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| **RASHIDUL HASAN**  ***Network Engineer*** | **M: 0411 647 995**  **E: rashidul.hasan.md@gmail.com**  **A: 3/9 Auchterlonie Crescent**  **Churchill VIC 3842**  [**Australian**](http://www.linkedin.com/in/rashidul17) Citizen |

Experienced information technology and telecommunications professional, with proven aptitude to gather information required for high-calibre delivery of technical advice and improvement recommendations. Study and employment have created a vast pool of skills regularly drawn upon to create novel products and solutions which meet consumer needs or increase system capability. Troubleshooting skills are integrated with initiative to resolve problems, underpinned by ability to supervise and participate in project operations.

**EXPERTISE OFFERED**

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| * **Troubleshooting** * **Analytical Abilities** * **System Upgrades** * **Protocol & Standards** | * **Windows/Linux Configuration** * **Network Infrastructure Management** * **Database Management** * **Project Management** | * **Web Development** * **System Support** * **Programming** * **Data Communication** |

**CERTIFICATIONS**

* Cisco: CCENT | CCNA | CCDA | CCNA Security
* Microsoft MCTS (Windows Server 2008 r2)

**CAREER HIGHLIGHTS**

* ***Designed Enterprise Scale Networks;*** knowledge of IPv4 allowed efficient use of IP blocks by appropriately assigning network mask with VLSM technique. Utilised knowledge of different protocols including SS7, CC API, CAMEL, INAP, MML, DIAMETER, CS1+, and UCIP to develop complex product requirements solutions.
* ***Demonstrated Complex Problem Resolution;*** logged onto prepaid system using TELNET/SSH, taking signalling races in voice networks (Ericsson MSC/SDP/SCP) to obtain call detailed record and identify wrongly configured parameter to be fixed.
* ***Developed Simulation Tool;*** recognized inadequacy of available environments for research problems, subsequently creating new frameworks using algorithms, programming languages (C/C++, Java, Matlab) and scripting languages (TCL, AWK, PHP). Resulted in significantly reduced simulation time due to flexibility in changing configuration parameters and the publishing of 3 contributions to International conferences.

**TECHNICAL EXPERTISE**

* ***Software;*** C/C++ | Java | Matlab
* ***Operating Systems;*** Unix (Redhat Linux, Solaris) | Windows | VMWare
* ***Protocols;*** TCP/IP | UDP | ARP | RARP | DHCP | DNS | ICMP | 802.1q | 802.1d | 802.1w | INAP | MAP | NAT/PAT | SS7 | SIGTRAN | TELNET | SSH | IPSec
* ***Scripting;*** PhP | AWK | Shell | HTML | TCL/Tk
* ***Database;*** MySQL
* ***Application;*** Microsoft Office Suite | Visio | AutoCAD | MS Project
* ***Vendors;*** Cisco (Switches and Routers), Microsoft (Windows Active directory), Ericsson (Core and Service Networks)

**EMPLOYMENT NARRATIVE**

**Monash University**

***Graduate Researcher* Jun 2008 – Mar 2013**

***Core Project***

To provide a convergent solution for next generation networks (Cognitive Radio Networks as a part of LTE) so that increasing demand for data speed and quality-of-services can be met. To make technology ready for the next decade, attention to the challenging problems of next generation networks where customers’ expectation can be integrated to drive business prospects was a focus. Conducted under the Faculty of Information Technology. Main customers and funding from NICTA, ARC, CSIRO, IEEE and ACM.

***Project A: Module for video encoder (server end) and decoder (receiver end)***

Implemented video encoder to compress video data and a decoder to decode compressed signal using C/C++.

***Project B: Designed and developed multichannel wireless protocol***

Created novel data link layer protocol that combines multiple available wireless channels whenever available. Ensures fair share of resources among multiple mobile users and is an improvements on traditional wireless networks devices using single wireless channel.

***Project C: Video delay modelling and analysis for proposed protocols***

Transmitted encoded data generated by Project A using the proposed model in Project B to provide necessary report on video delay and jitters to estimate how much resource is required by meeting quality-of-services.

***Key Achievements:***

* ***Constructed Simulation Tool;*** recognized inadequacy of available environments for research problems, subsequently creating new frameworks using algorithms, programming languages (C/C++, Java, Matlab) and scripting languages (TCL, AWK, PHP). Resulted in significantly reduced simulation time due to flexibility in changing configuration parameters and the publishing of 4 contributions to International conferences.
* ***Generated Superior Model for Data Link Layer;*** developed data link layer protocol for Cognitve Radio Networks to provision QoS guarantee for delay-sensitive services in CRNs, having users equipped with multiple radio interfaces. Simulation results using ns-2.33 show improved strength to reduce video delay with fewer number of primary channel sensing.
* ***Formed IT Networking Lab;*** created VLAN for each group, allocated private IP block for each group using VLSM technique, then set port speed according to the design requirements. Utilised knowledge of switching, routing and configured networking environment between Linux system and Cisco switches & routers.
* ***Resolved Complex Simulation Scenarios;*** generated functional blocks and debugged C/C++ codes in ns-2.33, used PhP, AWK to provide analysis of multiple potential simulation situations and tracing results.
* ***Addressed Packet Delay Behaviour for voice and video;*** utilised Java based event driven simulation tool (SimJava 2) for queuing analysis, developing bandwidth constrained network environment for 50 active wireless devices that were intermittently generated packets.
* ***Provided Issues Management;*** worked at treasurer for the Gippsland Association of Postgraduate Students, providing resolutions to problems of diverse team through novel thinking and exceptional funding administration.

