I'm

Ahmad Dahalan Yaakob

Experienced R&D and Product Management Professional in Defense Communications

I bring over 25 years of experience in defense, telecommunications, and emerging technologies, with a strong interest in Artificial Intelligence (AI) as a key driver for my career development, aiming to bring transformative benefits to various industries. Throughout my career, I've successfully led multidisciplinary teams to create advanced communication solutions for military and government clients. I am passionate about technology, innovation, and exploring AI's potential to benefit not only defense but also other industries, consistently striving to deliver high-quality, impactful solutions.

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About Me

With more than two decades of experience as an engineering leader, I have managed diverse teams of over 30 engineers across various disciplines. My expertise spans electrical systems, RF technology, software development, and mechanical engineering. Additionally, my interest in Artificial Intelligence (AI) allows me to apply my past knowledge to explore new opportunities, leveraging innovation not only in defense communications but also in other industries.

Professional Skills

Technical Leadership

- Research & Development Program Management
- Systems Engineering & Platform Integration
- Military Standard (MIL-STD) Compliance & Qualification
- Product Development Lifecycle Management
- Software Development & Architecture Design

Project Management

- Strategic Project Planning & Execution
- Budget Planning & Resource Allocation
- Risk Assessment & Mitigation Strategies
- ISO 9001:2015 Quality Management
- Industrial Process Optimization

Technical Expertise

- Radio Communication Systems Design
- Tactical Network Architecture
- Military Platform Integration
- System Performance Analysis
- Technical Documentation & Specifications

Business Development

- Technical Proposal Development
- Competitive Market Analysis
- Product Strategy & Positioning
- Technical Marketing Content Creation
- Client Requirements Analysis

Experience
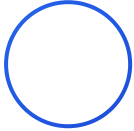
R&D General Manager

Sapura Thales Electronics Sdn Bhd · Full-time 2020 - Jun 2024 · 4 yrs

Kuala Lumpur, Federal Territory of Kuala Lumpur, Malaysia

- Post-MCO - Ensuring smooth ramp-up of RND activities after company re-open, and executing what was defined in the Business Continuation Plan (BCP)

- Adapting to the new normal and familiarize with remote working environments - driving businesses to automate as quickly as possible to ensure business continuity

- Motivate the team to maximize the use of 'brain' and focus on the cost-effective solution

- Managing supply chain, affected by the pandemic

- Maintaining zero '0' NCR for ISO audit
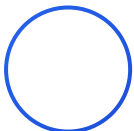
R&D Head Of Department

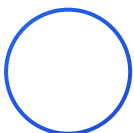Sapura Thales Electronics Sdn Bhd · Full-time 2014 - 2019 · 5 yrs

- Completed product development lifecycle (from design to manufacturing) for TRC5200, 1st tactical radio developed by 100% local engineers

- Managing schedule, budget and risks for sulf-funded projects and customer-funded program

- Defining product development roadmap strategic plan for the next 10 years

- Cascade down company's KPI to all staffs

- Continue exploring new business opportunities from overseas (Indonesia, Vietnam, Morocco, Timor Leste)

- Build a win-to-win collaboration with local suppliers with the intention to improve product quality and values

- Product marketing to the new local customers (POLIS, RMN)
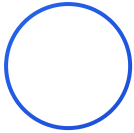
System Integration Manager

Sapura Thales Electronics Sdn Bhd · Full-time   2010 - 2013 · 3 yrs

- Completed the integration of Future Soldier System (FSS) under NCO Phase 1A Program

- Delivery, Deployment and User Acceptance of FSS within schedule and budget

- Exploring international market (product presentation, proposal, product evaluation and field trial)

- Technical solution to enhance Army Communication Program (ACP) capabilities under RMK 10 plan

- Technical solution for Navy Strategic Communication (for submarine)

- Technical solution to improve Navy legacy radios

- MIFV Comm-fit System Integration

- Communication solution for DEFTECH ADNAN (ACV 300)

- Product development (self-funded, program funded as well as subcontracting)

- Communication solution for 6x6 Armored Vehicle Communications Program

- Communication solution for SGPV Integrated Communication System (ICS) program

- Communication solution for the refurbishment of the SCORPION Armored Vehicle Program

- EMC Test for BUMAR Armored Vehicle Program

- Communication readiness site survey for PT91 PENDEKAR Main Battle Tank (MBT) Program

- Technical proposal for Army Tactical Electronic Warfare (EW) System

- Technical proposal for Malaysia Maritime Enforcement Agency (MMEA)

Technical Manager

Sapura Thales Electronics Sdn Bhd · Full-time   2008 - 2009 · 1 yr

- Validation and verification of CNR10 main equipment and accessories. Fully complied with user expectations

