

Quick introduction Life Cycle and Build Support

Relative to Release 110

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1 Introduction

Welcome to the Sure 'change & control' system demonstration. We are pleased that you have chosen to investigate how Sure can assist you in your change control needs.

Originally Sure was designed to keep track of changes and to prevent the loss of changes when modifying source modules. The first version was released in 1983 and was specifically tailored for Unisys CP/NX systems. From that time, Sure has proven to be a powerful assistant for project leaders, programmers, change controllers, security managers, auditors, and even operators.

In a very real sense hundreds of data processing professionals in dozens of companies have contributed to the development of Sure by telling us what they needed to perform their duties. The diversity of Sure's existing users assures that the system provides you with immediate and tangible benefits.

As in many other areas of endeavour, a few moments spent initially on understanding the overall picture of the Sure system will be more than repaid when you begin to use Sure in your own environment. This demonstration is designed to guide you from a point where you lack any specific knowledge of Sure to a point where you have seen some of the things Sure can accomplish for you.

Some paragraphs in this document are marked with character  or *****.
Character  means that this paragraph contains important information.
Character ***** means that one or more actions have to be performed.

Please take a few moments to look over the following sections of the Sure demonstration. We appreciate your interest in Sure and hope that by the time you complete this demonstration you will share our enthusiasm for Sure. If we can be of service to you please contact us as follows:

ITSforSURE B.V.
email: sure@itsforsure.nl

2 Configuration

The Sure evaluation repository is created as follows:

Family

All parts of the evaluation will be done on family IDR2.

The repository is placed on this family

All usercodes that are used during the evaluation will work on this family and have the following family specification: FAMILY DISK = IDR2 OTHERWISE DISK.

Environments

The repository is subdivided into the following environments:

DEVELOP

ACCEPTANCE

PRODUCTION

Usercodes

The following usercodes are used during the evaluation:

DM1	The repository-usercode: database (DM1)INFDB ON IDR2
DM1_DEV	The work usercode for environment DEVELOP
DM1_ACC	The work usercode for environment ACCEPTANCE
DM1_PRO	The work usercode for environment PRODUCTION
DM1_DEV_BATCH	The Sure batch usercode for environment DEVELOP
DM1_ACC_BATCH	The Sure batch usercode for environment ACCEPTANCE
DM1_PRO_BATCH	The Sure batch usercode for environment PRODUCTION
EVALUATE1 / PASS	An evaluation usercode
EVALUATE2 / PASS	An evaluation usercode
EVALUATE3 / PASS	An evaluation usercode
EVALUATE4 / PASS	An evaluation usercode
EVALUATE5 / PASS	An evaluation usercode

Evaluation usercodes

The members of the evaluation team must log on with one of the evaluation usercodes. Each team member must choose his own private usercode which identifies himself uniquely in Sure. In this case it is possible to do the evaluation with 5 team members simultaneously.

Work usercodes

A work usercode identifies the disk location where all programmer activities are done (similar to the programmers work location in Cande).

For this evaluation we configured Sure in such a way that copy-files and object-files are placed under the work usercode on disk.

Temporary source files (that are in maintenance) are placed under the work usercode.

In this case the work usercode is NOT equal to the global directory '□'. This means that all programmers will be connected to the same work location:

for environment DEVELOP	:	usercode (DM1_DEV) ON IDR2
for environment ACCEPTANCE:		usercode (DM1_ACC) ON IDR2
for environment PRODUCTION:		usercode (DM1_PRO) ON IDR2

Notice again that that each evaluation member is logged on to Sure with a private usercode (EVALUATE1 through 5), but all members will work under the same usercode on disk (DM1_DEV).

Batch usercodes

File that are modified and checked-in in Sure will be compiled by the Sure batch. Other Sure batch functions are:

- Copy the compiled objects to the correct object-locations.
- Match the modified saved files with their previous versions.
- Examine (scan) the modified files for references to other files and programs.

Each Sure environment has a corresponding Sure-batch usercode where the batch runs.

Authorisations

All usercode are allowed to do all Sure functions, except:

- function ODT
- change options
- change securities

Usercode DM1 (the installation usercode) has no authorisation limitations.

Task groups

We predefined the following task groups:

task group	reason	priority
DEV	Normal maintenance in environment DEVELOP	LOW
ACC	Quick fixes in environment ACCEPTANCE	HIGH
PROD	Urgent quick fixes in environment PRODUCTION	HIGH

3 Task registration

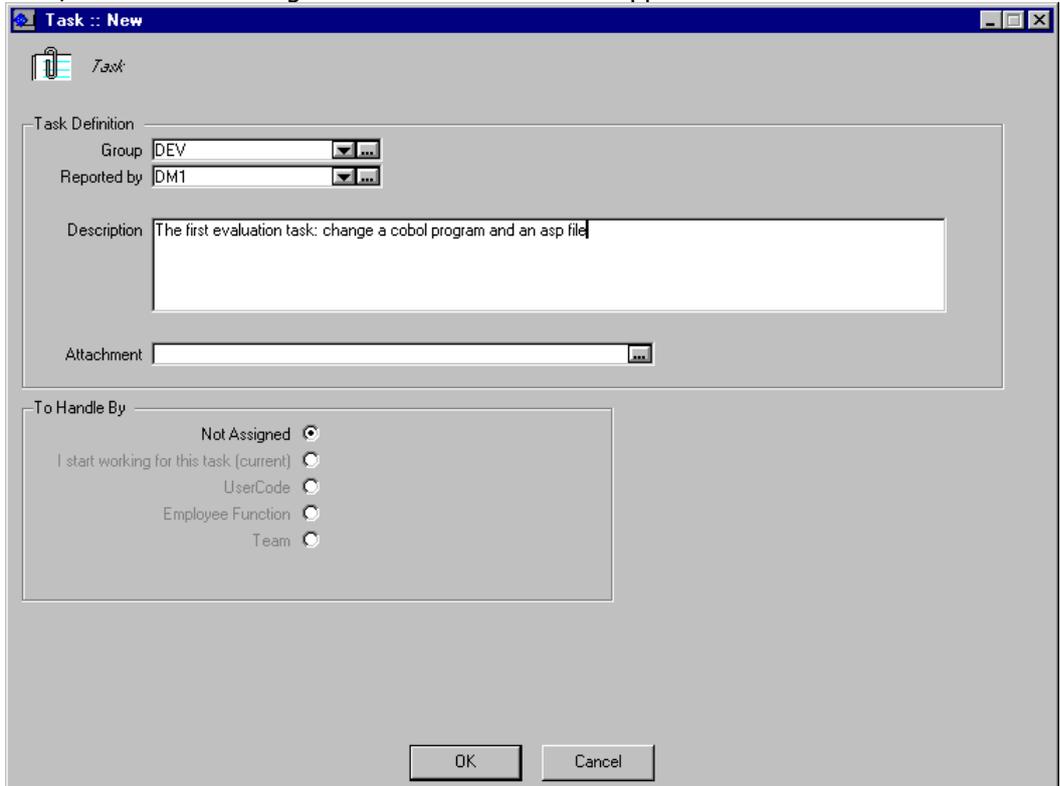
 The Sure manual is online available via button 'Help' in the menu bar.

Please read chapters 36.1 through 36.4 to obtain a first idea about tasks.

Each adaptation to software will be linked to a task. Therefore a task must be added and made current before a programmer can start working.

3.1 Task Registration via SureForWindows

- * Log on with your personal usercode.
- * Click on Edit (in the menu bar)
- * Click on New/Task. The following task definition screen will appear:



- * Add a new task:
 - It is possible to define a task via an existing task-group, or to define a task via a project/task-type combination. In this case we choose to define the task via a task-group:
 - Task Group = DEV
 - Description = The first task

Notice the name of the newly entered task: DEV-00nn. If a task is entered via a task-group then the new task name is determined according to the formula <task-group>'_'<4 digit number>.

The task has task-type DEVELOPMENT and it belongs to project DEMO.

The project and task-type of the task are inherited from the task-group. It is possible to override the default task-group attributes by entering a specific value in the appropriate field when a new task is added.

Notice the status of the newly entered task: ENTERED.

Notice the attributes 'Priority', 'Effort' and 'Environment': These attributes are inherited from the task type. If the task type is changed, then these inherited attributes will change too (if necessary).

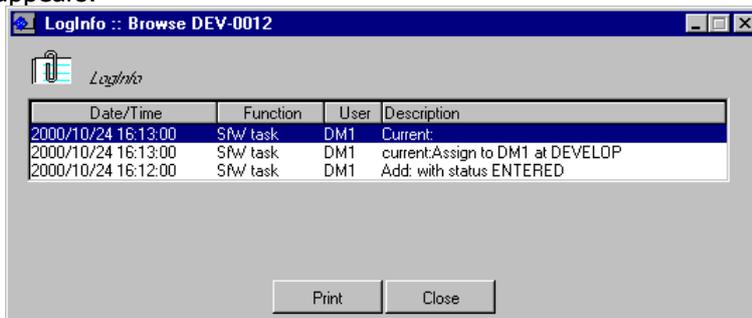
Read chapter 36.5 through 36.6 of the Sure manual for detailed information about the fields on the task definition screen.

- * We want to start working on this task. This is only possible if the task is defined as 'my current work task'. There are several ways to do this:
 1. Click on button 'Current' on the task-definition screen.
 2. Open browse-list 'Team Tasks'/'ToAssign' and click with the right mouse button on the task that you want to assign. Choose 'assign' from the speed-menu followed by 'current' from the speed menu.
 3. Open browse-list 'My-Tasks'/'ToDo', and click with the right mouse button on the task that you want to select. Choose 'current' from the speed-menu.
 4. Enter the new task directly with option 'I start working on this task (current)'

The current task is now displayed in the title bar of the SureForWindows screen, and as a folder in the DEVELOP environment:



- * Right-click on the name of your current task and choose 'log' from the speed-menu. The following screen appears:



- * Click on button 'Close' and double click on your current task. The following screen appears:

The screenshot shows a window titled "Task DEV-0012". At the top, it displays "Task Name: DEV-0012", "Status: DEVELOP", "ASSIGNED", and "no dependency". Below this are two tabs: "Task" and "Detail". The "Task Definition" section contains the following information:

- Project: DEMO
- Type: DEVELOPMENT
- Reported by: DM1
- TaskGroup: DEV
- Reference: (empty)
- Inform status change via eMail:
- Short description: (empty)
- Description: The first evaluation task: change a cobol program and an asp-file
- Attachment: (empty)
- Solution: (empty)

The "To Handle By" section has the following options:

- UserCode: DM1
- Employee Function: (empty)
- Team: (empty)
- Inform assigned 'to handle' by via eMail:

At the bottom of the window are buttons for "Open", "Modify", "Info", "New", "Print", and "Close".

