Sahil Amin, CSM

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Summary of experience:

- Working as program manager at IIT Bombay on multiple projects under Impacting Research, Innovation and Technology (IMPRINT) scheme of ***Ministry of HRD, Govt of India.***

- Working as project management consultant for SCADA, PLC & instruments-based automation for ***Smart Cities***.

- Handled multiple projects for PLC-SCADA based automation of water treatment/distribution systems for Maharashtra Industrial Development Corporation (MIDC), ***Ministry of Urban Development, Govt of Maharashtra***.

- Handled multiple projects for SCADA, PLC & instruments based automated water treatment/distribution system for ***Ministry of Railways, Govt of India***.

- Twenty-four years of rich experience in managing end to end system-oriented programs/projects consisting of the team of Project Managers, Project Leaders, Technical Architects, Technical Leaders & Software Engineers.

- Experience in leading multiple embedded projects using an ***onsite-offshore*** model.

- Managing the programs/projects from ***Futuristic & Modern Technology*** in ***Aerospace, Automotive, Industrial & Power domains.***

- Experience of managing programs of ***Mitsubishi ELectric Corporation (MELCO), Continental, Panasonic, Renesas Electronics Ltd & other automotive customers/OEMs from Japan & Germany***.

- Experience of generating technical & commercial proposals and executing, for various International/Government/Public sectors from ***Avionics/Aerospace/Defence*** like ***ADA***, ***ADE***, ***CABS***, ***RCI***, ***BEL***, ***LRDE***, ***GTRE***, ***NSTL***, ***SAGEM*** France, other ***Defence R&D Organizations*** & ***PSU***s based on the RFQ/SOWs received.

- Experience in leading the ***Competency Planning, Training & Deployment*** for Embedded engineers as per the business projections/needs from various ***Delivery & Strategic Units*** for customer projects.

- Core team member for certification, from the existing ***AS9100B*** certification to ***AS9100C***.

- Founded the startup, ***Amin Industry Private Limited***

- Worked at ***Goodrich Aerospace, Phoenix USA*** on-site with counterpart Integrated Product Team.

- Worked at ***Ultra Electronics, Cambridge UK*** on embedded project for A400M military aircraft.

- Worked as Scientist in **DRDO** for 9 years with a proven track record and system-oriented projects.

- Hands on experience in design & development of the drivers/software using ***AUTOSAR 3.2 layered software architecture***.

- Experience in all the phases of **Product Development Life Cycle/Software Development Life Cycle** like Requirement Definition, Requirements Analysis, Design, Coding, Testing, System Integration, Deployment and Maintenance.

- High level driver development for TCP/IP, TMS320C6713, TMS320C2806, TMS320C2808, PIC, PIT, UART, CAN, ARINC429 & MIL-STD-1553B.

- Significant software development for Micro Controllers (Intel's x51 Family) and Micro Processors (Intel's 80x86 Family) based avionics systems.

- Design and development of hardware interface box for Line Replaceable Unit to Automatic Test Equipment for automated testing.

Program/Project Management Skills:

- Pre-tendering, post tendering, third party audit of various programs

- Participation in the translation of the ***Organizational Policies*** and ***Enterprise Excellence Goals*** to own business unit

- Contracts management & Renewals

- Revenue management

- Technical & commercial project proposals for Fixed Cost, Fixed Schedule & T&M projects

- Concept generation from RFQ/SOW

- Participation in the voice of customer

- Effort Estimation

- Cost Estimation

- Bill of Material (BOM)

- Participation in the projects kick off

- Project Planning

- Schedule Development

- Software Development Planning

- Hardware Development Planning

- System, Hardware and Software architecture design

- Configuration Management

- Quality Management

- Risk Management

- Project Tracking & Monitoring

- On-site Customer Interaction & Reporting

- Monthly Review Meeting & Presentation

Technical Skills:

