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Speedware modernization audit service

To remain competitive in today's market, organizations are undertaking large and complex modernization projects designed to update aging legacy computer systems and improve corporate performance. Depending on the size of the organization, these projects can cost millions of dollars and take months or years to complete. Given the cost and time required, successful completion is the goal but is often difficult to achieve.

U.S. studies have shown that 18-31% of IT-related projects will be cancelled before completion and that more than half will incur cost overruns of 56-189%. Recent trends show some improvement in the absolute success/fail rate, but the number of "challenged" projects remains consistent over the years: a staggering 53% of all IT projects are completed late, over budget and under scope.

With so much at stake, companies need systems to ensure that a modernization project is successful. Speedware's Modernization Audit service provides an objective, third-party evaluation of your project's health with recommendations for success.

Speedware's project audit can uncover the issues and challenges typically encountered in the execution of an IT project, while focusing on producing a successful project result. Our evaluation also includes suggestions and best practices for improving project organization and management.

Project managers, project stakeholders and the project team all benefit from an examination of what has gone well and what needs to be improved with the project in order to complete it successfully.



Televised retailer sold on Speedware services

"We were told this project would be impossible to complete within the allotted time. Speedware proved that with the right experience, planning and knowledge, even the impossible can become a reality."

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Speedware current versions

AMXW	8.05.13
DBmotion	3.00
Esperant	5.2
Media	5.2
Speedware	7.13
Speedware Autobahn II	5.01
SpeedWeb	3.04
Visual Speedware	4.00

The "Customer," a leader in televised retailing, is known as a virtual shopping mall that never closes. The company provides telecasts 24 hours a day, seven days a week, to an audience of over 100 million viewers worldwide.

Time was running out

As a long time Hewlett-Packard customer, this retailer already had the largest HP e3000 machines on site, yet operations were rapidly approaching maximum capacity. That, together with the announcement that HP would soon no longer support the HP e3000, made it imperative that a migration solution be found and implemented quickly.

Their internal IT department claimed that, due to the complexity of the IT environment, a migration solution would be impossible to implement within the specified time frame.

Listening to the customer

In their search for a migration solution, the customer focused on three issues: timing, performance and risk.

Of utmost importance to the customer was that the migration be completed within a 12-month window. The retailer needed a solution that would be in place in time to handle the next year's holiday shopping season.

Performance was another high priority as the retailer needed to ensure that migrated applications would run as fast as the originals and that response times would not suffer.

Finally, the retailer was interested in a low-risk solution. With an extraordinary amount of information being processed daily, the company wanted a migration approach that would ensure business continuity.

The complexity challenge

The complexity of this organization's IT system would prove to be the biggest challenge. The retailer's data center stores vast amounts of information, up to 19 terabytes of data at a time.

Adding to the issue of complexity was the fact that three separate business operations were sharing the applications. There were regional differences associated with each of these entities and the proposed migration solution would have to address these differences.

Speedware's migration solution

Speedware was awarded the contract not only because of their competitive pricing but also due to an innovative migration approach that zeroed in on the customer's concerns.

The proposed migration solution allowed the retailer to keep their databases and structures without the need to rewrite, helping to ensure that the project was completed on time. In addition, the solution let the company keep certain tools that were vital to their operations.

Highlights of a successful migration

At the end of the migration, both the customer and Speedware knew they had accomplished what was once considered impossible.

Speedware completed the migration project on time, ensuring that the retailer would be able to handle the anticipated spike in holiday transactions. Armed with HP Integrity servers running HP-UX, reliability was maintained and the performance was better than expected.

In excess of 2 million lines of code were successfully migrated. Despite the complexity of the project, the transition from the HP e3000 to the HP Integrity was smooth and business continuity was maintained.