- Communication Solution for AV8 Gempita

- Establish marketing materials including product brochures

- Establish Product Policy Roadmap

- Collaboration with main suppliers to customize critical product (e.g Rugged Laptop) to meet user requirements

- Transfer for Technology (TOT) strategic plan
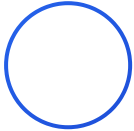
Senior Design Engineer (System Engineer)

Sapura Thales Electronics Sdn Bhd · Full-time   2003 - 2007 · 4 yrs

- Validation and verification of CNR9 main equipment and accessories. Fully complied with user expectations

- Multi Channel Radio System (MCRS) product evaluation with customers
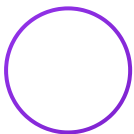
Design Engineer

Sapura Thomson Radiocommunication Sdn. Bhd · Full-time   Aug 1997 - Dec 2002 · 5 yrs 5 mos

- Completed the development of 1st generation of VHF tactical handheld TRC5100
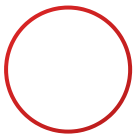
Preventive Maintenance Technician

Harris Corporation · Full-time   1994 - Dec 1995 · 2 yrs

- Semiconductor Division

Global Business Development Portfolio

Over the past 25 years at STE, I have established strong international partnerships across Asia, Africa, and Europe. This map highlights countries where I have developed business relationships through proposals, tenders, business collaborations, and product field trials.

Global Business Development Map

Indonesia	Benin	Thailand	Brunei	Timor-Leste	Pakistan
Bangladesh	Egypt	France	Morocco	Myanmar	UAE
Burkina Faso	South Africa	Vietnam			

Projects in Motion (2024)

Discover my dynamic portfolio of innovative projects, where AI integration meets practical solutions. From advanced LLM evaluations and AI-powered development tools to defense technology consulting and automated trading systems, these initiatives reflect my commitment to pushing technological boundaries while delivering tangible results. Each project showcases the intersection of emerging technologies with real-world applications, demonstrating expertise in AI, software development, and technical consultation.

Technical Consultation

Web-based Marketing Platform for Indo Defence 2025

Developing an innovative web-based marketing platform featuring AI-powered assistance, 4K-optimized product displays, and offline capabilities. The solution integrates local and cloud-based LLM models for intelligent product information retrieval, utilizing Next.js, Radix UI, and TypeScript for a robust exhibition-ready experience.

Defence Product Marketing Material Design

Creating comprehensive marketing materials for a new defence product launch at Indo Defence 2025. The project encompasses strategic branding, technical documentation, and visual storytelling through high-impact presentations and interactive product demonstrations, tailored for the defence industry audience.

MyLAB Grant Application for UniKL

Collaborating on a groundbreaking university-industry partnership with UniKL, providing technical expertise for a pre-commercialization initiative under the MyLAB grant. This project, shortlisted among 33 entries, leverages LIDAR and LoRa technologies to develop scalable, real-world solutions for industrial applications.

Product Marketing Brochure Redesign

Assisting a local company with a strategic review, update, and redesign of its product and marketing brochure. The project focuses on enhancing visual appeal, brand clarity, and customer engagement through graphic design, content strategy, and market research to create a brochure that effectively communicates value to the target audience.

PDRM Wearable Video Streaming Solution Analysis

Conducting comprehensive market analysis for wearable video streaming solutions tailored to PDRM (POLIS) operational requirements. The study evaluates real-time streaming capabilities, secure data transmission, and integration with existing systems to propose optimal solutions for law enforcement applications.

Quality Assurance for Rural Power Generation Solutions

Developing a comprehensive quality assurance and improvement plan for a local company's remote power generation systems. The initiative focuses on elevating product standards, documentation, and processes to meet international market requirements for rural and off-grid electrification solutions.

Self-Funded Projects

AI-Integrated Project Management Dashboard

Developing a prototype web-based dashboard that integrates various AI tools and LLM models to streamline project management tasks. The system leverages artificial intelligence for task automation, resource optimization, and intelligent project insights, demonstrating the potential of AI in project management workflows.

Mistral Canvas Dashboard Evaluation

Evaluating Mistral's Canvas capabilities in code visualization, document editing, and collaborative features, comparing it directly with ChatGPT Canvas and Claude Artifacts. This assessment focuses on practical development workflows and document manipulation capabilities.

AI Signal Integration for Automatic Trade Execution

Developing an AI-driven tool to autonomously capture and execute signals from providers (e.g., Telegram), implementing NLP and automated order placement for seamless trading without human intervention.

AI Agent for Market and Competitor Analysis

Planning a smart AI agent to track and analyze market and competitor trends in real-time. This project will use data scraping, NLP, and machine learning technologies to provide actionable insights for competitive advantage.

