

RELEASE

Media Contact:

NEC Corporation
Hiroe Okajima
Tel : +81-3-3798-6511
email : h-okajima@ax.jp.nec.com

NEC Corporation
Joseph Jasper
Tel : +81-3-3798-6511
email : j-jasper@ax.jp.nec.com

NEC Hong Kong Limited
Joanna Siu
Business Manager
Tel : (852) 2733 5546
Fax : (852) 2733 5519
email : joanna_siu@nechk.nec.com.hk

NEC Hong Kong Limited
Catherine Yuen
Senior Marketing Officer
Tel : (852) 2733 5543
Fax : (852) 2733 5519
email : catherine_yuen@nechk.nec.com.hk

For Immediate Release

NEC Fingerprint Matching Technology Ranked No. 1 by the NIST
- Automatic processing returns 97.2% accuracy from latent prints -

(Tokyo – 16th April, 2009) - NEC Hong Kong Limited (NEC) announced that its latent fingerprint matching technology has been ranked number one in the world on the Evaluation of Latent Fingerprints Technologies (ELFT)^(*1) test carried out by the National Institute of Standards and Technology (NIST), commissioned by the U.S Department of Homeland Security.

Among the world's leading fingerprint matching system vendors participating in this evaluation, NEC far surpassed even the second ranking vendor (accuracy rate: NEC, 97.2%; 2nd vendor, 87.8%; 3rd vendor, 80.0%) and reassured the superior position of NEC's fingerprint technology. NEC's high accuracy rate is achieved by the integration of improved matching technologies, such as a low-confidence minutiae adaptive matching algorithm, a zone matching algorithm, and recently developed image processing technologies specialized for latent fingerprints, such as a latent background noise removal algorithm and a low-quality fingerprint ridge recognition algorithm.

The ELFT evaluates the matching accuracy of a technology by using 835 latent fingerprints that are automatically matched against the known fingerprints (exemplars) of 10,000 individuals totaling 100,000 fingerprints.

Latent fingerprints are often left behind on objects at the scene of a crime; Latent fingerprint images typically consist of fingerprint segments or portions of many different overlapping prints. Most latent fingerprints of insufficient quality require latent fingerprint examiners to manually add and modify minutiae which are necessary in matching. This manual latent fingerprint process is one of the major obstacles in quick crime investigations and the automation of this process potentially accelerates the speed of investigations a great deal.

The primary objective of the ELFT test was to study feasibility of automated latent fingerprint processing. The test data were sampled from actual cases which were identified on the operational systems such as the FBI fingerprint system.

NEC's achievement of high accuracy (97.2%) on the ELFT test has proven the feasibility of automating latent fingerprint processing in the near future.

The ELFT test is expected to help drive the improvement and diversification of automatic latent fingerprint processing technologies. ELFT exams have drawn significant attention from around the world, and are being supported by the US Department of Homeland Security, Ministry of Justice, FBI, Department of Defense, and US-Visit Program among others.



NEC has been taking part in the development of fingerprint matching technologies since the 1970's. In 1982, the company realized a first-of-its-kind matching algorithm using "relation" (ridge count between minutiae), which returned a remarkably high accuracy rate. In large-scale fingerprint-related technology evaluations sponsored by NIST, NEC has gained high marks for its technological strength as the company was ranked number one in tests such as the PFT Study in 2007; SlapSeg04 in 2004 and FpVTE2003 in 2003. As a result of these technological evaluations, NEC's fingerprint identification systems have been used by police forces, judicial branches and immigration offices in Japan as well as in 24 states, including California, in the United States and 22 additional countries.

Looking forward, NEC plans to continue its support of advanced fingerprint comparison systems throughout markets around the world.

- ❖ (*1) For more information about ELFT, please visit NIST's website or (http://fingerprint.nist.gov/latent/NISTIR_7577_ELFT_PhaseII.pdf, or <http://fingerprint.nist.gov/latent/>)

For enquiry, please call 2733-5533 or visit www.nec.com.hk

About NEC Hong Kong Limited

NEC Hong Kong Limited has a long and eventful history in Hong Kong since its establishment in 1984 and has been expanding its activities rapidly to meet the growing customer demand in Hong Kong, Macau and Mainland China. Dedicated to information and communication technologies, NEC provides advanced display & visual products, server & storage and telecommunication devices. Through customization of specific needs, NEC also plays a leading role in business solutions of security & border control, unified communication and IT platform, as well as services of IT consulting, networking and outsourcing. With a full range of technical experts, we have the resources in response to the dynamic needs of customers in various industries. With our extensive products and services, we are ready in providing continuous values to customers globally. NEC is the one-stop answer for innovative technological excellence.

For more information, please visit www.nec.com.hk.

