

# PROGRAM ICCHP 04

## July 7 – 9 2004 (pre-conference July 5 – 6 2004)

### PLEASE NOTE:

In order to keep the programme dense and to ensure that the presentations are within the thematic session they belong to, the length of each paper is not totally fixed but in the frame of

- full paper: 20 - 25 minutes
- short paper: 12 - 15 minutes

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## Mon. July 5: Pre-conference

Workshops:

**A) Environmental Control Systems**

14:00-17:00, Salle 211

**B) Many ways to the ECDL**

14:00-17:00, Salle 223

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## Tue. July 6: Pre-conference

Workshops:

**C) Leadership - Managing the Complexity of IT for Inclusion**

09:00-12:00, Salle 211

**D) New Challenges for Accessible Information Provision: The EUAIN project**

09:00-12:00, Salle 223

**E) Evaluation of Web sites**

09:00-17:00, Salle 327

**F) 508/WAI/eEurope: Challenging the Legislation**

14:00-17:00, Salle 308

**G) Studying at University**

14:00-17:00, Salle 213

**H) Access to Mathematics for Blind People**

14:00-17:00, Salle 223

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## Tue. July 6, 19.00: Welcome Cocktail

Location: Registration Area, Université Pierre et Marie Curie

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## Wed. July 7, 9.00 - 11.00: Opening Session

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## Opening Ceremony

Gilbert Berezziat, President of the University Pierre et Marie Curie

Harry Murphy, General Chair of ICCHP

A Min Tjoa, Austrian Computer Society

Dominique Burger, President of the Association BrailleNet

Per Blixt, Head of Unit, eInclusion unit, European Commission

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## Opening Keynotes

Jef Raskin: "We are all blind: Designing interfaces for Accessibility"

Richard Schwerdtfeger (IBM): "Platform Accessibility Architecture and Interoperability"

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<b>Session A: Wed. July 7, 11.30 - 13.00</b>
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### Track 1:

#### **Blind and Visually Impaired People: Orientation and Mobility (chair: Roland Vollmer)**

proXimity: Ad-Hoc Networks for Enhanced Mobility  
Simon Harper, Stephen Pettitt, and Carole Goble (full paper)

A Context-Aware Locomotion Assistance Device for the Blind  
Christophe Jacquet, Yacine Bellik, and Yolaine Bourda (full paper)

Navigator - a Talking GPS Receiver for the Blind  
Ryszard Kowalik and Stanislaw Kwasniewski (full paper)

Dynamic Lighting Sign System for Way-Finding by People with Low Vision  
Junichi Akita, Kiyohide Ito, Ikuko Gyobu, Ken-ichi Kimura, Ayumi Mihara, Ryo Mizuno, Jun-ichi Nakakoji, and Keisuke Yanagihara (short paper)

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## Track 2:

### **Mobility Impaired People: HCI (chair: Roland Wagner)**

Remote Eye Gaze Tracking System as a Computer Interface for Persons with Severe Motor Disability

Malek Adjouadi, Anaelis Sesin, Melvin Ayala, and Mercedes Cabrerizo (full paper)

Controlling a PC by Eye Movements: The MEMREC Project

Marcela Fejtová, Jan Fejt, Lenka Lhotská (full paper)

HeadControl+: A Multi-Modal Input Device

Mario Mühlechner, Klaus Miesenberger (full paper)

Accessibility Through Standard Low Cost Pointing Devices

Barbara Prazak, Stefan Mina, Gernot Kronreif (full paper)

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## Track 3:

### **Design for All in IST - Co-operation in Europe (Special Thematic Session - chair: Christian Bühler)**

European Co-operation Activities Promoting Design for All in Information Society Technologies

Christian Bühler, Constantine Stephanidis (full paper)

EDeAN: European Design for all eAccessibility Network

n.n (full paper)

EDeAN special interest groups - An option for exchange and discussion, Moderators of EDeAN SIGs on Legislation, on Benchmarking, on Curricula, on Standardisation, and on Proactive Assessment

n.n (full paper)

Hermes the e-summoner, the virtual working platform of EDeAN, EDeAN-NCC/D4ALLnet

Constantine Stephanidis (full paper)

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## Track 4:

### **Deaf People: Sign Language and Digital Media (Special Thematic Session - chair: Deborah Fels)**

Accessible Digital Media and Sign Language  
Deborah Fels (STS)

Integration of Signage Information into the Web Environment  
Rashad Aouf, Steve Hansen (full paper)

Progress in Automated Computer Recognition of Sign Language  
Barbara L. Loeding, Sudeep Sarkar, Ayush Parashar, and Arthur I.  
Karshmer (full paper)

Creating Sign Language Web Pages  
Daniel G. Lee, Jan Richards, Jim Hardman, Sima Soudain & Deborah Fels  
(full paper)