Notice the status of the task: DEVELOP/ASSIGNED

Notice that info-block 'To Handle By' contains now your usercode. This means that this usercode is the only person who can work on this task. It is also possible to enter an employee function in this field. In that case all users who are linked to that employee function can work on the task.

- * Click on button 'Modify'/'Properties'
Change 'To Handle By' to: Employee-function EVALUATION

This makes the task available for all users with employee-function EVALUATION. (= usercodes EVALUATE1 through 5).

You are now ready to make a modification to a source!

4 Program Life Cycle Support

The following actions are done in this section:

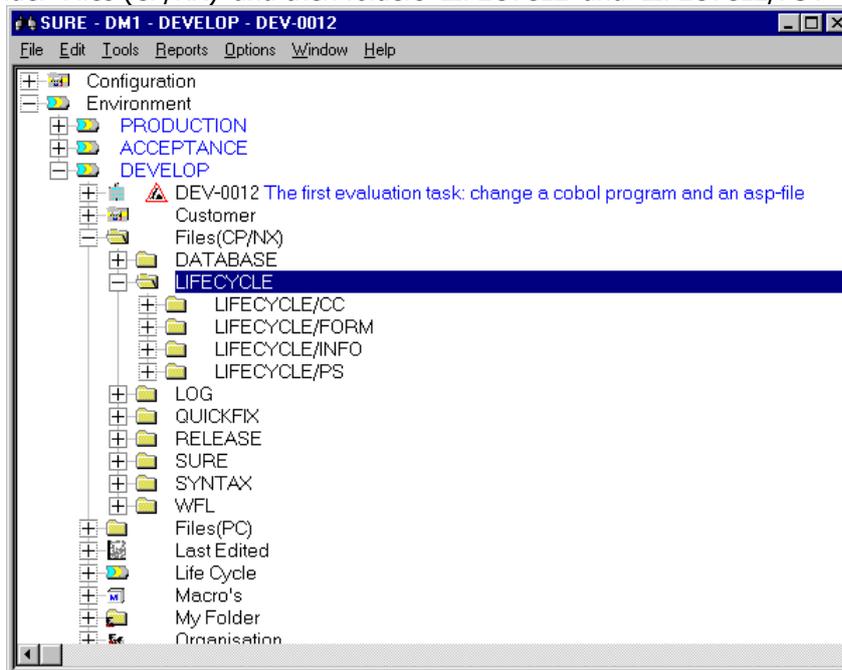
1. Modify an existing CP/NX file, compile the modified file and run it.
2. Modify an existing ASP file.
3. Transfer all modifications to the PRODUCTION environment

4.1 Modify an existing CP/NX file

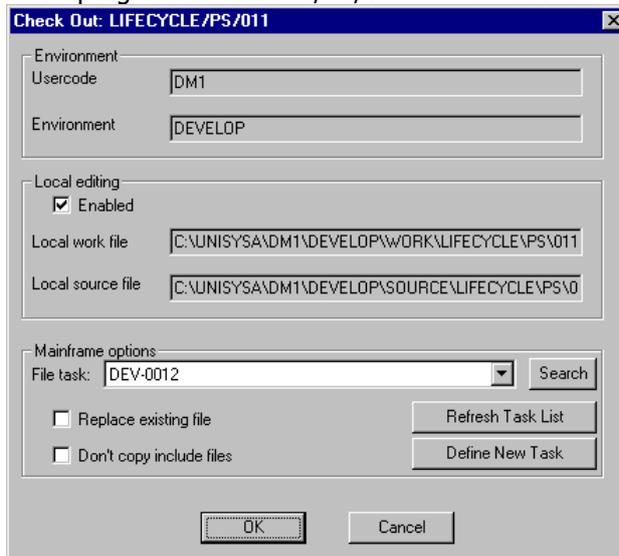
The procedure is explained via example program LIFECYCLE/PS/011.

We added 4 extra copies of this program in Sure: LIFECYCLE/PS/012 through LIFECYCLE/PS/015. Each member of the evaluation team can use his own copy of the program to do his tests. The person with usercode EVALUATE1 can use program LIFECYCLE/PS/011, the person with usercode EVALUATE2 can use program LIFECYCLE/PS/012, etcetera.

Open folder 'Files (CP/NX)' and then folders 'LIFECYCLE' and 'LIFECYCLE/PS':



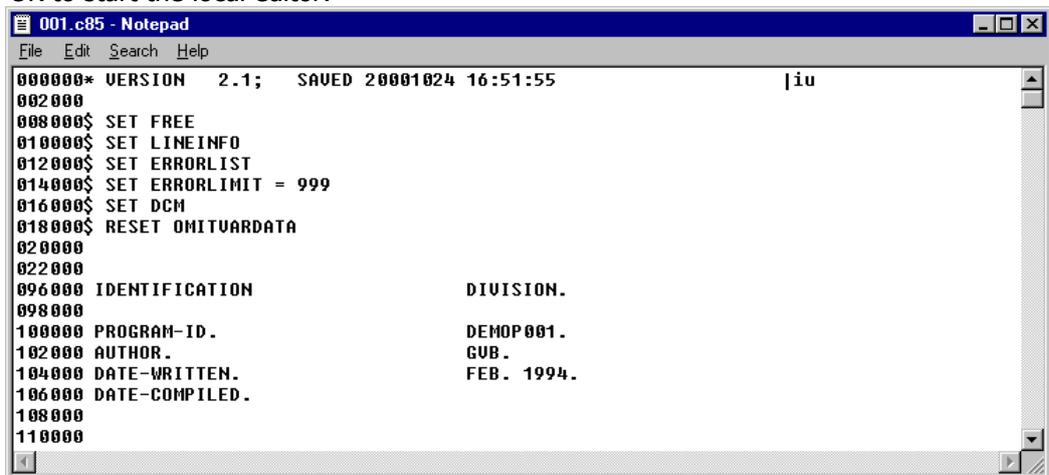
- * Right-click on program LIFECYCLE/PS/011 and choose 'check-out' from the menu:



Notice that 'local editing enabled' is set. This option enforces that the file is going to be modified on the PC. If necessary, the file is downloaded from the mainframe to a source-directory the PC. This is only done if the correct version of the file was not yet available in the source-directory. The file is then copied from the PC-source-directory to the PC-work-directory. The PC-source-directory and the PC-work-directory can be defined via menu-bar/options/'sure options'/'local options'.

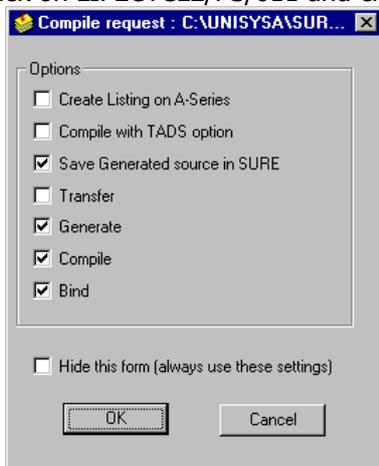
Notice that the name of the task is your current task. The file will be connected to this task, which means that the file is modified because of your task. If necessary, it is possible to choose another task from the value-list.

- * Click on OK to confirm the 'check-out' options.
- * The files is now copied to the PC-work-directory. Click on OK when the file is resident.
- * Click on OK to start the local editor:



By default NOTEPAD is started as local editor. We made seamless interfaces to various other editors such as 'ED for Windows', 'MultiEdit', etc. Please refer to chapter 10 of the Sure manual for detailed information about PC editing and local editors.

- * Make some small modifications in the file (add some comment lines, etc).
- * Save the file and leave the editor.
- * Right-click on LIFECYCLE/PS/011 and choose 'Compile, Local' from the menu:



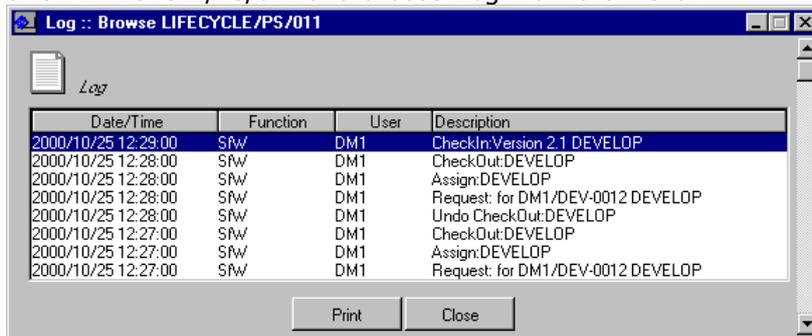
- * Click on OK to start the compilation.

The PC-work-file is compared to the PC-source-file and the differences are uploaded to the mainframe and merged with the mainframe original-file. The result-file is compiled on the mainframe. Syntax errors are downloaded to the PC, and can be merged into the PC-work-file.

- * Right-click on LIFECYCLE/PS/011 and choose 'check-in' to save the modified file in Sure.

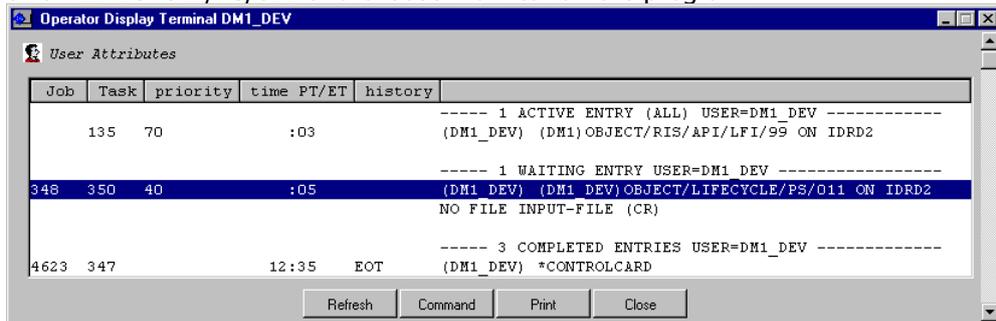
The PC-work-file is compared to the PC-source-file and the differences are uploaded to the mainframe and merged with the mainframe original-file. The result file is saved in the repository. The PC-work-file is moved to the PC-source-directory, and becomes PC-source-file.

- * Right-click on LIFECYCLE/PS/011 and choose 'Log' from the menu:

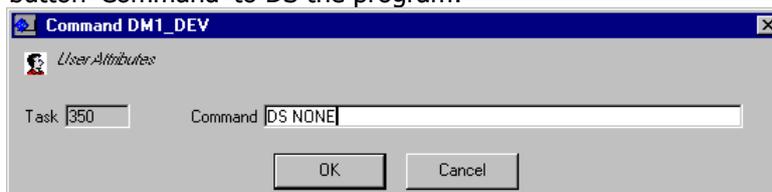


A history of actions on this file is logged in Sure.

