29/281,695, filed on Jun. 28, 2007, which is a continuation-in-part of application No. 29/281,507, filed on Jun. 25, 2007, now Pag. No. Des. 608,366, which is a continuation-in-part of application No. 29/281.460, filed on Jun. 23, 2007. now Pat, No. Des. 604,305.

(51)	LOC (9) CL	1-	4-04
(52)	U.S. CL	D14/	486
	Field of Classification Search		
	D18/24 33; D19/6, 52, 9, 10; D20/11;	D21/324	33:
	715/700	867, 973	
	See application file for complete search	history.	

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\*\* Nov. 23, 2010

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(Continued)

Primary Examiner - Melanie II Tung (74) Attorney, Agent, or Firm - Sterne, Kessler, Goldstein & Fox PLLC

(57)CLAIM

The ornamental design for a graphical user interface for a display sereen or portion thereof, as shown and described,

#### DESCRIPTION

The FIGURF is a front view of a graphical user interface for a display screen or portion thereof showing my new design. The broken lines of the display screen or portion thereof and other elements form no part of the claimed design

1 Claim, 1 Drawing Sheet



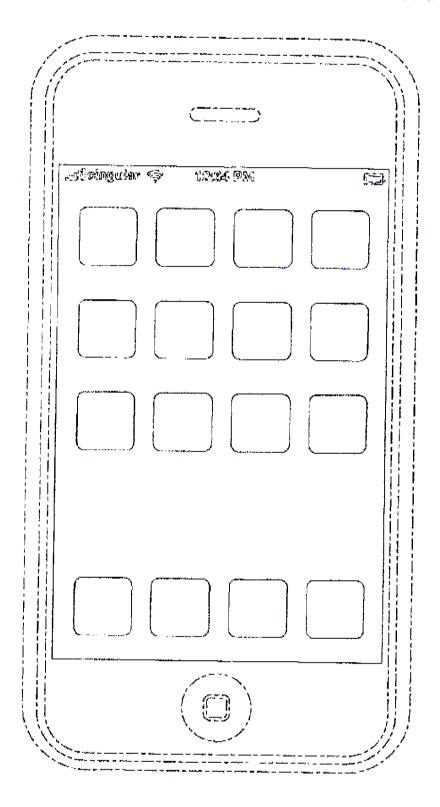
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**FIGURE** 



### THE PROPERTY OF THE PROPERTY O

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United States Patent and Trademark Office

July 19, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: D604,305

ISSUE DATE: November 17, 2009

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M. TARVER

**Certifying Officer** 



### (12) United States Design Patent (10) Patent No.:

**US D604,305 S** 

(45) Date of Patent: \*\* \*Nov. 17, 2009

(54)	GRAPHICAL USER INTERFACE FOR A
	DISPLAY SCREEN OR PORTION THEREO

- (75) Inventors: Freddy Anzures, San Francisco, CA (US); Imran Chaudhri, San Francisco, CA (US)
- (73) Assignee: Apple Inc., Cupertino, CA (US)
- (\*\*) Term: 14 Years
- (21) Appl. No.: 29/281,460
- (22) Filed: Jun. 23, 2007

(51)	LOC (9) Cl	32-00
(52)	U.S. CL	D14/486
(58)	Field of Classification Search	D14/485-95;
	D18/24-33; D19/6, 52; D20/11;	D21/324-33;
	715/700	-867, 973-77
	See application file for complete search	history.

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Primary Examiner-Melanie H Tung (74) Attorney, Agent, or Firm-Sterne, Kessler, Goldstein & Fox P.L.L.C.

#### (57)CLAIM

The ornamental design for a graphical user interface for a display screen or portion thereof, as shown and described.

#### DESCRIPTION

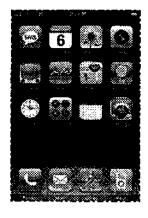
The patent file contains at least one drawing executed in color. Copies of this patent with a color drawing will be provided by the Office upon request and payment of the necessary fee.

FIG. 1 is a front view of a graphical user interface for a display screen or portion thereof showing our new design; and,

FIG. 2 is a front view of a second embodiment thereof.

The broken line showing of a display screen in both views forms no part of the claimed design.

