



Profile

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1 Corporate Profile

1.1 Spot Light

Got incorporated in the year of 2000, by NRI technocrats, at Salt Lake City, Kolkata, the Silicon Heart of Eastern India. During its short tenure of operation, the company has already made its presence felt in different fields of the computing world.

1.2 Infrastructure

- ❑ Highly experienced and dedicated group of engineers
- ❑ 1500 sq. ft. of office space at prime location of Salt Lake City, Kolkata, India
- ❑ Strong Intranet
- ❑ Internet
- ❑ Latest hardware & software platforms
- ❑ Proven track record

1.3 Client List

- American Megatrends Inc., USA
- Axiohelix Pvt Ltd, Japan
- iVivity Inc., USA
- PortalPlayer Inc., USA
- Programmer Society Inc., USA
- Red Hawk (CDT), USA
- Hash Technologies Pvt Ltd, Kolkata, India
- Indian Airlines Limited, Kolkata, India
- CDAC Kolkata, India
- DOEACC Center, Kolkata, India

1.4 Fields Of Interest

- Embedded Systems
- Utility & Tools Development
- SmartCard Solutions
- Network Management
- Database Applications
- Web & Rich Net Applications
- Promotional and Branding Presentations
- E-Learning on CD or Web

2 Off-shore Development Projects

2.1 PROJECT: Management of External LAN Devices Connected to BL-8000 Power-Sense HUB

About Client

RED HAWK, USA, a CDT company, designs and manufactures cutting edge networking products that are integral to today's converged networks.

Project Description

BL-8000 is the Mid-Span Power-Sense HUB from RED HAWK. This hub provides a safe & efficient way to provide power to VoIP phones, Wireless LAN Access Points, Web Cameras and other LAN devices without the use of an external power supply for each device. This greatly improves the range of installation locations for such devices, no longer requiring them to be located near a power outlet. It also adds an unprecedented level of security and reliability for powered LAN devices. The Hub comprises of several identical digital cards one for each of the external LAN devices. The Serial Ports of each of these cards are connected to the Serial Port of a Motorola M5272C3 board over a common serial bus.

The project scope includes:

- Implementation of SNMP (Simple Network Management Protocol) Agent on Motorola ColdFire M5272C3 Evaluation Board to control the LAN devices
- Implementation of Serial interaction on Motorola ColdFire M5272C3 Evaluation Board over RS-232
- Implementation of Serial communication layer on PIC16F873 Board
- Implementation of Command Interface Layer for the devices connected with the PIC16F873 Board

Technology Used

M5272C3 rev 2.2 and PIC16F873

MPLAB

Embedded TCP/IP, SNMP

OS: ucLinux 2.4.19

2.2 PROJECT: GUI Based SNMP Manager for Managing Red Hawk Power-Sense HUB

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The project requirement includes development of GUI based SNMP Manager which can discover the presence of all the BL-8000 Hub present in a intranet and communicate with them over SNMP protocol and control the LAN devices connected with them.

Technology Used

Microsoft Visual Studio
Microsoft WinSNMP
OS: Windows NT/2000/XP

2.3 PROJECT: iInvest, Pocket PC Based Personal Investment Manager

About Client

Programmer Society Inc. is a California, USA based software consulting company mainly working in the field of Windows internals.

Project Description

iInvest is a Pocket PC based stock performance monitoring tool. The data provided by any online share trading software or newspapers is overwhelmed with much more unwanted data for a single user. So, user can take some data out from the mass of his/her interest and put into his personal Pocket PC and make some analysis on the historic data to come to certain decision about making present investments. It can also be used to feed some online data to make some easy charts about certain interesting stocks.

Technology Used

Microsoft Embedded Visual Tools

Microsoft Active Sync 3.5

OS: Windows CE version 3.0

2.4 PROJECT: Rapid UI Generation Tool for Portal Player Embedded Audio System

About Client

PortalPlayer is a Seattle, USA based company engaged with developing state-of-the-art MP3 based multi-facility digital media infrastructure solutions. PortalPlayer is financially backed by big names like TechFund Capital, Vulcan Ventures Inc., JP Morgan, Morgan Stanley. Some of the technical partners of PortalPlayer are MP3.COM, Microsoft Corporation, Memory Stick, Sony Corporation.