Project Management Tools	: Microsoft Project 2010, Microsoft Excel
Requirements Management Tools	: IBM DOORS 9.3
Design Tools	: IBM Rhapsody Designer 7.6.1
Development Tools	: Ti Code Composer Studio4.1x, Visual Studio 2010 IDE, C, C++, Fortran 77, Visual Basic, Assembly, AutoIt, Python 2.5 with WxGlade 2.8.7, LabVIEW 2011 Professional
Testing/Debugging Tools	: IBM RTRT 8.0, IBM Test Conductor, IBM Tools & Utilities, Cross Compilers, Probe Debugger, In Circuit Emulators, TDS510 USB2.0 JTAG Emulators, Simulators, Logic Analyzer, Digital Storage Oscilloscope, CANCaseXL CAN bus analyser, Spectrum Analyser, Pulse Generator, Synthesized Signal (RF) Generator, Peak Power Meter
Configuration Management Tools	: Rational Team Concert 2.0, Concurrent Version Software, Sub Version, Visual Source Safe
Development Standards/Processes	: Scrum, Six Sigma, Lean Product Development, Continuous Improvement, AS9100C, DO-178B, DO-254, SAE ARP-4754, SAE ARP-4761, MIL-2167, ISO26262
Micro controllers/Microprocessors	: Intel's 8031, 8051 and 8751 micro-controllers; Intel's x86 family Microprocessors, TMS320F283xx, MPC5554, TMS320C6713 Floating Point DSP, TMS320C2806 DSP, TMS320C2808 DSP; NXP LPC1760 family of ARM Cortex-M3 processor, Spartan-6 FPGA, Virtex-6 FPGA, iMX6, Renesas RH850 family MCUs
Operating Systems	: MS-DOS, Windows, VxWorks, Linux
Device Drivers	: PWM, ADC, CAN, RS232, RS422, ARINC429, SPI, LIN, MOST, Flexray, I2C
Data/Communication Protocols	: Arinc429, 1553B, GPIB, RS422, RS232, Ethernet, CAN, TCP/IP, USB, I2C, SPI, LIN, MOST, Flexray
Automation/Others	: PLC, SCADA, Historian, HMI, Pump Efficiency Monitoring System, Vibration Monitoring System, Flow Meters, Level Transmitters, Pressure Transmitters, pH Analyser, Chlorine Analyser, Turbidity Analyser, COD/BIOD/TSS Analyser, Energy Meter, Electrical Actuators

Present Organization:

*Program Manager, in **Industrial Research & Consultancy Center, IIT Bombay***
from Jul 2018 till date

Previous Organizations:

1. *Program Manager, Head, Embedded Software COE (Center Of Excellence) in QuEST Global Engineering Pvt. Ltd., Trivandrum, INDIA from Jun 2014 to Jun 2018.*

2. *Founder of the startup, Amin Industry Private Limited, Aligarh, INDIA from May 2013 to May 2014.*

3. *Principal Engineer in Rossell TechSys Pvt. Ltd., Bangalore, INDIA from Dec 2011 to Apr 2013.*

4. *Software Technical Leader in Goodrich Aerospace Pvt. Ltd., Bangalore, INDIA from Oct 2009 to Dec 2011.*

5. *Principal S/W Engineer in Silver Atena Electronic Systems Pvt. Ltd., Bangalore, INDIA from Jun 2008 to Aug 2009.*

6. *Team Lead in Canadian Aerospace Engineering Pvt. Ltd., ITPL, Bangalore, INDIA from Dec 2006 to Jun 2008.*

7. *Senior Scientist in Defence Avionics Research Establishment, DRDO Bangalore, INDIA from Feb 1998 to Nov 2006.*

Awards & Recognition:

- Received **Commendation Award** from the Director of the Establishment in **DRDO**.

- Got **extra ordinary** promotion in **DRDO** for the excellent contribution made towards successful design, development, testing, integration and installation of the system at the user base.

Trainings & Certifications:

- Certified *SCRUM Master*.

- Certified *Six Sigma Champion*.

- Certified *Six Sigma Master Black Belt*.

- Certified *LabVIEW Associate Developer*

- Certified *Internal Auditor for Information Security Management System, ISO27001*

- Certified *Internal Quality Auditor* **for** *AS9100C*

- Certified *Practitioner* **for** *Rational Team Concert*

- Trained on *Managing Complex Projects*

- Trained on *Leadership*

- Trained on *Lean Product Development*

- Trained on *Continuous Improvement*

Seminars/Conferences

- Organized International Conference on "*Emerging Trends in Electronic Warfare*" in Defence R&D Organization, Ministry of Defence, Govt of India.

- Organized many *Aero India Shows* at Bangalore during the tenure in Defence R&D Organization, Ministry of Defence, Govt of India.

- Organized many *International/National Seminars* during the tenure in Defence R&D Organization, Ministry of Defence, Govt of India.

- Organized various workshops on *EDUMEET on Automation* in IIT Bombay in collaboration with Mitsubishi Electric India Pvt Ltd.