> 1 Claim, 2 Drawing Sheets (1 of 2 Drawing Sheet(s) Filed in Color)



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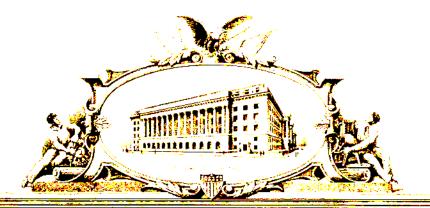
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FIG. 1



FIG. 2



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United States Patent and Trademark Office

July 20, 2011

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: D617,334

ISSUE DATE: June 08, 2010

By Authority of the

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M. TARVER



## (12) United States Design Patent (10) Patent No.:

Chaudhri

US D617.334 S

(45) Date of Patent:

Jun. 8, 2010

#### (54) GRAPHICAL USER INTERFACE FOR A DISPLAY SCREEN OR PORTION THEREOF

(75) Inventor: Imran Chaudhri, San Francisco, CA

Assignee: Apple Inc., Cupertino, CA (US)

14 Years (\*\*) Term:

(21) Appl. No.: 29/321,374

(22) Filed: Jul. 15, 2008

(51) LOC (9) Cl. ...... 14-04

(52) U.S. CL ...... D14/486 (58) Field of Classification Search ........ D14/485-95;

D18/24-33; D19/6, 52, 9, 10; D20/11; D21/324-33; 715/700-867, 973-77 See application file for complete search history.

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(Continued)

Primary Examiner—Melanie H Tung (74) Attorney, Agent, or Firm-Sterne, Kessler, Goldstein & Fox PLLC

(57)

The ornamental design for a graphical user interface for a display screen or a portion thereof, as shown and described.

CLAIM

#### DESCRIPTION

FIG. 1 is a front view of a graphical user interface for a display screen or portion thereof showing our new design;

FIG. 2 is a front view of a second embodiment thereof;

FIG. 3 is a front view of a third embodiment thereof;

FIG. 4 is a front view of a fourth embodiment thereof; and

FIG. 5 is a front view of a fifth embodiment thereof;

FIG. 6 is a front view of a sixth embodiment thereof:

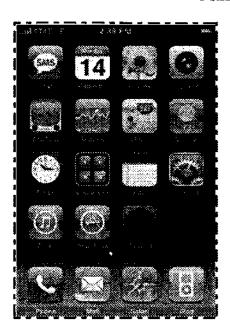
FIG. 7 is a front view of a seventh embodiment thereof; and,

FIG. 8 is a front view of an eighth embodiment thereof.

The broken line showing of the display screen or portion thereof in all views is not part of the claimed design.

The AT&T trademark in the upper left corner of the Figure is the property of AT&T Intellectual Property II, L.P. The You-Tube trademark on the left hand side of the Figures is the property of Google Inc. The iTunes trademark on the left hand side of the Figures is the property of Apple Inc. The App Store trademark on the bottom of the Figures is the property of Apple Inc. The Safari trademark on the bottom of the Figures is the property of Apple Inc. The iPod trademark on the bottom right comer of the Figures is the property of Apple Inc. Trademarks are the property of their respective owners.

