**Ravi Ranjan Chobey**

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Career Objective:

A hands-on embedded design engineer / software developer position, in developing a product with potentially broad market appeal that empowers the individual

tECHNICAL eXPERIENCE:

* Programming Languages: C/C++, Assembly programming
* Scripting Languages: Shell, Perl, CGI, Python
* Operating Systems: Windows-98,Windows XP, Windows 7,8 & WinBlue, Linux
* Embedded OS: Windows CE, Embedded Linux, uCLinux, MontaVista Linux
* Tools: Platform Builder-4.2, Xilinx Platform Builder(9.1i) and Project Navigator(9.1i)
* Compiler: gcc, ARM cross compiler.
* RTOS- RTLinux
* Linux Internals: Multithreaded, Socket and Linux Kernel Programming, IPC
* Protocols / System Interfaces: 802.3 (Ethernet)/ TCP/IP, RS-232/485, ATA and ATAPI, , 802.11 a/b/g, RS-232/485/432, Bluetooth, Zwave
* Processors-x86(VortexX86,Intel EP80579), ARM9 (AT91RM9200, SL3516 Marvell 88f5182, EP9307A/EP9315,LPC3131) and Microblaze (Spartan-3A),

ARM cortex-A8

* Storage System : NAS and RAID, Duplicator Systems
* CM tools : SVN, CVS, Sourcegear Vault, Git in linux, Beyond Compare

ACADEMIC ACHIeVEMENTS:

**Certification in Embedded System Designing and Linux Device   
Driver Programming**

Institute : AmplifyMindware, Pune   
Duration : June-2005 to December-2005

**B.E in Electronics & Telecommunications** **Engineering, 1999-2004**

Percentage: 62.6% (First Class)

Institute: P.C.College of Engineering, University of Pune

Attended Five day workshop on MOXA Embedded computers and converters.

WORK EXPERIENCE:

Present Organization: Infosys Ltd, ([www.infosys.com](http://www.infosys.com)), Bangalore(Mar-2012 to till   
 date) as a Technology Lead Engineer

Previous Organizations:

1) Larsen & Toubro, IES ([www.lnties.com](http://www.lnties.com)), Mumbai (November-2009 to Feb-2012) as a Software Engineer (Embedded Systems)

2) MRT-Communication ([www.mrt-communication.com](http://www.mrt-communication.com)), Pune (March-2008 to November-2009) as Embedded Engineer

3) Dynalog India Ltd (www.dynalogindia.com), Mumbai (April-2006 to March-2008)

as Research and Development Engineer.

Engineer (Project Trainee) from 12th August 2003 to 30th April 2004 on PLC

based Honing Machines.

PROJECT DETAILS:

**Project Name: Application development on Dyna EmbTech Development   
 & Trainer (x86) Board**

Description: Sample applications were developed for Windows CE and Embedded

Linux to demonstrate feasibility of the product Dyna EmbTech developed inhouse.

Applications were written to interface various PIO cards like ADC, DAC, mechanical

controls, I/O and LCD interfaces and also device drivers were written for Stepper

Motor and Parallel port.

Duration – April-2006 to August-2006.

Technologies – C, gcc, gdb, GnuMake, Embedded Linux. Developed GUI applications using GTK/GDK tools.

Role – Application Coding, Debugging and Testing

**Project Name: Application development on Dyna EmbTech Development & Trainer Advantech Board.**

Description : Developed BSP for PCM-4825/4825L motherboard from Advantech.

Sample applications were developed Embedded Linux to demonstrate feasibility of

the product Dyna EmbTech developed inhouse. Applications were written to

interface various PIO cards like ADC, DAC, mechanical controls, I/O and LCD

interfaces and also developed device drivers for parallel port and Stepper motors

Duration – September-2006

Role – Kernel porting, Scripting and kernel programming

**Project Name: RS-422 Based Data Logger**

Description: An SBC running Embedded Linux collects various plant data from an RS-

485 based network. These parameters are made available to external systems using

an embedded web server and ftp server.

Duration – October-2006 to November-2006

Role – Application Coding, Serial Protocol development, Debugging and Testing

**Project Name: Portable GPS Receiver**

Description: This hand held device runs Embedded Linux on an SBC to which Garmin

18LVC GPS receiver is interfaced. The chosen GPS parameters are displayed on LCD

as also maintained in a log file for further processing at base computer.