Sign Language Communication Support at the Class for Hearing Impaired  
Using a Control Camera  
Hiroki Minagawa (short paper)

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## **Session B: Wed. July 7, 14.00 - 15.30**

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### **Track 1:**

#### **Blind and Visually Impaired People: Orientation and Mobility (continued)**

Visual System to Help Blind People to Cross the Street  
Joan Aranda, Pere Mares (full paper)

CyARM Interactive Device for Environment Recognition Using a Non-Visual  
Modality  
Makoto Okamoto, Junichi Akita, Kiyohide Ito, Tetsuo Ono, Tomohito Takagi  
(full paper)

Walking Support Using Compact Terminals with Infrared Audio Communication  
Shinya Oyama, Ikuko Eguchi Yairi, Seiji Igi, and Takuichi Nishimura (full  
paper)

The Development of Virtual 3D Acoustic Environment for Training "Perception  
of Crossability"  
Takayuki Shiose, Kiyohide Ito and Kazuhiko Mamada (full paper)

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## Track 2:

### **Mobility Impaired People: HCI (continued)**

Optimisation of the Selection Set Features for Scanning Text Input

Julio Abascal, Luis Gardeazabal, Nestor Garay (full paper)

FastScanner: An Accessibility Tool for Motor Impaired Users

Stavroula Ntoa, Anthony Savidis, Constantine Stephanidis (full paper)

A Real-Time Voice Controlled Human Computer Interface to Help Persons with Motor Disability

Malek Adjouadi, Dalila Landestoy, Melvin Ayala, and Walter Tischer (full paper)

First User Test Results with the Predictive Typing System FASTY

C. Beck, G. Seisenbacher, G. Edelmayer, W.L. Zagler (full paper)

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## Track 3:

### **Design for All in IST - Cooperation in Europe (Special Thematic Session) (continued)**

IDCnet: Inclusive Design Curriculum Network - First Results

Carlos A. Velasco, Jan Engelen, Christophe Strobbe, Jenny Darzentas, Päivi Tahkokallio, Colette Nicole, Rafael Romero (full paper)

DfA Resource centre - pooling Information, EDeAN-NCC/ D4allnet

Harry Knops (talk)

DfA-Award 2004 - a report

n.n. (talk)

### **Design for All: Awareness, Guidelines and Policy (chair: Christian Bühler)**

Design for All: Experience-based Strategies for User Involvement in IST

Research Projects

Tony Verelst (full paper)

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## Track 4:

### **Deaf People: Sign Language and Digital Media: Special Thematic Session (continued)**

CD-ROM on Austrian Sign Language: Course OEGS 1, Lesson 1-6  
Marlene Hilzensauer (full paper)

Developing an e-Learning Platform for the Greek Sign Language  
E. Efthimiou, G. Sapountzaki, K. Karpouzis, S-E. Fotinea (full paper)

Design of Computer Animation of Japanese Sign Language for Hearing-  
Impaired People in Stomach X-ray Inspection  
Kazunari Morimoto, Takao Kurokawa, Norifumi Isobe, Junichi Miyashita (full  
paper)

Basic Study of a Communication Device for the Deaf-blind Using a Finger and  
a Palm - Measurement of Finger Speed and Pressure  
Chikamune Wada, Yasuhiro Wada (full paper)

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## **Session C: Wed. July 7, 16.00 - 18.00**

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### **Track 1:**

#### **Blind People: Braille Interfaces (chair: Makoto Kobayashi)**

Six-In - Braille Input from a QWERTY Keyboard  
Paul Blenkhorn and Gareth Evans (full paper)

A High-Density and High-Speed Tactile Display Panel Using Passive-Writing  
Method  
Shigekazu Yanagisawa, Yoshimichi Yonezawa, Kazunori Ito, Masami  
Hashimoto (full paper)

A Pair of Wireless Braille-Based Chording Gloves  
Sang Sup An, Jae Wook Jeon, Sung Il Lee, Hyuckyeol Choi, and Hoo-Gon  
Choi (full paper)

OBOE : Oboe-like Braille Interface for Outdoor Environment  
Tomohiro Amemiya, Koichi Hirota, and Michitaka Hirose (full paper)

Java-powered Braille Slate Talker  
A. Arato, Z. Juhasz, P. Blenkhorn, G. Evans, G. Evreinov (full paper)

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### **Track 2:**

#### **Mobility Impaired People: HCI (continued)**

Data Entry in Application-Independent Voice Interfaces  
Frankie James, Jeff Roelands, and Rama Gurram (full paper)

### **Mobility Impaired People: Rehabilitation and Health Care (chair: Enrico Pontelli)**

Movement Variability and Speed of Performance Using a Head-Operated Device and Expanded Membrane Cursor Keys  
Gilson J. Capilouto (full paper)