#### 1 Claim, 8 Drawing Sheets



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FIG. 1

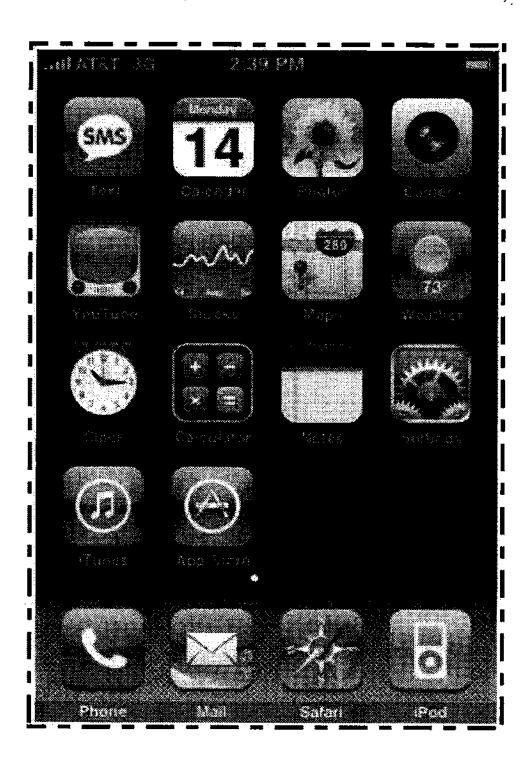


FIG. 2

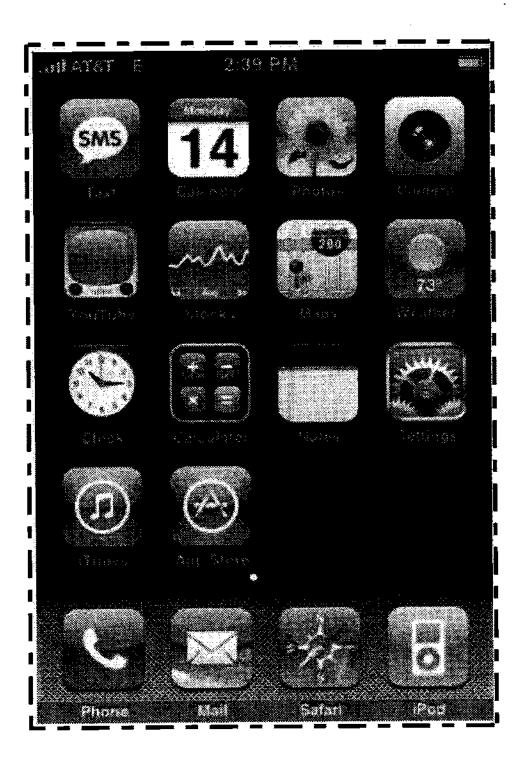


FIG. 3



FIG. 4

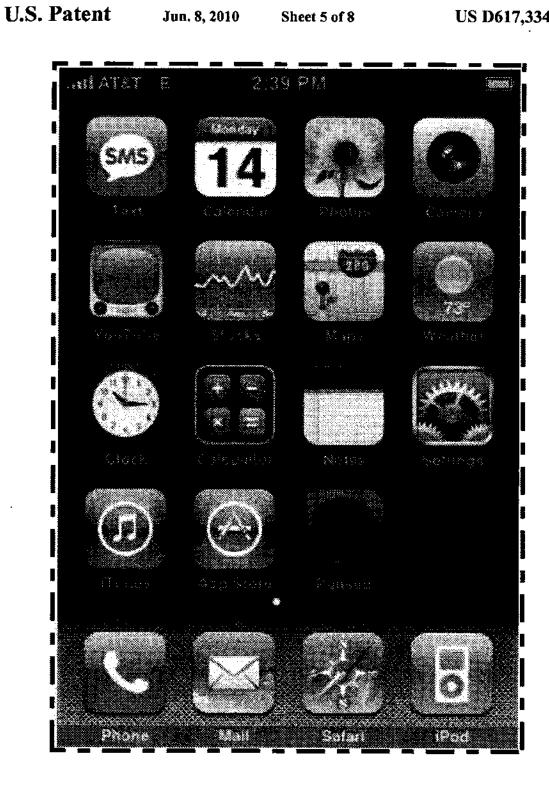


FIG. 5



FIG. 6

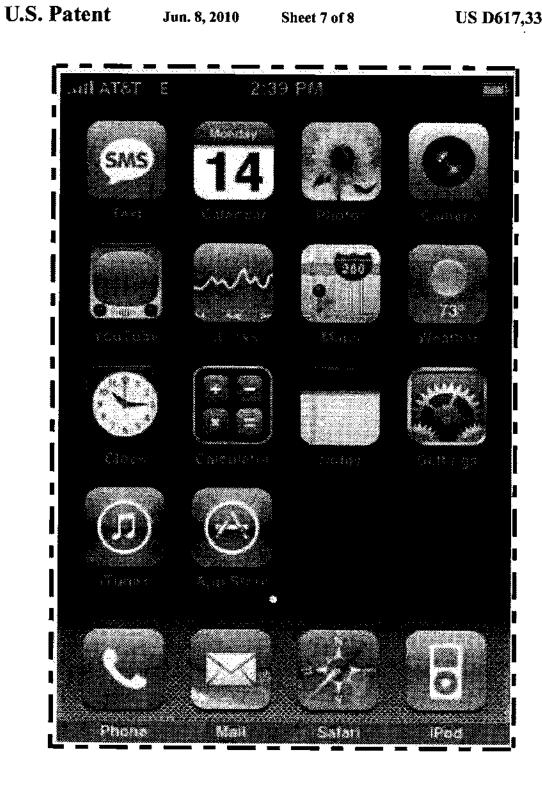


FIG. 7

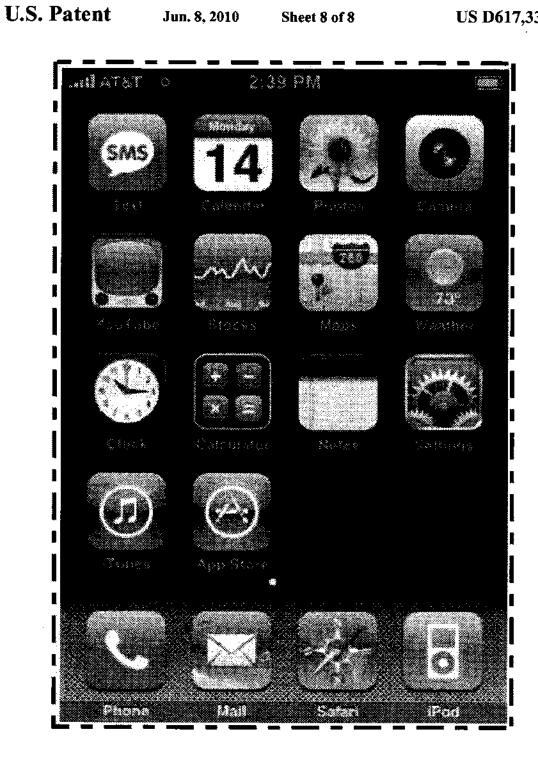


FIG. 8



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United States Patent and Trademark Office

May 02, 2011

THE ATTACHED U.S. TRADEMARK REGISTRATION 3,470,983 IS CERTIFIED TO BE A TRUE COPY OF THE REGISTRATION ISSUED BY THE UNITED STATES PATENT AND TRADEMARK OFFICE WHICH REGISTRATION IS IN FULL FORCE AND EFFECT.

REGISTERED FOR A TERM OF 10 YEARS FROM July 22, 2008 SAID RECORDS SHOW TITLE TO BE IN: Registrant

By Authority of the

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office



Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36 and 38