- Organized various CEP courses on *Automation & Control Applications* in IIT Bombay.

Educational Qualifications:

Qualification Year of Passing	Institution	University	Percentage of Marks	Grade
Ph.D. (2017) (Electronics Engg.)	School of Research & Innovation	CMR University, Bangalore (Karnataka)	Pursuing	--
M. Tech (1997) (Electronics & Communication Engg.)	Zakir Hussain College of Engineering & Technology	AMU, Aligarh (UP)	74%	First Class
B. Tech (1994) (Computer Engineering)	Zakir Hussain College of Engineering & Technology	AMU, Aligarh (UP)	72%	First Class
SSSC(10+2) (1990)	Senior Secondary School	AMU, Aligarh (UP)	65%	First Class
SSC(10th) (1988)	Shri Ganesh Inter College	UP Board	73%	First Class

Programs/projects:

1. Impacting Research, Innovation and Technology (IMPRINT) scheme of MHRD, Govt of India.

Design, development & field testing of manually and automatically readable Ultrasonic Water Meter for "Swachchta Action Plan (SAP)" program under Impacting Research, Innovation and Technology (IMPRINT) scheme of MHRD, Govt of India.

Responsibility	Market surveys, Requirements generation, Requirement's analysis, Project proposal, Effort & cost estimation, BOM, Reviews, Project scheduling, Project tracking & monitoring, Field testing, Product certification, Proof of concept at various customer locations, Status reporting to Ministry, Daily standup meetings, Weekly & monthly project review meetings
Tools/Technologies	Hardware and software IDEs, JTAG, Debugger, Digital Oscilloscope, Analysers
Team Size	20
Duration	3 years

2. PLC-SCADA based automation of Water Treat Plants (WTP)

PLC-SCADA based automation of WTPs with wide range of capacities 900MLD to 50MLD for optimization of usage of water and hence saving energy and revenue and ensuring availability of water till end consumer. Automation of Water Distribution using PLC-SCADA & other hardware and software components.

Responsibility	Pre-tendering, Post tendering, Third party audit, Site visits, Requirements gathering, Requirement's analysis, Project proposal, Effort & cost estimation, Project scheduling, Reviews, Project tracking & monitoring, Client interaction, Status reporting, Daily standup meetings
Tools/Technologies	PLC, SCADA, Historian, Communication System, HMI, Pump Efficiency Monitoring System, Vibration Monitoring System, Flow Meters, Level Transmitters, Pressure Transmitters, pH Analyser, Chlorine Analyser, Turbidity Analyser, COD/BIOD/TSS Analyser, Energy Meter, Electrical Actuators
Team Size	10
Duration	3 years

3. Water audit for Ministry of Railways

Water audit, recommendations & design consulting to reduce wastage and optimization of water and energy through automation.

Responsibility	Site visits, Requirements gathering, Requirement's analysis, Project proposal, Effort & cost estimation, Project scheduling, Reviews, Project tracking & monitoring, Client interaction, Status reporting, Daily standup meetings
Tools/Technologies	Ultrasonic flow meter (Fuji make) and other hardware & software tools.
Team Size	10
Duration	3 years

4. PLC-SCADA based automation for Smart City

Automation of WTPs, pumping stations, water distribution system	
Responsibility	Pre-tendering, Post tendering, Third party audit, Site visits, Requirements gathering, Requirement's analysis, Project proposal, Effort & cost estimation, Project scheduling, Reviews, Project tracking & monitoring, Client interaction, Status reporting, Daily standup meetings
Tools/Technologies	PLC, SCADA, Historian, Communication System, HMI, Pump Efficiency Monitoring System, Vibration Monitoring System, Flow Meters, Level Transmitters, Pressure Transmitters, pH Analyser, Chlorine Analyser, Turbidity Analyser, COD/BIOD/TSS Analyser, Energy Meter, Electrical Actuators
Team Size	10
Duration	3 years