An Examination about Walking Posture on Gait Training System for Computer-aided Rehabilitation  
Hidetaka Ikeuchi, Fumitaka Kamifukumoto, Satoshi Arakane, Kengo Ohnishi, Keiji Imado, Hiroomi Miyagawa and Yukio Saito (full paper)

Optimizing Menu Selection Process for Single-Switch Manipulation  
Grigori Evreinov and Roope Raisamo (full paper)

Designing an Evaluation Method for Computer Accessibility for People with Severe Disabilities  
R.Kadouche, B.Abdulrazak, M.Mokhtari (short paper)

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### **Track 3:**

#### **Design for All: Awareness, Guidelines and Policy (continued)**

A Special Design Approach for Special People  
Mary Zajicek (full paper)

Accessibility from Scratch: How an Open Focus Contributes to Inclusive Design  
David Crombie, Roger Lenoir, Neil McKenzie (full paper)

Influence of Accessibility Related Activities on the Usability of Business Software  
Rakesh Jani, Martin Schrepp (full paper)

Get Guam Teleworking: A Low Interest Loan & Lease Program for Using Computers for Telework  
Heidi San Nicolas (short paper)

How Governments Can Use Technology to Promote Employment of People with Disabilities  
Dinah F. B Cohen, Ilene R. Zeitzer (full paper)

Evaluating Accessibility of Public Information Kiosks  
Seongil Lee and Joo Eun Cho (short paper)

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## Track 4:

### **Deaf People: Sign Language and Digital Media: Special Thematic Session (continued)**

A Tactile Display System in the Use of a PC for Individuals who are Deaf-Blind  
Masatsugu Sakajiri, Shinich Okada, Kazuyuki Ito, Atsushi Sadakane, Naoki Sugiyama, Hideo Tomita, and Tohru Ifukube (full paper)

### **Deaf and Hearing Impaired People: ICT and AT (chair: Harry Murphy)**

Approaches to Using a Wireless Mobile Terminal to Help Severely Hearing Impaired People  
Sangman Moh (full paper)

A Preparatory Study for Designing Web-Based Educational Materials for the Hearing-Impaired  
Miki Namatame, Muneo Kitajima, Tomoyuki Nishioka, and Fumihiko Fukamauchi (full paper)

FLIPPS: Fingertip Stimulation for Improved Speechreading  
Hans-Heinrich Bothe, Ali F. Mohamad, Martin R. Jensen (full paper)

A New Mobile Text Telephony System Based on GPRS Communications  
Santiago Aguilera, Sergio Jiménez, Daniel Bolaños, Mari-Satur Torre, José Colás (full paper)

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## **Wed. July 7, 19.00: Reception**

Location: City Hall of Paris

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## **Session D: Thu. July 8, 8.30 - 10.30**

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## Track 1:

### **Blind People: Access to Mathematics (Special Thematic Session - chair: Arthur Karshmer)**

Mathematics for Blind People  
Arthur I. Karshmer (STS)

The Architecture of a Comprehensive Equation Browser for the Print Impaired  
Arthur I. Karshmer, Chris Bledsoe, Paul Stanley (full paper)

Translating between Formats for Mathematics: Current Approach and an  
Agenda for Future Developments  
E. Pontelli and B. Palmer (full paper)

Utilizing Scalable Vector Graphics in the Instruction of Mathematics to the Print  
Impaired Student  
Paul B. Stanley, Chris Bledsoe, Arthur I. Karshmer (short paper)

Cognitive Analysis of Equation Reading: Application to the Development of the  
Math Genie  
Douglas J. Gillan, Paula Barraza, Arthur I. Karshmer, and Skye Pazuchanics  
(full paper)

Automatic Conversions of Mathematical Braille: A Survey of Main Difficulties in  
Different Languages  
Victor Moço and Dominique Archambault (full paper)

Multi-Modal Mathematics: Conveying Math Using Synthetic Speech and  
Speech Recognition  
D. Fitzpatrick and A. I. Karshmer (short paper)

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## Track 2:

### **Mobility Impaired People: Rehabilitaiton and Health Care (continued)**

Computerized Assessment Tool for Mouse Operating Proficiency  
Ming-Chung Chen, Ling-Fu Meng, Cheng-Feng Hsieh, Ting-Fang Wu, Chi-  
Nung Chu, and Tien-Yu Li (full paper)

Applications of Computer Access Approach to Persons with Quadriplegics  
Ling-Fu Meng, Tieng Yu Li, Chi Nung Chu, Ming Chung Chen, Sophie  
Chien-Huey Chang, Arr-Mien Chou, Tony Yang, Chih Chen Hui, Ku Ai  
Chiao, Yun Lung Lin, Pei-ting Weng, Yu-chen Shih, Tsung-ying Lu, Nai-  
hsien Yeh (full paper)