## United States Patent and Trademark Office

Reg. No. 3,470,983 Registered July 22, 2008

#### TRADEMARK PRINCIPAL REGISTER



APPLE INC. (CALIFORNIA CORPORATION)
1 INFINITE LOOP
CUPERTINO, CA 95014

FOR: HANDHELD MOBILE DIGITAL ELECTRONIC DEVICES COMPRISED OF A MOBILE PHONE, DIGITAL AUDIO AND VIDEO PLAYER, HANDHELD COMPUTER, PERSONAL DIGITAL ASSISTANT, ELECTRONIC PERSONAL ORGANIZER, POCKET COMPUTER FOR NOTE-TAKING, ELECTRONIC CALENDAR, CALCULATOR, AND CAMERA, AND CAPABLE OF PROVIDING ACCESS TO THE INTERNET AND SENDING AND RECEIVING ELECTRONIC MAIL, DIGITAL AUDIO, VIDEO, TEXT, IMAGES, GRAPHICS AND MULTIMEDIA FILES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 6-29-2007; IN COMMERCE 6-29-2007.

NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "SMS", APART FROM THE MARK AS SHOWN.

THE COLOR(S) BLACK, BLUE, BROWN, BROWN-GRAY, GRAY-GREEN, GREEN, ORANGE, RED, SILVER, TAN, WHITE AND YELLOW IS/ARE CLAIMED AS A FEATURE OF THE MARK.

