What is Natural Single Point of Development?

The following topics are covered:

- Features and Benefits
- One Natural for All

If you have been developing applications using Natural in a non-graphical environment, you have undoubtedly become familiar with Natural's wide range of capabilities and most likely also with some of its inconveniences and shortcomings. You have probably quite often wished for a more advanced user interface for "your Natural". With Natural Single Point of Development, your wish has indeed become reality.

Simply speaking, one might say that Natural Single Point of Development is a Windows-based Natural workstation for remote application development on different platforms.

Actually, Natural Single Point of Development concept covers more than a simple workstation in that it combines the advantages of two disparate worlds:

- the strengths of the character-based Natural products and
- the ease of use provided with Natural for Windows.

In addition, it provides a series of novel features which are explained below.

Features and Benefits

Natural Single Point of Development approach is Software AG's response to the increasing demand for a state-of-the-art development workstation for building, testing and maintaining all Natural applications throughout their life cycle and across all supported platforms.

It meets the following requirements and offers the following advantages:

- **Client/server architecture enabling one single remote development environment for all platforms**

  Natural Single Point of Development is based on a client/server concept. On the client side, Windows-based Natural Studio with its modern look and feel, its powerful drag-and-drop copy and paste functionality and its browser-style workspaces offers one single, uniform view for all Natural users. Its graphical user interface is the basis for a single, uniform working environment for all platforms (mainframe, mid-range and PC computer systems) supported by Natural.

  For more details, refer to System Architecture.

- **Full remote development access after mapping to the target environment**

  For remote development, the Windows-based Natural client (which will remain useable for Windows-only application development) can be enabled to interact with a development server that can be located on a single or multiple, homogeneous or heterogeneous mainframe or mid-range computer systems. Once you have mapped your target environment in the client's browser-style application workspace, you have a set of convenient and effective tools at hand that enable you to perform all development tasks directly in the target development environment. You can use the functionality to the extent it is available there. And to prevent concurrent updates, the object under work on the target platform is locked.

For more details, refer to Remote Development.

- **Single, familiar system image of all objects and ressources involved in application development**

  Natural and non-Natural objects can be accessed and processed with a single user interface.You can generate DCOM components, use RPC and EntireX communications and/or put your applications to the Internet. You can submit and monitor jobs, control job listings and perform dataset maintenance tasks. Operations on all of these different object types, whether they reside on OS/390, VSE/ESA, BS/2000, UNIX (development server already implemented), Windows platforms supported by Natural (development servers are under development or planned), is afforded using a well-known graphical user interface.
  Under consideration: You can display and edit text files, JCL, and code held as Natural objects or 3GL programs.

  For more details, refer to First Steps with Natural Single Point of Development.

- **New application concept giving a logical view to distributed applications**

  To meet the requirements of a new, distributed application development scenario, a new-defined application concept has been introduced which provides a logical view of Natural and future objects on the various sites where they are developed and used. On the workstation screen, this is complemented by an application workspace which shows all distributed objects of an application in a tree structure.

  For more details, refer to Application Concept.

- **Remote development server file**

  A new central data dictionary file has been introduced to cope with the requirements of the new, distributed application concept. Having the same structure as the well-known Natural system file FDIC, the new system file serves to store the information where the objects linked to an application are stored and which objects are locked.

- **Reduced training costs plus increased productivity**

  The use of only one easy-to-use working environment and the independence from operating system or TP monitor will reduce the investment in training otherwise required for the different environments and will shorten the turnaround time for application development.

- **Future-proof by pluggable extras**

  As a first example, XRef Evaluation is available as an optional plug-in unit for the workstation.This facility enables you to retrieve and display conveniently the cross-reference information which is essential for developing applications in Natural. It gives you a comfortable way of listing and navigating through hierarchies of referenced and referencing objects, showing relationships between and within program objects.

  For more details, refer to XRef Evaluation.

  Additionally, plug-ins are available integrating the functionality of the well known products Predict, Natural Construct and Natural Engineer.

  The Object Description plug-in gives access to all descriptive data stored in Predict. A full set of maintenance and retrieval functions is included in the same graphical way. Use of retrieval models and an extended find dialog are included as well.

  The Schema Generation plug-in enables the user to generate DDMs, Adabas files and DB2 tables, views and more.

  Generation of Natural programs becomes as easy as possible, using the Program Generation plug-in. Using a wizard based graphical user interface, the server programs are generated by using Natural Construct running on the server platform.

Other plug-ins are under development. Even third-party plug-ins may be easily integrated in the future. Which plug-ins are actually visible and active can be configured on a per user basis using the Plug-in Manager.

- **Enhanced online help/documentation for remote environments**

  For remote environments with character user interface, Natural Single Point of Development enables application developers and administrators to display context-sensitive help and additional documentation in electronic form using browser style windows within the graphical user interface. This means fast and efficient access to vast amounts of information which formerly required many volumes of printed manuals. Should you need complex information in printed form, you can print out your personal copy of each document that is available online.

  In addition, the syntax help in the program editor available in Natural Studio offers full-detail context-sensitive help for the following Natural syntax elements:

  - Statements
  - System variables
  - System functions
  - Parameters (for example, the AD parameter)

One Natural for All

Natural Single Point of Development is more than wishful thinking - it is indeed **one Natural for all**.