

Infrastructure Legacy Systems Engineering Addendum

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Summary

Senior Architect and Infrastructure Strategist with proven success stabilizing and modernizing **COBOL** and **FORTRAN 77** platforms across **SCADA**, **ICS**, and compliance-heavy industrial environments. Adept at translating vintage logic into maintainable, interoperable systems while mentoring teams and guiding resilient modernization trajectories. Specialized in integrating legacy components into automated stacks and preserving mission-critical reliability through pragmatic engineering.

Tools, Technologies & Applied Skills

Category	Technologies / Platforms
Languages	COBOL (Wang VS), FORTRAN 77, VBScript, Win32 API, C/C++, PowerShell
Systems	Wang VS COBOL, TDACS (Texaco Data Acquisition and Control System), Honeywell Gateway (DDT), Texaco’s ScreenPack & GraphPack UI Libraries
Architectural Skills	Legacy system integration, data acquisition workflows, control logic stabilization, telemetry support
<u>Operational Impact</u>	Diagnosing persistent logic errors, refactoring for maintainability, restoring designed performance across industrial gateways
Interfacing	Custom UI scaffolding, input validation logic, real-time shared memory management
Modernization Strategy	Registry hive edits in WinPE, automation workflows, hybrid architecture alignment with Azure/AWS

Language-Specific Contributions

COBOL – Wang VS Environment – Union Carbide | 1988–1989

- Created structured data files using a proprietary file layout utility, integrated with UI scaffolding tools to build **character-based, menu-driven interfaces**
- Developed **multi-screen logic and screen-flow orchestration** with validation rules and application flow enhancements
- Produced standardized reports using layout-driven reporting utilities to support operational analysis in **compliance-heavy environments**
- Worked part-time during academic semesters and full-time during fall break, contributing consistently to core business systems

FORTAN 77 – TDACS (Texaco Data Acquisition and Control System) Industrial Systems – Texaco | 1990–1996

- Developed and maintained **character and graphical user interfaces** — including **menu-based screen navigation** — using proprietary systems (**ScreenPack, GraphPack**), interfacing with SCADA/ICS platforms
- Refactored legacy modules, fixed unresolved bugs, and addressed long-standing issues in control logic and continuous processes
- Diagnosed and eliminated memory leaks and faulty data transform usage, impacting high-availability systems via **Honeywell Highway/Gateway (DDT integration)**
- Enabled mission-critical processes to operate uninterrupted, **eliminating restart cycles** and stabilizing real-time shared memory usage (TDACS “**Commons**”)

Modernization Impact

- Migrated fragile physical platforms to virtual environments using customized WinPE workflows, recovering from boot failures by re-enabling device drivers via Registry hive edits in WinPE
- Created intelligent patch/config systems that proactively resolve legacy faults
- Transitioned monolithic utilities into modular components for maintainable hybrid environments

Access

This addendum accompanies my resume and reflects my legacy domain depth across engineering, recovery, and modernization in high-stakes environments.