Changes and Enhancements

This chapter covers the following topics:

- International Support
- Natural Studio
- Editors
- Utilities
- Parameters
- Statements
- System Variables
- System Commands
- Web Technology
- Automation Interface for Plug-ins
- NaturalX
- Miscellaneous

International Support

Natural for Windows now includes the international support which was previously only provided with the international version of Natural Version 6.1.1.

Bidirectional languages and double-byte characters are now supported. For detailed information on how to activate these features, see the sections *Bidirectional Language Support* and *Double-Byte Character Support* in the *Unicode and Code Page Support* documentation.

The following has changed (as compared with the international version of Natural Version 6.1.1):

- In the map editor, the **Flip Map** command has been renamed to **Reverse Map**. This command now only applies to the active map.
- The script of a font is now always set to the language script selected in the **Script** drop-down list of the **Font** dialog. Natural does not longer set a fixed script for specific languages.
- New controls created in the dialog editor now always contain the string "untitled", independent of the current language.
- The environment variable `RTL_BW_COMP` is no longer supported. For the TTY print method: for fields which have right-to-left (RTL) direction, all characters are simply reversed.

Natural Studio

Local Environment

When you are working in a remote development environment and have therefore collapsed the node for the local environment, the local environment will also appear collapsed when you restart Natural Studio. See *Starting Natural Studio* in *Using Natural Studio*.

Suppression of Line Numbers

For a library, you can now define that line numbers are not written to the source code in the file system. See *Suppressing Line Numbers in the Source Code* in the *Using Natural Studio* documentation.

Results Window

In the results window, it is now possible to copy or save the content of the **Find Objects** and **Cat All** tabs as normal text in column format. The individual columns are separated by tab characters. Thus, the copied or saved content can easily be used in an application such as Microsoft Excel. See *Results Window* in *Using Natural Studio*.

Program Editor Options

A new option is available which determines the behavior of the **Find** command. It can be used to stop searching at the end of the source code if the specified string is not found, or to wrap around to the other end of the source code and to continue the search. See *Program Editor Options* in *Using Natural Studio*.

Debugger

It is now possible to add watch variables and watchpoints using drag-and-drop functionality. See the sections *Adding a Watchvariable from the Editor Window* and *Adding a Watchpoint from the Editor Window* in the *Debugger* documentation.

Remote Development

When mapping to a remote development server which does not respond, you can now cancel the mapping process by pressing ESC. A corresponding message will be shown in the status bar.

Editors

Program Editor

It is now possible to move or copy text using drag-and-drop functionality. See *Dragging and Dropping Text* in the *Program Editor* section of the *Editors* documentation.

The recording of a keystroke sequence can now be saved as a macro for permanent use. See *Recording, Replaying and Saving Keystrokes* in the *Program Editor* section of the *Editors* documentation.

It is now possible to expand and collapse blocks of two or more consecutive comment lines. See *Showing and Hiding Source Code* in the *Program Editor* section of the *Editors* documentation.

Data Area Editor

It is now possible to set the upper bound for each dimension of an array or X-array. See *Editing Data Areas* in the *Data Area Editor* section of the *Editors* documentation.

It is now possible to enter an array definition and an initial value directly in the table of the editor window. See *Rows and Columns in the Editor Window* in the *Data Area Editor* section of the *Editors* documentation.

The handling of comments has been enhanced. It is now possible to either retain or delete field definitions when commenting out a field. See *Specifiying Comments* in the *Data Area Editor* section of the *Editors* documentation.

Utilities

FTOUCH

You can now define that line numbers are not written to the source code in the file system. See *FTOUCH Utility* in the *Tools and Utilities* documentation.

INPL

The INPL utility now automatically recognizes the type of the load file. It is no longer necessary to specify the correct load file type. See *INPL Utility* in the *Tools and Utilities* documentation.

SYSRPC

See *Natural Remote Procedure Call (RPC)* later in these *Release Notes*.

