Sun Mainframe Rehosting at Transamerica Life Canada

Part 1 — The Decision

An IDC White Paper
Sponsored by Sun Microsystems

Analyst: Vernon Turner

5 Speen Street • Framingham, MA 01701 USA • Phone 508.872.8200 • Fax 508.935.4015 www.idc.com

IDC Analyze the Future

INTRODUCTION

This white paper is the first of three snapshots of the migration of a key business system from a mainframe computing environment to a Sun environment. This first snapshot captures the planning and decision-making process. In the migration and acceptance testing snapshots that follow, IDC will identify and analyze the critical issues surrounding a typical rehosting effort.

The migration decision is a perennial challenge for IT planners. Twenty years ago, due to proprietary operating environments combined with few cross-platform tools and standards, IT often opted to maintain the status quo following a migration analysis. To make matters more irritating, the price, performance, and functionality of the new target environment were often much better than those of the legacy system. Getting from source to target, however, was an unaffordable process. So-called greenfield or clean-sheet applications demonstrated what IT wanted to do, but could not afford, at least for legacy systems.

This study is based on conversations with a customer identified by Sun Microsystems. Planning milestones and budgets for effort and time were obtained before the onset of the work. Subsequent investigation will reveal just how well early expectations are met.

TRANSAMERICA LIFE CANADA

Transamerica Life Canada (Transamerica) is a market leader in the sale of life insurance and investment products in Canada.

Transamerica Life Canada is a member of the AEGON Group, a leading international financial services group. The Group's businesses offer a diverse portfolio of products: principally life insurance, pensions, and related savings and investment products but also accident, health, and general insurance. With close to 1,000 employees across the country, AEGON Canada Inc. is headquartered in Toronto, Ontario, and provides Canadians with wealth management

solutions through its companies: Transamerica Life Canada, AEGON Capital Management Inc., AEGON Dealer Services Canada Inc., Money Concepts (Canada) Ltd., and AEGON Fund Management Inc. Through its holdings, AEGON Canada has over $10 billion in assets under management.

In December 2000, Transamerica and NN Life Insurance Company of Canada amalgamated.

In December 2000, Transamerica and NN Life Insurance Company of Canada (NN) amalgamated and continued to operate as Transamerica Life Canada (Transamerica). NN's IT systems, hosted in a mainframe computing environment, are now under the direction of Naj Hirani, vice president, information technology and chief information officer.

Maximizing Profit: The Presenting Problem

The IT system that supports NN's life insurance and investment products is outsourced and run in a mainframe environment at a United States service provider and is not cost-effective to operate.

"The IT system that supports NN's life insurance and investment products is outsourced and run in a mainframe environment at a United States service provider and is not cost-effective to operate," according to Hirani. "Here in Toronto we have a mixed-vendor environment, with about 20% of our business residing on servers supplied by Sun Microsystems and 80% by other suppliers. The business question for us was, Should we host the NN system on an in-house mainframe or migrate the system to our Sun operating environment? Our analysis indicated that in-house operating costs for Sun systems were lower than [those of] an in-house mainframe."

Transamerica has an ongoing responsibility to administer the investment product for current customers. And, Transamerica is interested in retaining those customers.

One of NN's product offerings was of particular interest to Transamerica. The offering is an investment product with an enrollment of approximately 100,000 customers and assets that total just under $2 billion. To harmonize offerings after the acquisition, Transamerica decided not to continue to sell the investment product. At the same time, the company has an ongoing responsibility to administer the product for current customers. And, Transamerica is interested in retaining those customers and inviting them to consider other Transamerica products.

The software that administers the investment products comprises administrative functions. Customers may request that parameters of their investment be changed; for example, they may ask that more money be drawn each month from an annuity or that monies be reallocated among different investment choices. This part of the administrative function is an interactive system used about 12 hours each business day in support of a back-office operations and call center business unit.