- * Right-click on LIFECYCLE/PS/011 and choose 'Run' to run the program:



- * Click on button 'Refresh' until the program appears in the list of waiting entries.
- * Click then on the line with the program name to make that line current (highlighted), and click then on button 'Command' to DS the program:

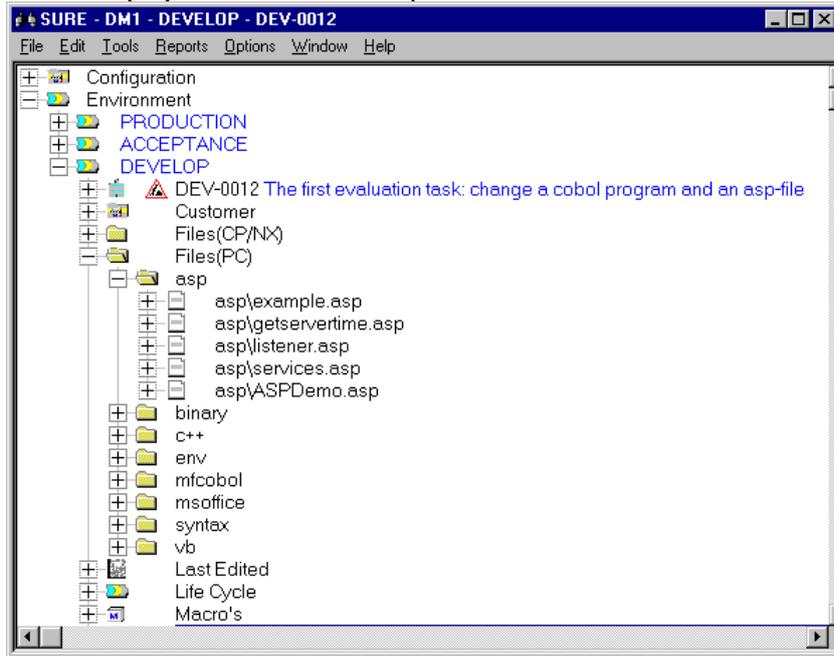


4.2 Modify a PC file

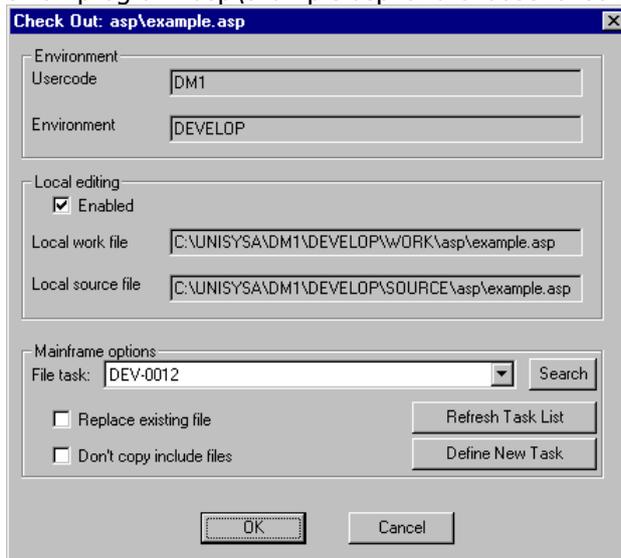
The procedure is explained via example program 'asp\example.asp'

We added 5 extra copies of this program in Sure: 'asp\example1.asp' through 'asp\example5.asp'. Each member of the evaluation team can use his own copy of the program to do his tests. The person with usercode EVALUATE1 can use program 'asp\example1.asp', the person with usercode EVALUATE2 can use program 'asp\example2.asp', etcetera.

Open folder 'Files (PC)' and then folder 'asp':



- * Right-click on program 'asp\example.asp' and choose 'check-out' from the menu:

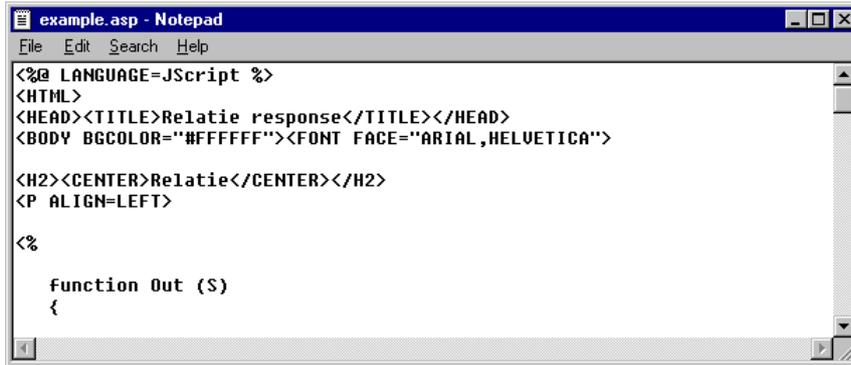


Notice that 'local editing enabled' is set. This option enforces that the file is going to be modified on the PC. If necessary, the file is downloaded from the mainframe to a source-directory the PC. This is only done if the correct version of the file was not yet available in the source-directory. The file is then copied from the PC-source-directory to the PC-work-directory. The PC-source-directory and the PC-work-directory can be defined via menu-bar/options/'sure options'/'local options'.

Notice that the name of the task is your current task. The file will be connected to this task, which means that the file is modified because of your task. If necessary, it is possible to choose another task from the value-list.

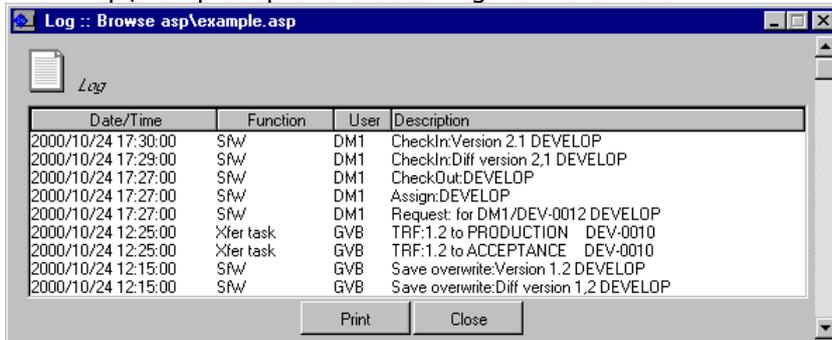
- * Click on OK to confirm the 'check-out' options.
- * The files is now copied to the PC-work-directory. Click on OK when the file is resident.

- * Click on OK to start the local editor:



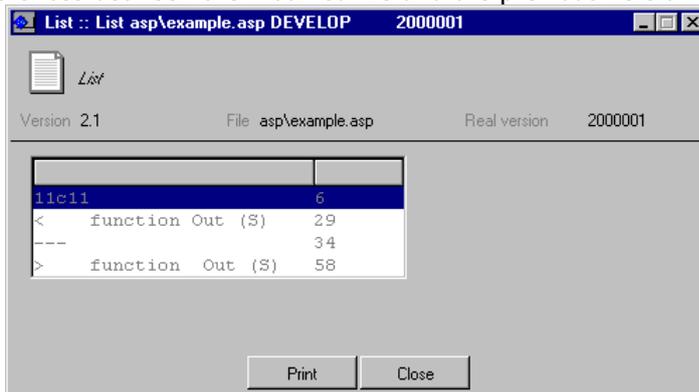
The correct editor is started depending on the file extension. In the case of an unknown file extension NOTEPAD is started as default local editor.

- * Make some small modifications in the file (add some comment lines or spaces, etc).
- * Right-click on 'asp\example.asp' and choose 'check-in' to save the modified file in Sure.
- * Right-click on 'asp\example.asp' and choose 'Log' from the menu:



A history of actions on this file is logged in Sure.

- * Open folder 'asp\example.asp' and then folder 'Deltafile'. Right-click on the newest delta file to list the differences between the modified file and the previous version of the file:

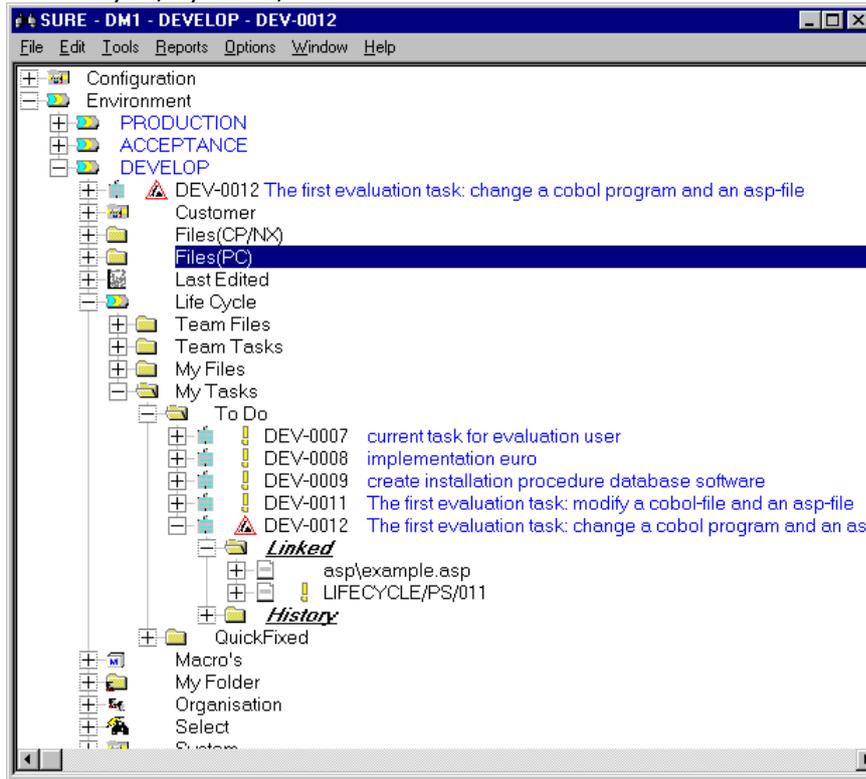


In this example a few spaces were added on a line.

4.3 Transfer Adaptations to the Next Environment

All adaptations are linked to a task: the current task of the programmer who made the adaptation. When the programmer has finished his activities for the task, then that task can be transferred to the next environment. All sources that were adapted because of the task are then transferred too.

