Reengineering Legacy Systems:
Tracking Functions and Generating Reports

In order to enable systems in separate universes to share the same data source, CalPERS devised the Backbridge solution. With this solution, updates to the corporate database (CDB) were being sent during nightly batch runs. This worked reasonably well, but had three main imperfections: legacy programs did not have access to up-to-the-minute data; record deletions were not applied correctly to the VSAM file; and supporting this infrastructure incurred significant costs due to data discrepancies and cleanup. After considering alternatives, CalPERS chose Trinity Technology Group to reengineer legacy systems. This new system, the Backbridge Decommission (BBD), would eliminate imperfections by utilizing a middleware layer that would directly call and retrieve data from CDB.

Overview

The California Public Employees' Retirement System (CalPERS) manages pension and health benefits for approximately 1.5 million California public employees, retirees, and their families. As of June 30, 2006, it had provided benefits to 1,048,895 active and inactive members and 448,271 retirees. CalPERs membership is divided approximately in thirds among current and retired employees of the state, schools and participating public agencies.

During the mid-90s, CalPERS undertook a major initiative to revamp its systems which resided on an IBM mainframe. This initiative, the CalPERS Online Member and Employer Transaction System (COMET), was only partially completed. While many systems were incorporated into COMET, a handful remained on the mainframe. The underlying CDB, was the system of record for member and employer data, but legacy systems remaining on the mainframe had no means to directly query these data.

Key Benefits to the Client

- **Consolidated & Sustainable System** – A number of legacy systems, including "problematic" programs that perform sequential reads, are accommodated in the new infrastructure; despite the increase in data exchange and storage, the total batch processing time did not increase.

- **On Time & Below Budget** – The solution was delivered in a timely manner, and users were able to use systems throughout implementation. There was no production downtime.

Shortly after implementation, former **CalPERS CEO** wrote:
"On November 11th, the Legacy Enrollment Database and its associated "backbridge" process were decommissioned. For those of you who have lived the pain of reconciling data discrepancies between COMET and the legacy systems, the significance of this achievement is huge! The solution went into production seven weeks ahead of schedule and well under budget (**the budget was originally estimated at $4-5 million, but delivered for only $1.2 million**) **and the ongoing annual savings to CalPERS is estimated at $500,000 - $700,000.** However, the greatest benefit to this project is that we've eliminated a major source of our data integrity and redundancy problems."

- **Accurate & Stable Data Exchange & Retrieval –** Users have access to accurate and updated information. This saves time and money wasted by discrepancies resulting from inaccurate data.
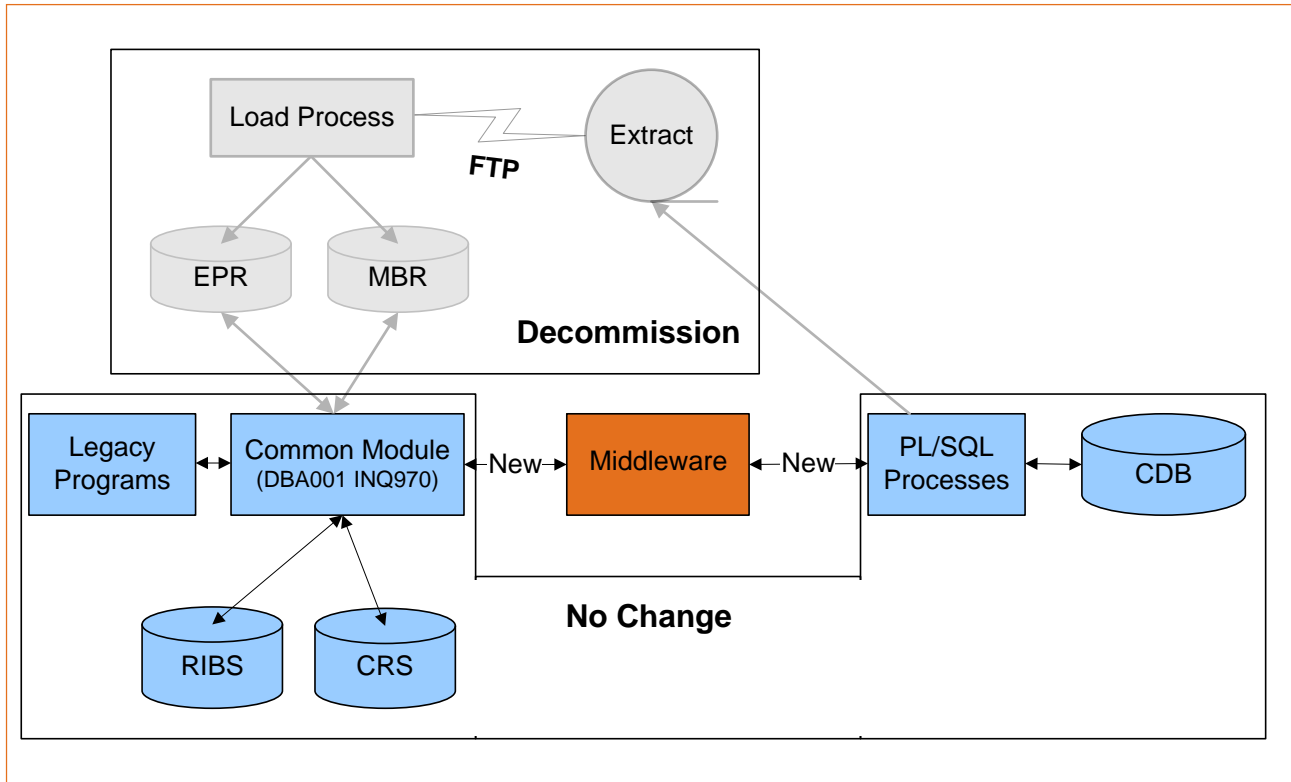