Windsurf vs Cursor AI IDE Comparison

Conducting a dedicated comparison study between Windsurf and Cursor AI development environments, evaluating their unique approaches to AI-assisted coding, real-time suggestions, and developer workflow optimization. This analysis helps determine the most effective tool for modern development needs.

AI-Based IDE Evaluation

Investigating cutting-edge AI-enhanced coding tools like VS Code + Cline, GitHub Copilot, Bolt.new, and Cursor AI to improve development efficiency and integrate AI insights directly into the coding process.

Personal Portfolio Website

Building a dynamic, multi-page portfolio website with React Next.js, designed to be fully responsive and showcase expertise in modern web development technologies.

LLM Model Evaluation

Testing top AI models, including GPT-4o, o1-preview, Claude 3.5 Sonnet, and Gemini, to evaluate their capabilities in technical consultation, problem-solving, and language understanding, aiming to stay updated with the latest advancements in large language model technology.

Automated MT5 Trading Platform

Created an automated trading system for MT5 with impressive returns (17% annual profit) using MQL5 and algorithmic trading strategies. The next phase focuses on refining risk management and optimizing drawdown, enhancing stability through advanced strategy adjustments.

Low-Cost Drone Jammer for Military Applications

Completed a feasibility study for a cost-effective drone jammer to meet critical military needs, exploring RF signal blocking and low-cost hardware solutions for effective, accessible defense.

Notable Projects
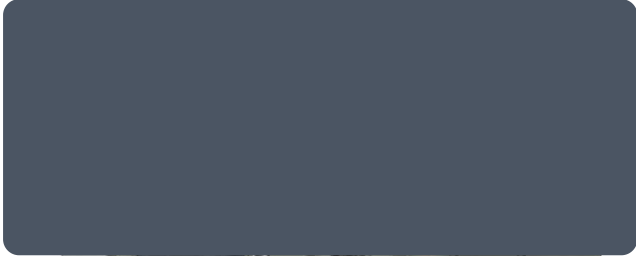
Combat Net Radio CNR9 and CNR10

Jan 2010 - Jan 2020

The CNR9 and CNR10 programs for the Malaysian Army encompass the provision of equipment and services, including next-generation HF and VHF radio systems, data terminals, and Blue Force Tracking software.

TRC5200 Tactical VHF Handheld

Jan 2017 - Jan 2020

The second generation of VHF radios, developed by Sapura Thales Electronics (STE) and fully designed in Malaysia, has been deployed by the Malaysian Navy. This system includes radios and accessories that support data transmission and position tracking.

Future Soldier System (FSS)

Jan 2015 - Jan 2018

The Future Soldier System (FSS) was introduced as part of the Malaysian Army's Network Centric Operations (NCO) program to enhance long-distance synergy and coordination. In this system, each soldier functions as a sensor, transmitting vital battlefield information back to command. The FSS was entirely developed by local engineers

OICS for Deftech 8x8 GEMPITA

Jan 2015 - Jan 2018

Thales, through its joint venture STE, is part of the AV8 programme for the Royal Malaysian Army. STE provides communication, vetronics, sensors, command & control, mortar, and optronics

Radio Communications Solution for various Armoured Vehicles

2010 - 2018

Led the development and implementation of tactical communication solutions for multiple armoured vehicle platforms including ADNAN, MIFV, BUMAR, AV8, SCORPION, PT91, and various 6x6 and 4x4 vehicles. The solutions encompassed radio integration, intercom systems, antenna systems, and command & control interfaces, ensuring robust battlefield communications across different military platforms.

TRC5100 Tactical VHF Handheld

Jan 1997 - Jan 2015

Pioneered the development of Malaysia's first locally designed and manufactured tactical VHF handheld radio. The TRC5100 featured encrypted voice communications, frequency skipping capabilities, and ruggedized design for military operations. This groundbreaking project established local expertise in military radio development, with over 1000 units deployed across Malaysian Armed Forces, marking a significant milestone in Malaysia's defense industry capabilities.

Strategic Portfolio Timeline (1997-2018)

A comprehensive overview of major milestones and achievements in tactical communication solutions, system development, and market expansion. This timeline complements the detailed project portfolio section.