A collection of batch operations serves other administrative functions. The investment portfolio price fluctuates with markets, and each day a batch program recalculates this price. Monthly batch processes aggregate information about payments to customers. Quarterly and annual reports summarize the overall financial status of the assets under management.

From a technical perspective, the administrative system is a series of COBOL programs and associated utilities. Some COBOL programs run under an online system (CICS) to provide the interactive online transaction processing (OLTP) functions. All of the applications run against data stored in a VSAM database. Other software investments include necessary job control language (JCL), FOCUS, EASYTRIEVE, and CoSORT.

Deciding to Migrate

The primary motivation to migrate the administrative system is cost.

The primary motivation to migrate the administrative system is cost. Because of exchange rates and labor costs, Transamerica estimates that there is an immediate 50% premium associated with the outsourcing operations being in the United States. Integration of this system with other Transamerica systems is more difficult because it isn't in-house. Even though Transamerica has curtailed sales of new products, the company expects to attend to existing customers for years to come.

If the applications were ported from the mainframe environment to the prevalent Sun server environment, then existing staff members would have all the skills necessary to operate the system.

The internal IT team evaluated the option of bringing the mainframe environment in-house. Analyses showed that in-house operating costs would certainly be lower than those for outsourcing the environment to the U.S. service provider. However, to bring a mainframe environment into the Toronto datacenter would require additional staff with mainframe skills and experience — and the organization discovered that such employees were relatively hard to find. Meanwhile, if the applications were ported from the mainframe environment to the prevalent Sun server environment, then existing staff members would have all the skills necessary to operate the system.

The IT team began an audit to establish an inventory of the mainframe application's components, to develop a best-practices plan for the migration process, and to estimate a sequence of tasks and a tentative project schedule.

The IT team's focus shifted to the risks and costs associated with a migration from the mainframe environment to the Sun operating environment. Could the system be migrated quickly and reliably and at a price that could be recovered due to lower operating costs moving forward? To answer this question, the IT team began an audit to establish an inventory of the mainframe application's components, to develop a best-practices plan for the migration process, and to estimate a sequence of tasks and a tentative project schedule.

SUN'S SOURCE AUDIT ASSESSMENT SERVICES

"There are two primary objectives for what Sun calls the 'source audit,'" according to Wayne Worden, Sun's rehost center manager for the Transamerica audit. "The first objective is to establish an initial baseline inventory of all source modules sorted by type — CICS COBOL program, batch COBOL program, JCL [job control language], and so on. The second objective is to identify those components that are adaptable with existing tools as well as those that will require special attention."

Sun Professional Services technicians audit a project repository built from application source modules supplied by the customer. Sun professionals initially analyze the inventory for completeness

SUN'S SOURCE AUDIT ASSESSMENT SERVICES (CONTINUED)

and review their findings with the customer. Sun professionals then analyze the source modules to identify areas that require or potentially require customization. The information is collected and presented to the customer in a source audit assessment report. Only active application source modules need to be rehosted. Often, customers eliminate unused or inactive modules as a result of this review. Transamerica eliminated programs, JCL, and utilities, reducing the overall project scope to those core elements required for the future.

The analysis results depicted in the source audit assessment report are the foundation for estimating the time, tools, and skills required for the application component migration. Past experience has provided the basis for tool development to identify situations requiring source modification (via an assortment of methods). With the increasing availability of adaptive tools and methodologies, Sun analysts are able to anticipate the toolsets and effort that will be needed to complete the application component migration.

The customer/Sun team can use the results to establish a partnership; together they can determine which company will be responsible for specific tasks by balancing their core competencies with the overall project cost.

"The final result is a budgetary estimate," Worden explained, "because the final decision whether to migrate always depends on the total cost of ownership and expected time frame to capture a complete return on investment. As costs drop, we see more of our customers deciding to migrate.

"Our Transamerica engagement provided a good platform for establishing a productive partnership by providing a common view into the application. The source audit assessment results have served as an objective basis for Transamerica to make an informed decision and to prepare for the project."

Sun's mainframe rehosting software environment includes tools and features that streamline the migration process.