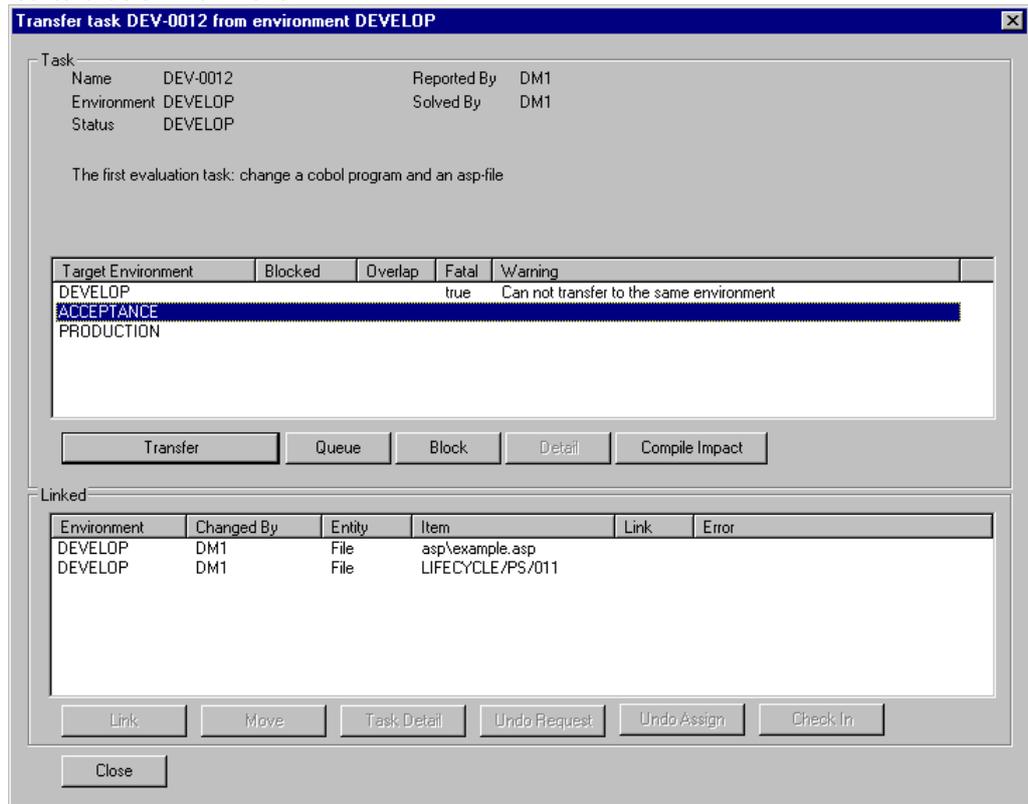
- Open folder 'LifeCycle/My-tasks'/'To Do':



- * Right-click on your current task and choose 'Transfer' from the menu.

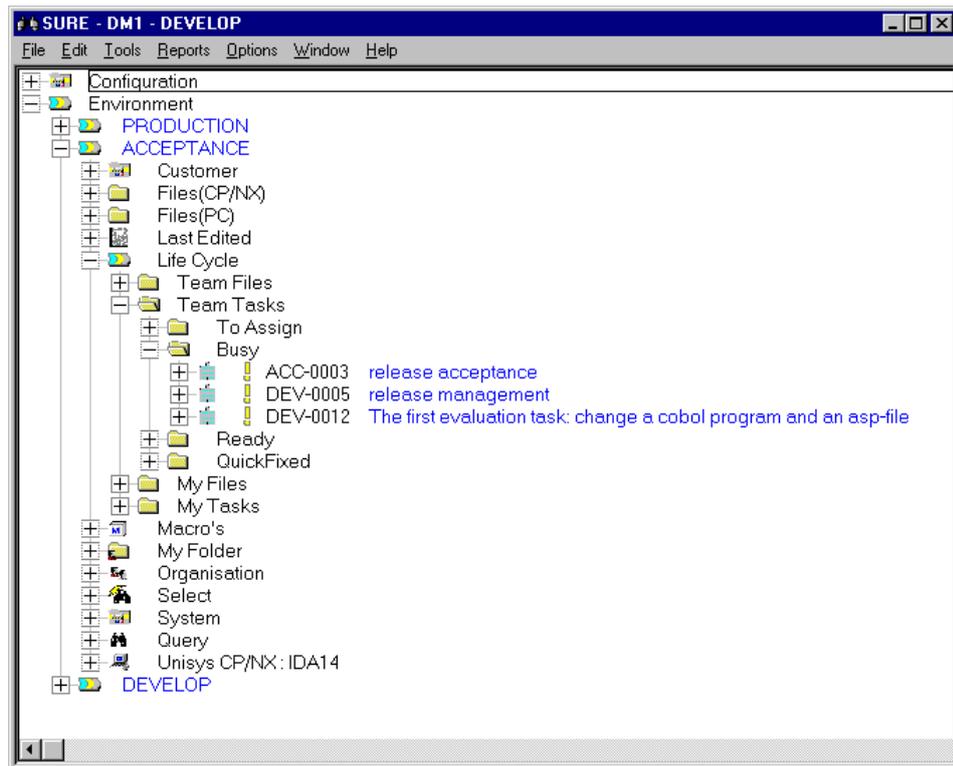
A transfer-dialogue is presented where the possible destination environments are given, and where all files that were modified because of this task are listed.

- * Click on the line with destination environment ACCEPTANCE, because the task has to be transferred to that environment:



- * Click on the button 'Transfer' to transfer the task from DEVELOP to ACCEPTANCE.
- * Right-click on your current task and choose 'Properties'. The status of the task is now ACCEPTANCE.
- * Press on the F5 function key while your current task is highlighted, to refresh your ToDo list. The transferred task is not in your ToDo list, so you can not work on this task anymore.

Open folder 'ACCEPTANCE'/'Life Cycle'/'Team Tasks'/'Busy':



The transferred task is now resident in the 'Busy task' list on the next environment. The test team can evaluate the modifications that were made because of this task and transfer the task further to PRODUCTION when the evaluation is done.

Read chapters 36.8.6 through 36.9 for detailed information about transferring a task.

5 Build Support & Distribution Support

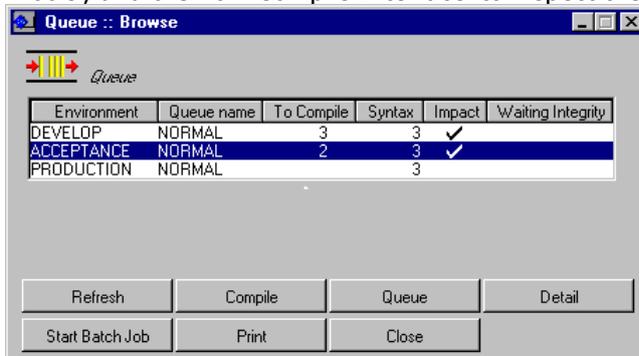
5.1 CP/NX build support

Files that are loaded in Sure are automatically placed into the Sure-compile-queue. In this section the Sure batch job will be started to compile programs via Sure, and to install the object in the correct object-location.

The batch job performs the following functions:

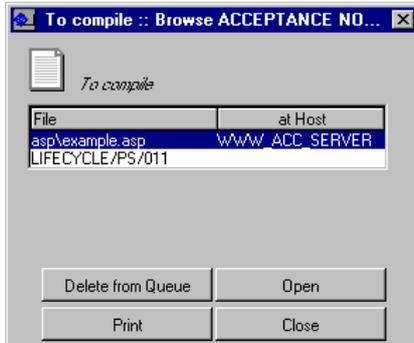
- A. Process the Sure compile queue: all files in the compile-queue will be compiled. In case of an include file all referencing programs will be compiled.
- B. Copy the compiled objects to the correct object location.
- C. Create delta-files between the changed files and their previous versions.
- D. Examine (scan) changed files for language statements that refer to other files.
- E. Process the Sure find queue.
- F. Process the Sure replace queue.

- * Click on 'Tools', and then on 'Compile Interface' to inspect the contents of the compile-queue:



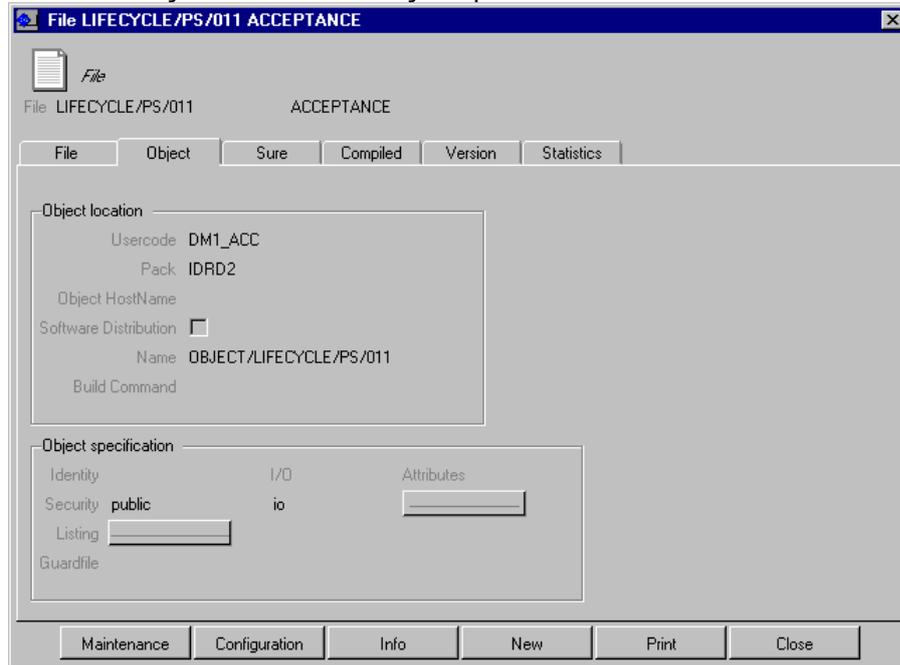
In this example the compile-queue for environment ACCEPTANCE contains 2 programs.