THE MARK CONSISTS OF THE CONFIGURA-TION OF A RECTANGULAR HANDHELD MOBILE DIGITAL ELECTRONIC DEVICE WITH ROUNDED SILVER EDGES, A BLACK FACE, AND AN ARRAY OF 16 SQUARE ICONS WITH ROUNDED EDGES. THE TOP 12 ICONS APPEAR ON A BLACK BACK-GROUND, AND THE BOTTOM 4 APPEAR ON A SILVER BACKGROUND. THE FIRST ICON DE-PICTS THE LETTERS "SMS" IN GREEN INSIDE A WHITE SPEECH BUBBLE ON A GREEN BACK-GROUND; THE SECOND ICON IS WHITE WITH A THIN RED STRIPE AT THE TOP; THE THIRD ICON DEPICTS A SUNFLOWER WITH YELLOW PETALS, A BROWN CENTER, AND A GREEN STEM IN FRONT OF A BLUE SKY; THE FOURTH ICON DEPICTS A CAMERA LENS WITH A BLACK BAR-REL AND BLUE GLASS ON A SILVER BACK-GROUND; THE FIFTH ICON DEPICTS A TAN TELEVISION CONSOLE WITH BROWN KNOBS AND A GRAY-GREEN SCREEN; THE SIXTH ICON DEPICTS A WHITE GRAPH LINE ON A BLUE BACKGROUND; THE SEVENTH ICON DEPICTS A MAP WITH YELLOW AND ORANGE ROADS, A PIN WITH A RED HEAD, AND A RED-AND- BLUE ROAD SIGN WITH THE NUMERAL "280" IN WHITE; THE EIGHTH ICON DEPICTS AN ORANGE SUN ON A BLUE BACKGROUND, WITH THE TEMPERATURE IN WHITE; THE NINTH ICON DEPICTS A WHITE CLOCK WITH BLACK AND RED HANDS AND NUMERALS ON A BLACK BACKGROUND; THE TENTH ICON DEPICTS THREE BROWN-GRAY CIRCLES AND ONE OR-ANGE CIRCLE ON A BLACK BACKGROUND WITH A WHITE BORDER, WITH THE MATHEMA-TICAL SYMBOLS FOR ADDITION, SUBTRACTION, MULTIPLICATION, AND THE EQUAL SIGN DIS-PLAYED IN WHITE ON THE CIRCLES; THE ELE-VENTH ICON DEPICTS A PORTION OF A YELLOW NOTEPAD WITH BLUE AND RED RULING, WITH BROWN BINDING AT THE TOP; THE TWELFTH ICON DEPICTS THREE SILVER GEARS OVER A THATCHED BLACK-AND-SILVER BACK-GROUND; THE THIRTEENTH ICON DEPICTS A WHITE TELEPHONE RECEIVER AGAINST A GREEN BACKGROUND; THE FOURTEENTH ICON DEPICTS A WHITE ENVELOPE OVER A BLUE SKY

WITH WHITE CLOUDS; THE FIFTEENTH ICON DEPICTS A WHITE COMPASS WITH A WHITE-AND-RED NEEDLE OVER A BLUE MAP; THE SIXTEENTH ICON DEPICTS THE DISTINCTIVE CONFIGURATION OF APPLICANT'S MEDIA PLAYER DEVICE IN WHITE OVER AN ORANGE BACKGROUND.

SEC. 2(F).

SER. NO. 77-303,282, FILED 10-12-2007.

SKYE YOUNG, EXAMINING ATTORNEY



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

May 04, 2011

THE ATTACHED U.S. TRADEMARK REGISTRATION 3,457,218 IS CERTIFIED TO BE A TRUE COPY OF THE REGISTRATION ISSUED BY THE UNITED STATES PATENT AND TRADEMARK OFFICE WHICH REGISTRATION IS IN FULL FORCE AND EFFECT.

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M. TARVER



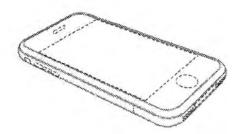
Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36 and 38

## United States Patent and Trademark Office

Reg. No. 3,457,218 Registered July 1, 2008

### TRADEMARK PRINCIPAL REGISTER



APPLE INC. (CALIFORNIA CORPORATION)
1 INFINITE LOOP, MS: 3TM
CUPERTINO, CA 95014

FOR: HANDHELD MOBILE DIGITAL ELECTRONIC DEVICES COMPRISED OF A MOBILE PHONE, DIGITAL AUDIO AND VIDEO PLAYER, HANDHELD COMPUTER, PERSONAL DIGITAL ASSISTANT, ELECTRONIC PERSONAL ORGANIZER, POCKET COMPUTER FOR NOTE-TAKING, ELECTRONIC CALENDAR, CALCULATOR, AND CAMERA, AND CAPABLE OF PROVIDING ACCESS TO THE INTERNET AND SENDING AND RECEIVING ELECTRONIC MAIL, DIGITAL AUDIO, VIDEO, TEXT, IMAGES, GRAPHICS AND MULTIMEDIA FILES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 1-9-2007; IN COMMERCE 6-29-2007.

