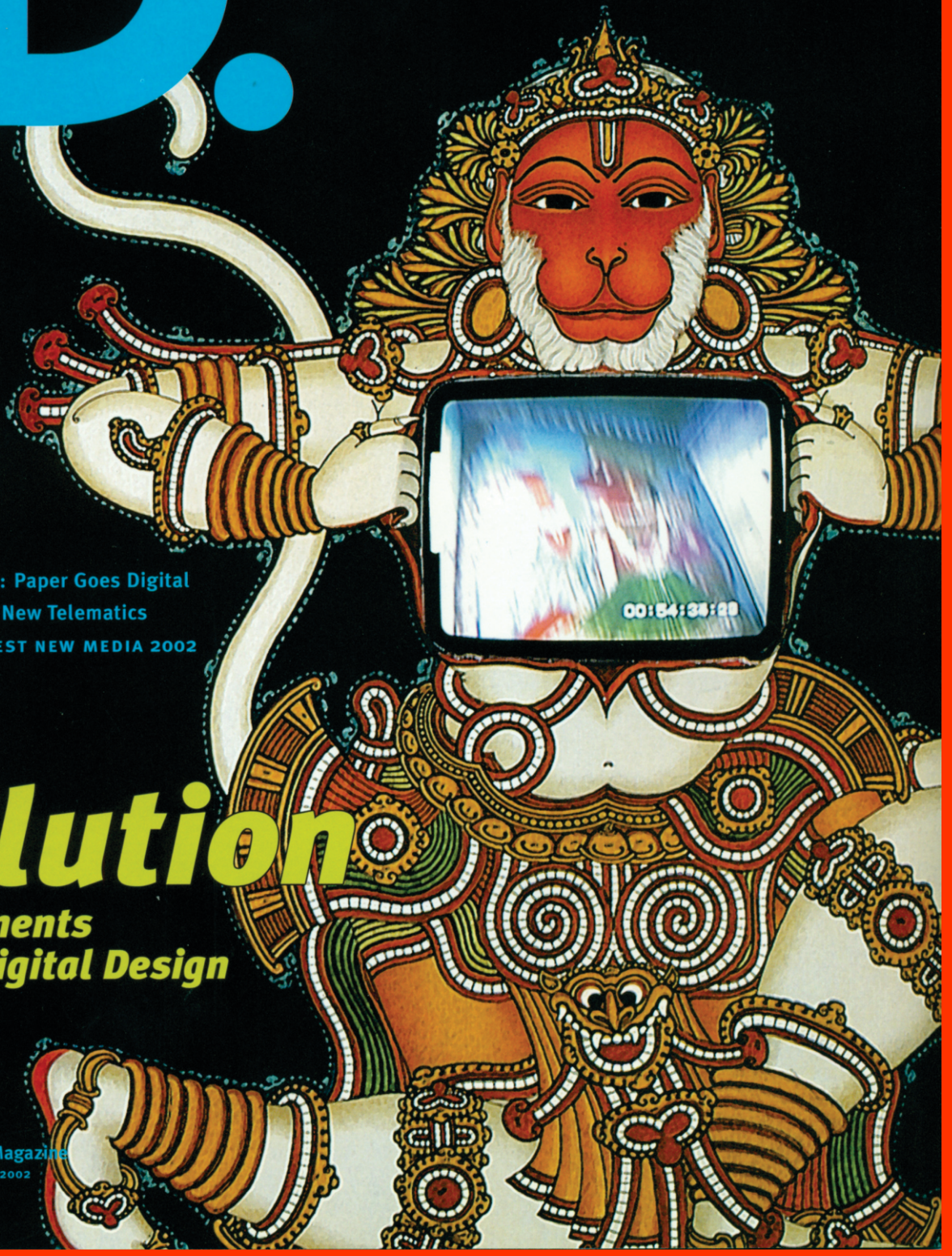


Interactive Media Design Review

# I.D.



SMART SURFACES: Paper Goes Digital  
INTELLIGENT AUTOS: New Telematics  
BEST NEW MEDIA 2002

## *evolution*

**Developments  
in Digital Design**

The International Design Magazine  
\$6.95 US/\$10.95 CAN NOVEMBER 2002



## THE CROSSING PROJECT

For centuries, India's primeval city of Banaras has been revered as a *tirtha*, or crossing place, for those seeking physical, mythical and spiritual enlightenment. Now, digital enlightenment has become part of the allure.

*The Crossing Project*, an exhaustive multimedia exhibition introduced last year by Xerox PARC and Xerox Developing Markets Operations in India at the National Gallery of Modern Art in Mumbai, explores the many sacred dimensions of Banaras in a collection of interactive "high-touch" displays that are arrestingly nontraditional, while simultaneously rooted in the most ancient forms of art and communication. Challenging the graphical user interface that has served as the substrate of modern computing systems for more than 30 years, the exhibition presents alternative paradigms of information access and delivery, integrating human gesture, aesthetics and cultural identity into the acts of computer-based communicating and learning.

Jurors savored the intuitive functionality of interfaces such as e-Rickshaw, which deconstructs "traditional" gray-box hardware, reincarnating the computer as an indigenous transportation vehicle. Users can access video footage

of Banaras (as filmed from the back of a rickshaw) by maneuvering the handlebars, seat and bell of the bicycle—an approach juror Eddie Sotto praised as "entertaining, intriguing and comfortable."

