



Network Programs Highlights its Technological Excellence at the Embedded Expo & Conference in Japan with its third consecutive participation.

By Vipin Tyagi (President & CEO)

For the third time in a row, the Network Programs team shall attend the 9th Embedded Expo & Conference (ESEC) to be held in Tokyo on June 28-30, 2006. ESEC is Japan's leading ICT trade show focusing on embedded systems and design services. This year's show includes a RFID pavilion where Network Programs shall showcase our technological expertise in RFID, embedded systems, imaging solutions and applications development.

Our decade long association with Japan dates back to 1994, when we set up our local operations in this dynamic country and since have undertaken numerous projects, ranging from onsite technical consulting to offshore development centres for leading Japanese electronics manufacturers. This experience base includes R&D for telecoms equipment and applications, including switching applications, network management systems, billing and applications development. Our wholly owned affiliate, Network Programs Japan (NPJ), continues to

to provide applications support to more than 20 Japanese customers both onsite and offshore.

In addition, our Japanese team of some 25+ people work locally on consulting projects, managing a handful of ODCs out of our NOIDA office in India. In Japan we have long-standing customer relationships with Fortune 500 and Global 1000 companies, including Fujitsu, Cannon, Hitachi, Toshiba and others. Our Japanese arm provides services across diverse industries, such as electronics, telecom, finance, and automotives. NPJ is now in the process of diversifying its focus by targeting the automobile and distribution industry by developing capabilities in RFID, smartcards, telematics and biometrics in addition to embedded systems and communications solutions.

Japan is as an exciting ICT market with cutting-edge devices and network infrastructure combined with a unique corporate and consumer environment. Industry reports have revealed that the Japanese ICT

has expanded at 5.6% annually making it the largest and fastest growing sectors. The ICT industry has



broadened its focus beyond manufacturing equipment to encompassing maintenance and management, as well as the creation of audio, video, print and digital content. The new personal data protection laws in 2005 have also given birth to opportunities in the information security domain.

Japan has no doubt been one of our critical markets and we do have a strong understanding of business and cultural nuances of the country. Our long terms strategy entails ramping up the team size in Japan to serve our customers better - when and where they need technological excellence and take on newer challenges. We look forward to having the pleasure of your company at our booth at the ESEC and explore opportunities to work together in order to developing a mutually beneficial relationship.

OUR CLIENTALE



News Snippets

Network Programs to attend a TMF meet in France

In our continuous endeavour to to develop IPTV standards for interface implementation via the Tele Management Forum (TMF), Catalyst III initiative, a Network Programs team shall participate in an IPTV demo organised by the TMF in Nice, France.

Network Programs Signs MoU with StreamUnlimited

NPI has inked an MoU with Austria-based StreamUnlimited - an innovative developer of audio and video technology. The 2-way technology and delivery partnership allows both companies to share resources and use technology expertise mutually.

Meet us at...

SNAPSHOTS

- ◆ Japan's leading ICT event
- ◆ Date - June 28-30, 2006
- ◆ Venue: Tokyo International Exhibition Centre

ESEC

For enquiries please contact us at:
Japan: +81-3-3535-8591
India: + 91-120-2536622

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www.networkprograms.com

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Network Programs (India) Ltd.
 B-1C, Sector-10, Noida-201301, India
 Tel: +91-120-253 66 22, Fax: +91-120-253 66 25
www.networkprograms.com
 email: marketing@networkprograms.com



Success Story: Smart Card based on FRAM technology

A Fortune 500 Japan-based Telecom Company

The integrated circuit chip embedded in smart card is empowered to perform many different functions. The Smart cards offer consumers the ability to hold multiple applications on a single card, separately and securely.

The recent years have witnessed industries like telecommunications, transportation, PC/software, and government agencies worldwide aggressively incorporating smart card technology into their businesses.

The Challenge

The project required the Network Programs team:

- *To study, test and optimize the client's proprietary Smart Card OS for 32-bit IC cards
- *To improve the performance of Java Card OS
- *And to develop Smart Card/Java Card applications

The Solution

A reverse engineering of the proprietary Smart Card OS (based on Mach micro kernel) was done to understand the OS functionality; various components like Hardware Abstraction Layer, Communication Protocol Layer, Memory Management, Transaction Management, File System Management etc. were redesigned/optimized and tested.

Java Card Virtual Machine (JCVM) and Java Card Run Time Environment (JCRE) were optimized to improve the performance of Java Card

Wireless Identity module (WIM) was developed, tested and integrated with the other parts of OS

GlobalPlatform API on Java Card were implemented to provide a Secure Communication with the Card Terminal and to manage the Card Contents

Features

The OS architecture is modular and scalable; each module provides a well defined interface

The OS is optimized to provide large free memory space for user applications

The card is capable of performing encryption/decryption for secured communication and data integrity

The card supports Java Card API and GlobalPlatform API



The card supports multiple applications

The Java Card supports Card Content management

The card supports Contact Mode communication protocols (T=0 and T=1 as per ISO-7816) as well as Contact-less communication protocol (T=CL as per ISO/IEC-14443)

The cards use FRAM; a non-volatile memory with low power requirements, fast write and high write endurance.

Benefits

The primary benefit from the use of a Smart Card is increased security

Smart Card/Java Card is capable of receiving commands from Terminals; processing the received information, verifying it and updating the stored information



Information stored on the card can be protected with a PIN code, password etc.

Smart card is much more secure than magnetic strip card. It's a perfect a choice for applications that require more security and confidentiality

Applications may be downloaded onto or deleted from the Smart Card



YOUR FEEDBACK

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