**GrameenPhone**

***Deputy Superintendent Engineer (Technical Division)* Jul 2006 – Jun 2008**

***System Engineer (Technical Division)* Jan 2005 – Jun 2006**

One of the world’s largest telecommunications service providers with more than 40 million subscribers. It is a joint venture between Telenor of Norway and Grameen Telecom of Bangladesh.

***Key Achievements:***

* ***Provided Technical Feasibility Analysis for voice and data plan;*** collaborated with marketing department to create, expand and test service options to meet customer needs. Developed a comprehensive technical feasibility analysis method that ensures quality of services including signalling loads (SS7, INAP, MAP), servers (Ericsson Billing System, VAS, MSC/VLR, TSC, STP, HLR) capacity and buffer requirements, automation requirements, cross product requirements and customer care requirements.
* ***Streamlined Work Request System;*** identified lack of priority work requests and unreasonable job demand on technical division resulting in stressful work environment and incomplete assignments. Initiated agreement between marketing department, stakeholders and technical workers for agreed number of expected requests per day and a priority definition to be given to all tasks.
* ***Integrated Increased Capability Network;*** assimilated old and new system through configuration of upgrade with multiple back up programs, monitoring progress continually through review.
* ***Designed Enterprise Scale Networks;*** knowledge of IPv4 allowed efficient use of IP blocks by appropriately assigning network mask with VLSM technique. Utilised knowledge of different protocols including SS7, CC API, CAMEL, INAP, MML, DIAMETER, CS1+, and UCIP to develop complex product requirements solutions.
* ***Demonstrated Complex Problem Resolution;*** logged onto prepaid system using SSH, taking INAP traces in prepaid billing system (MSC/SDP/SCP) to obtain call detailed record and identify wrongly configured parameter to be fixed.
* ***Contributed to Strategic Planning;*** resolved market saturation challenges by ensuring sufficient buffer capacity with scheme, outline and implementation collaboration to facilitate network expansion.
* ***Safeguarded Service Supply;*** optimised loads by allocation of different segments to varied servers to equalise burden throughout network.
* ***Guaranteed Seamless Signal System Transition;*** performed investigation, impact analysis and implementation proposal to produce redundant signalling path for links to be made out of service whilst apposing link was made fully operational.
* ***Migrated 20 Million Users to New Billing System;*** identified key challenges including protocol compatibility, proposing and verifying new solutions through data backup, testing and inter departmental communication implementing phase by phase user segmentation.
* ***Streamlined Service Automation for Provisioning of User Requests;*** met with and gathered requirements from different groups, visiting similar project overseas to collect ideas that allowed for development and modelling of technical requirements. Resulted in real time provisioning time and reduced customer complaint resolution by 80%.
* ***Resolved network protocol Incompatibility;*** found that personalised ring back tone (PRBT) server could not communicate with prepaid servers, met and discussed with vendors and internal stakeholders to analyse all potential solutions and design ad hoc resolutions. Value added service outcome significantly increased revenue and customer retention rate.

***Key Projects:***

***Core Network Expansion Prepaid Billing System Swapping Number Plan Change***

***Common Provisions System Signalling System SS7 to SIGTRAIN Roll Out of PRBT***

**EDUCATION**

* ***Bachelor of Science (Electrical and Electronic Engineering),*** Bangladesh University of Engineering & Technology, 2004

**PROFESSIONAL DEVELOPMENT**

* ***Commercialising Research,*** Monash University, 2011
* ***Communication Skills Training,*** British Council, 2007
* ***Split architecture and SIGTRAN signalling,*** Ericsson, 2007
* ***Leadership Training,*** British Council, 2007
* ***MSC/VLR configuration,*** Ericsson, 2006
* ***GSM system operation in SSF/SCF/HLR/MSC/VLR,*** Ericsson, 2006
* ***PRBT operation and Maintenance,*** Comverse, 2006
* ***Participating Team Building Workshop,*** TEAMSWORK, 2005
* ***GSM Signalling in Core Networks (MSC, BSC, BTS, HLR/VLR),*** Ericsson, 2005
* ***Understanding New Telecom,*** Ericsson, 2005
* ***Advanced System Administration of Solaris™ Operating System***, Sun Microsystems, 2005

**REFERENCES**

***Available Upon Request***