Wealth of knowledge available in the SWS

Speedware's Support Web Site has the information you want

The SWS in brief

- www.speedware.com/sws
- Knowledgebase search available from initial screen; advanced knowledgebase just one click away
- Latest production versions of software and documentation
- Email notification is available per folder in the SWS
- What's New feature lets you see what has been added since the last time you visited the SWS
- Learning Center contains hundreds of articles

Speedware's Support Web Site (SWS, located at www.speedware.com/sws) is a constantly-growing repository of all things Speedware. For example:

- The SWS gives you access to the entire Knowledgebase of service requests, not just issues that you have personally submitted to Speedware. Every problem, enhancement request or technical question submitted to Speedware Support is entered into the Knowledgebase, which is accessible to all supported customers. You can look up the status of any reported problem or enhancement at your convenience.
- The Documentation folder contains all reference manuals, user guides, release notes, etc. This folder was previously called the Reference Library.
- Technical articles are available in the Learning Center folder.
- A list of bug fixes for a specific software version is available by using the Advanced Knowledgebase Search. You can get to the

advanced search by clicking the link in the upper-left corner of the initial SWS screen. In the advanced search, select a name from the Product pull-down list, and specify a version in Fixed in Version field. Then click View Results.

In addition to those great features, the SWS can also notify you when a patch, new release or new documentation is available for download. You just have to set Email notification to ON in the SWS.

E-mail notification is set for individual folders in the SWS. For example, if you'd like to be alerted whenever a new version of classic Speedware is released for the HP 9000, just open the HP 9000 folder and activate the Email notification feature. You can activate this feature by clicking the mail icon in the SWS toolbar or by clicking the **OFF** indicator in the Email notification line in the upper-right corner of the SWS. The indicator will change to **ON**, and email will be activated for the currently opened folder.

SWS Guru

GHRUG conference

Speedware was a proud sponsor of the second annual GHRUG International Technical Conference. The two-day event of the Greater Houston Regional Users Group took place from March 14-15, 2008 at the University of Houston Clear Lake campus.

This year there were five tracks, two of them dedicated to the HP e3000. Speedware was pleased to offer two presentations: an overview of migration solutions and an informative session on Application Portfolio Management (APM).

HP and Encompass webcast

Speedware was pleased to participate as one of several guest speakers in a webcast, providing a high-level summary on recent developments in the e3000 business. The webcast, sponsored by Encompass and HP, targeted the European market and included topics such as news

and announcements as well as what customers and partners could expect

in terms of R&D and support over the next few years. The webcast took place on Thursday, May 15, 2008, and also allowed for discussion on migrations, transition tools and partners.



Media hints 'n' tips

Improve your Media IQ with these ideas from our support specialists

Media hints and tips

Media pros use the following tricks to speed their use of Media and keep their dashboards running smoothly. Each item is discussed in detail at right.

- Increase the number of rows returned for a SQL table by increasing the maximum data points allowed
- Set the context per user in Media Web
- Select a language when launching Media
- Resolve language/culture problems on Windows Vista
- Automatically refresh a chart
- Ensure that the introduction page always loads when running Media Web
- Ensure that users do not receive the 'No more licenses available' message
- Ensure that all data appear in a Media chart

Speedware's Knowledgebase contains numerous hints, tips, suggestions and time-savers that can make you more efficient with Media and Media Web. We've taken some of the best ones and described them below.

Increasing the number of rows returned for SQL tables

The number of rows that Media returns in an SQL table is determined by the data points allowed in charts. A data point is a single value in a chart based on an x/y coordinate. For example, in a table with 10 rows and 5 columns, there are 50 data points. The Media default for data points in tables is 2000. To increase the number of data points, follow these steps:

1. Right-click the dashboard background (or click the File menu) and select Dashboard Properties.
2. Click the Charts tab.
3. Under Maximum Number of Data Points, increase the value of Table Chart.