- * Click on line ACCEPTANCE and then on button 'Detail' and choose 'to compile' from the menu:



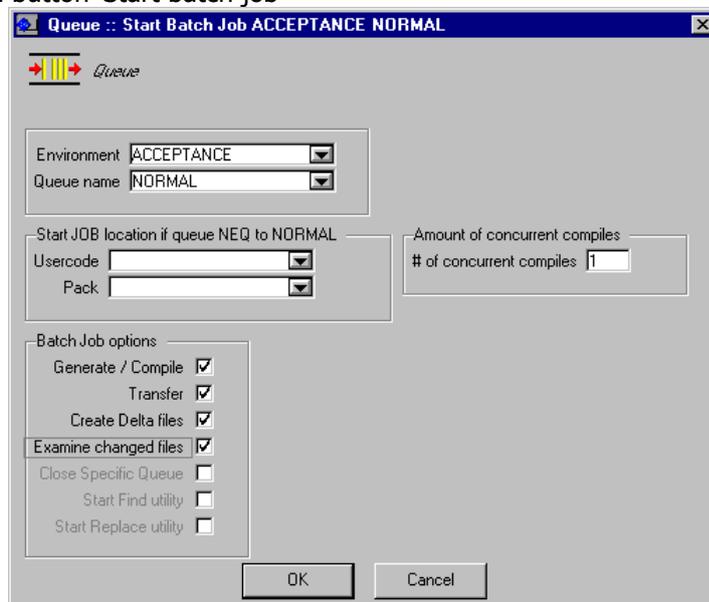
The two files in the Sure compile queue.

Click on a program LIFECYCLE/PS/011 to make it current.
 Click on button 'Open' to check the properties of that file.
 Click on tab sheet 'Object' to check the object specifications:



The object of this file will be (DM1_DEV)OBJECT/LIFECYCLE/PS/011 ON IDRD2. The object-location usercode and pack are inherited from the default object location of system DEMO as a result of option 'Inherit default object location' of file-type SOURCE.

- * Click 2 times on button 'Close' to return to dialogue 'Compile Interface'.
- * Click on button 'Start batch job'



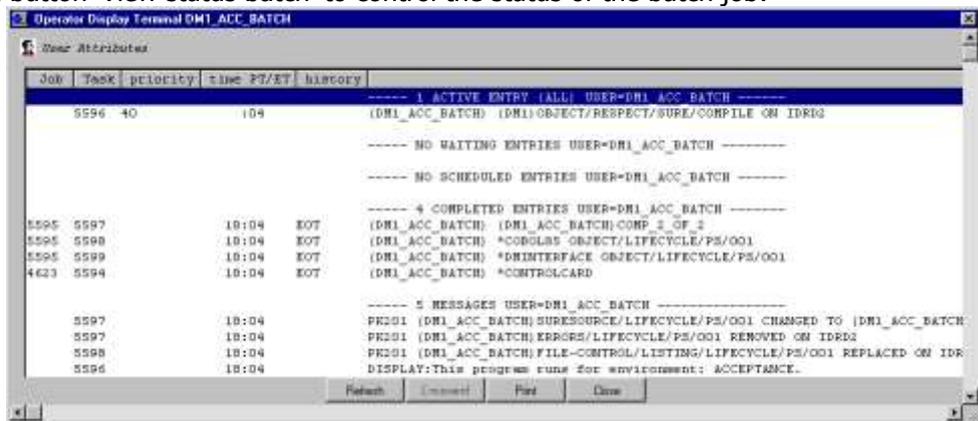
- * Set batch job options
 - 'Generate and Compile' (function A)
 - Transfer (function B)
 - Create delta files (function C)
 - Examine changed files (function D)

- ★ Click on button 'OK' to start the job:



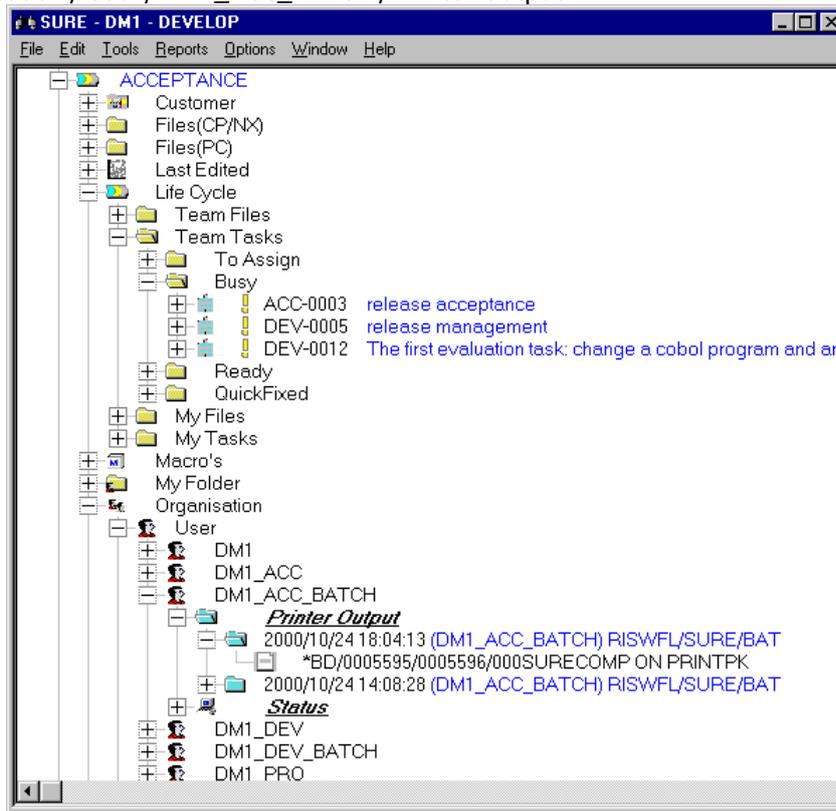
A standard Sure evening job is available for each environment. The name of this job is WFL/<environment>/SURE, and the job was placed on disk during the installation.

- ★ Click on button 'View status batch' to control the status of the batch job:



- ★ Wait until the Sure batch is finished

- * The Sure batch has produced a compilation overview, that is available via folder 'Organisation'/'User'/'DM1_ACC_BATCH'/'Printer Output'.



- * Open the correct print request.
Right-click on backupfile 'BD/000.....SURECOMP' and choose 'Download' form the menu.

The following compile overview is copied to your PC and opened in WordForWindows:

```
@E>421 Compilation overview                20001024 18:04:13 Page  1

Mixnumber : 5595/5596
Usercode  : DM1_ACC_BATCH
Family    : IDR2
Repository: (DM1)INFDB ON IDR2
Warning   Environment: ACCEPTANCE
Warning   Compilation mode   : NORMAL
Warning   Compilation queue  : FILE-CONTROL
Use no copyfiles from star '*'
Only create compilation listings for changed sources
Remove downloaded copyfiles after the compilations
Use integrity mechanism SYSTEM DEMO
Use startjobs
Disk location 'BACKUP' = PRINTPK

Warning   This copy-file/task creates an integrity-chain: DEV-0012
Use version 2.1 of copy-file (DM1_ACC_BATCH)LIFECYCLE/CC/001
Use version 1.1 of copy-file (DM1_ACC_BATCH)LIFECYCLE/CC/002
Use version 1.1 of copy-file (DM1_ACC_BATCH)LIFECYCLE/CC/003

Program in the compile-queue: asp\example.asp
Program in the compile-queue: LIFECYCLE/PS/011

Warning COMP_1  PC compilation not yet completed asp\example.asp

COMP_2  Compile version 2.2 of LIFECYCLE/PS/011
```

COMP_2 Compilation ok: LIFECYCLE/PS/011

The following tables show the waiting integrity chains.
 The programs that are mentioned in these chains will not be transferred, until the reason why the chain is waiting is solved.
 A program that is marked with SNTX blocks the integrity chain, and this program has been compiled successfully before the waiting chain can be transferred.
 A task that is marked with SNTX blocks the integrity chain, because one or more generations that are triggered by the impact analyses failed.
 The RIS modules that need to be regenerated to solve the task are reported just below the table.

Table 0 triggered by asp\example.asp

Table 0	
1:DEV-0012	
Sntx asp\example.asp	1
LIFECYCLE/PS/011	1

```

Compilations with syntax errors: 0
Pending PC compilations      : 1
Aborted compilations         : 0
Successful compilations      : 1
-----
Total: 2
    
```

End of task RESPECT/SURE/COMPILE

In this overview we see that the compilation of mainframe file LIFECYCLE/PS/011 was completed ok, but the object is not transferred to the correct object location because the PC build of file 'asp\example.asp' is not yet done. Notice that the modifications of these two files are dependent of each other because these modifications were done under the same current task.

First the build of the PC file has to be done. This will automatically unlock the mainframe object. Then the Sure batch has to be restarted to transfer the waiting object of LIFECYCLE/PS/011 to the correct object location.

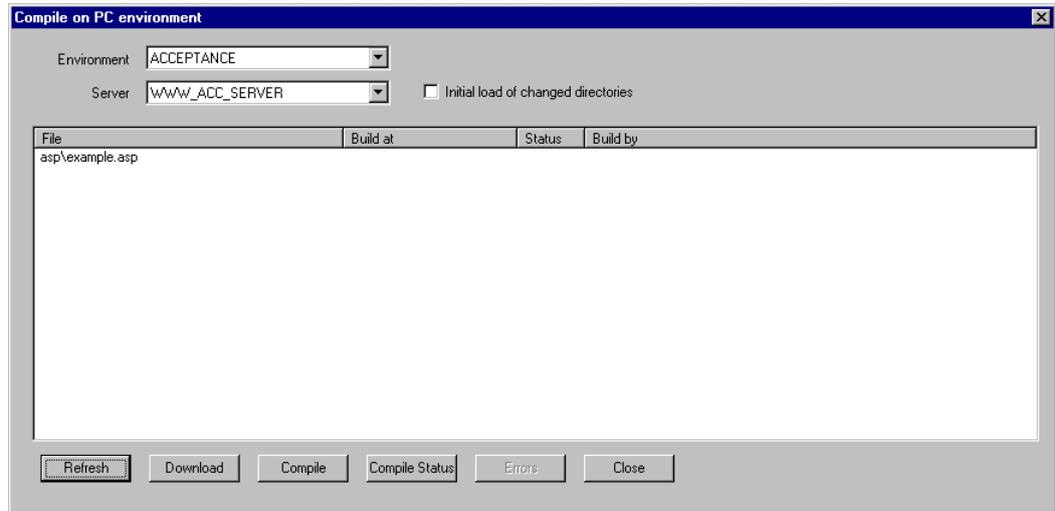
5.2 PC build support

- * Click on 'Tools'/ 'Compile Interface' to check the current compile status:



One file must be compiled for ACCEPTANCE: 'asp\example.asp'
 One file is blocking an integrity chain in ACCEPTANCE: 'asp\example.asp'
 Programs are waiting for integrity: LIFECYCLE/PS/011

- * Click on 'Tools'/PC environment'/Build support'.
- * Choose environment ACCEPTANCE from the value list en click on button 'Refresh':