Results of the audit, which was conducted in March, indicated that the migration option was viable. As Table 1 shows, there were hundreds of components to be considered. At the same time, Sun's mainframe rehosting software environment includes tools and features that streamline the migration process. VSAM files, for example, can be rehosted using Sun's VSAM capabilities. Tools such as FOCUS and CoSORT have been ported to and certified in the Sun environment. Existing tools could leverage much of the work.

Drawing on their experience, Transamerica's Hirani and Kennedy devised a plan that exploited in-house resources and expertise complemented by consulting services from Sun and supported by Sun's migration products.

"We are confident that we can rehost the mainframe platform to the Sun platform successfully," claimed Hirani, "because we've done it before." Hirani and his colleague Grace Kennedy, assistant vice president, investment products systems, have used Sun's rehosting products to port financial services applications from the mainframe to the Sun environment. Drawing on their experience, they devised a plan that exploited in-house resources and expertise complemented by consulting services from Sun and supported by Sun's migration products.

Table 1: Transamerica's Application Profile

Component of the Application Set	Approximate Number of Programs
Interactive	600+
Batch	1,000
Screens	260
Job control language	4,500
VSAM files	300
Utilities (e.g., backup)	14

Source: IDC, 2002

On May 14, the IT team made the final decision and set in motion an aggressive schedule. High points of that plan are as follows:

- Sun consultants will take primary responsibility for porting the COBOL programs, while Transamerica will focus on the migration of data sets.
- Migration will begin with those systems used daily and weekly and then move systematically to systems needed quarterly and annually.
- The migration will conclude with all systems in operation by the end of June.
- Testing will occur from July 1 to August 6, with Transamerica at the lead and Sun consultants in reserve to help with problems as needed.
- The new systems will be put into production on August 6, which coincides with the termination of outsourcing services from Transamerica's U.S. service provider.

Managing Risk

"We know what we have to do, and we understand the factors that we must watch most carefully," said Kennedy. To make the migration a success, Transamerica has identified some of the factors in the planning process:

- A complete and accurate audit of subsystems is essential.
- The decision to curtail the sale of additional products must be sustained.
- Rehosting must be completed by the end of June and acceptance testing must be completed in five weeks, prior to the expiration of Transamerica's outsourcing contract with its U.S. service provider.
- Transamerica and Sun resources must work uninterruptedly and in a coordinated fashion for the short, intense duration of the project.

- Impact of the system on users must be minimized both during and after the migration.
- The "new" system must be functionally equivalent to the existing system in details such as the exact format of printed materials aimed at customers.

Challenges to the Migration Process

The curmudgeonly masters of IT management cynically suggest that "IT systems migrate best on a white board." By that they mean that simple block diagrams, undefined transformational arrows and conduits, and assumptions lead to significant risk. In reality, to choose an antithetical saying, the devil is in the details.

IDC believes that Transamerica's challenges are not writ large; rather, they are in the fine print.

IDC believes that Transamerica's challenges are not writ large; rather, they are in the fine print. As the Transamerica migration moves ahead, IDC will be watching carefully how the company addresses the following challenges:

- **The 80/80 rule.** The first 80% of a project's milestones consumes 80% of the project budget; the final 20% consumes 80% of the project's budget as well. Software development projects have a tendency to move smoothly until the endgame, when accumulated errors and interactions among components frustrate attempts at closure.
- **Murphy's Law.** Anything that can go wrong, will. Project plans that assume slack time may underestimate the time that it takes to solve unexpected problems.
- **Gordon's Law.** Adapting the user to the software is cheaper than adapting the software to the user. Transamerica's objective, to produce a system identical in behavior and performance to the original, may not be the easiest path to success. People can adapt more easily than systems in many cases.

NEXT STEPS

Our next white paper will mark the progress of Hirani, Kennedy, and their team, as the target hardware and software environment is brought into play and the work of the migration gets under way.

