Objectivity Case History

Customer Information

Customer: International Computers Ltd. (ICL)

Industry: Computer Hardware and Software
Application Domain: Dragon - An Expert System for configuring hardware and diagnosing customer or internally reported problems.
Status: In production.
Platform: Sun Solaris [ICL supplied the SPARC processors]
Compiler: C++
Other Tools: -

About ICL

International Computers Limited (ICL) was a major British computer company formed in 1968 through the merger of International Computers and Tabulators (ICT) and English Electric Computers. It was the UK government's attempt to consolidate and strengthen its national computing industry in response to growing dominance by American firms, especially IBM.

Key Points:

- **Main Products:** ICL produced mainframes, notably the **2900 Series ("New Range")**, and later diversified into minicomputers, personal computers, and services.
- **Focus:** ICL was particularly strong in government, education, and large enterprise markets in the UK and Commonwealth countries.
- **Innovation:** The company was known for:
    - Its advanced operating systems (like George, VME/B and VME/K) and software tools, such as IDMS.
    - The Distributed Array Processor (DAP), which could have up to 4,096 CPUs.
    - The Content Addressed Filestore, which could perform indexless sorts on variable length data for hundreds of clients in a few rotations of its specially built and microprocessor driven disk.
- **Acquisition:** Fujitsu acquired an 80% stake in 1990 and full ownership by 1998. ICL was eventually rebranded as **Fujitsu Services** in 2002, marking the end of the ICL name.

Legacy:

ICL played a vital role in shaping the UK's early computing landscape and trained generations of engineers and programmers who later influenced global IT development.

Buying Criteria

Ex-colleagues of Leon and Brian at ICL's Software Development Division in Bracknell, UK contacted Objectivity in 1995 whilst designing a "Smart System" (early AI) for configuration of mainframe hardware and software, collecting diagnostic data, and to support early diagnosis of customer trouble tickets. They required:

- Solaris and C+ support
- Scalability
- Supports complex data models
- Supports complex relationships
- Handles versioning
- Supports compute and data intensive simulations.

Competition:

ICL had already ruled out its own IDMS network database and relational databases, plus Oracle and Ingres for performance and data model complexity (many classes, deep inheritance. And multiple many-to-many relationships). Their options were to build a custom DBMS, use structured files, or adopt a commercial ODBMS. They decided on the latter.

Evaluation:

Objectivity/DB easily passed the performance and scalability tests and had more than adequate features. We also met their documentation, product fixes and support requirements.

Development, Trials and Production:

The model and algorithms had been simulated and took only a few months to be integrated with Objectivity/DB. Dragon went live after three months of parallel-running operational trials and worked flawlessly for several years. There were even discussions about a paid-for port of Objectivity/DB to their mainframes and a sales and marketing arrangement. However, after Fujitsu acquired ICL, they replaced most customer-facing systems with their own applications, even though they had no "smart" equivalent to Dragon.

Contact Information

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