Duration – December-2006

Role – Application Coding, Debugging and Testing

**Project Name: Network Traffic Management*.***

Description: The project contains two programs, the server program and the client program, which communicates with each other while transferring a file.

Duration – January-2007 to February-2007

Technologies - C, Socket Programming

Role – Application Coding

**Project Name: Embedded Linux based Transformer Monitoring System**

Description: The project was to develop a transformer monitoring system. The

SBC used was ROCKY 4786 from ieiworld, China.

Duration – February-2006 to April-2007

Technologies – C, gcc, gdb, GnuMake, Embedded Linux

Role – BSP development, Driver development and porting and Application Coding and debugging

Client: Crompton Greaves Ltd, Mumbai

**Project Name: Linux on Rugged Computer.**

Description: The project was to install linux on rugged computer, configure the touchscreen, install smart card driver and to install driver for MOXA Nport 1240(USB to Serial Converter).The project was used for navigation application in Defence projects.

Duration – April-2007

Role - Driver Porting

**Project Name: Modbus application on ARM:**Description: Developed Serial port and MODBUS application for ARM9 based system from MOXA UClinux-7112 plus.

Duration – May-2007 to June-2007

Role – Protocol Coding, Testing and Debugging

**Project Name: Embedded Linux on Arcom Motherboard**Description: The project was to develop a Networking device. Developed the BSP for that Arcom Gemini board and configured driver for Ethernet controller (82573L).The aim of this project to determine the transfer of information packets from host SBC to destination SBC and determine the total throughput.

Team Members – 3

Duration – July-2007 to August-2007

Technologies – C, gcc, Embedded Linux, Qemu

Role – BSP development, Driver Porting and Monitoring Packet Switching

Tools – Spirent System Software for packet monitoring

Client – BEL, Bangalore

**Project Name: Embedded Networking device**Description: The project was to port linux on ARM9 (AT91RM9200).   
This is networking device used mailing and Wifi applications.

Duration – September-2007 to December-2007

Role – BSP development, Driver Porting and Monitoring Packet Switching

Tools – Spirent System Software for packet monitoring

Client – BEL, Bangalore

**Project Name: VPN Adapter for Network security**

Description: The Aim of this project is to develop standalone hardware which allows internet user the same local network for internet surfing.We have to restrict the access of this computer to other network.This computer can only communicate with internet proxy via VPN adapter and VPN concentrator.We require here two ethernet   
ports. The hardware was ARM9 based hardware i.e UC-7112 from MOXA. Scope of this project is to develop the Software application on linux   
platform. This application will monitor HTTP traffic on both ethernet ports.Duration – January-2008 to March-2008

Role – Coding, Port Monitoring

Tools used: ipsec tools 0.5.2 from Kame (netbsd)

Client – BARC, Mumbai

**Project Name: Hard Disk Duplicator**

Description: The aim of this project is to develop ATA protocol on Microblaze (Spartan-3A) processor based board. ATA protocol is used for duplication of data from One Master Hard disk drive to Nine Slave Hard disk drive.

Duration – March-2008 to July-2008

Role – ATA protocol Coding

Tools used: Xilinx Platform Studio (9.1 i), Xilinx Project Navigator (9.1i)

**Project Name: Embedded Surveillance System**

Description: The aim of this project was to build a surveillance system for Network monitoring. The hardware used for this system is Storlink SL3516 Gemini ARM9 processor. A USB webcam (Logitech Quickcam Connect) and Network Camera (Axis 2100) was used for video grabbing and displaying.

Duration – August-2008 to October-2008

Role – Driver porting, Application Testing and GUI development using HTML and CGI coding

Tools used: Gspca USB webcam-20071228, Spcaview-20061223 and Camstream.

**Project Name: Embedded NAS device**

Description: The aim of this project is to develop an Embedded Network Attached storage device. The Hardware used is Marvell 88f5182 ARM9.

Duration – November-2008 to January-2009

Role – A] Protocol testing and implementation on device

B] Adding Ralink Wireless Support to the device.

C] Device driver porting and testing wireless functionality

D] Adding support for Transmission package and Mldonkey into that.