Computer Access for Persons with Spinal Cord Injury  
Ting-Fang Wu, Hwa-Pey Wang, Ming Chung Chen, and Wu-Tien Wu (full  
paper)

An Assessment into Touch Screen Input Devices for Cervical Spinal Injured  
Computer Users

Robert C. C. Chen, Dilys T. Tsai, Li-Chen Chang, and Nick Higgett (full paper)

Home-Use Upper Limb Rehabilitation Device for Cervical Spinal Cord Injured Patients

Kengo Ohnishi, Eri Goto, Fumitake Sugiki, Keiji Imado, Hidetaka Ikeuchi, Nobuhiro Kito, Hiroomi Miyagawa, and Yukio Saito (full paper)

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### **Track 3:**

#### **People with Cognitive, Speech and Learning Impairment: Autism (chair: Paul Trehin)**

Computer Use for People with Learning Difficulties: Basic Needs  
Paul Tréhin (full paper)

Using "Ambient Intelligence" for Compensating Intellectual Difficulties of People with Severe Learning Difficulties and/or Autistic Spectrum Disorders  
Gerardo Herrera, Amparo Plasencia, Gabriel Labajo, Rita Jordan, and Cristina de\_Pablo (full paper)

Assessing B.A.Bar Device as a Tool for Supporting Labour Integration of a Severely Affected Person with Autism who Carries Out Classifying Tasks  
Gerardo Herrera Gutierrez and Gabriel Labajo Rodilana (full paper)

#### **People with Cognitive, Speech and Learning Impairment: Education and Training (chair: Paul Trehin)**

Mobile Devices Converted into a Speaking Communication Aid  
Bálint Tóth, Géza Németh, Géza Kiss (full paper)

SOCRATES: Barrier Free Communities of Aphasics on the Internet  
Marc Spaniol, Luise Springer, Ralf Klamma, and Matthias Jarke (full paper)

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### **Track 4:**

#### **Deaf and Hearing Impaired People: ICT and AT (continued)**

Head Mounted Display as a Information Guarantee Device for Hearing Impaired Students  
Tomoyuki Nishioka (full paper)

Facial and Head Movements of a Sign Interpreter and Their Application to Japanese Sign Animation  
Sumihiro Kawano, Takao Kurokawa (full paper)

SYNFACE - A Talking Head Telephone for the Hearing-impaired  
Jonas Beskow, Inger Karlsson, Jo Kewley, and Giampiero Salvi (full paper)

### **Accessible Tourism (Special Thematic Session - chair: Franz Pühretmair)**

It's Time to Make eTourism Accessible  
Franz Pühretmair (full paper)

Tourism Information Systems Promoting Barrier-free Tourism for People With Disabilities  
Hildegard Rumetshofer, Wolfram Wöß (full paper)

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### **Thu. July 8, 11.00 - 12.30: Keynote**

Paul Blenkhorn (University of Manchester Institute of Science and Technology):  
"Using computers to support people with Specific Learning Difficulties (SpLD)"

Thomas Logan (Microsoft):  
"Introduction to Microsoft Windows' Next Generation Accessibility Framework"

Immaculada Placencia Porrero (European Commission, DG Information Society, eInclusion unit): "An Information Society for All; the European Response"

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### **Session E: Thu. July 8, 13.30 - 15.30**

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#### **Track 1:**

#### **Blind People: Access to Mathematics (Special Thematic Session) (continued)**

An Integrated OCR Software for Mathematical Documents and its Output with Accessibility

Masakazu Suzuki, Toshihiro Kanahori, Nobuyuki Ohtake, and Katsuhito Yamaguchi (full paper)

Mathematical Working Environment For the Blind Motivation and Basic Ideas  
Bernhard Stöger, Klaus Miesenberger, and Mario Batusic (full paper)

Towards a Universal Maths Conversion Library  
Dominique Archambault, Donal Fitzpatrick, Gopal Gupta, Arthur I. Karshmer,  
Klaus Miesenberger, and Enrico Pontelli (full paper)

math2braille: Opening Access to Mathematics  
David Crombie, Roger Lenoir, Neil McKenzie, Alison Barker (full paper)

Enhancing the Accessibility of Mathematics for Blind People: The AudioMath  
Project Helder Ferreira, Diamantino Freitas (full paper)

Handwriting Input System of Graphs for Barrier-free Mathematical  
Communications  
Ryoji Fukuda, Masanori Yo, and Taichi Kawahara (short paper)

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## Track 2:

### **Smart Environment for All (Special Thematic Session - chair: Gerhard Nussbaum)**

Smart Environments for All  
Gerhard Nussbaum (STS)

The Assistive Home - More than just Another Approach to Independent Living?  
Gerhard Nussbaum, Klaus Miesenberger (full paper)