Setting the context per user in Media Web

You can use a configuration file to set the context per user in Media Web. Create the file in the same location as the users.dat file (repository level). Call it usersettings.ini. The file has the following format:

```
[data_view_name\dashboard]
user=dimension=value dimension=value, etc.
```

For example:

```
[LBMDemo\LBMDemo.dsh]
admin=Warehouses="New York" Years=05
```

This specifies context for the user admin. Every time an admin user opens the dashboard via Media Web, the Warehouse dimension is set to New York, and the Years dimension is set to 05.

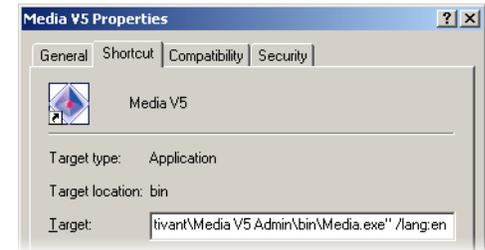
Selecting language when launching Media

Media will follow the regional settings set up on your computer to start either in French or English. To override the language setting, you need to specify the following in the shortcut:

```
path_to_media.exe /lang:fr
```

or

```
path_to_media.exe /lang:en
```



Avoiding problems with language/culture on Windows Vista

When you install Media V5.2 on Windows Vista and then launch Media, you may see the following error:

Unknown culture (en:-US), .NET system default used

You simply have to open the shortcut's Properties dialog (see above) and, in the Target field, remove any extra colons that were added to the line. The target line should be:

```
path_to_media.exe /lang:en
```

Automatically refreshing a chart

If you want a particular chart to be refreshed every *n* minutes, right-click the chart, choose Properties from the pop-up menu and click the Refresh tab. Select the Automatically refresh chart option and then specify how often the chart should be refreshed.



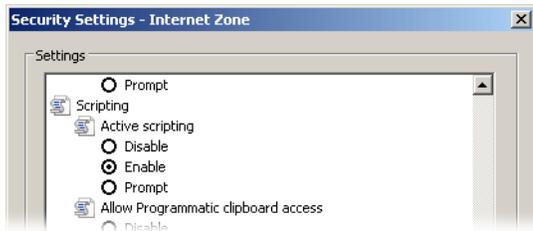
Media hints 'n' tips (continued)

Improving your Media IQ

Making sure the Intro.htm page loads in Media Web

When you attempt to load your Media Web V5 page, you may notice that you only see a Connect button with no text. For the page to load properly, your browser must have JavaScript enabled. To enable JavaScript in Internet Explorer:

1. Choose Tools > Internet Options from the main menu.
2. Click the Security tab.
3. Click on the Custom level... button.
4. Scroll down until you reach the Scripting section.
5. Enable Active scripting.



To enable JavaScript in Mozilla Firefox:

1. Choose Tools > Options from the Firefox main menu.
2. In the Options dialog, click Web Features.
3. Click Enable JavaScript.

Once you have made the change, re-load Media Web V5's Intro.htm page. It should display with the proper text.

Dealing with “No more licenses available”

When you attempt to launch Media Web, you click the Connect to Server button, but you sometimes receive the following error message:

No more licenses available.

This message is usually displayed because Media Web cannot reach License Server. You need to check that the IP address in the Is.ini file is correct. Follow these steps:

1. Open the Is.ini file found in the following location:

C:\Documents and Settings\All Users\Application Data\
Speedware\Media5\

The file contains the following information:

```
[License]
LSServerIP=ip_address
LSServerPortNum=port_number
```

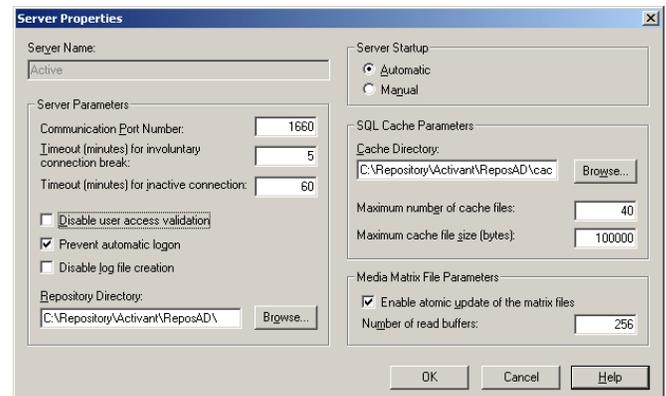
2. Make sure that LSServerIP corresponds to the IP address where License Server is installed, and LSServerPortNum specifies the port on which License Server is listening (8187 by default). This information was supplied when License Server was installed. You may have to ask your system administrator to check the information for you.

