



Keep your PCs secure while keeping your workforce productive.

The Intel® Pentium® 4 Processor with HT Technology. Enables virus scans and other security tasks to run in the background with minimal impact on performance. [Click here to learn more](#)



SEARCH:

- 2 FREE ISSUES
- RENEW-GET 2 FREE ISSUES
- CUSTOMER SERVICE
- FREE DIGITAL ISSUE



HOME MAGAZINE ARCHIVE INNOVATION FUTURES WEBLOG MIT INSIDER FORUMS

LOG IN

E-mail:
 Password:
 Help

- TOPICS
- BIOTECH / HEALTHCARE
 - BUSINESS
 - COMPUTING
 - ENERGY
 - NANOTECH
 - SECURITY
 - SOFTWARE
 - TELECOM / INTERNET
 - TRANSPORTATION
 - EXPANDED LIST

Computing Sponsored by:



▼ ADVERTISEMENT ▼

➔ Topic > Computers and Electronics > Displays

Cell Phone Melds Video and Data

August 16, 2004

Augmented reality systems combine digital information with real-world objects. Researchers at Bauhaus University in Germany are attempting to bring the technology to the mass market with a video see-through augmented reality system for commercial cell phones.

Their cell phone system inserts computer-generated three-dimensional models into real-time video shown on the cell phone's display and aligns the models with physical markers in the camera's field of view. The system could be used to provide, for instance, museum or city guides. Markers encoding IDs would be captured by the tourist's cell phone, which would then determine which exhibit the person is looking at and present related information on the cell phone display.

The system uses a coordinate system to anchor three-dimensional graphics to physical markers in the two-dimensional video stream displayed by the cell phone. As the user moves her cell phone, the model rotates in relation to the changing angle between the cell phone and the marker. The system updates the model's position at 4 to 6 frames per second, or about one-sixth the speed of full-motion video, said Moehring. The marker contains colored dots that form a code that tells the system which computer-generated model to display.

Cell phone augmented reality systems could be practical in the next couple of years, according to the researchers. They are scheduled to present the research at the Association of Computing Machinery (ACM) Siggraph 2004 conference in Los Angeles, August 8 to 12.

Technology Research News

▼ ADVERTISEMENT ▼

➔ TECHNOLOGY REVIEW RELATED ARTICLES

- [Phone It In](#)
- [Burger Profiling](#)
- [IM, I said](#)
- [Interventional Innovation](#)
- [The New Face of Hollywood](#)

➔ RECOMMENDED LINKS

- [Siggraph 2004](#)

WEBLOG

Erika Jonietz
 @ 8/19/2004 4:25:50 PM
[P2P Software Makers in the Clear](#)
 The Ninth Circuit Court of Appeals has ruled that Grokster and StreamCast Networks ...

Erika Jonietz
 @ 8/18/2004 5:42:49 PM
[Cryptographers Find New Weaknesses in Common Security Algorithms](#)

Henry Jenkins
 @ 8/17/2004 9:20:53 PM
[Downloading Television, Legal or Otherwise](#)

TODAY'S TOP STORIES

- [Translating Iceland's Genes into Medicine](#)
 Armed with the DNA of an entire nation, deCode Genetics is shaving years off the drug discovery process.
- [Projector Lights Radio Tags](#)
- [Travel Web Sites Agree to be More Accessible to Blind](#)
- [A Healthy Shark Attack](#)
- [Internet Giant Google Shares Trade Higher in Debut](#)
- [Chips Measure Electron Spin](#)
- [ZigBee Takes It Easy](#)
 Design Software Comes with Machine Shop Attached
- [Shifty Tiles Bring Walking to VR](#)
- [Demo: Artificial Retina](#)

PREDICTIVE MARKETS

[Will SCO be awarded damages?: SCO will be awarded damages in its lawsuit against IBM at the District Court in Utah](#)

FREE NEWSLETTERS

Get the latest technology and business news in Technology Review's weekly newsletters.

SPONSORED LINKS

[Coming in 2005! JUICE: The Inventor's Fuel. A 6-episode television series.](#)

[Experience the world's first DVD recorder with TiVo\(tm\).](#)



TECHNOLOGY REVIEW MARKETPLACE

Extend Ethernet to 1 Mile Over Copper Wires

Patton Ethernet Extenders break the 300 ft barrier of Ethernet. Now you can extend ethernet ports upto 1 mile over regular voice grade telephone wire at full ethernet speeds.

Protect Your Valuable Files - Mirra

How valuable are your digital files? The Mirra Personal Server is the easiest way to automatically backup your valuable files, emails, and more. Plus, remote access and secure file sharing. Ideal for small business.

New Plantronics wireless headsets

Join the 21st Century and deploy the latest Plantronics wireless headset solution in your call center, help desk or office. Increase productivity with hands-free mobility. Volume discounts, 30 day money back guarantee and 1 year warranty.

Processor Verification

Stop wasting resources developing tools, use an off-the-shelf processor verification tool.

Anywhere System Admin: RemotelyAnywhere

RemotelyAnywhere is the tool for managing systems inside and outside your LAN. Deploys quickly, monitors systems. Use HTML support toolset or remote control. Access with console, browser or PDA. Register for free 30-day trial.

>> BUY A LINK NOW

MIT TECHNOLOGY INSIDER

Exclusive monthly newsletter that tracks the hundreds of commercial enterprises conceived at MIT. Find out what patents have been issued; what technologies have been licensed: what companies are funding projects.



Try 2 Free Trial Issues!

First Name	<input type="text"/>	Last Name	<input type="text"/>	
Address	<input type="text"/>		City	<input type="text"/>
State	<input type="text"/>	Zip	<input type="text"/>	
<input type="button" value="State"/>		<input type="button" value="Zip"/>		
Email				
<input type="text"/>				

For non-U.S. orders [click here](#)

[About Us](#) | [Contact Us](#) | [Privacy](#) | [Terms of Use](#) | [Advertise](#) | [Subscribe](#) | [XML](#) | [About Newsfeeds](#)

	Twelve Interconnected Conversations about the Future	Pop!Tech 2004 October 21-24 Camden, Maine www.poptech.org
--	--	--