THE MARK CONSISTS OF THE CONFIGURA-TION OF A RECTANGULAR HANDHELD MOBILE DIGITAL ELECTRONIC DEVICE WITH ROUNDED CORNERS. THE MATTER SHOWN IN BROKEN LINES IS NOT PART OF THE MARK.

SEC. 2(F).

SER. NO. 77-303,256, FILED 10-12-2007.

SKYE YOUNG, EXAMINING ATTORNEY



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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office

May 09, 2011

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> T. WALLACE Certifying Officer



Int. Cl.: 9

Prior U.S. Cls.: 21, 23, 26, 36 and 38

## United States Patent and Trademark Office

Reg. No. 3,475,327 Registered July 29, 2008

### TRADEMARK PRINCIPAL REGISTER



APPLE, INC. (CALIFORNIA CORPORATION)

I INFINITE LOOP

CUPERTINO, CA 95014

FOR: HANDHELD MOBILE DIGITAL ELECTRONIC DEVICES COMPRISED OF A MOBILE PHONE, DIGITAL AUDIO AND VIDEO PLAYER, HANDHELD COMPUTER, PERSONAL DIGITAL ASSISTANT, ELECTRONIC PERSONAL ORGANIZER, POCKET COMPUTER FOR NOTE-TAKING, ELECTRONIC CALENDAR, CALCULATOR, AND CAMERA, AND CAPABLE OF PROVIDING ACCESS TO THE INTERNET AND SENDING AND RECEIVING ELECTRONIC MAIL, DIGITAL AUDIO, VIDEO, TEXT, IMAGES, GRAPHICS AND MULTIMEDIA FILES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 1-9-2007; IN COMMERCE 6-29-2007.

THE COLOR(S) GRAY, SILVER AND BLACK IS/ ARE CLAIMED AS A FEATURE OF THE MARK. THE MARK CONSISTS OF THE CONFIGURATION OF A HANDHELD MOBILE DIGITAL ELECTRONIC DEVICE. THE MATERIAL SHOWN IN DOTTED LINES, NAMELY, THE BUTTONS AND OPENINGS ON THE DEVICE SHOW THE POSITION OF THE MARK IN RELATION TO THE DEVICE AND ARE NOT CONSIDERED A PART OF THE MARK. THE COLOR GRAY APPEARS AS A RECTANGLE AT THE FRONT, CENTER OF THE DEVICE. THE COLOR BLACK APPEARS ON THE FRONT OF THE DEVICE ABOVE AND BELOW THE GRAY RECTANGLE AND ON THE CURVED CORNERS OF THE DEVICE. THE COLOR SILVER APPEARS AS THE OUTER BORDER AND SIDES OF THE DEVICE. THE COLOR WHITE IS SHOWN SOLELY TO IDENTIFY PLACEMENT OF THE MARK AND IS NOT CLAIMED AS A PART OF THE MARK.

SEC. 2(F).

SER. NO. 77-303,049, FILED 10-12-2007.

SKYE YOUNG, EXAMINING ATTORNEY



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

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THE ATTACHED U.S. TRADEMARK REGISTRATION 3,886,196 IS CERTIFIED TO BE A TRUE COPY OF THE REGISTRATION ISSUED BY THE UNITED STATES PATENT AND TRADEMARK OFFICE WHICH REGISTRATION IS IN FULL FORCE AND EFFECT.

REGISTERED FOR A TERM OF 10 YEARS FROM December 07, 2010 SAID RECORDS SHOW TITLE TO BE IN: Registrant

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Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

W. MONTGOMERY
Certifying Officer



# Anited States of America



Reg. No. 3,886,196

Registered Dec. 7, 2010 CUPERTINO, CA 95014

Int. Cl.: 9

TRADEMARK

PRINCIPAL REGISTER

APPLE INC. (CALIFORNIA CORPORATION)

1 INFINITE LOOP

FOR: TELEPHONY SOFTWARE, NAMELY, COMPUTER SOFTWARE FOR MAKING, MANAGING, AND RECEIVING PHONE CALLS, AND FOR REVIEWING, MANAGING, AND PLAYING ELECTRONIC VOICE MESSAGES, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 6-29-2007; IN COMMERCE 6-29-2007.