Parameters

LSTEP

The default value assigned to the profile parameter LSTEP has been changed from "STEP" to "SYSTEM". Therefore, you have to take precautions if you create new parameter files and your applications use these newly created parameter files and depend on objects located in the library STEP (the former default value). The modification of the default value implies an alteration in the default library search order (steplib). Therefore, your applications might not run properly or might produce unexpected results.

When you are using old parameter files in which the value "STEP" is defined for the profile parameter LSTEP, your existing applications which depend on objects located in library STEP will still run properly.

If your applications do not expect objects to be located in library STEP on FUSER or if library STEP on FUSER is empty, your applications will run properly after the default value change of LSTEP. The performance is increased since the library search order decreased in size. You are encouraged to modify LSTEP in your current installation to the proposed new default value in order to take advantage of the above mentioned performance increase.

LT

The range of possible values for the profile and session parameter LT has been changed from 0 - 99999999 to 0 - 2147483647.

NCFVERS

The new value "3" is now available for the profile parameter NCFVERS. This value indicates that a format file of Entire Connection Protocol Version 3 is written, which is created by Natural Version 6.3. The default value of the NCFVERS parameter has changed from "2" to "3".

Statements

DECIDE ON

The SUBSTRING option can now be used as *operand1* and *operand2* in the DECIDE ON statement. It allows you to check only a certain part of an alphanumeric, Unicode or binary field.

FOR

An arithmetic expression can now be used as *operand2*, *operand3* and *operand4* in the FOR statement.

System Variables

*SERVER-TYPE

The new value "WEBIO" of the *SERVER-TYPE variable indicates that Natural has been started as a Natural Web I/O Interface server.

System Commands

SYSPROD

The list of installed products, which is invoked with the system command SYSPROD, now also includes hotfixes.

Web Technology

Natural Web Interface

The Natural Web Interface now also supports Apache Version 2.2.*x* HTTP servers. For further information, see *Supported HTTP Servers* and *Natural Web Server Extensions for MOD* in the *Web Technology* documentation.

Using the Web Interface on a remote machine without EntireX technology is now possible via the PAL interface as used for the SPoD server. On Windows platforms, this is also possible via DCOM.

The server extension program initializes a communication directly to the PAL server instead of, for example, using RPC. Because all Web Interface programs are subroutines, and it is not possible to run a subroutine directly using PAL, a generic stub is necessary. This stub handles steplib setting, parameter transfer and `CALLNAT` of the subprogram.

For further information, see *Communication Using PAL Techniques* and *Functionality* in the *Web Technology* documentation.

Automation Interface for Plug-ins

The following new predefined node types are available:

Node Type Number	Node Type Name	Key Format
1021	Adapter	NATID
1071	Adapter (in application)	NATID
1104	DDM system file	FILEID

See *Predefined Node Types* in the *Extending Natural Studio with Plug-ins* documentation.

NaturalX

The ActiveX components `SoftwareAG.NaturalX.Utilities` and `SoftwareAG.NaturalX.Enumerator` are provided with a new version number (".4"). See the descriptions of these ActiveX components in the *NaturalX* part of the *Programming Guide*.

Miscellaneous

Printing

When you print an object, the database ID and file number are now included on the printout.

NCF Format Files

The content of the NCF format files which are created for the work file type Entire Connection has changed. Now the information fields that were empty before are also filled with the work file processing information. The content of the information field **File name** has changed; the file name and path are now included in the information field. Since Unicode is now supported for NCD files, a new information field is available in the NCF file, containing code page information.

Tracing the SPoD Protocol

The environment variable `SET PALTRACE=nbr` has been dropped. If you want to trace the Pal, you have to use `NCTR_TRACE` for this purpose. The prerequisite is a Natural version which has been optimized for tracing or a debug version. The file *NCTR.cfg* has to be adapted accordingly.