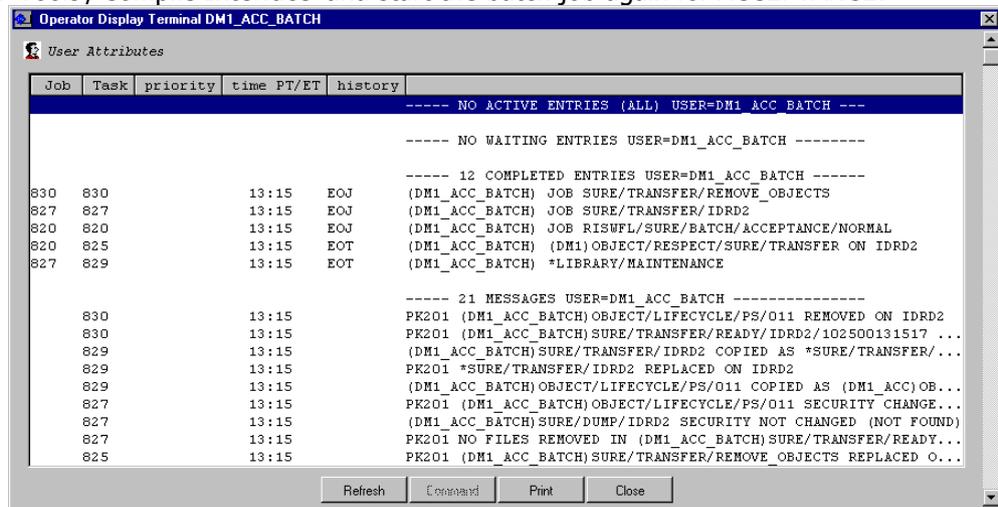


- * Click on 'asp\example.asp' to make that file current, and click then on button 'Compile'

This start the build process on the PC and it also unlocks the waiting integrity chain with mainframe objects that are compiled but not yet transferred.

5.3 CP/NX build support (continued)

- * Click on 'Tools'/Compile Interface' and start the batch job again for ACCEPTANCE:



OBJECT/LIFECYCLE/PS/011 is now copied to the correct location.

Chapter 22 gives detailed information about the Sure compile + transfer process (functions A, B).
 Chapter 16 gives detailed information about delta files (function C).
 Chapter 24 gives detailed information about the examine process (function D).

An important feature of Sure is the integrity mechanism: Sure controls that all objects in the run-time environment are compiled with the same set of copy-files. If a copy-file changes, then all programs that use that copy-file will be recompiled.
 Read chapter 22.9 through 22.9.6 for detailed information.

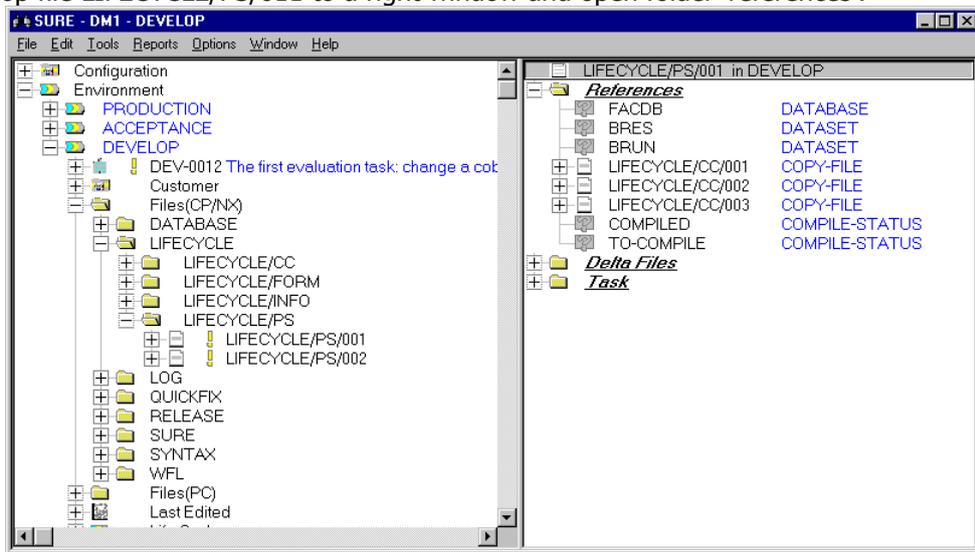
Transfer the task to PRODUCTION, build the PC file for PRODUCTION and start the batch job for environment PRODUCTION.

6 Support Functions

6.1 Cross Reference and Data Dictionary Functions

Each time a new version of a source is loaded in Sure, the source will be cross examined for used datasets, sets, databases, libraries, input or output files, external procedures, etceteras. All found issues are linked to the source via relationships. The examine function is normally done during the evening batch, but on-line command EXAMINE is available for direct results.

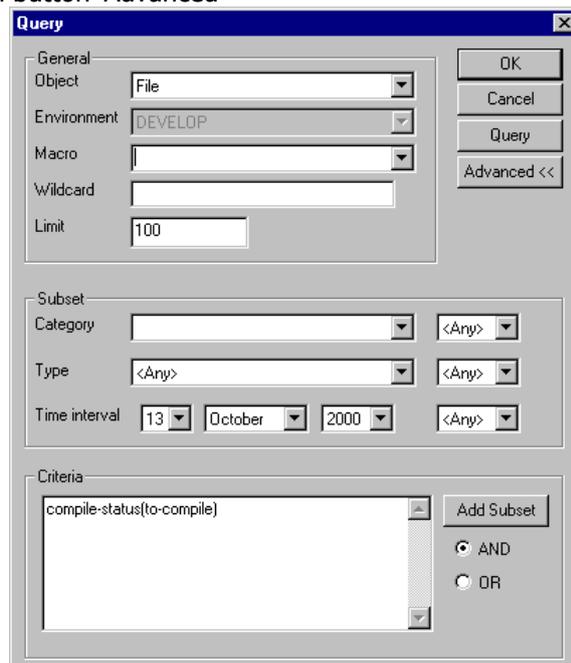
- * Drag/drop file LIFECYCLE/PS/011 to a right window and open folder 'references':



Program LIFECYCLE/PS/011 references three copy-files and a database.

It is not only possible to inquire the attributes of a file, it is also possible to select groups of files using their attributes. A special QUERY facility is available where groups of files can be selected.

- * Double click on 'Query' to enter the query function.
- * Click on button 'Advanced'



Example 1: Select all files that are placed in the Sure evening compile queue:
Enter in 'Select Criteria' : COMPILE-STATUS(TO-COMPILE)

Example 2: Select all files that are maintained by usercode <your usercode>:
 Enter in 'Select Criteria' : MAINTAINED(<your usercode>)

Example 3: Select all files that use copy-file LIFECYCLE/CC/001:
 Enter in 'Select Criteria' : COPY-FILE(LIFECYCLE/CC/001).

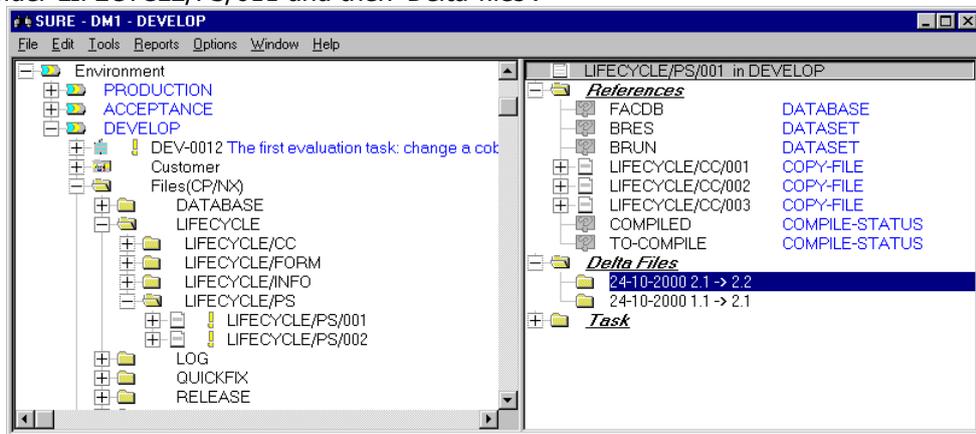
Read chapters 12 and 24 for detailed information about the select function.

6.2 Delta Files

All adaptations that are made to sources are kept in the repository. After an adaptation to a source Sure will make a comparison between the previous FileVersion that was active in an environment, and the newly saved FileVersion. The result of such a comparison is called a DELTA file, and these delta files are stored in the repository.

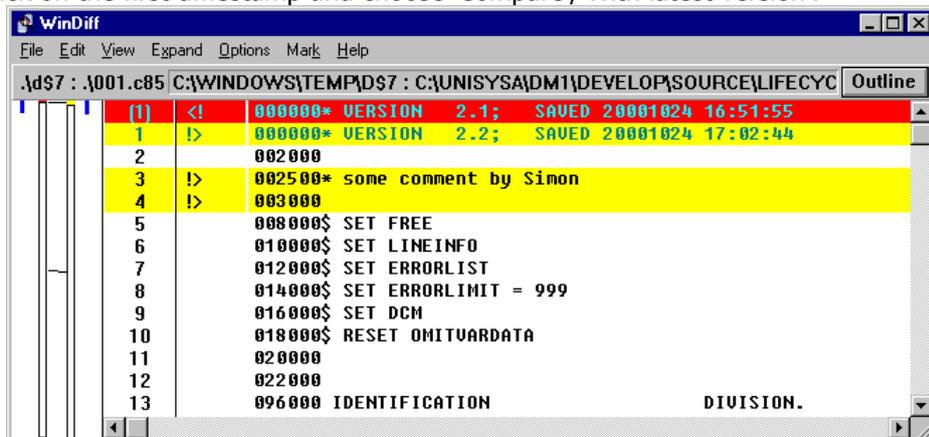
It is possible to browse through delta files, or to roll a file back to an old version using these delta files.

- * Open folder LIFECYCLE/PS/011 and then 'Delta-files':



A click on the delta-file timestamp will show the contents of that delta-file or compares two version of the file.

Right-click on the first timestamp and choose 'Compare'/'With latest version':



Refer to chapter 16 of the Sure manual for detailed information about delta files.

6.3 Find and Replace Utilities

The FIND and REPLACE utilities in Sure can be used to find/replace one or more targets in a group of sources.

The FIND utility is explained via an example. The procedure of the REPLACE utility is similar to the procedure of the FIND utility.

Suppose you want to find the words 'SECTION' and 'COPY' in COBOL programs.