Technology Usage for Dependant People: Towards the Right Balance between  
User Needs and Technology  
C. Penaud, M. Mokhtari,, B. Abdulrazak, (full paper)

Coupling Context Awareness and Multimodality in Smart Homes Concept  
Mohamed Ali Feki, Stéphane Renouard, Bessam Abdulrazak, Gérard  
Chollet, Mounir Mokhtari (full paper)

On the Design of Ambient Intelligent Systems in the Context of Assistive  
Technologies  
J.L. Sevillano, J. Falcó, J. Abascal, A. Civit-Balcells, G. Jiménez, S. Vicente,  
R. Casas (full paper)

PACS: Communication and Environment Control System for Disabled  
Vidas Lauruska (short paper)

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### **Track 3:**

#### **People with Cognitive, Speech and Learning Impairment: Education and Training (continued)**

Evaluations of an Information and Communication Technology (ICT) Training Programme for Persons with Intellectual Disabilities  
Cecilia Li-Tsang, Chetwyn Chan, Chow Lam, Christina Hui-Chan, Siu-sze Yeung (full paper)

Effect of Dynamic Features on Diagnostic Testing for Dyspraxia  
M. A. Razian, M. C. Fairhurst and S. Hoque (full paper)

Feature Selection Optimisation in an Automated Diagnostic Cancellation Task  
S. Chindaro, R.M. Guest, M.C. Fairhurst, M.A. Razian, J.M. Potter (full paper)

Minus-Two: Multimedia, Sound Spatialization and 3D Representation for Cognitively Impaired Children  
Thimoty Barbieri, Antonio Bianchi, and Licia Sbattella (full paper)

Neuropsychological Function for Accessibility of Computer Program for People with Mental Retardation  
Alex W. W. Wong, Chetwyn C. H. Chan, Cecilia W. P. Li-Tsang, Chow S. Lam (full paper)

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### **Track 4:**

#### **Accessible Tourism (Special Thematic Session) (continued)**

AccesSights - A Multimodal Location-Aware Mobile Tourist Information System  
Palle Klante, Jens Krösche, Susanne Boll (full paper)

#### **e-Learning and Accessibility (chair: Joachim Klaus)**

Living, Teaching and Learning at Any Time and at Any Place E-Learning - Opportunities and Barriers for Visually Impaired Students  
Joachim Klaus (full paper)

Accessibility for e-Learning Environments  
Mari Luz Guenaga, Dominique Burger, Javier Oliver (full paper)

ECDL-PD: International Co-operation to Keep the Syllabus and MQTB Open for Everybody  
Klaus Miesenberger, Martin Morandell, Andrea Petz, Denise Leahy (full paper)

Essential Competencies of Special Educator in Integrating Assistive Technology into the Curriculum  
Ming-Chung Chen, Ting-Fang Wu, and Chi-Nung Chu (full paper)

Open Distance Learning and Inclusion  
Ewald Feyerer (talk)

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## Session F: Thu. July 8, 16.00 - 18.00

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### Track 1:

#### **Blind People: Access to Graphics and Haptic Interfaces (chair: Andras Arato)**

Three Dimensionally Perceived Planar Tactile Illusion Device and Method  
Gilbert R. Gonzales (full paper)

Touching Geometry for Blind Pupils  
Sophie Rouzier, Bernard Hennion, Tomás Pérez\_Segovia, Denis Chêne (full paper)

An Indicating, Leading Manipulator as a Good Hand at Teaching Strokes: A Mental-Image-Creation Support System  
Yoshihiko Nomura, Haruki Kakehashi, Tokuhiko Sugiura, Hirokazu Matsui, and Norihiko Kato (full paper)

The Bigger Picture: Automated Production Tools for Tactile Graphics  
David Crombie, Roger Lenoir, Neil McKenzie, George Ioannidis (full paper)

Two Dimension Interactive Voice Browser for the Visually Impaired  
Chi Nung Chu (short paper)

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### Track 2:

#### **Smart Environment for All (Special Thematic Session) (continued)**

Performance Analysis of User Interface for the Disabled in Real-time Ubiquitous Information Network  
Yung Bok Kim and Jong Yong Kim (short paper)

The HM2PH Project: A Database to Help Prescription of Assistive Technologies

Jérôme Leloup, Pierre Gaucher, Sybille Pellieux (full paper)

Networking and Communication in Smart Home for People with Disabilities

Mahmoud Ghorbel, Maria-Teresa Segarra, Jérôme Kerdreux, Ronan Keryell, Andre Thepaut, Mounir Mokhtari (full paper)

SmartX - Enabling Traditional Environmental Control to Use Standard HCI

Gerhard Nussbaum, Klaus Miesenberger (full paper)

Indoors Pervasive Computing and Outdoors Mobile Computing for Cognitive Assistance and Telemonitoring

Sylvain Giroux, Hélène Pigot, André Mayers (full paper)

