Centre for Development of Advanced Computing

Products & Solutions for Transfer of Technology

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C-DAC: Genesis and History

- Setup in 1988 with the mission to build indigenous supercomputing capability.
- Started building Indian Language Computing technologies solutions in parallel.
- Subsequently added Education & Training activities to its portfolio.
- In 2002, ER&DCI (Electronics Research & Development Centre, India), NCST (National Centre for Software Technology) and CEDTI (Centre for Electronics Design and Technology, India) were merged with C-DAC.
- With this, several new domains got added to C-DAC’s spectrum of activities such as Professional Electronics, Health Informatics, Cyber Security, Cyber Forensics, e-Governance, etc.
Solutions for Intelligent Transportation

- WiTRAC (Wireless Traffic Controller)
  - Vehicle actuated road traffic controller that controls the signal lamps over wireless medium
  - Compatible with ATCS (Area Traffic Control System)

- Vehicle Tracking System
  - Provides information about location of vehicle and its movement in real time.

Application Areas: Traffic Engineering, Surveillance
Solutions of Critical Importance

- TETRA Products
- Disaster Management Application
- Base Station, Gateway, Handheld & Vehicle Mount Radio, Network Monitoring System
- Automated Dial 100 System
- Distress Call Response System for Police

Application Areas: Defense and Police, Critical Infrastructures
Solutions of Critical Importance

- **Cyber Forensics**
  - **Disk Forensics**
    - CyberCheck Suite (Perform data acquisition of digital evidence, analysis, data recovery and reporting)
    - TrueImager (Hardware based disk imaging tool)
    - TrueTraveller (Portable forensics tool kit) tools

- **Network Forensics**
  - NetForce Suite (Collect and analyze evidence from network environment)

- **Mobile Device Forensics**
  - Mobile check (Mobile, PDAs, & Smart Phones Forensics)
  - Advik (Call data record analyzer)
  - SIMXtractor (Imaging & analyzing SIM cards)

- **Live Forensics**
  - Win-LIFT (Windows Live Forensics)

**Application Areas: Defense, Police, Critical Infrastructures**
Solutions for Quality Analysis of Black Tea & Silk

- **ENOVISION**
  - Integrated electronic E-Nose and E-Vision for quality monitoring of black tea

- **E-Tongue**
  - Electronic tongue for taste characterization of black tea
  - Portable E-Nose (PEN) & Hand held E-Nose (HEN)

- **Resham darshan**
  - Apparatus for colour characterization and grading of Tasar Silk yarm

**Application Area: Agriculture**
Solutions for Quality Analysis Rice & Spice

- AMMAR
  - Aroma measurement machine for aromatic rice

- Annadarpan System
  - Instrument for appearance based quality characterization of rice

- e-Spice
  - Integrated touch operated computer based Portable Electronic instrument for quality analysis of spices (Chillies, turmeric, cardamom)

Application Areas: Agriculture
Solution for Application Acceleration

- Reconfigurable Computing Hardware
  - Very small form factor card is unique, allowing application acceleration for 1U or 2U machines that support PCI-e low profile cards
  - 12 Million Gate FPGAs
  - Onboard High Speed Memory
  - Low Power consumption (25W)

- Varada Programming Environment
  - Simple interface for hardware interaction
  - C/C++ support
  - APIs for 64bit Linux/Windows

Application Areas: Scientific & Engineering Applications such as fracture mechanics, radio astronomy, bioinformatics, agriculture
Other Solutions

- Digital Programmable Hearing Aid
- Meghdoot cloud stack and support
- Tools & technologies for Multilingual computing including Machine translation and Solutions for Speech to Speech
- Bharat Operating System Solutions & Support, Web & mobile based e-governance applications/tools
- Solutions for e-learning and personal safety
- Biometric based authentication, Network monitoring, Intrusion Prevention & Firewall, Malware prevention and USB Protection and IP Storage (disaster recovery solution)
- Telemedicine and Hospital Information Management
Areas of Expertise

- High Performance Computing and Grid Computing
- Multilingual Computing & Heritage Computing
- Professional Electronics, including VLSI and Embedded Systems
- Software Technologies, including FOSS
- Cyber Security & Cyber Forensics
- Health Informatics
- Education & Training
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Thank You