Migrating 4GL Applications

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Agenda

- Common Migration Issue for 4GLs
- Speedware Migrations
- Powerhouse Migrations
- Transact Migrations
- Improving the User Interface

Common Migration Issues for 4GLs

Common Migration Issues for 4GLs

- Database migrations
- Interfacing with 3GL migration results
- External technologies
  - Omnidex / Superdex
  - Supertool
  - Editors
  - HP e3000 Utilities (MPEX, Spooler product, Job Queue Products, etc.)

Common Migration Issues for 4GLs

- Interfacing with packaged applications
  - ManMan
  - Amisys
  - Summit
  - Exegesys
  - Ecometry
  - Etc.

Speedware Migrations

Migrating Speedware Applications

- Every Speedware development toolset offers cross-platform portability as one of its core features.

- Most applications built with Speedware technology can be easily ported to any other supported platform without modifying the code at all.

- Operating System Switches permit developers to write OS-specific code in applications designed for multiple platform deployment.

Database Migrations

- Databases can be easily ported through the Speedware development environments.
  - Database layers are abstracted away from the code permitting application to be database portable.
  - Speedware's development tools are able to reconstruct identical database structure in other database types
- The database porting process is relatively simple
- Coming Soon: Database Migrator

Database Migrations

- **What about Omnidex and Superdex?**
  - Relational Databases have strong data querying capabilities
    - However, most of the commonly-used Omnidex functionality doesn't exist. (keyword retrieval)
  - Omnidex has a migration path to Omni-Access
    - API compatibility libraries exist, reducing need to re-write queries.
  - Superdex – best option is migration to Omni-Access.

Migrating Speedware Applications

- Platform / Database grid

HPe3000 – MPE/iX	Image Image (with Omnidex) Image (with Superdex) Allbase Oracle (V7) KSAM and KSAM-XL Flat (and other variations)
HP9000 – HP-UX	Oracle Sybase Informix Allbase DISAM (for Indexed files) Flat Netbase (Image, KSAM, etc.)
IBM RS6000 – AIX	Oracle Sybase Informix DB2 DISAM (for Indexed files) Flat Netbase (Image, KSAM, etc.)

Migrating Speedware Applications

- ## Platform / Database grid

Windows XP / 2000 / NT / ME / 98	SQL Server Oracle Sybase Informix DB2 DISAM (for Indexed files) Flat Netbase (Image, KSAM, etc.) ODBC (for all other dbms types)
Sun – Solaris	Oracle Sybase Informix DISAM (for Indexed files) Flat Netbase (Image, KSAM, etc.)

Migrating Speedware Applications

- Product Portability Grid

Speedware/4GL Speedware/Designer	HPe3000 – MPE/iX HP9000 – HP-UX IBM R6000 – AIX Windows XP / 2000 / NT / ME / 9x Sun – Solaris (4GL only)
Speedware Autobahn	HPe3000 – MPE/iX HP9000 – HP-UX Windows XP / 2000 / NT / ME / 9x Sun – Solaris (Autobahn CGI only) Linux (Autobahn CGI only)
Visual Speedware	HPe3000 – MPE/iX HP9000 – HP-UX Windows XP / 2000 / NT / ME / 9x
EasyReporter	HPe3000 – MPE/iX HP9000 – HP-UX

Speedware Migration Process

- Design
  - Binary FTP to target system
  - Open with Designer
  - Change file locations (paths) and database location

- Database
  - Using Speedware development tools
    - BDIS, change DB type / user / path, BGEN
  - Speedware Database Migrator
  - Bridgeware (Quest)

Speedware Migration Process

- Applications
  - Generate applications from Designer

Speedware Migration Issues

- Batch Sections and Command Statements
  - Speedware is looking into providing an MPE Emulation layer to automate migrations
- CALLs to 3GL applications
  - Migration of 3GL XLs to shared library routines
- Database porting
  - Differences
  - Database porting (gradual, incremental loading, mirroring)
  - Omnidex / Superdex
  - Optimization (Data views)

Application Porting Demonstration

Click Here

Transact Migrations

Transact Migrations

- Transact (RAPID 3000)
  - 4GL created by HP for the HP e3000 platform only
- 400 supported customers worldwide (HP estimates)
  - Estimated total of 1000 customers
- Significant number looking for future path
- There is currently no easy migration / conversion paths

Transact Migrations

- SPW is offering a Transact migration solution

- Benefits of Speedware solution
  - Similar language and concepts
  - Platform and Database Portability
  - User interface enhancement options
  - Continued development

Transact / Speedware Similarities

- Similar syntax in much of the 4GL statements.
- Similar 4GL concept shared between both.

Functionality Comparison

Transact	Speedware
System Dictionary	Speedware Data Dictionary
Data prompts and VPLUS	Speedware SCREEN sections
Data Reports	Speedware REPORT sections
Transaction Logic	Speedware/4GL statements
Batch Processing	Speedware BATCH sections

Transact Migration Process

- Using Speedware's tools, migrate the Transact Application to Speedware.
  - Speedware's tools will only migrate a percentage of the Transact code. In most cases, additional work will be required.
- Test the application and address any migration issues
- Once fully tested on MPE, follow the Speedware Migration Process to migrate off the HP e3000 platform.