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### Track 3:

#### **People with Cognitive, Speech and Learning Impairment: Software Accessibility (chair: Constantine Stephanidis)**

An Adaptive and Predictive Environment to Support Augmentative and Alternative Communication

Nicola Gatti, Matteo Matteucci, and Licia Sbattella (full paper)

Intelligent Model for Rating Cognitive Capability for Computer Access of People with Disabilities

Thomas A. Pushchak and Sreela Sasi (short paper)

Automatic Modification of Text for People with Learning Disabilities Using Internet Services

Gabriele Nordbrock, Henrike Gappa, Yehya Mohamad and Carlos A Velasco (short paper)

Soft Keyboard for the Disabled

Paul Gnanayutham, Chris Bloor and Gilbert Cockton (short paper)

A Talking Word Processor and Web Browser

Gareth Evans, Miltos Kritikos, Alasdair King and Paul Blenkhorn (full paper)

Sibyl: AAC System Using NLP Techniques

Igor Schadle (full paper)

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### Track 4:

#### **e-Learning and Accessibility (continued)**

Web Adaptation of Learning Objects for Special Access WALOSA  
Carole Salis, Cristian Lai, Claude Moulin (short paper)

Postgraduate Course on Accessible Web Design  
Daniela Ortner, Mario Batusic and Klaus Miesenberger (short paper)

Cognitive Training with Animated Pedagogical Agents (TAPA) in Children with Learning Disabilities  
Yehya Mohamad, Carlos A Velasco, Sylvia Damm, Holger Tebarth (full paper)

A Concept Map-based Adaptive Tutoring System Supporting Learning Diagnosis for Students with Learning Disability  
Sook-Young Choi (full paper)

Tutor Informatico: Increasing the Selfteaching in Down Syndrome People  
Eduardo Campos, Ana Granados, Sergio Jiménez, Javier Garrido (full paper)

The Effect of Assistive Technology on Educational Costs: Two Case Studies  
Amy Gips, Philip A. DiMattia, James Gips (full paper)

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## **Thu. July 8, 19.00: Gala Evening / Concert**

Location: Institut du Monde Arabe

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## **Session G: Fri. July 9, 8.30 - 10.30**

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### **Track 1:**

#### **Blind People: Access to Graphics and Haptic Interfaces (continued)**

Exploring Scalable Vector Graphics for Visually Impaired Users  
Martin Rotard, Kerstin Otte, Thomas Ertl (full paper)

Communication System for the Blind Using Tactile Displays and Ultrasonic Pens -MIMIZU-  
Makoto Kobayashi and Tetsuya Watanabe (full paper)

Directly Accessible Mainstream Graphical Information  
John A. Gardner and Vladimir Bulatov (full paper)

Simple Pattern Creation Using a Pen Input Guide and Sound Localization for  
the Visually Impaired  
Masahiko Sugimoto, Kazunori Itoh, Michio Shimizu (full paper)

An Approach for Direct Manipulation by Tactile Modality for Blind Computer  
Users: Principle and Practice of Detecting Information Generated by Touch  
Action  
Makoto Shimojo, Masami Shinohara, Michio Tanii, Yutaka Shimizu (full  
paper)

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## Track 2:

### **Personalization of Interactive Systems (Special Thematic Session - chairs: Helen Petrie and Gerhard Weber)**

Personalization of Interactive Systems  
Helen Petrie and Gerhard Weber (STS)

Learning from Internet Requirements of People with Communication Needs  
Colette Nicolle, Zaheer Osman, Katharine Black, and Andrew Lysley (full  
paper)

IPCA: Adaptive Interfaces Based upon Biofeedback Sensors  
Carlos A Velasco, Yehya Mohamad, Dirk Stegemann, Henrike Gappa, Gaby  
Nordbrock, Erwin Hartsuiker, Javier Sánchez-Lacuesta, Juan M. Belda (full  
paper)

Adaptation of Multimedia Browsing Techniques  
Kurt Weimann, Ine Langer, and Gerhard Weber (full paper)

Adapting Presentation and Interaction with XML Documents to User  
Preferences  
Benoît Encelle, Nadine Baptiste-Jessel (full paper)

Designing User Interfaces Tailored to the Current User's Requirements in Real  
Time  
Martín González Rodríguez, J. Ramón Pérez Pérez, M. Puerto Paule Ruíz  
(full paper)

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## Track 3:

## **Making Music Accessible (Special Thematic Session - chair: David Crombie)**

Making Music Accessible

David Crombie, Roger Lenoir, Neil McKenzie, Ben Challis (full paper)

The Design of Spoken Music Web Browser for Teaching Learning-disabled Children: A Chev  System Approach to Music Notation  
Chi-Nung Chu and Yu Ting Huang (full paper)