**Project Name: USB PnP server (WANSER)**

Description: The aim of this project is to develop a product which can connected in

Network, and detected and accessed by various systems in LAN.

Duration – February-2009 to September-2009

Role – A] Development of bootloader.

B] Development of linux kernel.

C] Kernel porting on RDC-3210 (x86) processor.

D] File system and Toolchain development.

E] Developed shell scripts for binary image development.

F] Application development using CGI scripting and HTML coding.

G] Added support for Ralink 2870 support to make wireless USB NAS.

**Project Name: Display Module for Next generation Release (NGR)**

Description: The aim of this project is develop a display module for ACB (Air circuit breaker).

Duration – November-2009 to April - 2010

Role – A] Development of bootloader.

B] Development of Kernel & Ramdisk images as per designed hardware.

C] Porting of kernel and Filesystem (ramdisk) on EP9307A based board.

D] GPIO, LED and QVGA (LCD) device driver development.

E] Shell script development for autoloading of device drivers and applications.

F] Learnt how to run devices using SPI protocol.

**Project Name: Intel EP80579 based Networking device Module to be   
 used in Wastage treatment plants**

Description – The aim of this project is to develop a networking device which is to be used in Water and Wastage treatment plants. The hardware used was an EP80579 processor, Marvell 88E1141 (Quad) for 1000 Mb/s, DP83849C (Dual port) and DP83848I for 10/100 Mb/s operations.

Role – A] To boot embedded linux from USB drive and divert all log messages to   
 serial port

B] Port the device driver for Marvell 88E1141 and establish the   
 communication link between Mac layer and Physical a layer.

C] Modify the device driver of Marvell for Single port operation (DP83848I)   
 and Dual port operation (DP83849C).

**Project Name: Migration of VSS Database to Sourcegear Vault   
repository**

Description – The aim of this project is to migrate and existing VSS DB to Sourcegear Vault repository. It was basically a configuration management related work. The reason for migration was corruption of VSS DB as it grows older.

Role – A] Migration of 8 VSS DB’s provided by the client to SGV repository.

B] Writing a batch script for pinning Shared files.

**Project Name: Brady wireless printer**

Description – It was basically desin and development of an LPC3131 based ADD ON

Card. When the card is connected to USB port of Brady printer, it will enable wifi and Bluetooth features.The wifi chipset used was wl1271 and for POC purpose Intel 9345 a/b/g.

Role – A] Configuration and usage compat wireless package for wl1271 chipset.

B] Board bringup and boot time optimization upto 10 seconds.

**Project Name: Developing Voice and Audio based application using**

**Libjingle**

Description – It is basically an android based Set top box in which the objective was of replacing the existing Skype application with Open Source libjingle apllication provided by google. Libjingle is a Voice and video based chat application which is

Using SIP for peer to peer connection.

Role – A] Looked into the Source code of Libjingle application for customizing it as per need of client.

B] Tried with Imsdroid and WebRTC application for POC purpose.

**Project Name: UTC Home automation appliance**

Description – Its is basically Linux based Home automation system which was having various modules like Wifi, Zigbee, Bluetooth and M2M(Mobile to Mobile connectivity) features. The name of this is AIO(All in One) as it was using various networking features for Fire and safety purpose.

Role – A] To understand Zwave and SPI protocol

B] Implemented C code for Firmware upgradation for Flash and Eeprom of   
 8051 based RF device provided by Sigmadesigns using SPI protocol.

**Project Name: Intel Audio Stack debugging & validation**

Description – Tools development for the automated validation with minimum human intervention and End-to-End validation of Win 8 tablet specific Audio Driver.

Roles & Responsibilities:

* Understanding of audio driver architecture, analyzing and creation of test suites, so that product gets end-to-end validated.
* Development of automated tools for Audio Driver validation using python and Auto IT.
* Used Audio Precision and Astro tool for testing quality of the driver.
* Raised bugs and did debugging using Windbg.

PERSONAL INFORMATION:

* Date of Birth : 05th July, 1982
* Marital Status : Single
* Language Known : English, Hindi
* Temporary Address : D-002, SRK sillicana, Dodathoguru Village,

Electronic City Phase I, Bengaluru- 560100

* Permanent Address : House No. – 323/1,

Bhegde Ali,

Shaniwar Peth,

Talegaon Dabhade,

Pune – 410506.