Project Description

Tango is the PortalPlayer firmware, which includes an OS, FAT, CDFS etc. It basically works on two ARM processors. PortalPlayer, Inc has developed this chip and firmware for their PP6001B, PP6002 and PP6012 boards. It basically is for an advanced MP3 player, which has a flexibility of playing, encoding, decoding, CD writing etc.

PastelShade is in process of developing a rapid application development tool that will help the OEM customers to design their own UI, for the LCD attached to the audio system, in a very easy way. The users will design the UI in a PC, which can then be ported for the on-board LCD without any compilation effort, and the total user interface at the LCD will work according to the design made in the PC.

The work involves enhancement of event architecture in firmware and an industry level UI design tool in PC that can show objects according to the resolution of the actual LCD in the board.

Technology Used

ARM library and API with ANSI C

Multi Ice Debugger

Microsoft Visual C++ with Microsoft Foundation Class (MFC)

SGML, XML

OS: RTXC & Windows98, Windows2000, WindowsXP

2.5 PROJECT: Unicode Support for Embedded Digital Audio System

About Client

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Project Description

As PortalPlayer provides solutions to the worlds leading audio device manufacturers, the need of porting the solution in different look and feels and different languages is appreciably increasing. One of the major requirement was to provide Unicode support to the firmware.

PastelShade provided solution to PortalPlayer to make the firmware Unicode enable. The development effort includes Unicode enhancement of file system drivers, display drivers and database drivers.

Technology Used

ARM library and API with ANSI C
Multi Ice Debugger

2.6 PROJECT: i2000 Console Management

About Client

iVivity Inc. USA, is an Atlanta, Georgia based start-up company which is engaged in making intelligent router boards to provide efficient storage area network solutions.

Project Description

i2000 is a specially designed state-of-the-art Storage Area Network (SAN) router box designed by iVivity Inc. This console management software interacts with the box to provide every possible type of configuration and management. This project made extensive use of Common Information Modeling (CIM), Simple Network Management Protocol (SNMP) and Jiro Technology along with Java Swing.

Technology Used

Java Swing

Jiro SDK

Storage Area Network

Simple Network Management Protocol (SNMP)

Common Information Modeling (CIM)

OS – Windows2000, Solaris

2.7 PROJECT: MegaRAID Power Console

About Client

American Megatrends Inc. (AMI) USA, is the company famous for making PC-BIOS. AMI is also worldwide renowned for making SCSI RAID controllers which are used by many major OEMs like HP, DELL, TOSHIBA etc.

Project Description

This project makes an utility program for configuring & managing of RAID (Redundant Array of Inexpensive Disks) hardware present at an isolated server and on servers present in a Local Area Network (LAN). The solution works on SCSI devices connected with the controller card. The utility has got English, Japanese, French, Italian and German version.

This utility is getting used with RAID solutions provided by OEM vendors like American Megatrends Inc. (AMI), DELL, Hewlett Packard (HP), CONNER, Advanced Logic Research, FWB, TOSHIBA.

Technology Used

Microsoft Visual C++

ZINC Application Framework

TCP/IP

RAID Mechanism

OS – Windows95, Windows 98, Windows NT, OS/2

3 Domestic Projects

3.1 PROJECT: RS-485 Based Instrumentation Solution to Increase Production Efficiency

About Client

Hindustan National Glass & Industries Ltd. (HNGIL) is an India based major glass bottle manufacturing company. The company produces more than 6 million glass bottles per day for multinationals like: Pepsi, Coca-Cola, Glaxo, Bayer, Nestle, Cadbury's, Pfizer, Lakme.