DaCapo, A Project on Transforming Ink Printed to Braille Notes Semi-Automatically

Thomas Kahlisch, Matthias Leopold, Christian Waldvogel (short paper)

Using SVG and a Force Feedback Mouse to Enable Blind People to Access "Graphical" Web Based Documents

Nadine Baptiste-Jessel, Bertrand Tornil, Benoit Encelle (full paper)

Modified Stave Notation - an Approach to Making Stave Notation More Accessible to Users Who Are Partially Sighted

Sally-Anne Zimmermann (short paper)

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## **Track 4:**

### **Blind and Visually Impaired People: Access to Documents and Information (chair: Jan Engelen)**

Towards an Integrated Publishing Chain for Accessible Multimodal Documents

Beno t Guillon, Jean-Louis Monteiro, C dric Checoury, Dominique Archambault, Dominique Burger (full paper)

Presenting UML Software Engineering Diagrams to Blind People

Alasdair King, Paul Blenkhorn, David Crombie, Sijo Dijkstra, Gareth Evans, John Wood (full paper)

Linear Searching in a Non-linear Environment: the Information Seeking Behaviour of Visually Impaired People on the World Wide Web

Jenny Craven (full paper)

Text Comprehension by Blind People Using Speech Synthesis Systems

Luis Gonz lez Garc a (full paper)

Accessing Web Based Documents Through a Tree Structural Interface

Esmond Walshe and Barry McMullin (short paper)

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## Session H: Fri. July 9, 11.00 - 13.00

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### Track 1:

#### **Blind and Visually Impaired People: Access to Documents and Information (continued from Track 4)**

Access to Information at Your Own Choice by the Aid of Digital Talking Books  
Thomas Kjellberg Christensen (full paper)

Talking Linux for the Blind - a CD Distribution with Speech  
Danko Butorac (full paper)

Design and Use of Pseudo-Electronic Whiteboard for Low-Vision Education  
Yasuyuki Murai, Hisayuki Tasumi, Masahiro Miyakawa, and Shinji Tokumasu  
(full paper)

Multimedia Medicine Consultant for Visually Impaired People  
Javier Tejedor, Daniel Bolaños, Nicolás Morales, Ana Granados, José Colás, Santiago Aguilera (full paper)

An objective method to compare different computer displays  
Helen van Harten (short paper)

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### Track 2:

#### **Accessibility and the Next Generation of Web Development Tools (Special Thematic Session - chair: Carlos Velasco)**

Accessibility and the Next Generation of Web Development Tools  
Carlos A. Velasco (STS)

Preferences of People with Disabilities to Improve Information Presentation and Information Retrieval Inside Internet Services - Results of a User Study  
Henrike Gappa, Gabriele Nordbrock, Yehya Mohamad, and Carlos A Velasco (full paper)

Web Accessibility through Adaptation  
Chrisoula Alexandraki, Alexandros Paramythis, Napoleon Maou, Constantine Stephanidis (full paper)

Imergo: Supporting Accessibility and Web Standards to Meet the Needs of the Industry via Process-Oriented Software Tools  
Yehya Mohamad, Dirk Stegemann, Johannes Koch, Carlos A Velasco (full paper)

Evaluation Methodology and Quality Mark for Web Accessibility  
Eric Velleman (full paper)

A Cost-Benefit Approach for Accessible Web Presence  
Valeska Heerdt and Christine Strauss (full paper)

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### Track 3:

#### **Elderly and Disabled People: Therapy and Care (chair: Willibald Kremser)**

Virtual Reality Based Therapy Application for Developmental Disordered Children  
Yoshiyuki Takahashi, Yuko Ito, Takeshi Yamashita, Takafumi Terada, Kaoru Inoue, Yumi Ikeda, Keisuke Suzuki, Hokyo Lee, Takashi Komeda (full paper)

Real-time Health-Monitoring Network for Disabled and Elderly People  
Yung Bok Kim and Jong Yong Kim (full paper)

Using Information Technologies for Monitoring Key Health Indices Among Undeserved Elderly: A Computer-based Self-help Monitoring System  
Judith F. Karshmer, Arthur I. Karshmer (full paper)

Investigations to Develop a Fully Adjustable Intelligent Toilet for Supporting Old People and Persons with Disabilities - the Friendly Rest Room (FRR) Project  
Paul Panek, Georg Edelmayer, Charlotte Magnusson, Peter Mayer, Johan F.M. Molenbroek, Håkan Neveryd, Robert Schlathau, and Wolfgang L. Zagler (full paper)

Tele-Surveillance System for Patient at Home: The MEDIVILLE System  
Jean-Louis Baldinger, Jérôme Boudy, Bernadette Dorizzi, Jean-Pierre Levrey, Rodrigo Andreao, Christian Perpère, François Delavault, François Rocaries, Christophe Dietrich, Alain Lacombe (full paper)

