The Lifter

INDIUM

Deciphering the Logic of 170 Critical PICK BASIC Programs for a Large-Scale Retailer

How **The Lifter was used,** a core component of its solution suite, to help a leading North American retailer understand **170 PICK BASIC programs** running on Rocket Software's UniVerse without months of manual reverse engineering.

Success Story

Customer Overview

For decades, **an established retailer in North America** relied on a complex, long-standing legacy architecture built on **Rocket Software's UniVerse MultiValue platform using PICK BASIC.**

At the core of this environment were **170 business-critical transaction programs that had evolved over decades to support daily retail operations.** The platform was fast, stable, and deeply embedded in the business, but its logic became difficult to interpret.

Over time, they faced several challenges:

- Documentation was limited or outdated.
- Business meaning was embedded directly in **procedural PICK BASIC code.**
- Institutional knowledge was fading as experienced staff retired.
- Business analysts depended heavily on developers to interpret system behavior.

For leadership, this created a growing risk:

Critical systems were running the business, but the business could no longer clearly explain how key data fields behaved or why.

Before considering modernization, migration, or even analytics initiatives, the organization needed the confidence to modernize without breaking applications that were in the **critical path of day to day operations.**

They partnered with Indium, adopting **Legacy Lifter and Data Lifter** to restore clarity and understanding across their MultiValue legacy system.

The Challenge

MultiValue systems like **Rocket UniVerse** are powerful, but difficult to analyze, govern and change.

Unlike relational systems, **UniVerse allows variable-length, multi-valued fields within single records,** with meaning defined through PICK BASIC logic, not schemas. As a result:

- Field definitions were disconnected from real runtime behavior.
- Business rules existed implicitly inside procedural code.
- Understanding field usage required manual tracing across programs.
- Analysts relied on developers for even basic interpretation.

Answering fundamental questions was slow and risky:

- What does this field actually represent?
- Where is it used across the system?
- What logic governs its behavior?
- What would break if it were changed or migrated?

Traditional approaches (manual walkthroughs, developer interviews, ad-hoc documentation) were **time-consuming, fragile, and not scalable.**

Leadership needed a way to:

- Turn legacy complexity into clear, business-readable insight.
- Reduce dependency on technical experts.
- Preserve institutional knowledge before it was lost.
- Enable confident decisions around change and modernization.

The Approach: Understanding Before Change

Indium implemented **The Lifter,** its agentic AI platform designed to extract **meaning and not just structure from legacy systems.**

Rather than rewriting code or producing generic summaries, the platform was used to:

- Legacy Lifter and Data Lifter interpret PICK BASIC logic in the context of UniVerse MultiValue semantics.
- Anchor analysis to the system's CO file schema.
- Legacy Lifter translates procedural logic into clear, explainable business context.
- Produce structured outputs usable by both business and technology teams.

This ensured insights were **accurate, explainable, and decision-ready.**

How Legacy Lifter Delivered Clarity

Platform-Aware Grounding 01

The approach was first grounded in:

- **Rocket UniVerse MultiValue data structures.**
- Variable-length and multi-valued field behavior.
- Common transactional and control patterns in **PICK BASIC.**
- Platform-specific logic constructs.

This approach revealed how the system functioned in reality, not just how the code was written.

Schema-Anchored Business Insight 03

The **CO file schema** was used as the anchor point for interpretation.

The Lifter correlated:

- Field definitions
- Actual code usage locations
- Conditional logic and transformations

This allowed clear differentiation between:

- Transactional values
- Operational control flags
- Counters, accumulators, and identifiers

This delivered **field-level insight grounded in real business behavior** rather than isolated code fragments.

Structural Analysis of 170 PICK BASIC Programs 02

All **170 programs** were analyzed to understand

- Where each CO file field was referenced.
- How it influenced processing outcomes.
- Which programs depended on which fields.

This produced a system-wide map of field usage and dependencies, something that had never existed in a usable form.

Effective, Usable Analysis 04

Instead of scanning all procedural logic uniformly, Legacy Lifter focused only on **programs that interacted with CO file fields.**

This:

- Reduced analytical noise
- Improved accuracy
- Accelerated insight generation
- Increased confidence during SME validation

The same agentic architecture used for modernization scenarios was reused, **ensuring enterprise scalability and consistency.**

From Code to Business-Readable Explanations 05

Insights were refined through multiple passes and alidated with domain experts, resulting in:

- Plain-language explanations of field behavior.
- Clear mappings between data, logic, and business impact.
- Structured outputs suitable for reporting, analysis, and planning.

The Method Used to Decipher Legacy Logic – In Brief

Foundation	**Speaking the System's Language**	
	Learned how UniVerse and PICK BASIC behave in runtime.	Looked at production reality, not just static source code.
Analysis	**Following the Logic Wherever it Led**	
	Walked through all 170 PICK BASIC programs systematically.	Traced where fields were used and depended upon.
Anchor	**Using Schema as the Source of Truth**	
	Anchored every insight to the central CO file structures.	Separated real business data from technical control logic.
Delivery	**Turning Cod into Human Insight**	
	Explained system behavior in plain, accessible language.	Delivered queryable outputs teams could explore independently.

What Was Delivered

The engagement produced decision-ready artifacts, including:

- Detailed knowledge graph of the legacy system of 170+ applications.
- Understanding and clarity on dependencies.
- A complete **CO file field inventory,** enriched with business meaning.
- Clear mappings showing **where and how each field was used.**
- Summarized business rules tied directly to PICK BASIC logic.
- Dependency views illustrating **how changes would ripple across programs.**
- Queryable outputs enabling ongoing exploration without developer involvement.
- With a chat interface, it was possible to ask questions about the legacy system, which could be answered.

Business Impact

- Restored **visibility into a mission-critical UniVerse MultiValue system.**
- Reduced reliance on scarce PICK BASIC experts.
- Enabled analysts to interpret system behavior independently.
- Preserved institutional knowledge in structured, searchable form.
- Significantly reduced analyst–developer clarification cycles.
- Created a safer foundation for modernization, migration, and data initiatives.

Outcome

Using **The Lifter,** the organization transformed decades-old **Rocket UniVerse and PICK BASIC logic** into **clear, explainable, field-level intelligence,** without rewriting systems or disrupting operations.

Instead of delaying change due to uncertainty, leaders gained the **confidence to move forward and plan the next steps in terms of modernization, AI usage and analytics.**

This case demonstrates how **deep, platform-aware system understanding** can unlock progress, even in the most complex, niche legacy environments.

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About Indium

Indium is an AI-driven digital engineering company that helps enterprises build, scale, and innovate with cutting-edge technology. We specialize in custom solutions, ensuring every engagement is tailored to business needs with a relentless customer-first approach. Our expertise spans Generative AI, Product Engineering, Intelligent Automation, Data & AI, Quality Engineering, and Gaming, delivering high-impact solutions that drive real business impact.

With 5,000+ associates globally, we partner with Fortune 500, Global 2000, and leading technology firms across Financial Services, Healthcare, Manufacturing, Retail, and Technology–driving impact in North America, India, the UK, Singapore, Australia, and Japan to keep businesses ahead in an AI-first world.

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