

Bohemian

AI-Powered SysML & IDL Generation

FEATURES

Anthropic Claude AI Integration

SysML Model Generation with Copilot

OMG IDL Output (Astute DDS, RTI Connex, Cyclone DDS.)

DEF STAN 23-009 Compliance

UK LDM 10.0.0 Support

Australian LDM 7.2.5 Support

Natural Language Input

Block Definition Diagrams (BDD)

Internal Block Diagrams (IBD)

State Machine Diagrams (STM)

DDS Topic Generation

QoS Policy Configuration

VivoeX SDK Integration

Import IBM Rational Rhapsody Files

Enterprise Security & Audit

Real-time Conversational UI

Bohemian is our revolutionary AI-assisted domain modelling tool that combines the power of **Anthropic's Claude AI** with industry-standard SysML and IDL generation. Whether you're building GVA-compliant systems, creating entirely new domain models, or working with the Land Data Model (LDM), Bohemian dramatically accelerates your design workflow from months to days.

Bohemian acts as your intelligent copilot for exploring and modelling new domains. Whether you're integrating a **Remote Weapons Station (RWS)**, planning **tactical communications systems**, designing **sensor fusion architectures**, or deploying **C-UAS capabilities** — Bohemian helps you understand the domain, identify required interfaces, and generate compliant models in hours rather than months.

Claude understands UK MoD modelling rules, naming conventions, and architectural patterns. Bohemian enforces these rules automatically, ensuring your models are compliant from the start — not fixed after review.

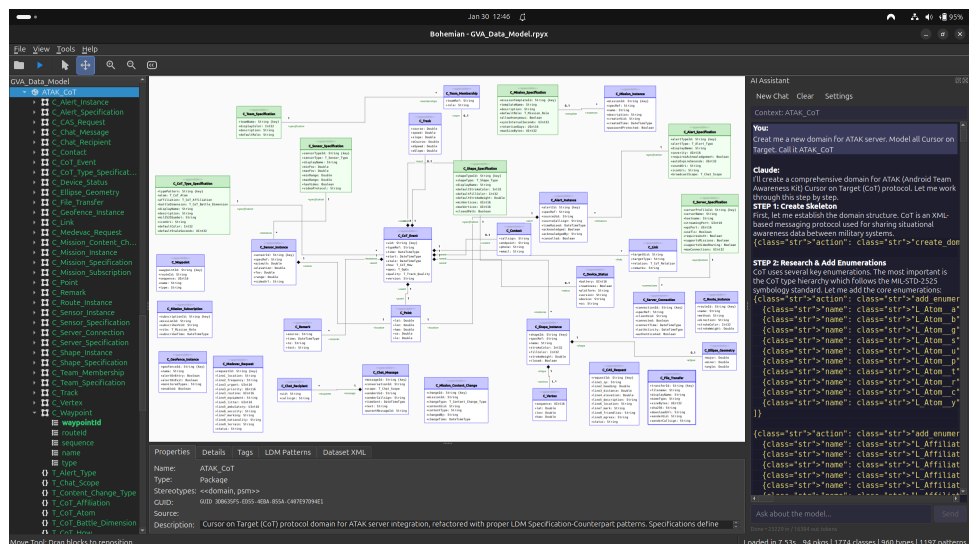
SysML is the only modelling language developed explicitly for defence and systems engineering, and Bohemian is the only AI tool purpose-built to generate defence-grade SysML.

Traditional domain modelling is slow, error-prone, and requires deep expertise. Bohemian changes everything:

Explore — Ingest specifications, standards and existing models. Ask natural language questions to understand complex domain requirements. Claude's 200K token context window can process entire programme specifications at once.

Plan — Generate SysML models, define DDS topics, and validate against GVA standards. Bohemian identifies interface requirements, data dependencies, and integration points automatically.

Deploy — Export directly to Astute Systems DDS middleware and GVA Services. Generated IDL integrates seamlessly with VivoeX SDK, MediaX video streaming, and our complete GVA service suite.



MADE IN
AUSTRALIA

AI-POWERED DOMAIN MODELLING



FIND OUT MORE

Commercial Off The Shelf (COTS) and Modified Off The Shelf (MOTS) solutions for defence and aerospace.

Astute Systems is a global leader in rugged AI computing and software for autonomous military systems. Our GVA toolchain provides complete compliance with UK and Australian defence standards.

SPECIFICATIONS

AI CAPABILITIES

- Natural language to SysML conversion
- 200K token context window
- Constitutional AI safety guardrails
- Explainable reasoning for audit trails
- Pattern recognition from existing models
- Iterative refinement through chat
- Multi-modal input (text, specs, PDFs)

SYSML OUTPUT

- Block Definition Diagrams (BDD)
- Internal Block Diagrams (IBD)
- State Machine Diagrams (STM)
- Requirement Diagrams
- Parametric Diagrams
- XMI/SysML 2.0 export

IDL GENERATION

- OMG IDL 4.2 compliant
- DDS Topics auto-generation
- Type-safe data structures
- QoS policy annotations
- Cyclone DDS / Astute DDS ready

LDM SUPPORT

- UK LDM 10.0.0 — Full Support
- UK LDM 9.2.0 — Full Support
- UK LDM 9.1.0 — Full Support
- AS LDM 7.2.5 — Full Support

STANDARDS COMPLIANCE

- DEF STAN 23-009 Part 3
- DEF STAN 00-082 (VIVOE)
- OMG SysML 1.6 / 2.0
- OMG IDL 4.2
- ISO 10303 STEP (AP233)

INTEGRATION

- VivoeX SDK direct import
- LdmX Debugger validation
- ToolX visual inspection
- MediaX video configuration
- Git version control

DEPLOYMENT OPTIONS

- Cloud SaaS (start in minutes)
- On-premise (Docker/K8s)
- Air-gapped for classified work
- API access for automation

SECURITY

- No data retention
- API key management
- Role-based access control
- Full audit logging
- Enterprise SSO (SAML/OIDC)

REQUIREMENTS

- Modern web browser (Edge, Chrome, Firefox)
- Claude API credentials
- Network access (or air-gapped Claude)

SUPPORT

- Online documentation
- Video tutorials
- Email & phone support
- Training workshops available

Claude AI is a trademark of Anthropic.

CONTACT YOUR LOCAL REPRESENTATIVE

FOR MORE INFORMATION ON HOW WE CAN ADAPT OUR SOLUTIONS TO MEET YOUR IO REQUIREMENTS

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