Project Description

In the production floor of the glass factory, quality control supervisors are required to check the defects of the products. The checking status related to machines & moulds are informed to the machine operators. The machine operators, on the basis of the reports, rectify the problems so that the production efficiency is increased and the rejection cost is minimized. This whole status of reporting was in manual mode and that has been made automated through the implementation of a RS-485 based networked environment having the following items:

- 1) Intelligent Handheld Terminals where the supervisors enter production data.
- 2) Digital Display Boards where the machine operators will view the production efficiency data.
- 3) Windows2000 based data server, which will receive data from the handheld terminals, process it and display it to the display boards.

The designing of the handheld terminals and the digital display boards were also included in the project scope.

Technology Used

PIC16F873 & 8951
RS-485 Networking
Serial Communication Protocol
OS- Windows2000

3.2 PROJECT: SmartCard based Student Management Solution for Engineering College

About Client

Kolkata based private engineering college having more than 500 students.

Project Description

The target of the project was to provide student management support.

Through the system it is possible to manage the following systems of the institution:

- 1) Time & Attendance Information Management
- 2) Canteen Management
- 3) Access Control for Various Facilities
- 4) Library Management

The system also helps to keep different information of students on their card with time-to-time updation method.

Technology Used

PC/SC Specification

ACOS1 8K EEPROM CPU Card

ACR30 USB/Serial Reader

Microsoft Visual C++

OS – ACOS, Windows95/98/NT/2000/XP

3.3 PROJECT: TELEGRAPH INSTRUMENT for Marine Simulator Software

About Client

Hash Technologies Pvt. Ltd. is a Kolkata, India based software development company engaged in making marine simulator software for various marine training schools.

Project Description

This device replicates the behavior of Telegraph instrument used in ships. This device will be attached to the computer through parallel port interface and users will be able to control the speeds of the ships, of the simulator software, by operating it just like an original Telegraph instrument present in an actual ship.

The project is separated into two major parts:

- 1) Making the electro-mechanical prototype of the Telegraph instrument, capable of communicating with the computer.
- 2) The software component, which will communicate with this Telegraph device.

Technology Used

Opto-Electronic Position Detector along with Four-Bit Digital Pattern Generator

Microsoft Visual C++

OS – Windows95, Windows 98, Windows NT, Windows2000

3.4 PROJECT: FALCON, Document Management Software

About Client

Indian Airlines is the major domestic airline company of India. It spans from Kuwait in the west to Singapore in the East and covers 75 destinations - 59 within India and 16 abroad. The Indian Airlines international network covers Kuwait, Oman, UAE, Qatar and Bahrain in West Asia, Thailand, Singapore, Yangon and Malaysia in South East Asia and Pakistan, Nepal, Bangladesh, Myanmar, Sri Lanka and Maldives in the South Asian Sub-Continent.

Project Description

This software acts as a document management engine for Indian Airlines. It helps the company to manage huge amount of departmental documents like Financial Rules, Employee Rules, Agreements between the employer and different employee unions etc. in a very user-friendly way with strong in-build search engine. The software helps the user to retrieve any old document of a specific interest through one or two mouse clicks only.

Technology Used

Microsoft Visual C++

Object Linking & Embedding (OLE) Mechanism

OS – Windows95, Windows 98, Windows NT, Windows2000

4 Products

4.1 BARNAMALA, Phonetic Bengali Word Processor

Product Description

BARNAMALA is a unique software package in the category of word-processing software. It helps to enter Bengali texts along with the normal English. The main difference between BARNAMALA and other normally available Bengali word processors is, BARNAMALA does not depend on keyboard mapping for generating Bengali characters. One need not have to paste the print outs of the Bengali characters on the English keyboard. BARNAMALA depends on phonetics or rather pronunciation.

Some of the features are:

- a) Totally phonetic algorithm based software
- b) Supports both Bengali and English typing
- c) Basic text formatting is present along with text color changing
- d) Text Find and Replace methods
- e) Other documents can be inserted into BARNAMALA document
- f) Carries on line help
- g) Comes with three sets of TrueType Fonts
- h) Possible to customize for any other Bengali Font
- i) Possible to customize for any phonetic algorithm

Technology Used

Microsoft Visual C++

Object Linking & Embedding (OLE) Mechanism

OS – Windows95, Windows 98, Windows NT, Windows2000, WindowsXP