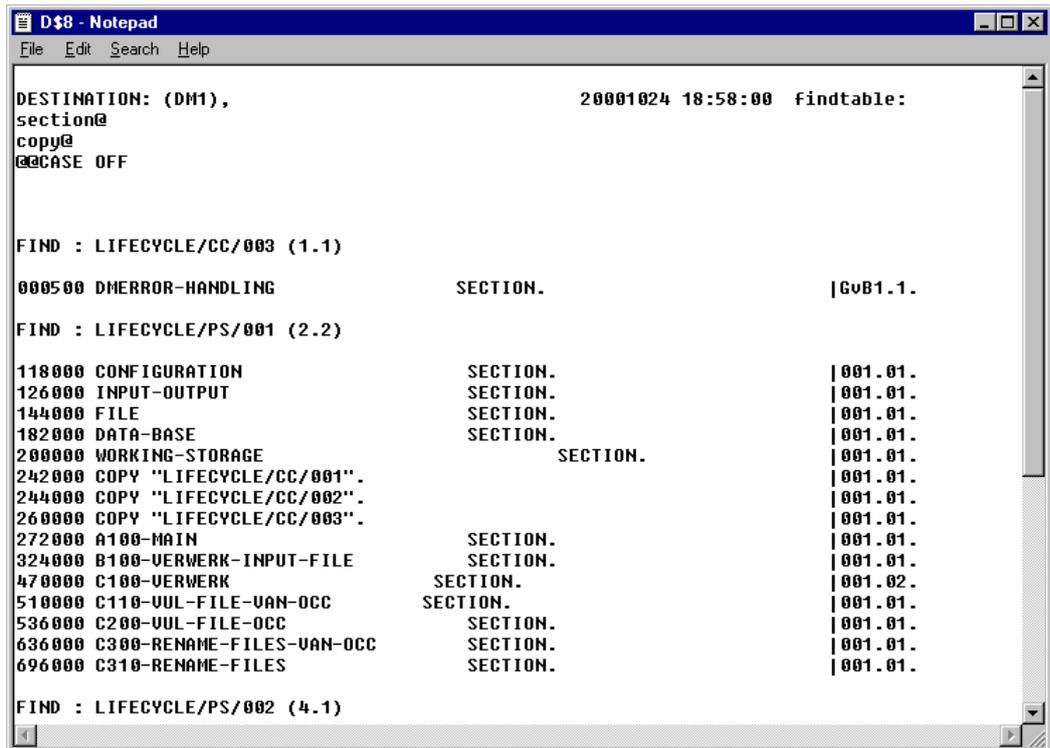
- * Click on menu-bar/Tools/Find to enter the find-utility.
Click on button 'Query' and enter 'LIFECYCLE/=' in the Wildcard field
Enter 'SECTION' in the find-target-entry-field and click on button 'Add'
Enter 'COPY' in the find-target-entry-field and click on button 'Add':

Wildcard 'LIFECYCLE/=' means that all files starting with that prefix are placed in the find-queue. The find-table consists of the find-targets 'COPY' and 'SECTION'. All files in the find-queue will be scanned for those targets.

- * Click on OK to start the find utility on the mainframe.

The sources are scanned on the mainframe. After a short while you will get a notification that the find-request is completed:

- * Open the FIND dialogue again and click now on button 'Show Found Report' to see the find-results:



```

D$8 - Notepad
File Edit Search Help

DESTINATION: (DM1),                20001024 18:58:00 findtable:
section@
copy@
@@@CASE OFF

FIND : LIFECYCLE/CC/003 (1.1)
000500 DMERROR-HANDLING           SECTION.           |GvB1.1.

FIND : LIFECYCLE/PS/001 (2.2)
118000 CONFIGURATION              SECTION.           |001.01.
126000 INPUT-OUTPUT               SECTION.           |001.01.
144000 FILE                        SECTION.           |001.01.
182000 DATA-BASE                  SECTION.           |001.01.
200000 WORKING-STORAGE             SECTION.           |001.01.
242000 COPY "LIFECYCLE/CC/001".    |001.01.
244000 COPY "LIFECYCLE/CC/002".    |001.01.
260000 COPY "LIFECYCLE/CC/003".    |001.01.
272000 A100-MAIN                   SECTION.           |001.01.
324000 B100-VERWERK-INPUT-FILE     SECTION.           |001.01.
470000 C100-VERWERK                SECTION.           |001.02.
510000 C110-VUL-FILE-VAN-OCC       SECTION.           |001.01.
536000 C200-VUL-FILE-OCC           SECTION.           |001.01.
636000 C300-RENAME-FILES-VAN-OCC  SECTION.           |001.01.
696000 C310-RENAME-FILES           SECTION.           |001.01.

FIND : LIFECYCLE/PS/002 (4.1)

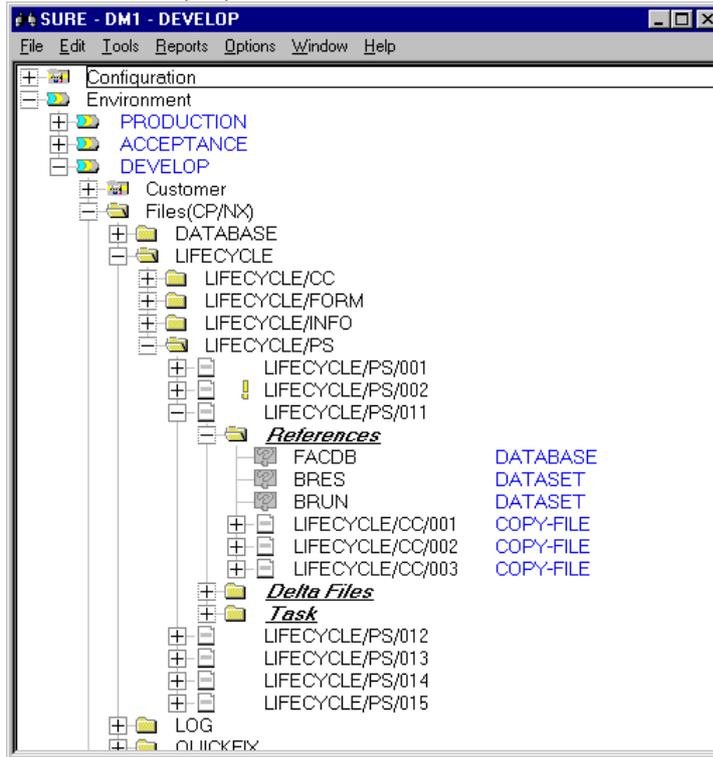
```

Chapter 18 of the Sure manual gives detailed information about find and replace.

6.4 Mass compilation after a database change

Each time a new version of a source is loaded in Sure, the source will be cross examined for used datasets, sets, databases, libraries, input or output files, external procedures, etceteras. All found issues are linked to the source via relationships.

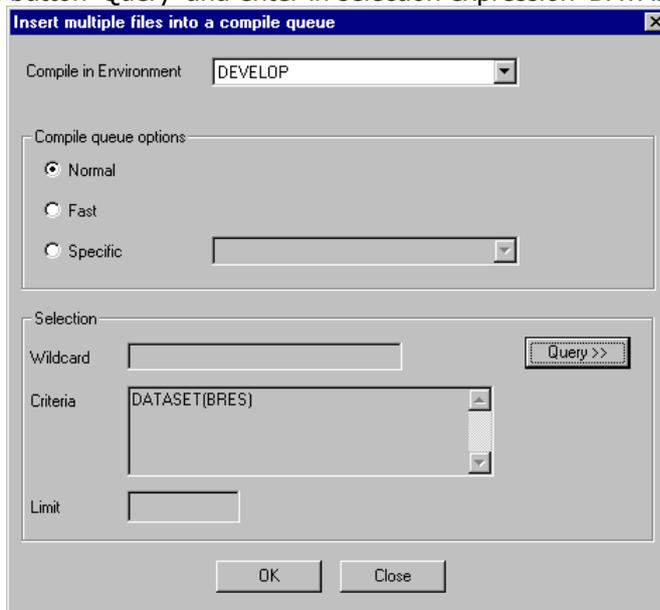
- * Open folder LIFECYCLE/PS/011 and then folder 'References':



The program uses database FACDB and datasets BRES and BRUN.

Sure known which datasets are used by which programs, and this information can be used in the query function to add all programs with a specific dataset into the compile-queue. Suppose that dataset BRES is reorganised, and that all programs using BRES need to be compiled.

- * Click on 'Tools'/'Compile Interface' and then on button 'Compile'. Select the environment where you want to fill the compile queue. Click on button 'Query' and enter in selection expression 'DATASET(BRES)':



This will add all files with a link to dataset BRES into the compile queue. If BRES is referenced in a copy-file, then all programs using that copy-file will be compiled.

6.5 Quick Fix Support

The flow is the demonstration is as follows:

1. Define a new task for DEVELOP
2. Modify program LIFECYCLE/PS/001 in develop.
3. Define a task for PRODUCTION which describes an urgent problem
4. Modify program LIFECYCLE/PS/001 in production.
5. Check to status of the program
6. Reprocess the quick fix from production to develop.

- * Define as new task as described in paragraph 3.

Task Group	DEV
Description	A task to modify program LIFECYCLE/PS/001
Set option	'I start working for this task'

- * Check-out program LIFECYCLE/PS/001, make a small modification and check the file in.

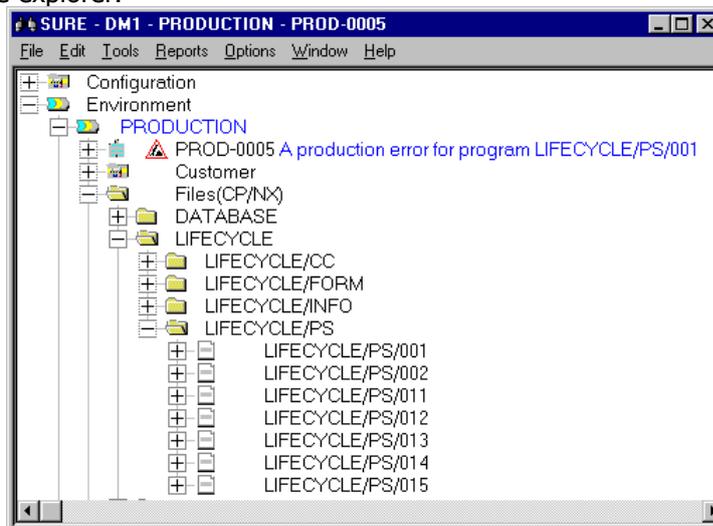
- * Define as new task as described in paragraph 3, but now for environment PRODUCTION:

Task Group	PROD
Description	A production error in program LIFECYCLE/PS/001
Set option	'I start working for this task'

Notice the status of the task: PRODUCTION/ASSIGNED.