Note that if you specify localhost as the IP address of the License Server, you may also receive the error message. It is always best to specify the actual IP address of the computer.

Ensuring that all data appear in a Media chart

If you use Media with Decision Server in a client-server setup, you may sometimes find that a chart does not include all of the values that it displays when you open it locally (without using Decision Server). If this happens, try increasing the maximum cache file size in Decision Server:

1. Open the Speedware Service Manager.
2. Highlight the appropriate service in the service list. This is the service for the repository that contains your dashboard.
3. Click Modify. In the Server Properties dialog, find the Maximum cache file size (bytes) field.
4. Increase the file size, and restart the service.



Vinay Sethi
Technical Support Consultant

Getting the most from Speedware versioning

Speedware guru Michael Rusk uses versioning to update, roll back and de-bug

So many times, programmers are asked to remove functionality that is “no longer needed...” Yeah, right! We’ve all heard that one before. So the safeguard is just to leave the code in and treat those code segments as comments. The problem is that over time the program can get so cluttered it’s hard to discern code from comments. Why not create a new version of the program with the old code stripped out, making it clean and easy to read?

For many, the idea of creating and maintaining multiple versions of a program is painful, but keep in mind the benefits:

- It’s easy to roll back to the previous version without having to find and strip all of the code out of the program.
- You can reduce “obsolete” code clutter without losing the code.

I’m a huge proponent of program versioning and it’s easy to implement in Speedware. I was lucky once to meet the gentleman responsible for the architecture of Speedware Designer — Steve Reeve from London. How Steve saw Designer and the tools and capabilities that it provides greatly exceeds the use the average customer gets out of the product. This article will provide you with some of Steve’s insight so you can benefit from Designer’s advantages in program versioning.

Documentation is essential for versioning

Besides being an advocate of program versioning, I’m also big on good documentation. I’ve even been branded by some as Mr. Documentation just because I’m so obsessive about it.

As you will see in this article, versioning relies heavily on documentation to keep things straight. The way I implement documentation is easy — I use templates to get a jump on the process when starting a new program. So I’ll discuss documentation frequently, but it’s all part of a good versioning scheme.

One final note: I know that programmers at most Speedware shops insert program intros and change log history at the top of the code somewhere. It’s a habit, I know, but there is a much better way. For example, let’s say upper management asks you to produce a report for a possible audit. The report must list the program ID, the name, the program introduction and change log and the format, but no program code. Now tell me: can you do this

without listing the code if the program introduction and change log are inline with the actual code? I’m sure you can’t, unless you plan to spend long hours at Kinko’s with scissors, glue and a copy machine!

At the end of this article, I’ll show you the exact Sysdoc script to get that output, providing you follow my advice and buy into Steve Reeve’s vision for Designer.

Screen shots in this article

The screen shots in this article are from Virginia International Terminals’ HP 9000 and are just mock-up programs designed to illustrate my ideas.

How can you start versioning in Speedware?

Start with the Application Definition screen and make certain you are **not** creating applications with ***All** in the Program list as shown below.

Speedware/Designer VERSIONS. des

Application Definition

Reference : VERAPP Category

Name : Versions Article Application

Title : Versions Article Application

Master Menu : *MENU Cascade

Initial Program : Menu Popu

Finish Program : Terminate Pro

Program	Type	Substitute	Name
1	*All		
2			

*Do not use *All. You need to list your programs in AD if you want to use multiple versions.*

Also make certain that you are **not** placing just a few of the programs for an application in the program list with the Cascade option turned on, as shown below:

VERSIONS. des MRUSK

Application Definition

APP Category : :

sions Article Application

sions Article Application

NU Cascade : Yes

Menu Popu

Terminate Prog. : :

Type	Substitute	Name
Menu		Sub Menu One
Menu		Sub Menu Two

Do not use Cascade. Again, all programs must be listed.