OWNER OF U.S. REG. NO. 3,470,983.

THE COLOR(S) GREEN, LIGHT GREEN, DARK GREEN AND WHITE IS/ARE CLAIMED AS A FEATURE OF THE MARK.

THE MARK CONSISTS OF A RECTANGLE WITH ROUNDED CORNERS DEPICTING A STYLIZED WHITE TELEPHONE RECEIVER AGAINST A STRIPED GREEN AND DARK GREEN BACKGROUND. A SHADE OF LIGHT GREEN COVERS THE UPPER HALF OF THE RECTANGLE DESIGN.

SER. NO. 85-019,804, FILED 4-21-2010.

ANDREW RHIM, EXAMINING ATTORNEY



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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office

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W. MONTGOMERY



# United States of America



Reg. No. 3,889,642

APPLE INC. (CALIFORNIA CORPORATION)

Registered Dec. 14, 2010 CUPERTINO, CA 95014

Int. Cl.: 9

FOR: TEXT AND MULTIMEDIA MESSAGING SOFTWARE, NAMELY, SOFTWARE FOR PROCESSING IMAGES, GRAPHICS AND TEXT, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND

38).

TRADEMARK

FIRST USE 6-29-2007; IN COMMERCE 6-29-2007.

PRINCIPAL REGISTER

OWNER OF U.S. REG. NO. 3,470,983.

THE COLOR(S) WHITE, GREEN, DARK GREEN AND LIGHT GREEN IS/ARE CLAIMED AS A FEATURE OF THE MARK.

THE MARK CONSISTS OF A RECTANGLE WITH ROUNDED CORNERS DEPICTING A STYLIZED SPEECH BUBBLE ON A DIAGONAL STRIPED BACKGROUND. THE COLOR WHITE APPEARS IN THE SPEECH BUBBLE DESIGN; THE COLORS GREEN AND DARK GREEN APPEAR IN THE DIAGONAL STRIPES IN THE BACKGROUND OF THE RECTANGLE DESIGN; AND THE COLOR LIGHT GREEN APPEARS IN THE UPPER HALF OF THE RECTANGLE DESIGN.



SER. NO. 85-018,959, FILED 4-21-2010.

ANDREW RHIM, EXAMINING ATTORNEY

Danie - 1- MA

Director of the United States Patent and Trademark Office



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United States Patent and Trademark Office

April 28, 2011

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W. MONTGOMERY



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Reg. No. 3,886,200

Registered Dec. 7, 2010

Int. Cl.: 9

TRADEMARK

PRINCIPAL REGISTER

APPLE INC. (CALIFORNIA CORPORATION)

1 INFINITE LOOP CUPERTINO, CA 95014

FOR: COMPUTER SOFTWARE FOR ORGANIZING, STORING, SHARING, AND VIEWING IMAGES, SOLD AS A FEATURE OF COMPUTERS AND HANDHELD MOBILE DIGITAL ELECTRONIC DEVICES COMPRISED OF MOBILE PHONES, DIGITAL AUDIO AND VIDEO PLAYERS, HANDHELD COMPUTERS, PERSONAL DIGITAL ASSISTANTS, AND ELECTRONIC PERSONAL ORGANIZERS, IN CLASS 9 (U.S. CLS. 21, 23, 26, 36 AND 38).

FIRST USE 6-29-2007; IN COMMERCE 6-29-2007.

OWNER OF U.S. REG. NO. 3,470,983.

THE COLOR(S) YELLOW, BLUE, GREEN, BROWN, BLACK, GRAY AND WHITE IS/ARE CLAIMED AS A FEATURE OF THE MARK.

THE MARK CONSISTS OF A GRAY, WHITE, AND BLUE RECTANGLE WITH ROUNDED CORNERS DEPICTING A STYLIZED FLOWER IN THE COLORS GREEN, YELLOW, BROWN, BLACK, WHITE AND GRAY.

SER. NO. 85-019,831, FILED 4-21-2010.

JAMES MACFARLANE, EXAMINING ATTORNEY



Vand J. Lypas

Director of the United States Patent and Trademark Office