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Reality in Healthcare

FEATURES:

Interactive Augmented Reality Exposure **Treatment**

▶ p 16

Augmented Reality Handhelds and Mobile Devices

▶ P 23

Visual Augmentation for the Blind

P 24

ASK THE EXPERT:

Ashfaq Ishaq

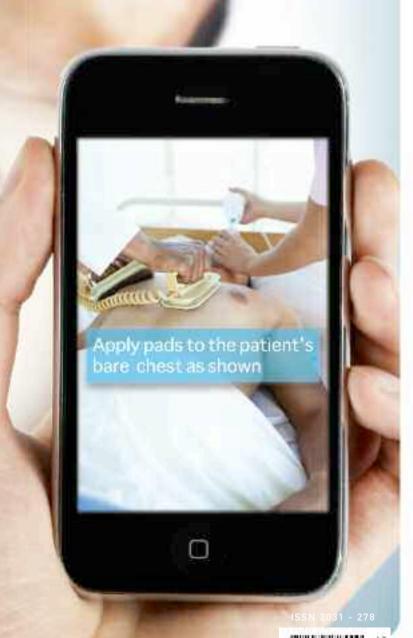
P 31

COUNTRY FOCUS:

The Netherlands

P 40

and much more...



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PUBLISHING HOUSE

Virtual Reality Medical Institute BVBA 30 Clos Chapelle aux Champs, Bte. 3030 1200 Brussels, Belgium Telephone: +32 (0)2 880 62 26 E-mail: office@vrphobia.eu Website: http://www.vrphobia.eu

PUBLISHER

Brenda K. Wiederhold, Ph.D., MBA, BCIA

PRODUCTION AND PRINTING Nyomda

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For advertising information, rates, and specifications please contact Virtual Reality Medical Institute, 30 Clos Chapelle aux Champs, Bte. 3030, 1200 Brussels, Belgium, Telephone: +32 (0)2 880 62 26; E-mail: office@vrphobia.eu.

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► LETTER FROM THE EDITOR-IN-CHIEF B.K. Wiederhold D 1

► COVER STORY Overview on Augmented Reality M.D. Wiederhold, B.K. Wiederhold p 10

▶ FEATURES

Interactive Augmented Reality Exposure Treatment

A. Dünser p 16

- ► Manipulative Augmented Virtuality for Modulating Human Perception and Action A. Pusch, F. Steinicke p 20
- Augmented Reality Handhelds and Mobile Devices
 A. Ines p 23
- ► Visual Augmentation for the Blind
 P. Degenaar p 24
- ► PRODUCT COMPARISON CHART Augmented Reality p 26
- ► Clinical Skills Learning With Touch Technology M.J. Cox, J.P. San Diego, B. Quinn p 28
- ► ASK THE EXPERT

 A. Ishaq p 31
- ► FROM WHERE WE SIT

 H. Kaufmann p 35
- ► ACROSS THE POND B.D. Wassom p 36
- ► FURTHER AFIELD

 L. Kong p 37
- ► COUNTRY FOCUS
 The Netherlands
 C. Loranger p 40



Augmented Reality for Exposure Therapy

By overlaying virtual content on the real world, Augmented Reality has great potential for exposure treatment. By interacting with a representation of a specific stimulus, such as spiders, the therapist is easily able to control the level of exposure experienced by the patient, leading to reduced levels of anxiety. The virtual stimulus not only appears to be moving in the real world, but also reacts and adapts to the a client's presence and actions, making therapy even more effective.



Manipulative Augmented Virtuality

Mixed reality display and tracking technologies have begun to spread into the mass market and have a great potential to be applied to various healthcare applications. Research has shown promising leads in the potential of applying manipulative augmented virtuality for individuals who have trouble walking . These developments could lead to enormous potential for rehabilitation, diagnosis and treatment of various disorders.

Ask the Expert:

8

Ashfaq M. Ishaq

Executive Chairman International Child Art Foundation

"The power of the arts to foster creativity and develop empathy is overlooked. Since creativity and empathy are preconditions for a just, prosperous, and nonviolent world, we should all champion global art programs."



Brenda K. Wiederhold: Tell us about your background and experience

Ashfaq M. Ishaq: I started my career at the World Bank headquarters in Washington DC conducting economic research on entrepreneurship and small industry development in 1980. The bank's research department had acguired an IBM System 360 at that time which opened possibilities for econometric analysis of primary data which we had collected. I coauthored a book which was published by the Oxford University Press in 1987 and by that time I had joined the economics faculty at the George Washington University. Soon thereafter I wanted to leverage my economic development and teaching experiences into advisory services. So I opened a project development company in Washington which eventually became successful by the mid-1990s. I had to close this business in 2001 to devote all my time and energy to the International Child Art Foundation (ICAF).