Getting the most from Speedware versioning (continued)

Deciding when a new version is required

Why these requirements? I'll answer with a question: Did you ever wonder what that third column was for in the Application Definition Screen? The one called Substitute? Its specific purpose is program versioning. But to take advantage of it, every program in your application must be in the program list. That way, you know exactly which programs are in the given application. More importantly, with that list in place, you can substitute a new program with a completely different name for any program in the application.

A quick digression about repositories

While we're on the subject of knowing which programs are in a given application, I want to speak to programmers who still associate a single repository (design) with each Speedware application. Speedware architecture up to and including V5 dictated one application per design. In V6 the shackle was removed, although many developers still hold onto that limiting method of using Speedware.

It is my belief that programmers feel they will lose their programs in a vast sea. Isolating "their" pool of programs in a single-application design seems to be the logical solution. Yes, it is a solution, but probably the worst one. Why? Because now you're managing multiple repositories with multiple profiles and multiple catalogs, which translates into duplicated database and file definitions, and often duplicated programs. Duplication is rarely recommended as it creates more work and more problems. Steve Reeve created an entity called Category for every object in the Speedware repository.

Once you understand how to effectively use the Category feature in Designer you will see how to logically group related programs and objects to a specific business function or purpose. You can think of it as your logical design within the physical design.

Do you need a new version?

How do you decide when to make a new version of a program? There's no easy answer, since there are many factors to consider.

Here's a list of questions I ask when considering whether to create a new version as opposed to modifying the existing program:

1. Are there many changes being applied to the program?
2. Are the changes significant?
3. Is the program structure poor and hard to follow?
4. Is the program filled with obsolete code that is commented out?
5. Does the program have a bug and do I need to add traces to debug?

Obviously, if you have just a slight change to apply, you might quickly make the change to the program and skip versioning it, even if items 3 and 4 above are true. Of course, if you have more time, and your workload permits, you might take the opportunity to create the new version even for the small change, just to achieve the cleaner code.

If number 5 is true, you should create a new version every time. You don't want to clutter up a production program with CREATES to a flat file to trace events and then have to track them all down after you have resolved the problem. You simply want a temporary debug version that can be used for a specific purpose and then replaced by the previous version.

The nuts and bolts of versioning — an example

Is my method of versioning the right way or the best way? I'm not certain, but in my years working for Speedware and consulting with many of Speedware's largest customers, I've refined my method and it always makes the job easier.

The example that I'll use in the rest of this article is very simple. I just want to show the fundamental concepts of versioning in Speedware. The main focus will be on a simple customer screen with a secondary version of that program along with a customer report and its secondary version.

Getting the most from Speedware versioning (continued)

Using Sysdoc to keep track of multiple versions

Documentation is the first step

Documentation is crucial to versioning. At the bottom of this page, the Program Definition for the Customer screen has the cursor on the Sys Doc field. Most programmers don't name their system documentation, but we've used the name CUSTSCRNSYSDOC. When you use a name, you create an independent document object that can be referenced anywhere in Designer. This document helps you keep track of your versions.

In fact, once the document is linked to the initial baseline program, it will be preserved every time you copy the program to make a new version. Even if you have ten versions of the program, they will all share the document, which will show all the historical changes for each version. Also, no matter which program version you open, you see the same documentation and history, as the document is linked and shared between all versions! Nice concept, isn't it?

