HAROLD G. MAMITAG, ECE

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SUMMARY

Licensed Electronics and Communications Engineer with a total of seven years of experience in the Semiconductor industry as a Test Product Engineer and in the Telecommunications industry as an Architecture and Specifications Engineer in a multinational and multicultural environment. Proven record in Project management from planning, design, implementation, testing and maintenance through the effective use of Six-Sigma tools and Scrum methodology. A persistent and innovative Team Leader who collaborates well, solves tough problems, and delivers quality results.

EDUCATION

Electronics and Communications Engineering, Saint Louis University Baguio City, June 2007 – April 2012

LICENSE / CERTIFICATIONS

Certified SAFe® 4 Practitioner, Scaled Agile Incorporated, October 2018 - October 2019
Electronics Engineer, Professional Regulation Commission, November 2012 - Present

AFFILIATION

Member, Institute of Electronics and Communications Engineers of the Philippines, 2018 - Present

WORK EXPERIENCE

A&S Scrum Master, Nokia Technology Center Philippines, September 2019 – June 2020

- Facilitator for Scrum Meetings (Daily, PI/iteration Planning, Retrospective) and ensure its effectiveness
- Responsible for the removal of impediments which are blocking the team to reach iteration goals, and escalate to the line manager or Area Product Owner if cannot be solved on team level
- Supports transformation of the organization on squad level through Change Map Survey
- Ensures Definition-of-Done compliance with global standards and continuously improve the coverage
- Quality of working with JIRA (i.e. logging)
- Helps Product Owner maximize productivity

Project: Maximized Scrum Team's Productivity
The Feature Commitment Efficiency (FCE) is a Key Performance Indicator which measure how close the planned projects are to the actual delivered items. Dependent and unforeseen tasks pegged the team's FCE under the target of 88%. The team consistently achieved over 90% FCE through the effective utilization of the scrum process of breaking down a large backlog into smaller set of tasks that fit within the scrum team's total Feature Development Effort (FDE). Furthermore, active participation in the Scrum of scrums facilitated the risk mitigation of tasks that were highly interdependent.

Architecture and Specifications (A&S) Engineer, Nokia Technology Center Philippines, March 2019 – June 2020

- Document software or hardware architecture of the component or domain owned by the business line
- Create EFS (Entity level functional specifications) mapping customer user stories to requirements
- Individual contributor documenting low-level SW (or HW) architecture and creating entity-level specifications spanning across multiple sub-components but within one domain
- Analyzing and specifying hardware preconditions for any kind of feature support.
- Splitting of functionalities between software components
- Documenting and maintaining the functional requirements and cumulative design modules.
- Ensuring traceability of functional requirements, design and acceptance criteria from test plans, entity tests and module tests.
- Sharing technical knowledge to software and integration teams.

Project: Cost Reduction of proprietary documentation software
The use of third-party documentation software limits the scale of introducing functionality while the cost of operation is high. This project reduced the operational cost for proprietary documentation software by migrating the WCDMA Capacity and Performance specifications from IBM DOORS to Sphinx. Activities include determining and planning of tasks to carry out the migration, effort estimation, delegation of subtasks to peers, proper mapping and documentation of the migrated specifications.

Project: Market growth for mobile radio access technologies
The air-interface is a limited resource. This project enabled the 2G, 3G, and 4G mobile radio access technologies to share the licensed 2100 MHz radio spectrum by creating the technical specifications for the WCDMA downlink digital filter of the Dynamic Spectrum Sharing feature. Activities include the in-depth research on digital filter types and collaboration with the Software Developers to document the correct digital signal filter parameters.

Research and Development Engineer, Nokia Technology Center Philippines, January 2017 – February 2019

- Design, implementation and testing (Unit Test and Module Test) of WCDMA DSP software modules and programs according to given specifications and standards.
- Maintain and improve the overall good health of Continuous Integration / Continuous Delivery system
- Subject Matter Expert for WCDMA Downlink subsystem.
- Conduct 3GPP trainings for newcomers according to the Competence Development Plan
- Responsible for development of assigned piece of HW/SW
- Documenting design
- Fault analysis and correction of own issues
- Root-Cause Analysis and Escape-Cause Analysis for issues escaping own area
- Quality improvement actions in own area

Test Product Engineer, Texas Instruments Philippines, May 2013 – December 2016

- Development work in support of a broad range of analog, digital and mixed signal products in battery management gauge products that address automotive, consumer electronics and industrial markets
- Collaborate and work in a team environment with Applications, Design, Test, Marketing, Manufacturing, Quality and Reliability in all aspects of new product development, production release to accomplish goals and objectives
- Lead product and package qualification to ensure meet product specifications and manufacturing requirements
- Design reliability test hardware and generate corresponding test program for product and package qualification test
- Work with ATE test and product validation team to ensure product compliance to datasheet specifications and manufacturing requirements, and support production sustaining activities
- Work with failure analysis to determine root cause of any reliability and qualification failures
- Work with process and package technology development to develop and qualify technologies for new product development
- Work closely with the global manufacturing facilities to address customer specific product quality, yield management and cost reductions issues on mature products. Scope of work could include product spins and derivatives

Technical Paper: A holistic approach to reducing false failures for contact-sensitive test device
The technical paper described the process improvement and tool optimization from Integrated Circuit (IC) Assembly and Test which would have been normally carried out as separate study in a traditional semiconductor manufacturing line. This holistic approach increased the testing capacity and allowed the local manufacturing site to be the owner of the whole business line.

Project: Cost Reduction in testing Bosch Automotive air-bag ICs
Test Burn-In has the capability of screening out latent defects present on semiconductor ICs by subjecting them on high temperature within long periods of time, around 4 to 6 hours. However, this is a non-value-added test which only consumes a part of operational cost due to the high demand of energy to maintain heat but does not add functionality to the IC. This project simplified the IC test flow from undergoing 100% burn-in to completely no burn-in which reduced the operational cost for non-value-added testing. The process of eliminating this burn-in test process include:

- Validation of burn-in failures are repeatable on ambient temperature test and characterizing whether failures are test induced or material related.
- Analyzing datalog parameters for passing units follow a normal distribution.
- Facilitating customer audits to ensure that the all Test Processes are compliant to the Product Datasheet
- Continuous collaboration with Process Engineers, Quality Engineers, Semiconductor Wafer Fab Engineers, Local Business Entities, Equipment Engineers and Manufacturing Supervisors to ensure that ICs are tested as specified.
- Communicating with Business Planners on the test capacity and simplified test flow plans

SKILLS

OS and Virtualization

- Ubuntu Linux, RedHat, Solaris
- Amazon Web Services
- VirtualBox

Web Development

- Django
- Nginx/Apache web servers
- MySQL Database

Programming Languages

- Python programming
- C Programming

Software Documentation

- ReStructuredtext and Sphinx
- Atlassian Software: Jira, Confluence
- IBM DOORS
- Universal Mark-up Language (UML)
- MS Office: Word, Excel, Powerpoint

Software version control and test automation

- Git, Gerrit, GitLab, GitHub, SVN
- Jenkins CI
- Robot Test Framework
- Bash and DOS scripting

Six-Sigma tools

- DMAIC, Pareto, Histogram, Scatter Plots

IC Automated Test Equipment (ATE)

- Eagle ETS 384, Eagle ETS 81, Teradyne IFlex, Teradyne UltraFlex

IC Handlers

- Strip test, Delta Edge, Yokogawa HS-2000, Advantest M-4841