BKW: What inspired you to found the International Child Foundation?

AMI: I was always interested in creativity and my research on entrepreneurship deepened this passion. It frustrat-

cost and more effective approach is to employ the arts. But there was no national art organization for American children, nor an international arts organization for the world's children. The ICAF had to fill this vacuum.

"We are also developing a virtual creativity playground (VCP) because if a child's creativity is not encouraged, it could be lost forever."

ed me that economics dealt with productivity alone and not creativity. I was asking myself why innately creative children grow up to become bureaucrats. E. Paul Torrance, who is considered the father of creativity, documented the "4th-grade slump" in the creativity of children through his longitudinal and cross-cultural studies. Something happens to us at that age, be it conformity or being educated out of our creativity. How to help children overcome their creativity slump? The least

BKW: Tell us more about the background of the International Child Foundation, and the aims of the organization.

AMI: Running the ICAF posed a big challenge as neither I nor my wife had non-profit experience. I knew that at least initially we had to invest our own funds, which is what we did. Right after incorporating the ICAF we launched an international art competition for children age 8 to 12 to address the "4th-grade slump." In September 1998 the ICAF hosted the

▶ **ASK THE EXPERT** Ashfaq M. Ishaq

first-ever national children's art festival, held on the National Mall in Washington DC.

The problem with creativity is that it is morally neutral. "The greatest work of

imagination and art and hence it has zero market value. Consequently, the power of the arts to foster creativity and develop empathy is overlooked. Since creativity and empathy are preconditions for a just, prosperous, and nonvi-

as BKW: Could you explain what the World children's Festival is about?

"Neurobiologists inform us that our brains are hardwired for both creativity and empathy. The 4th grade slump and the selfish gene play against our better instincts. It just so happens that the arts can be employed for the development of creativity and empathy."

art imaginable for the whole cosmos" is how a German avant-garde composer Karlheinz Stockhausen described the 9/11 terrorist attacks on the United States. Creativity alone cannot do the job. We need empathy as well. Creativity and empathy together are necessary and sufficient conditions to build a brighter future for all.

Neurobiologists inform us that our brains are hardwired for both creativity and empathy. The 4-th grade slump and the selfish gene play against our better instincts. It just so happens that the arts can be employed for the development of creativity and empathy. This is what the ICAF does.

BKW: Could you tell us about your current research?

AMI: Do children through their art offer insights into our creative purpose and potential? Can we, former children, learn from the new generation? What is this learning?

BKW: Do you think the public should be more aware of the issues your organization aim to promote?

AMI: People do not appreciate children's

olent world, we should all champion global art programs.

BKW: What are the best achievements you have experienced since founding the organisation?

AMI: The ICAF is today a world leader in children's art. Next year we launch the 5th Arts Olympiad (2013-2016). We expect that about two million 8 to 12 year olds worldwide will participate in and benefit from their Arts Olympiad experience. This innovative art and sport program inspires them to embrace the Artist-Athlete IdealSM of the creative mind and healthy body—mens sana in corpore sano. Although the ICAF receives little financial support, its work is essential and its achievements incredible.

It has been especially important to break with history and bring children's voices to major conferences where we have organized children's panels. Instituting the "World Children's Award" is another achievement. Introducing a child's imagination to the adults is what we do every day. We continue to convince contemporary art museums to dedicate at least one room to art by children.

AMI: The festival honors the Arts Olympiad winners from U.S. states and participating countries. In 1999 we produced the first World Children's Festival and ever-since the festival is held quadrennially as Olympics of children's imagination and co-creation. Child performers and musicians from around the world apply to showcase their talents. Architects, engineers, scientists, technologists, writers, Olympians and other professionals come to Washington at their own expense to host workshops and activities for the children, who arrange their own workshops as well.

This educational festival has grown into a global showcase for STEAMS Educations^M which integrates Arts and Sport with STEM disciplines (science, technology, engineering and mathematics) for children's holistic development. The 5th World Children's Festival will be held in Washington in 2015. It is free and open to the public, so you are most welcome.

BKW: How has technology impacted your work?

AMI: When we started in 1997 all communications were by snail mail, which was very costly and time consuming. Today, about 80 percent of our work is online. The ICAF was one of first civil sector organizations to publish a we bsite in early 1998. We added digital art as a category to the Arts Olympiad in 2004. At the 1st World Children's Festival in 1999, very few teachers and parents had E-mails. At the 4th World Children's Festival in 2011, nearly all the children had E-mail addresses. The current issue of ChildArt magazine is on Games & Online Experience. We are also developing a virtual creativity playground (VCP) because if a child's creativity is not encouraged, it could be lost forever.