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FOR IMMEDIATE RELEASE**Digital Imaging Tools from LEAD Technologies Help Police Officers
Locate Abducted Children**

By Sarah Juon

In the aftermath of the abduction of 12-year-old Polly Klaas from her home in Petaluma, California, in 1993, crime-fighting organizations around the world woke up to the importance of speed when distributing a photograph of an abducted child to law enforcement and media agencies.

The first few hours are crucial. According to Gordon McNeill, FBI supervisory agent with the Child Abduction Unit, "It's my opinion that if you do not recover that child within the first 2-4 hours, in all likelihood you are going to have a deceased victim on your hands."

Almost as important as speed is the quality of the photograph distributed. Most of the police stations rely on primitive tools to broadcast a photo grabbed up in haste from a distraught family. They paste the photo to a page with text and copy it. The copier, while printing the text clearly, muddies the photo. This sheet is then churned through a fax machine, which further blurs the image, rendering it nearly useless as a tool for recognizing the child.

With 2,300 child abductions occurring every day in the United States - 900,000 a year - law enforcement agencies need to have technology working for them, not throwing up more obstacles.

To address this problem, SocialTech, Inc., was founded in 1994 in Burlingame, California, with the mission to provide America's 17,600 law enforcement agencies with the technology necessary "to mount the fastest, most effective response to a missing or abducted child." The nonprofit organization developed a comprehensive program called TRAK (Technology to Recover Abducted Kids).

By partnering with corporations such as AT&T, Hewlett-Packard and LEAD Technologies, SocialTech has developed TRAK as a standardized, state-of-the-art technology - including both a hardware and software solution - available at a minimal cost to communities across the nation.

Digital Imaging Made Simple

A key ingredient of the TRAK program is its ability to transform a mediocre image into a crisp, clear photograph, which can be inserted into a flyer and copied, faxed and transmitted electronically without losing any definition.

A second key ingredient is the ability to obtain this high-quality image with the press of only a few buttons.

Bob Asquith, president of SocialTech, put it this way: "We needed to design the TRAK software so that any officer, computer-literate or not, can sit down in a moment of crisis, scan in a photo, and within five minutes have a high-quality flyer in hand to distribute." Asquith stressed the importance of a software program that does not require any training. "The police officer's job is to find the culprit, not spend hours in some computer training course."

"We were looking for a digital image programming tool that would build in all that functionality at the code level," Asquith said, "so it's there to use but the police officer doesn't have to deal with it."

Asquith said his team looked at a variety of alternatives. "We found LEADTOOLS by LEAD Technologies was exactly what we were looking for," Asquith said. "We chose them because of the high quality of the product. For the programmer, LEADTOOLS offers an immense amount of flexibility. And for the end user, we were impressed by their absolute ease-of-use."

SocialTech began designing the TRAK system using LEAD Technologies' LEADTOOLS Win32 Pro, V. 8, a program designed for the programmer who needs a 32-bit tool for development with C/C++.

Working in a Visual Basic environment, SocialTech programmers drew on LEADTOOLS' imaging capabilities for scanning, color conversion, display, annotation, image processing, compression, imaging for the Internet with ActiveX and Netscape Plug-in, and imaging for printing.

"LEAD Technologies has a very fine scan engine," Asquith said. "A developer doesn't have to worry about how to optimize the scanner, which is always a challenge when you write software: to make very simple software very smart."

A police officer creating a TRAK flyer using the LEADTOOLS features, Asquith explained, essentially has to make only one choice: to pick out of a photo the image he wants. If it's a family photo of four, for instance, he picks out the face of the abducted child. LEADTOOLS then performs an automatic enhancement of the picture: sharpening, adding contrast, adjusting the color.

"We have a simple usability criteria for knowing when we have the best image," Asquith said. "It has to be able to survive a single photocopy. The test is, we hand that photocopy to a police officer and say, 'Based on this, can you recognize that little girl?' So far, the answer has been always yes."

Getting It 100% Right

The ultimate test, of course, is transforming a 24-bit, 64-million-color photo into a black-and-white photo that faxes clearly.

"We're 98% there," Asquith said, adding that SocialTech is in the early stages of working on an update of their current TRAK 1.45 version.

Much of the "difficult" two percent stems from the problem of separating out the head of a darker-skinned individual photographed against a medium to dark green or red background or against a night sky.

SocialTech is planning a later version that will incorporate some of the more advanced features of LEADTOOLS, enabling a police officer to find a face against the background and change the background, as well as the ability to view the same picture in several different modes - the original and two or three changes, for example - to compare with the photo they started out with.

"Without using controls that are complicated, in our new version we will enable the officer to tweak the photo a few times and figure out which direction to take the photo," Asquith said. "The LEADTOOLS kit allows us to do this."

The TRAK program, which began in June of 1996, has met with great enthusiasm. It is now instituted in almost 180 police stations across 12 states, as well as several FBI bureaus and at the National Center for Missing & Exploited Children. The TRAK system - which includes the LEADTOOLS kit software, an H-P Pentium I 233 MHz. computer endowed with 32 mg. RAM and a 1.6 gig. hard drive, CD-ROM drive, 33.6 modem, color ink jet printer and a scanner and a complete-coverage three year warranty - costs \$7,000. Funding comes from communities, foundations and grant monies.

The best part about the TRAK system is, it works. Asquith offered one example. "In San Jose, CA a three-year-old boy was abducted from a laundromat, where his mother was doing laundry. The local authorities printed up a flyer and had it in the hands of every law enforcement officer in the area. A waitress at a nearby restaurant saw a little boy in the back of a car, recognized him from the TRAK flyer, and called the police. The little boy was recovered that evening, and his abductor was arrested. This is TRAK doing what it was designed for."

For more information about TRAK or SocialTech, visit their informative website at www.trak.org.

For more information about how to use LEAD Technologies' LEADTOOLS kits in innovative ways, call 704-332-5532 or visit them at www.leadtools.com.

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About LEAD Technologies, Inc.

Founded in 1990, LEAD grew out of years of research headed by Moe Daher to find a comprehensive compression standard for digital images. LEAD is now the world-leading supplier of imaging development toolkits, providing technology of the future, today. LEAD brings to the market the most innovative and technically superior products that provide the greatest possible value for its customers. LEAD's award winning imaging technology is chosen by Microsoft, Hewlett Packard, Intel, Boeing, Xerox and thousands of other companies for use in their high volume applications and internal systems.