Ines Bjornsen Senior Systems Engineer

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PROFILE SUMMARY

- **Senior Systems Engineer** with **7 years** in **defense aerospace**, now owning the architecture of an **electronic warfare subsystem** at Boeing, after controller work at **Honeywell Aerospace**.
- Works in **DOORS** for requirements, **SysML** in **Cameo Systems Modeler**, **MATLAB and Simulink** for analysis, **LabVIEW** on HIL benches, and **MIL-STD-1553** and ARINC 429 buses.
- Strong in **requirements decomposition**, **ICD ownership**, **HIL and SIL verification** and **FMEA-based safety analysis** under **MIL-STD-882E** and **DO-178C**.
- Partners with **hardware, software, RF and flight test teams**, chairs the subsystem's **interface working group**, and presents at **PDR, CDR and TRR** with the customer.
- Mentors **4 systems engineers**, co-wrote the program's **MBSE modeling guide**, and holds the **INCOSE CSEP** and an active **Secret clearance**.

TECHNICAL SKILLS

Requirements & ALM Tools:	DOORS, DOORS Next, ReqIF, Jira, Confluence
MBSE & Modeling Tools:	SysML, Cameo Systems Modeler, Enterprise Architect, UML
Simulation & Analysis:	MATLAB, Simulink, Stateflow, Python
Integration & Test Tools:	Hardware-in-the-loop, software-in-the-loop, LabVIEW, Wireshark
Interfaces & Data Buses:	MIL-STD-1553, ARINC 429, Ethernet, RS-422
Safety & Reliability Methods:	FMEA, Fault tree analysis, Hazard analysis, MTBF prediction
Standards & Lifecycle:	MIL-STD-882E, DO-178C, DO-160G, ISO 15288, INCOSE SE Handbook

EDUCATION

Missouri University of Science and Technology — **B.S. in Aerospace Engineering** — Rolla, MO · Aug 2015 to May 2019

WORK EXPERIENCE

Boeing Defense, Space & Security — **Senior Systems Engineer** — St. Louis, MO · Mar 2022 to Present

- Own the **SysML** architecture model in **Cameo Systems Modeler** for an electronic warfare subsystem flying on **3** fighter variants, with every function allocated to hardware or software before PDR.
- Decomposed 940 subsystem requirements in **DOORS** and held verification traceability at **100%** through 2 CDRs, with each requirement linked to a test, analysis or inspection.
- Wrote and maintain 22 ICDs for **MIL-STD-1553** and Ethernet links to the mission computer and 4 suppliers, cutting interface changes after CDR from 19 to **5** a year.
- Run the subsystem's HIL and SIL verification with **LabVIEW** test scripts, which cut defects found in flight test from 14 per release to **3** over 3 releases.
- Led the FMEA and fault tree analysis for safety-of-flight modes under **MIL-STD-882E**, closing all **9** serious hazards before the Safety Assessment Report was signed.

Honeywell Aerospace — **Systems Engineer** — Phoenix, AZ · Jun 2019 to Feb 2022

- Wrote **320** derived requirements in **DOORS** for an auxiliary power unit controller and linked each one to its **DO-178C** DAL B test evidence.
- Ran a trade study on 3 sensor redundancy schemes with **Simulink** models, and the chosen design cut controller weight by **1.8 lb** while meeting the availability target.
- Prepared the controller's SRR and PDR data packages and tracked **74** review actions to closure in **Jira** before the critical design review.