Figure A. New middleware solution that allows legacy online and batch programs access the CDB directly.
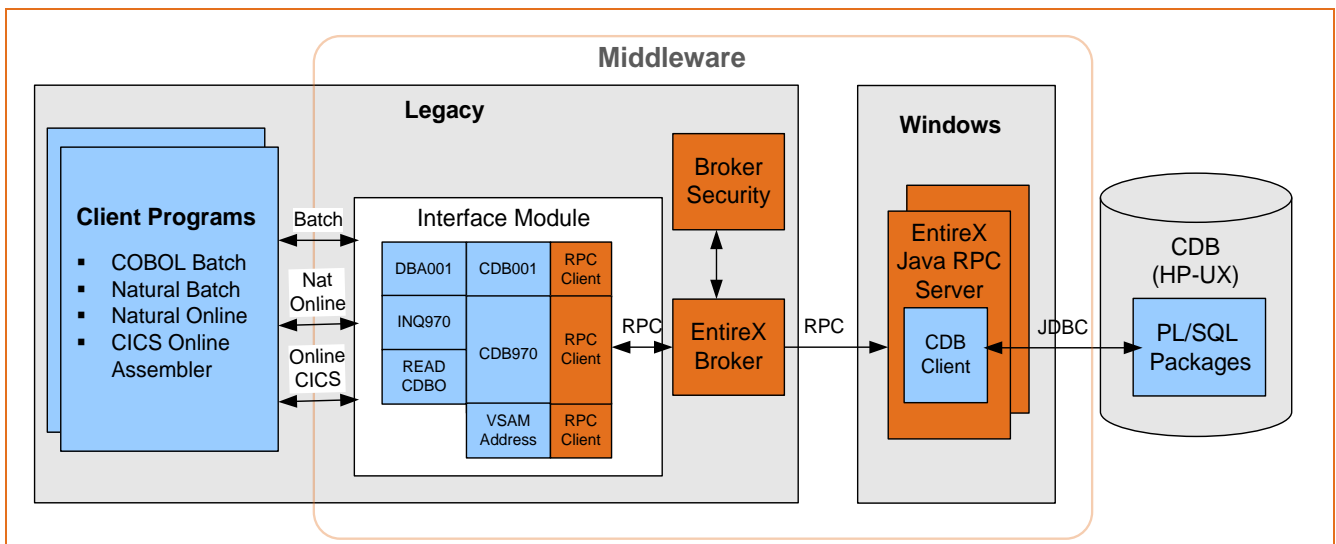

Figure B. System Architecture illustrated with new components in orange.

Trinity Technology Group Provides Innovative Solutions

At TrinityTG, we are in the business of solving the problems that arise with shifts in business strategies and operations. **No matter what information technology challenges you face, we can use those challenges as opportunities to find solutions that fit your current and future needs.** We can help to develop business, technical, and enterprise architectures to improve business processes and transactions. **Our Strategic Planning approach focuses on re-use and adaptation vs. re-building from scratch.** We perform process analysis with an eye to best leverage your current system. We design process maps to enable effective communication between business and technical users throughout the project life cycle. **At every phase, we use new technologies and techniques to maximize your investment in business systems.** To establish cohesive and effective interaction through the project life cycle, we produce formal plans for all of the following critical processes for every project: Communication, Risk Management, Change Management, Configuration Management, Implementation Management, and Project Management.

TrinityTG's Success is Measured in the Satisfaction of our Clients

Our clients are among the largest of state agencies across the public sector and the most progressive and advanced in the private sector. Our clients' success drives our business; 95% of our business comes from referrals from current and past clients. **We distinguish ourselves by our approach, working in connection with our clients to ensure their satisfaction every step of the way.**

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