PowerHouse Migrations

- Cognos is working closely with HP and its global partner network to provide customers with a smooth migration path from the HP e3000 for their PowerHouse applications.
- Cognos is also aligning with other partners who can provide application and database migration consulting.

Powerhouse Migration Options

Deciding Not to Migrate

- Adopt a "wait and see" strategy regarding the future of OpenMPE

- Rely on availability of third party maintenance after support end dates

Making the Decision to Migrate

- Move to a new platform manually

- Port PowerHouse Application using Axiant

PowerHouse Support

PowerHouse

	Oracle	DB2	Sybase	SQL Server	*HP Eloquence	Turbo Image	Omnidex	Oracle RDB	Allbase	Interbase	ODBC
HPUX	√	√	√		√						
AIX	√	√			√						
Sun Solaris	√	√			√						
Windows NT/2000/XP	√	√	√	√	√	√ ODBC		√ ODBC	√ ODBC	√ ODBC	√
HP e3000	√					√	√		√		
OpenVMS Alpha	√		√					√		√	
AS/400		√									
Tru64	√		√							√	

*HP Eloquence will be supported by the end of the year.

Powerhouse Migration Tools

Axiant 4GL

- Provides a Windows-based IDE (integrated development environment) for building and maintaining core business solutions.
- Enables both thin-client and terminal-based solutions to be built and maintained in a visual environment.
- Enables Web-based applications to be quickly built and deployed
- Minimize end-user training by migrating your terminal-based PowerHouse 4GL applications to new environments—while leveraging your existing PowerHouse skills, code, and experience to do so.

Powerhouse Migration Tools

Axiant Imports From -

- PowerHouse dictionary

- Relational metadata

- QUIZ, QTP, and QUICK source code

Powerhouse Migration Tools

To bring your application into Axiant:

- On MPE
  - Collect the source files (PDL, QK, QZ, QTP) to be moved
  - Save the data in portable subfiles, using QTP
  - Transfer the source code to Windows
  - Transfer the subfiles to the target machine

Powerhouse Migration Tools

To bring your application into Axiant:

- Use Axiant's migration tools to:
  - Create a migration profile: MPE/Image to Oracle/UNIX
  - Import the PDL and generate the database
  - Import the programs, converting to PH UNIX/relational

Powerhouse Migration Tools

To bring your application from Axiant to
UNIX:

- Use Axiant's tools to generate the target
  PDL and SQL.

- Use Axiant to compile the programs on
  the PC.

- Use FTP to transfer the PDL, SQL and
  source files to UNIX.

Powerhouse Migration Tools

To assemble the application on UNIX:
- RDBMS tools – create database from SQL.
- PDL – create dictionary from PDL source file.
- QUTIL – create indexed and sequential files.
- QTP – load subfiles into database and files.
- Programs – modify to match the data changes, then test.
- Make the application relational.
- Translate any MPE command scripts and test.

Powerhouse Migration Issues

Powerhouse Customer Training

- New Migration Course Available:
  - Use Axiant to:
    - Migrate your application from HP3000 to HPUX
    - Migrate your database from IMAGE to Relational
  - Free copy of Axiant with the course
- Existing courses that can help:
  - Understanding Relational Databases
  - Porting PowerHouse Applications
  - Relational Interface Courses (Part I and II)

Powerhouse Migration Support

Recommended companies with the knowledge, expertise and migration skills with PowerHouse, Axiant, HP/IX, UNIX and NT/Win2000

Minglewood Consulting	Seward Consulting
Managed Business Solutions	MB Foster
Sector 7	Creative Computing
HP	AD Technologoies
Bookwood Systems	Lawinger Consulting
In Business	C.R. DeYoung & Associates
Intertech Business Solutions	Visibility and more

Cognos Migration Assistance

- For even more information:
  http://powerhouse.cognos.com

Enhancing the User Interface

Enhancing the User Interface

- Either as part of a migration effort or post-migration, consider enhancing the visual interface of the application.
  - Putting either a Web or Windows interface on top of the application can dramatically improve the life of an application

Enhancing the User Interface

- Speedware Autobahn can easily Web-Enable existing applications.

- Existing Speedware/4GL applications can be quickly migrated to Visual Speedware, instantly giving them a Visual Basic front-end.

SpeedWeb
(internal project name)

- Web-enablement project for Classic Speedware applications
  - Java / Web
  - Instant enablement / Limited flexibility
  - Ready by July / August
  - To be part of Autobahn
  - Examples

Powerhouse Web Enablement

- Developing Web Applications? Consider PowerHouse Web
  - In conjunction with PowerHouse 4GL allows you to build Web applications including business-critical business applications for the web.
  - Eliminate overhead associated with traditional client/server computing by simply having a Web browser on the users' desktop and the applications on centralized servers.

Powerhouse Web Enablement

- Extends the reach of your enterprise to provide improved customer service, additional sales channels, and alternate communication channels to customers and suppliers.