5. Validation of SOC using Model Based Design for Automotive application

Customization, integration of hypervisors on various platforms and demonstration with automotive applications using RH850 chip. Porting of the firmware (OS/Drivers/Stacks) of RH850 to custom board. Design and development of module test application for the verification of the all the modules (peripherals) of RH850. Design & development of RH850 system validation application for power train of Automotive Domain. Few examples of such peripherals are Digital I/O, Pulse Width Modulation, Reset Controller, Clocked Serial Interface H, LIN /UART Interface, CANFD Interface, Flexray, Ethernet Controller, Power Supply Voltage Monitor, Temperature Sensor, Clock Monitor, Clock Controller, Renesas High Speed Bus, Secure Watchdog Timer, Serial Communication Interface, Peripheral Interconnection, Analog to Digital Converter, Delta Sigma Analog to Digital Converter, Cyclic Analog to Digital Converter, Digital Filter Engine, Error Control Module, Data CRC Function B, Flash Memory, High Speed Serial Peripheral Interface, Intelligent Cryptographic Unit/Master, sDMA Controller.	
Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, Reviews, Project scheduling, Project tracking & monitoring, On-site (Japan) client interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	Host OS: Linux 4.10, Hypervisor: Xvisor, Guest OS#1: Linux 4.8, Guest OS#2: Xfce, C, Matlab, Simulink, Python, RH850, JTAG, DSO, Logic analyzer, CANoe, Function generator, Hyper terminal
Team Size	4
Duration	7 months

6. **Design & development of Remote Vehicle Diagnostic system using Intel IOT, Data Analytics & Control**

Remote vehicle diagnostic (RVD) system helps the user to remotely monitor selected vital parameters (e.g. Speed, RPM, Engine temperature, Oil temperature, Fuel pressure, etc.) from the vehicle. This information helps the user to determine the health of the vehicle, root cause of the problem/failure and provides real time information of vehicle parameters to access its performance against benchmarks. The RVD system communicates with remote clients via Wi-Fi. RVD system communicates with vehicle ECUs using the OBD-II (On-Board Diagnostics) port via CAN protocol which is available in the vehicle under the dash board. RVD has a GUI to provide the Instrument Cluster information & configuration information locally.

Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, System design, Reviews, Project scheduling, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, QT, Android, IOT Intel Edition Board, Linux, Cloud, Gateway, Sensors
Team Size	8
Duration	6 months

7. **Development of Linux drivers for Arria 10 SoC and AM57x based custom board for GE Grid, France**

This is the industrial custom hardware board designed and developed for GE-Grid (Power Vertical). This board contains dual-core ARM® Cortex™- 9 hard processor system (HPS), FPGA and dual core Cortex-A15 processor. Each processor has the devices/interfaces like eMMC, QSPI, DDR, UART, JTAG, I2C, Ethernet, RGMII, Flash, MicroSD, RTC & TPM. The scope includes the board bring up, development of the firmware, test and validate all   devices/interfaces present/connected to both the processors. U-Boot loader is developed.

Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, Software design, Reviews, Project scheduling, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, On-site (France) client interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, Ubuntu16.04, Kgdb debugger, Processor SDK
Team Size	4
Duration	5 months

8. Design & development of Data Acquisition & Control system for Industrial automation

The Data Acquisition and Control system, accepts and processes the data from various interfaces like CAN, SPI, I2C, DAC, ADC, RTC, PWM, UART at predetermined rates in real time. The system converts analog data into digital format, displays data, stores data, drives DC motor, controls the RPM of the motor automatically, controls the speed of the motor manually, selects mode of motor operation manual/automatic, displays clock time, audio & visual mechanism to alert/warn user, external PC interface to view sensor data and configure the system.

Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, Project scheduling, Software development planning, Software quality assurance planning, Reviews, Project tracking & monitoring, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, C++, Windows, KEIL IDE
Team Size	5
Duration	8 months

9. Electromechanical Braking System for aircraft

The electromechanical braking system is an embedded system which controls the braking for wheels of an aircraft. It contains software application based on Freescale Power PC & Ti DSP. The software application designed and developed as per DO-178B level A standard. This electromechanical braking replaces hydraulic braking with the help of motor driven by PWM signal generated by the on board PWM module. The commands are exchanged over CAN interface.

Responsibility	Requirements gathering, Requirements analysis, Preliminary design review, Critical design review, Effort & cost estimation, Project scheduling, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, On-site (US) client interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, Assembly, Code Composer Studio IDE, TMS 28335, MPC5554, JTAG
Team Size	20
Duration	24 months

10. Design & development of RFID based Inventory Management & Asset Tracking System

This project was designed and development of automated RFID based solution for Inventory Management & Asset Tracking System (IMATS) for their assembly & production for one of the establishments of Defense Research and Development Organization. The inventory includes LRUs, mechanical structures, brackets, flanges, fasteners, looms, pneumatic components, electronic components, electrical components, electromechanical components, containers, fixtures, tools, equipment etc. Proposals should include all necessary information on hardware, software, networking, installation, training, and maintenance requirement. Solution shall be deployable with the existing infrastructure.

Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, System design, Reviews, Project scheduling, Software configuration management planning, Software development planning, Software quality assurance planning, Project

	tracking & monitoring, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, Windows, active and passive RFID tags, RFID readers, Database server, Antenna
Team Size	6
Duration	8 months

11. Design & development of Automated Concession Integrated System for AIRBUS

This project was developed using SCRUM software development process. The software is developed in the form of independent modules. The data is collected from 4-5 servers located at other countries. This data is in the form of AutoCAD drawings, pdf, word, jpeg, etc. The tasks/operations were performed based on the data collected in automatic mode. Newly generated data was again uploaded to the required. Periodic synching with the servers is to happen to get the latest data.	
Responsibility	Requirements gathering, Requirements analysis, Effort & cost estimation, Software design, Reviews, Project scheduling, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	AutoIT, .Net, C#, SQL server 2014
Team Size	12
Duration	14 months

12. Indigenization of Touch Screen based Radar Control & Indicator Unit

Radar Control and Indicator Unit (RCIU) carries all the technical and operating controls for functioning of various parts of the radar system. It also enables the configuration of the radar system like operating mode, transmission mode, forbidden frequencies, elevation selection and video selection. It also indicates primary and secondary radar operating status, performance degradation, line fault, jammer detection and radar operation from a sub-assembly local control.	
Responsibility	Requirements gathering, Drafting project proposal, Generating BOM, Effort & cost estimation, Project scheduling, Requirements analysis, Preliminary design review, Critical design review, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, Resource management, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, VHDL, Xilinx Virtex 6 board
Team Size	15
Duration	12 months

13. Automated Test Equipment for Digital Flight Control Computer for fighter aircraft

This ATE is used for testing the Digital and Analog printed circuit boards of Digital Flight Control Computer of LCA aircraft. The stimuli required to test these PCBs are being generated by ATE through its hardware and custom-built instruments like pulse generators, analog outputs, digital outputs and other signals. The output generated by the PCB is fed back to ATE for verification and the test results are generated in the form of test reports.

Responsibility	Requirements gathering, Drafting project proposal, Generating BOM, Effort & cost estimation, Project scheduling, Requirements analysis, Preliminary design review, Critical design review, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, Resource management, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C++, LabVIEW, Windows, NI Modules
Team Size	25
Duration	8 months

14. Automated Test Equipment for Airborne Early Warning And Control System

Airborne Early Warning And Control System (AEW&CS) consists of approximately 40 LRUs, which are divided into 18 types consisting of Radars, ESM/ELINT(RWR), CSM (Communication Support Measures)/COMMINT, ECM (Electronic Counter Measures)/Self-protection suite e.g. Jammers etc. This Automated Test Equipment is modular in nature consisting of TWO/THREE racks, out of which one rack may consist of all the test and measuring equipment along with the desktop computer on which the actual test software runs and the second rack consists of the backplane with all the connectors to which LRUs can get connected through push & lock mechanism. NO MANUAL tightening of the connector required to interface LRU with ATE. These LRUs are of 1U in size. Only few LRUs require manual connection to ATE, out of which some are custom built which can be connected to ATE manually. These LRUs can be placed in third rack. Testing of these LRUs done by feeding the RF input from ATE and analyzing the output spectrum, along with superimposed modulations like AM/FM. Programmable power supply is used to test LRUs. Test Cases for each LRU were provided by the customer. After the execution of test cases, ATE can declare the health status of respective LRU as OK/Not OK and display the massage of the probable fault indication. ATE is able to generate, store the test report of all LRUs indicating its test history. The test report of any LRU can be retrieved at any time to calculate its reliability/FMEA etc. ATE houses control panels and interface panels. This ATE was designed around a PXI based System with following features:
 	
    a. Self-Test
    b. Calibration of RF cables
    c. Pre-loaded Test Procedures for automated testing
    d. User friendly Graphical User Interface
    e. Test report generation
    f. Test report printing
    g. Emergency Stop

Responsibility	Requirements gathering, Drafting project proposal, Generating BOM, Effort & cost estimation, Project scheduling, Requirements analysis, Preliminary design review, Critical design review, Software configuration management planning, Software development planning, Software quality assurance planning, Project tracking & monitoring, Resource management, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C++, LabVIEW, Windows, NI Modules
Team Size	10
Duration	12 months

15. Tunable Vibration Absorber system for A400M aircraft

This system is designed to reduce propeller induced noise in the cargo hold of the A400Maircraft. This embedded project was developed at Ultra Electronics, Cambridge, UK.