To activate the Mythology browser, users push a giant lens across a flat mural depicting the sacred sites of Banaras. Parking the lens at specific cartographic points unlocks deeper layers of meaning. In essence, the mural becomes the monumental equivalent of a display monitor, and the lens functions as a mega-cursor.

In yet another installation, icons representing the 14 emblems of Shiva migrate off the desktop to become sculptural forms. Touching the objects to points on a tabletop display activates an embedded retrieval system, yielding deeper insights into the multiple personifications of the Hindu god.



*The Crossing Project* took visitors through the primeval city of Banaras. "High-touch" displays bridged old-world art forms and modern technology. For example, icons representing the 14 emblems of Shiva left the desktop to become sculptural forms.

### CLIENT

Xerox PARC/DMO, Stamford, Conn.; Carlos Pascual, president

### DESIGN

The Crossing Project, New Delhi, India: Ranjit Makkuni, project director; Madhu Khanna, project scholar; Mustafa Siddiqi and Muralidhar Swarangi, technology designers; Kalpana Subramanian and Pallavi Arora, videographers; Turan Rawat and Pallab Chakraborty, graphic designers; Jayachandran and Venu, artists. For complete credits and acknowledgements, please see [www.crossingproject.net](http://www.crossingproject.net).

### HARDWARE+SOFTWARE

Custom embedded systems, radio and robotics

### URL

[www.crossingproject.net](http://www.crossingproject.net)

### KIOSK/INSTALLATION



Because its vernacular is culturally contextual, *The Crossing Project* succeeds not only in rematerializing the abstract world of computing, but also in engendering a developing nation with a unique technological signature. Ornate, egg-shaped, wireless devices delight the eye and conform ergonomically to the concavity of users' hands, while simultaneously embodying archetypal representations of the egg as a seed of knowledge. Artists' renderings of the footprints of the guru—etched in precious metals, embroidered on silk and painted on parchment—can be pressed to summon multimedia highlights of the teachings of philosophers, poets, observers and reformers who made pilgrimages to Banaras—from Buddha to Mark Twain to Mahatma Gandhi. The pedate interface is intuitive insofar as touching the feet of a sage is a traditional sign of respect in Indian culture.

Project director Ranjit Makkuni notes that the global proliferation of information technology thus far has rendered a generic form of techno-literacy that ignores issues of cultural identity and values. *The Crossing* hypothesizes—and, to a large extent, proves—that ancient art forms and mobile, multimedia interfaces need not be mutually exclusive. "For centuries, craftpersons in all cultures have interpreted complex mythologies and made them accessible to people," Makkuni observes. "It could be said that they were the world's first user-interface designers."

—JENNY SULLIVAN



#### Q+A WITH RANJIT MAKKUNI

**You helped develop the world's first GUI. What was the impetus for re-examining it?**

*The GUI was based on the invention of the mouse, which allowed people to point and click on representations on a display screen. While the GUI of 30 years ago transformed the way in which people interact with computing media, we missed a fundamental connection: the integration of the hand and the eye in the act of interaction. The GUI form ultimately disembodied the learner, in turn creating the static office. Hence, The Crossing Project is re-questioning the GUI assumption for two audiences. For the techno-man, we believe that richer forms of interactions and creativity are needed, especially if people are spending large amounts of time interacting with modern tools. For the emerging developing world, we can't presumptuously dump "button pushing" and notions of desktops into the paddy fields of India or the forests of Latin America—places where "cut, copy and paste" may not mean anything. These are cultures in which the hand is considered an extremely intelligent tool; their crafts reveal an extremely high degree of hand literacy.*

**In what contexts might gesture-based computing be used?**

*We're suggesting a new genre of culturally rooted computing that employs tactility in interface, as well as displays. For example, The Crossing e-pots and e-eggs and e-rickshaws suggest cultural forms that might apply to village contexts in developing countries. The pop-up, transformable interfaces (i.e., displays that don't use a display "screen") serve as traditional physical portals.*

*There are many reasons why we should investigate body-friendly, culture-friendly forms. In Chinese systems of medicine and wellness, hand positions and pressure points are integral to the evocation of healing and intelligence states, as in tai chi or acupuncture. If modern society can learn to embrace alternative but time-tested forms, then we can build a case for tactile modes of intelligence behaviors.*

*Of course, the notions of computational-based gestures will need to grow more sophisticated, enabling subtlety and nuance in addition to basic commands. They might, for example, be responsive to pressure and gesture. We need to figure out how to manipulate digital technology using the same physical dexterity a Chinese calligrapher uses to evoke gesture with the touch of a brush.*

**Obviously, the word "crossing" has significance on several thematic levels. Could you elaborate?**

*"Crossing" is the Sanskrit term for pilgrimage, representing a journey into the space of transformation and healing. In this case, our goal was also to engineer a crossing from keyboard and mouse forms of interaction to gesture-based, physical computing. Finally, we're also facilitating a crossing insofar as we're shifting the point of innovation from Hollywood to developing nations and tools from Silicon Valley to India.*