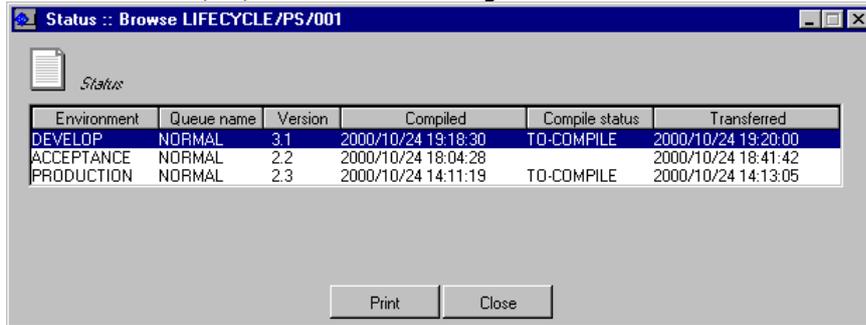
- * Open folder PRODUCTION.

The last entered task is mentioned as current task is folder PRODUCTION, and in the title bar of the Sure explorer.



- * Check-out the production version of program LIFECYCLE/PS/001, make a small modification and check the file in.

- * Right click on LIFECYCLE/PS/001 and choose 'Log' from the menu:

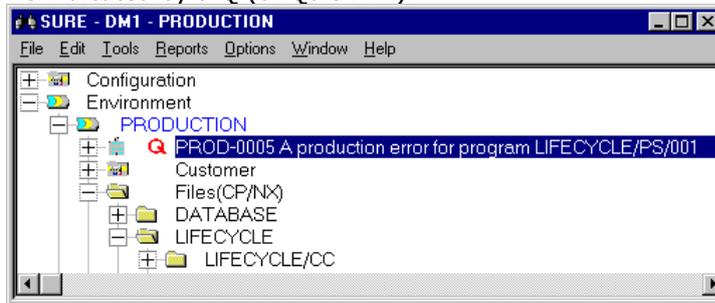


Originally the file had version 2.2 in all environments.
 The FileVersion is changed in DEVELOP from 2.2 to 3.1
 The FileVersion is changed in PRODUCTION from 2.2 to 2.3

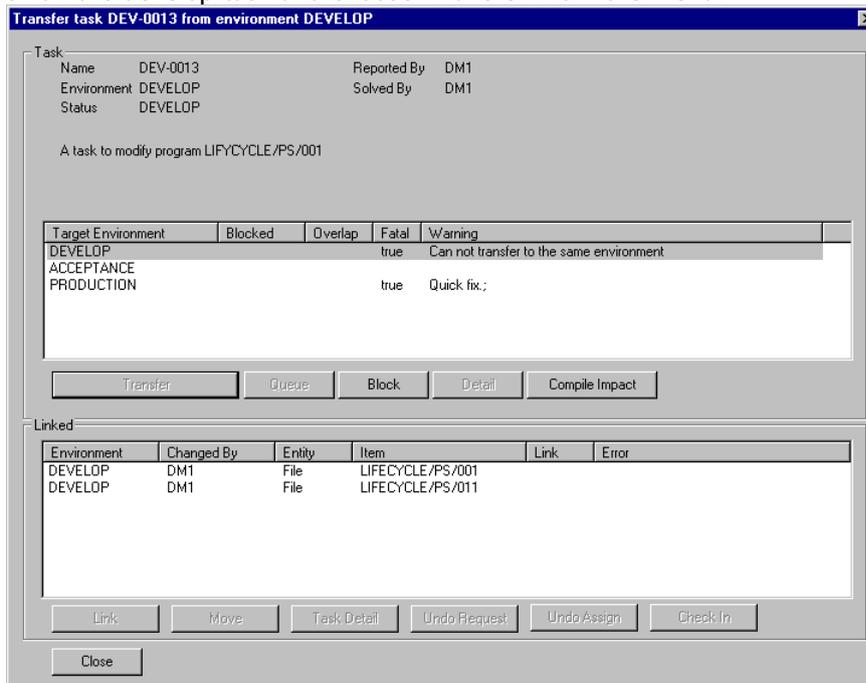
- * Right-click on your current production task and choose 'Transfer' from the menu.
- * Click on button 'Transfer' to freeze the task in environment PRODUCTION.

The task is not your current task anymore because it is transferred. It is not possible anymore to work on this task in the production environment.

The task is indicated by a Q (of Quick Fix):



- * Close folder PRODUCTION and open folder DEVELOP
- * Right click on the develop task and choose 'Transfer' from the menu:



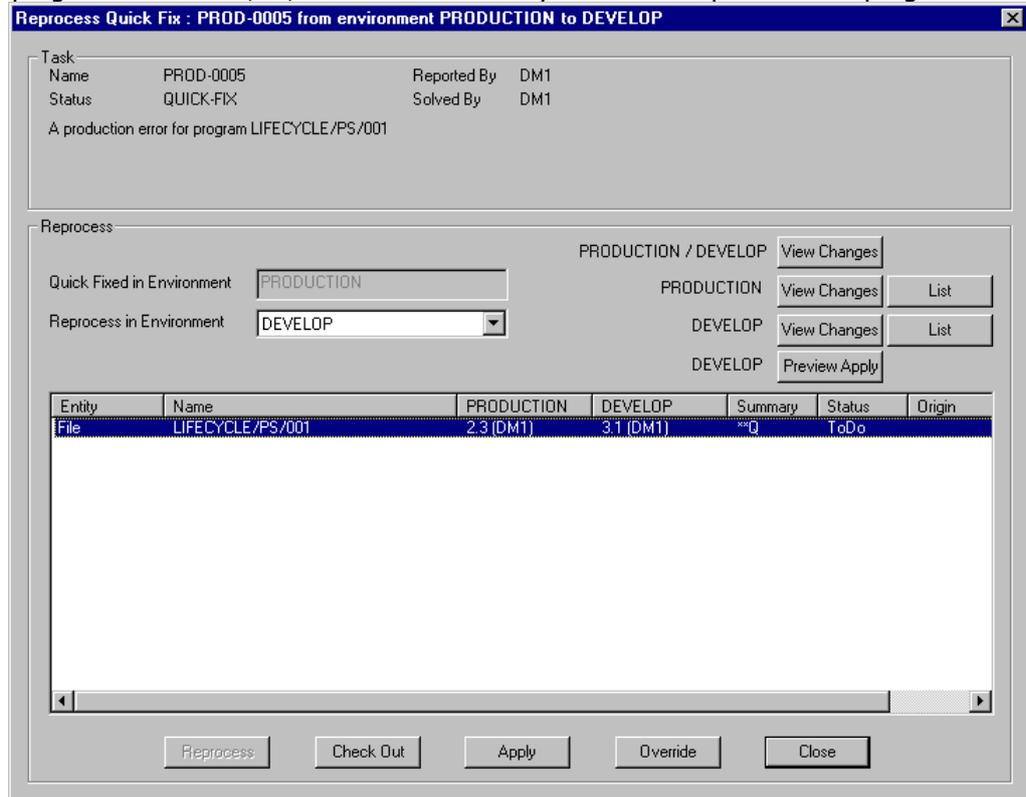
It is not possible to transfer the task to production. If you click on the line with PRODUCTION then button 'Transfer' is switch off. This is because of the quick-fix that was made to program

LFCYCLE/PS/001. A transfer of this task to production at this moment would remove the quick-fix patch in production.

- * Open folder 'DEVELOP'/'Life Cycle'/'My tasks'/'Quick fix'.

The production quick-fix task appears in the list.

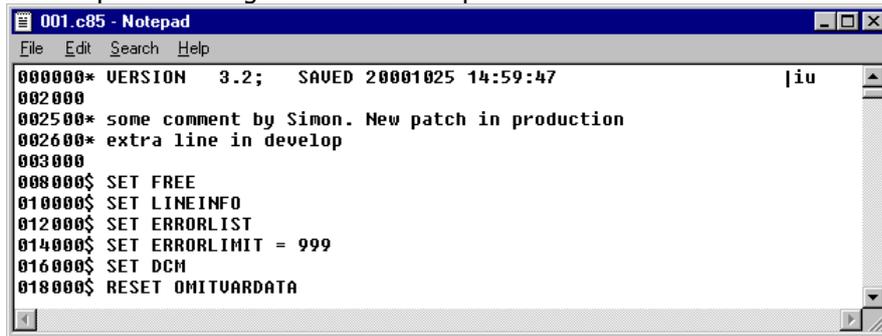
- * Right click on that task and choose 'Reprocess Quick Fix' from the menu.
- * Click on program LIFECYCLE/PS/001 to indicate that you want to reprocess that program:



- With button 'PRODUCTION/DEVELOP [View Changes]' you see the current differences between the file in production and the file in develop.
- With button 'PRODUCTION [View Changes]' you see the differences between the current production version of the file and the original production version (at the start of the quick fix).
- With button 'PRODUCTION [List]' you see the production patches.
- With button 'DEVELOP [View Changes]' you see the differences between the current develop version of the file and the original develop version (at the start of the quick fix).
- With button 'DEVELOP [List]' you see the develop patches
- With button 'Preview Apply' you see the production patches merged into the current develop version of the file.
- Button 'Reprocess' can be used if the file was not changed in develop. In that case the production version of the file is simply copied to develop.
- Button 'Apply' can be used to merge the production patches into the develop version.
- Button 'Override' can be used to override all checks. The production version is copied to develop and will overwrite all develop modification (if there were any).
- Button 'Check Out' can be used to merge the quick-fix patch manually into the develop version.

- * Click on button 'Apply'.
- * Close dialogue 'Reprocess Quick Fix' and Right click on LIFECYCLE/PS/001 to view the file.

The production patch is merged into the develop version of the file:



```
000000* VERSION 3.2;   SAVED 20001025 14:59:47      |iu
002000
002500* some comment by Simon. New patch in production
002600* extra line in develop
003000
008000$ SET FREE
010000$ SET LINEINFO
012000$ SET ERRORLIST
014000$ SET ERRORLIMIT = 999
016000$ SET DCH
018000$ RESET OMITVARDATA
```

Line 2500 contains the production patch

Line 2600 is the develop modification.

- * Transfer the quick-fix task to production.
- * Transfer the develop task to production.

7 Epilogue

This concludes the Sure Quick Start Demonstration. We thank you very much for your time and attention and, above all, your interest in the Sure 'change & control' system.

We hope that these examples have given you a basic understanding of Sure. Many other features of Sure (which are not mentioned in this short demonstration), are available to support the developers and change-control staff in their daily jobs.

For detail information concerning Sure consult the Sure reference manual.

If you have any additional questions about Sure, please do not hesitate to contact us.

Once again, thank you and good luck with Sure.