IDC Worldwide Offices

CORPORATE HEADQUARTERS

IDC
5 Speen Street
Framingham, MA 01701
United States
508.872.8200

NORTH AMERICA

IDC Canada
36 Toronto Street, Suite 950
Toronto, Ontario M5C 2C5 Canada
416.369.0033

IDC California (Irvine)
18831 Von Karmen Avenue
Suite 200
Irvine, CA 92612
949.250.1960

IDC California (Mountain View)
2131 Landings Drive
Mountain View, CA 94043
650.691.0500

IDC New Jersey
75 Broad Street, 2nd Floor
Red Bank, NJ 07701
732.842.0791

IDC New York
2 Park Avenue
Suite 1505
New York, NY 10016
212.726.0900

IDC Texas
100 Congress Avenue
Suite 2000
Austin, TX 78701
512.469.6333

IDC Virginia
8304 Professional Hill Drive
Fairfax, VA 22031
703.280.5161

EUROPE

IDC Austria
c/o Loisel, Spiel, Zach Consulting
Mayerhofgasse 6
Vienna A-1040, Austria
43.1.50.50.900

IDC Benelux (Belgium)
Boulevard Saint Michel 47
1040 Brussels, Belgium
32.2.737.76.02

IDC Denmark
Omøgade 8
Postbox 2609
2100 Copenhagen, Denmark
45.39.16.2222

IDC Finland
Jarrumiehenkatu2
FIN- 00520 Helsinki
Finland
358.9.8770.466

IDC France
Immeuble La Fayette 2
Place des Vosges Cedex 65
92051 Paris la Defense 5, France
33.1.49.04.8000

IDC Germany
Nibelungenplatz 3, 11th Floor
60318 Frankfurt, Germany
49.69.90.50.20

IDC Italy
Viale Monza, 14
20127 Milan, Italy
39.02.28457.1

IDC Netherlands
A. Fokkerweg 1
Amsterdam1059 CM, Netherlands
31.20.6692.721

IDC Portugal
c/o Ponto de Convergancia SA
Av. Antonio Serpa 36 - 9th Floor
1050-027 Lisbon, Portugal
351.21.796.5487

IDC Spain
Fortuny 18, Planta 5
28010 — Madrid
Spain
34.91.787.2150

IDC Sweden
Box 1096
Kistagangen 21
S-164 25 Kista, Sweden
46.8.751.0415

IDC U.K.
British Standards House
389 Chiswick High Road
London W4 4AE United Kingdom
44.208.987.7100

LATIN AMERICA

IDC Latin America
Regional Headquarters
8200 NW 41 Street, Suite 300
Miami, FL 33166
305.267.2616

IDC Argentina
Trends Consulting
Rivadavia 413, Piso 4, Oficina 6
C1002AAC, Buenos Aires, Argentina
54.11.4343.8899

IDC Brazil
Alameda Ribeirao Preto, 130
Conjunto 41
Sao Paulo, SP CEP: 01331-000 Brazil
55.11. 3371.0000

International Data Corp. Chile
Luis Thayer Ojeda 166 Piso 13
Providencia
Santiago, 9, Chile
56.2.334.1826

IDC Colombia
Carerra 40 105A-12
Bogota, Colombia
571.533.2326

IDC Mexico
Select-IDC
Av. Nuevo Leon No. 54 Desp. 501
Col. Hipodromo Condesa
C.P. 06100, Mexico
525.256.1426

IDC Venezuela
Calle Guaicaipuro
Torre Alianza, 6 Piso, 6D
El Rosal
Caracas, Venezuela
58.2.951.1109

CENTRAL AND EASTERN EUROPE

IDC CEMA
Central and Eastern
European Headquarters
Male Namesti 13
110 00 Praha 1
Czech Republic
420.2.2142.3140

IDC Croatia
Srednjaci 8
1000 Zagreb
Croatia
385.1.3040050

IDC Hungary
Nador utca 23
5th Floor
H-1051 Budapest. Hungary
36.1.473.2370

IDC Poland
Czapli 31A
02-781 Warszawa, Poland
48.22.7540518

IDC Russia
Suites 341-342
Orlikov Pereulok 5
Moscow, Russia 107996
7.095.975.0042