Below at right, part of the CUSTSCRNSYSDOC object is displayed. It contains the basic program intro and name with the creation date, along with the versioning information showing the base version program name and the subsequent version names. This is important because the base version is the program name that is referenced throughout the application, and Designer maps the new version to the old reference. This is what makes versions so simple in Speedware — you don't have to track down all references (in menus, function keys, logic, etc.) and change all code from CUSTOMERS to CUSTOMERS-V1. Best of all, you can start the document from a template, so not only is it consistent and useful, it's easy to create — just fill in the blanks!

Implementing new versions is the second step

After creating new versions of your programs, implement those versions in your Speedware application. On the next page, you'll see the Application Definition screen again, but a little differently this time. Now the Application lists all the programs in the application, which means you can add versions through the Substitute field.

Speedware/Designer VERSIONS. des

Program Definition

Reference	: CUSTOMERS	Category
Name	: Customer Master Screen	
Title	: Customer Master Screen	
Type	: Screen	Coord Type
File / View	: CUSTFLAT	File Coord Row
Database	: FLATBASE	FLAT Coord Column
File Type	: Flat	->Foreground
		->Background
Online Help	: =	
User Doc	: =	
Sys Doc	: CUSTSCRNSYSDOC	=
Format Type	: Window	=
Format Sort	: No	

In the Sysdoc document, enter all version information for the program so that you always know which is the base version, and you know why subsequent versions were created.

In PD, use the Sys Doc field to give your document a descriptive name. This document will be linked to all versions of the program and will serve as a version and change record.

Speedware/Designer VERSIONS. des MRUSK

Document CUSTSCRNSYSDOC

Program ID	CUSTOMERS
Title	Customer Master Screen
Description	This is the Customer Master Screen and it is used to manage the company customer records within the system.
Date Created	05/21/2007
Versioning	
Base Version	CUSTOMERS
Subsequent	
	Implemented Version Notations
CUSTOMERS-V1	- 01/02/2008 Stripped obsolete code and made change to validation logic
NEWPROG-NAME2	- MM/DD/YYYY Version Comments
SR No.	Change Date Who Description of Change
	Document CUSTSCRNSYSDOC

Getting the most from Speedware versioning (continued)

Implementing new versions of your programs

You can see below that newer versions have been substituted for the original programs. When the application is generated, Designer inserts the tags SCREEN-CUSTOMERS and REPORT-CUSTREPORT in the spec file but then maps to the new version for all of the code. In the code listing from the spec file, Designer inserts comments so that someone picking up the code will know where the original version of the code is. And remember: always copy the latest version of a program when you create a new version and update the documentation accordingly.

User Doc helps too

You should also add version documentation in the application's User Doc. You can always see the versions in the AD list but if the application is large you might end up scrolling through many screens to find what you need. You can see below the contents of the User Doc portion of the VERAPP application. This documentation simply lists the original programs and their current corresponding versions. Bear in mind that the standard Sysdoc

report for an application does not show the substitutes. However, by placing the information in the User Doc or Sys Doc block, that information will be printed in the AREP output.

Obviously, this method of versioning relies heavily on good documentation to keep track of what's in an application. But with the tools found in Designer and with a little practice, it will be a cinch. The beauty of this strategy is the ability to roll back to any previous version simply by inserting the previous version's program name in the Substitute field and re-generating the application. If you have only one version to roll back, just remove the value in the Substitute field and you are back to the original program.

Ultimately, there may be a point when the original is too outdated and you want to clean up your repository. Simply delete the original, copy the latest version back to the original name and remove the substitute altogether. At that point you will have a new baseline program that has all the revisions rolled into it.