Responsibility	Effort estimation, Project scheduling, Requirements analysis, Preliminary design review, Critical design review, Project tracking & monitoring, Resource management, Customer interaction, Status reporting, Daily standup meetings, Weekly & monthly project review meetings
Platform/ OS	C, Assembly, Code Composer Studio, Ti DSPs 6713, 2806, 2808
Team Size	25
Duration	12 months

16. Automation of test scripts for Boeing 787 Electric Power Generator Starter

Boeing 787 contains Electric Power Generator Starter System. Automation of the Test cases were done to test different subsystems of this system. These scripts were tested on the online Simulator available through internet.

Responsibility	Requirements Analysis, Development of software, Testing, Effort Estimation & Scheduling, Onsite Customer Interaction
Platform/ OS	Python 2.5, WxGlade 2.8.7, Windows
Team Size	25
Duration	12 months

17. Development & feature enhancement of CGF Studio

CGF Studio Software simulates the warfare entities & scenarios according to the intelligence provided. It controls and takes the offensive & defensive measures to counter the warfare scenarios.

Responsibility	Requirements Analysis, Design & Development of software, Effort Estimation, Project Tracking, Onsite Customer Interaction
Platform/ OS	C++, Windows
Team Size	20
Duration	18 months

18. Operational Flight Program for ECM of EW Suite

Operational Flight Program is the embedded application which controls all the real time processes of the EW System by resource & time management. The proprietary Intel 80486DX4 main processor card acts as the master of the bus and communicates with other I/O cards through DPRAM interface.

Responsibility	Requirements analysis, Preliminary design review, Critical design review, Coding, Testing, System integration, Effort estimation, Project scheduling, Project tracking & monitoring, Status reporting
Platform/ OS	C, Assembly, Intel 80486DX4
Team Size	5
Duration	36 months

19. Electronic Warfare Suite Controller software

EWSC software meets the EW Avionics Interface requirements by acting as the compatibility interface for the information/data exchange among different EW sub-systems connected through 1553B, ARINC429, RS422 and I/O bus.	
Responsibility	Requirements analysis, Interface control document, Software development, Testing, System integration, Status reporting
Platform/ OS	C, Assembly, Intel 386EX processor based custom built system
Team Size	3
Duration	12 months

20. Arinc429 & 1553B Bus Controller software

Intel 80386EX processor based 1553B card containing 1553B bus controller, memories, peripherals and processor supervisory circuit receives and transmits the data from/to various Avionics sub systems connected to 1553B bus through DPRAM interface. Similarly, Intel 80386EX processor based ARINC429 card containing ARINC429 bus controller, memories, peripherals and processor supervisory circuit receives and transmits the data from/to various Avionics sub-systems connected to ARINC429 through DPRAM interface.	
Responsibility	Software development, Verification and validation, Software integration, System integration, Status reporting
Platform/ OS	C, Assembly, Intel 386EX processor based custom built system
Team Size	3
Duration	10 months

21. Automated Test Software for Printed Circuit Boards of EW sub-systems

This module of Automated Test Equipment software, tests all the PCBs of one of the EW sub systems as a White Box for their functionalities. PCBs consist of various peripherals like Micro Controllers, Programmable Inter Timers, Programmable Interrupt Controllers, Programmable Peripheral Interfaces, Clock Generators, Latches, Buffers etc. Communication and the data transfer among the instruments take place through GPIB, RS422 and RS232 bus.	
Responsibility	Test cases & test procedure development, Software development, Module testing, Integration testing, Status reporting
Platform/ OS	C, Windows 3.11
Team Size	2
Duration	10 months

22. Automated Test Software for Line Replaceable Unit of EW sub-system

This module of Automated Test Equipment software tests one of the EW sub-systems as a Black Box for its functionality. Communication and data transfer among the instruments takes place through GPIB, RS422 and RS232 bus.	
Responsibility	Test cases & test procedure development, Software development, Module testing, Integration testing, Status reporting
Platform/ OS	C, Windows 3.11
Team Size	2
Duration	10 months

Personal Details:

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References:

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