MIDDLE EAST AND AFRICA

IDC Middle East
1001 Al Ettihad Building
Port Saeed
P.O. Box 41856
Dubai, United Arab Emirates
971.4.295.2668

IDC Israel
4 Gershon Street
Tel Aviv 67017, Israel
972.3.561.1660

IDC South Africa
Building 9, Pebble Beach
Fourways Golf Park
Roos Street
Fourways, Gauteng
South Africa
27.11.540.8000

IDC Turkey
Tevfik Erdonmez Sok. 2/1 Gul
Apt. Kat 9D
46 Esentepe 80280
Istanbul, Turkey
90.212.275.0995

ASIA/PACIFIC

IDC Singapore
Asia/Pacific Headquarters
80 Anson Road
#38-00 IBM Towers
Singapore 079907
65.6226.0330

IDC Australia
Level 3, 157 Walker Street
North Sydney, NSW 2060
Australia
61.2.9922.5300

IDC China
Room 611, Beijing Times Square
88 West Chang'an Avenue
Beijing 100031
People's Republic of China
86.10.8391.3610

IDC Hong Kong
12/F, St. John's Building
33 Garden Road
Central, Hong Kong
852.2530.3831

IDC India Limited
Cyber House
B-35, Sector 32, Institutional
Gurgaon 122002
Haryana India
91.124.6381673

IDC Indonesia
Suite 40, 17th Floor
Jakarta Stock Exchange
Tower 2, Jl. Jend. Sudirman Kav. 52-53
Jakarta 12190
6.221.515.7676

IDC Market Research (M) Sdn Bhd
Jakarta Stock Exchange Tower II
17th Floor
Jl. Jend. Sudirman Kav. 52-53
Jakarta 12190
62.21.515.7676

IDC Japan
The Itoyama Tower 10F
3-7-18 Mita, Minato-ku
Tokyo 108-0073, Japan
81.3.5440.3400

IDC Korea Ltd.
Suite 704, Korea Trade Center
159-1, Samsung-Dong
Kangnam-Ku, Seoul, Korea, 135-729
822.551.4380

IDC Market Research (M) Sdn Bhd
Suite 13-03, Level 13
Menara HLA
3, Jalan Kia Peng
50450 Kuala Lumpur, Malaysia
60.3.2163.3715

IDC New Zealand
Level 7, 246 Queen Street
Auckland, New Zealand
64.9.309.8252

IDC Philippines
703-705 SEDCCO I Bldg.
120 Rada cor. Legaspi Streets
Legaspi Village, Makati City
Philippines 1200
632. 867.2288

IDC Taiwan Ltd.
10F, 31 Jen-Ai Road, Sec. 4
Taipei 106
Taiwan, R.O.C.
886.2.2731.7288

IDC Thailand
27 AR building
Soi Charoen Nakorn 14,
Charoen Nakorn Rd., Klongtonsai
Klongsan, Bangkok 10600
Thailand
66.02.439.4591.2

IDC Vietnam
Saigon Trade Centre
37 Ton Duc Thang Street
Unit 1606, District-1
Hochiminh City, Vietnam
84.8.910.1233; 5

IDC is the foremost global market intelligence and advisory firm helping clients gain insight into technology and ebusiness trends to develop sound business strategies. Using a combination of rigorous primary research, in-depth analysis, and client interaction, IDC forecasts worldwide markets and trends to deliver dependable service and client advice. More than 700 analysts in 43 countries provide global research with local content. IDC's customers comprise the world's leading IT suppliers, IT organizations, ebusiness companies and the financial community. Additional information can be found at www.idc.com.

IDC is a division of IDG, the world's leading IT media, research and exposition company.

02-145SYSTEM3421
July 2002

IDC
Analyze the Future

www.idc.com