Speedware/Designer VERSIONS.des MRUSK

Application Definition

Reference : VERAPP Category :
 Name : Versions Article Application
 Title : Versions Article Application
 Master Menu : MENU1 Cascade : No
 Initial Program : Menu Popup :
 Finish Program : Terminate Prog. :

Program	Type	Substitute	Name
1 CUSTOMERS	Screen	CUSTOMERS-V1	Customer Master Screen
2 CUSTREPORT	Report	CUSTREPORT-V1	Customer Report
3 MENU1	Menu		Sub Menu One
4 MENU2	Menu		Sub Menu Two
5			

Newer versions of programs are specified in the Substitute field

```
SCREEN-CUSTOMERS:LISTING;
(* Substituted by CUSTOMERS-V1 *)
(* Release Label (3) *)
SET TITLE ("Customer Master Screen");
SET WINDOW(ROW=2, COL=0, HEIGHT=19, WIDTH=80, LINE=SINGLE, FORE=BLACK,
           BACK=MAGENTA, COORDROW=UP, COORDCOL=LEFT);
...
```

The spec file notes where the substitutions have taken place

```
REPORT-CUSTREPORT:LISTING;
(* Substituted by CUSTREPORT-V1 *)
(* Release Label (1) *)
SET TITLE ("Customer Report");
SET WINDOW;
DCLPRINTER PRINTER ASSIGN(D
...
```

User Doc specifies the versions currently being used

Speedware/Designer VERSIONS.des

User Doc Text for VERAPP

Application Title	VERAPP Speedware Versioning Application		
App Versions	Original	Type	Current Version
	CUSTOMERS	Screen	CUSTOMERS-V1
	CUSTREPORT	Report	CUSTREPORT-V1

Getting the most from Speedware versioning (continued)

That Sysdoc script I mentioned at the top...

Sysdoc script

I nearly forgot — at the beginning of this article, I promised you the script for a report that lists the program ID, the program description, the format and the Sysdoc documentation. This script requires you to be licensed for the Sysdoc tools in Speedware. These tools help you extract useful information from the repository with some simple scripts. At one point, I used Sysdoc and User Doc to produce a complete end user manual for an application I wrote at American Airlines. The script is shown at the bottom of this page.

In this case, the script will list every single program in the repository where the Category is equal to “AR” and Program Type is a “Report” and it will list the Program Reference, Name, Modification Date and Time and the last person to modify the program, along with the program format and finally the contents of the System Document.

Summing up

This article was an introduction to Speedware’s versioning capabilities. There are some basic guidelines you need to follow, such as identifying all objects in an application and creating decent documentation to help keep track of versions, but beyond that, the choices are really yours.

My feeling is that once you start to understand the concepts and see what versioning can provide, you will begin to rely on it to make your development life much easier. Even if you use it only for debugging (where you add code for tracers), versioning is worth it. Give it a try soon — you’ll never go back.

Michael Rusk

Virginia International Terminals, Inc.

```
#HEADING 0,2
Virginia International Terminals
Visual Programs Listing
=====
#ENDHEADING
#FOOTING 2,0
=====
!TIMESTAMP[1:12]
#ENDFOOTING

#FOR PROGRAM WHERE '!CATEGORY' = 'AR' AND \
                    '!TYPE' = 'REPORT' ORDER BY REF SELECTED
Program Reference: !REF_____ Program Name: !NAME
Modification Info: !MODTIME_____ !MODIFIER

Program Format

# LISTFORMAT

# LISTSYSDOC
#ENDFOR
```

AMXW's new -c command line option

Now you can execute *nlsh* commands without being in *nlsh*

Did you ever want to execute *nlsh* commands without actually being in *nlsh*? Well, starting in AMXW V8.05.12, the -c command line option gives you that power.

The main benefit is the ability to execute *nlsh* commands from within a UNIX script. The -c command line option gives you the possibility of communicating information between the UNIX environment and the *nlsh* environment.

The syntax is one of:

```
nlsh -c amxw_command
nlsh INFO="-c amxw_command"
```

Where *amxw_command* is:

- Any AMXW command (BUILD, LISTF, etc.)
- !CMD (where CMD is an environment variable already defined)
- AMXW programs
- UNIX commands
- UDCs
- Command files

The first syntax is normally used from outside *nlsh*. It can be used inside *nlsh* or inside a job, but you will receive an error message if the *nlsh* location is set in HPPATH or your current working directory is PUB.NEWLAB. The error message is:

```
This is not a valid keyword for this command. (CIERR 10007)
```

If you need to use *nlsh -c* from within an AMXW environment, you can avoid the error either by:

- Using the second syntax (with INFO=), or
- Removing PUB.NEWLAB from HPPATH and not working from PUB.NEWLAB.