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### Track 4:

#### **From the Human Interface to the Humane Interface (Special Thematic Session - chair: Andreas Holzinger)**

The Design Question of Development of Multimedia Educational Software for Aphasia Patients  
Cecília Sik Lányi, Erzsébet Bacsa, Rita Mátrai, Zsolt Kosztyán, Ilona Pataky (full paper)

Multimedia Programs for Children with Hearing Difficulties  
Cecília Sik Lányi, Ágnes Váry, András Sik, András Nemetz, Zoltán Geiszt  
(full paper)

Multimedia and Virtual Reality in the Rehabilitation of Autistic Children  
Cecília Sik Lányi, Ádám Tilinger (full paper)

Mobile Phone Based User Interface Concept for Health Data Acquisition at Home  
Günter Schreier, Alexander Kollmann, Martin Kramer, Jürgen Messmer, Andreas Hochgatterer, Peter Kastner (full paper)

Multi Parameter Data Acquisition on Interface Devices for the Development of Adaptive Input Systems  
Stefan Mina, Andreas Hochgatterer, Barbara Prazak, Sten Hanke, Günter Schreier (full paper)

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## Session I: Fri. July 9, 14.00 - 16.00

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### Track 1:

#### **Blind and Visually Impaired People: Education and Training (chair: A Min Tjoa)**

Computer for Persons with Visually Impairment: A Door to Education, Information and Employment  
A.H.M. Noman Khan and Sadaf Noori Chowdhury (short paper)

Usability of Educational Software for Visual Impairment: A Question of Viewpoint  
Silvia Dini, Lucia Ferlino, and Cristina Martinoli (full paper)

Use of Bar Code and RFID for the Visually Impaired in Educational Environment  
Hisayuki Tatsumi, Yasuyuki Murai, Masahiro Miyakawa, Shinji Tokumasu (full paper)

Virtual Disability: Simulations as an Aid to Lecturers' Understanding of Disability  
Simon Ball, John Rousell (full paper)

Multimedia Software Training Tool (MSTT) for Persons with Visual and Mobile Impairments in Four Languages  
A.Mousadakou, M.Gemou, E. Bekiaris (short paper)

Designing New Technology Based Services to Support Visually Impaired  
Computer Workers (VICWs)  
J. Joyce Beumer, M. Wiethoff, J. Attema (full paper)

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## **Track 2:**

### **Accessibility and the Next Generation of Web Development Tools (Special Thematic Session) (continued)**

The Use of Current Content Management Systems for Accessibility  
Laura Burzagli, Marco Billi, Francesco Gabbanini, Paolo Graziani, and  
Enrico Palchetti (full paper)

Accessing Documents via Audio: An Extensible Transcoder for HTML to  
VoiceXML Conversion?  
Narayan Annamalai, Gopal Gupta and B. Prabhakaran (full paper)

Listener-controlled Dynamic Navigation of VoiceXML Documents?  
Hemambaradara Reddy, Narayan Annamalai and Gopal Gupta (full paper)

Toward User-Centered, Scenario-Based Planning and Evaluation Tools  
Paul Bohman, Shane Anderson (short paper)

Discovering Structure of Web Pages for Non-visual Navigation: Binding Text to  
Forms  
E. Pontelli and R. Reddy (full paper)

Accessibility of Adobe Acrobat Files  
Charlie Pike, Mike Paciello (talk)

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## **Track 3:**

### **Elderly and Disabled People: Therapy and Care (continued)**

Multimodal Control Centre for Handicapped People  
Ana Granados, Víctor Tomico, Eduardo Campos, Javier Tejedor, Javier  
Garrido (full paper)

Classification of Infant Crying to Identify Pathologies in Recently Born Babies  
with ANFIS  
Orion F. Reyes-Galaviz, Emilio Arch Tirado, and Carlos Alberto Reyes-  
Garcia (full paper)

Improving Quality of Life and Well-Being for Children and the Elderly through  
Vibroacoustic Sound Therapy  
Phil Ellis (full paper)

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## Track 4:

### **Accessible Games and Entertainment (chair: Donal Fitzpatrick)**

Entertaining Software for Young Persons with Disabilities  
Morten Tollefsen and Magne Lunde (full paper)

The TiM Project: Overview of Results  
Dominique Archambault (full paper)

3D Shooting Games, Multimodal Games, Sound Games and More Working  
Examples of the Future of Games for the Blind  
Eric Velleman, Richard van Tol, Sander Huiberts, and Hugo Verwey (full  
paper)

Choosing Methods for Prototype Testing of Inclusive Computer Games  
Lieselotte van Leeuwen, Aoife Power, Phil Ellis (full paper)

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## **Fri. July 9, 16:30: Farewell Reception**

Location: Registration Area, Université Pierre et Marie Curie

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