1997 TRC5100 Research and Development - Joint venture between Sapura (Malaysia) and Thales (France) for the development of VHF Tactical Radio

2005 Production of TRC5100

2007 Field Evaluation of Thales TRC9210 and TC3600 Combat Net Radio

2008 Initial Technical Proposal for Communication System onboard Malaysian AV8 Armoured vehicle

2009 • Explore opportunities in worldwide market including Benin, Indonesia, Egypt, Brunei within the scope of tactical communication solutions

- Explore new customer locally including Briged Sempadan, TUDM, TLDM Submarine, and TLDM PRM4700 replacement, MMEA
- Initial Combat Net Radio proposal (CNR10), a critical requirement to equip Malaysian Army with the latest tactical radio communication solution under RMK10 budget

2010 Continue to explore the solution for various armoured vehicle platforms including ADNAN, MIFV, BUMAR, AV8, SCORPION, PT91, 6x6, 4x4

2011
- Close partnership with Vietnam customer on the complete set of tactical communication solution
- Proposal for Naval communication for SGPV program
- Research and Development of Tactical Radio repeater
- TLDM Submarine Strategic Communication - Technical solution

2012 Initial Stage of designing communication network for Malaysian Armed Forces (MAF) Network Centric Operation (NCO)

2013 Prototyping the Future Soldier System

2014 Development of Future Soldier System (FSS) under NCO scope

2016 Delivery and Commissioning of tactical communication solution for Vietnam Army

2017 Delivery and Commissioning of tactical communication solution for Timor Leste Army

2018 Establish product development roadmap for 10 years

Tools & Technologies

Productivity Suites

Office 365	Canva	Gamma

Code Editors & Development Tools

Visual Studio Code	Cline	Cursor	Bolt.new
GitHub Copilot	GitHub	V0 by Vercel	Windsurf

Content Management Systems (CMS)

WordPress	Joomla

Financial Trading Platforms

MT4

MT5

TradingView

Forex Tester

Design & Creative Tools

Photoshop

Lightroom

DALL·E 3

Midjourney

Large Language Models (LLMs) & AI Tools

OpenAI ChatGPT

Anthropic Claude

Perplexity

Notebook LLM

Scite

Microsoft Copilot

Specific LLM Versions

GPT-4

o1-preview

Claude 3.5 Sonnet

Claude 3.5 Haiku

Ollama

Gemini
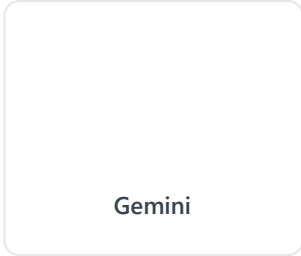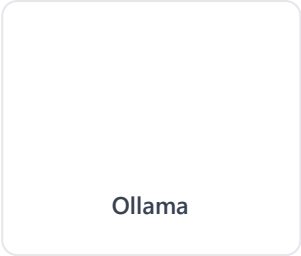
Education

University of Plymouth

B.Eng (Hons), Electrical and Electronics Engineering
1995 - 1997

Universiti Teknologi Malaysia

Diploma in Electrical Engineering (Communications)
1991 - 1994

Certifications

Basic Fire Fighting & Emergency Response Plan

Asian First Aid Academy

Issued Jan 2020

Occupational First Aider Certification

Asian First Aid Academy

Issued Jan 2020

Design & Development Methodology

Vee Model Systems Engineering

In my design and development processes, I employ the Vee Model Systems Engineering methodology, a structured framework that emphasizes thorough planning, integration, and validation throughout a project's lifecycle. This approach ensures that each phase of development is systematically aligned with corresponding testing activities, promoting early detection and resolution of potential issues.

Key Phases of the Vee Model:

- **Requirements Definition**

  Establishing clear system objectives and functional requirements to align with stakeholder needs.

- **System Design**

  Developing detailed architectures and specifications, breaking down the system into manageable components.

- **Subsystem Design**

  Focusing on the design of individual subsystems, ensuring they meet the overall system requirements.

- **Implementation**

  Developing and assembling system components and subsystems.

- **Integration and Verification**

  Combining subsystems and verifying their performance against design specifications.

- **System Validation and Testing**

  Conducting comprehensive testing to ensure the system meets all requirements and performs as intended in real-world scenarios.

- **Deployment and Maintenance**

  Releasing the system for operational use and providing ongoing support and updates.

Courses

Quality Management **AS 9100 REV D/ EN 9100:2016 Interpretation**	Safety & Emergency **Basic Fire Fighting & Emergency Response Plan (ERP)**
Professional Skills **Building Impactful Presentations with PowerPoint**	Business Strategy **Business Model Canvas (BMC) and Setting Result-Oriented KPIs**
Technical Training **Combat Net Radio (CNR HF VHF) Operation Training for Managers**	Language **Diplôme d'Études en Langue Française (DELF) A1**
Problem Solving **Effective Root Cause Analysis (RCA)**	Professional Development **Performance and Motivation Workshop**
Project Management **Project Risk Management and Compliance**	Technical Training **TRC9100 General and Technical Product Training**
Technical Training **VHF TRC9200 General and Technical Product Training**	

Personal Interests

Artificial Intelligence (AI)	Photography
Comparative Religion	Ancient Civilizations

Extraterrestrial Conspiracy Theories

Audiophile Enthusiast

References

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