Here is a basic example of a UNIX script called TESTSCRPT that is executed from *nlsh* and sets a global variable in your *nlsh* environment. The SHOWVAR in *nlsh* demonstrates that the variable now exists in your *nlsh* environment.

```
::cat TESTSCRPT
echo my unix script
nlsh -c "SETVAR ABC '123'"
nlsh -c "SHOWVAR ABC"
```

```
::TESTSCRPT
my unix script
ABC = 123
```

```
::SHOWVAR ABC
ABC = 123
```

Did you know?

AMXW V8.05.12 includes the following upgrades:

- The -c command line option
- Support for the LIMIT command on HP-UX and AIX
- Improved spool file handling
- Permission changes
- Enhancements to the COPY command
- And many more...

For complete information about new features, see the AMXW Release Notes 8.05.12, available at the Speedware Support Web site

AMXW's new -c command line option (continued)

Using pipes to combine nlsh and UNIX commands

You can also use UNIX piping to combine nlsh commands with UNIX utilities while in nlsh. Here is an example that shows how to use a UNIX pipe and grep to find only fixed binary files of a LISTF @,2 command.

<p>Using the UNIX pipe , the grep command receives the output from LISTF @,2 and searches for fixed binary (FB) files</p>	<pre> ::LISTF NEW@,2 ACCOUNT= NEWLAB GROUP= DEMO FILENAME CODE -----LOGICAL RECORD----- ----SPACE---- SIZE TYP EOF LIMIT R/B SECTORS #X MX NEWFILE 128W FB 8 1023 1 8 1 * NEWFILE2 72B FA 4 1023 1 2 1 * ::nlsh -c "LISTF @,2" grep " FB " NEWFILE 128W FB 0 1023 1 0 1 * </pre>
--	---

This example lists all fixed ASCII files that have zero records:

<p>Similar to the above example</p>	<pre> nlsh -c LISTF @,2 grep " FA " awk '{ if (\$4 == 0) \ print \$1 " " \$2 " " \$4 }' </pre>
-------------------------------------	--

The following example shows how to use UNIX piping to abort all scheduled or executing jobs:

<p>This example uses the -c option and UNIX piping to build a command that nlsh finally executes with the -c option</p>	<pre> nlsh -c SHOWJOB grep "#J" grep "SCHED" awk '{ print "ABORTJOB " \$1 }' \ xargs -n2 nlsh -c nlsh -c SHOWJOB grep "#J" grep "EXEC" awk '{ print "ABORTJOB " \$1 }' \ xargs -n2 nlsh -c </pre>
---	---

The -c option also supports STDIN and STDLIST arguments to redirect input and output respectively using MPE-like keywords. Please note that STDLIST must point to an existing file. For example:

<p>Example using first syntax</p>	<pre> nlsh STDLIST=OUT -c LISTF NEWFILE,2 </pre>
<p>Same example with INFO string. Note that only the command is in quotes in the INFO string</p>	<pre> nlsh INFO="-c LISTF NEWFILE,2" STDLIST=OUT nlsh STDIN=input_file nlsh input_file ← Implicit STDIN </pre>

Nlsh can also be used as the implicit shell in a UNIX script. Upon execution, UNIX will start nlsh and try to execute all the lines that follow. Thus, the script file can contain any command normally available at the nlsh prompt. For example:

<p>The first line, starting with #!, identifies nlsh as the interpreter of subsequent commands in the file</p>	<pre> #! ../../NEWLAB/PUB/nlsh BUILD NEWFILE touch unixFile rm unixFile LISTF NEWFILE,2 </pre>
--	--

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