Natural

Glossary

Version 9.1.3

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ADABAS & NATURAL

This document applies to Natural Version 9.1.3 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Glossary

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A

Abstract	*Predict:* Each object in Predict can have an abstract providing short comments on the object. An abstract can have up to 16 lines of up to 30 characters. In earlier versions of Predict, an abstract was referred to as “Comments” or “Short comments”. The name was changed for reasons of compatibility with other Software AG products.
Activation Policies	Activation policy is an attribute of a NaturalX class that is to be registered as a DCOM class. It defines whether the class may share a Natural session with other classes.

NaturalX combines the different options supported by **DCOM** in the form of the following three activation policies:

- ExternalMultiple
- ExternalSingle
- InternalMultiple

The activation policy of a class can be set as part of the `REGISTER` command, in the `DEFINE CLASS` statement or with the profile parameter `ACTPOLICY`.

Active Help

Predict: If parameter values needed to execute a function are missing, active help is given in the form of a selection window containing all possible values. This applies to all input fields marked with an asterisk.

Active Reference Data

Predict: See ***XRef Data***.

Active Retrieval

Predict: Active retrieval functions retrieve information from XRef data and from Predict documentation objects. Comparison of documentation and implementation of a system is possible.

ActiveX Component

Windows: Standardized Microsoft interface to external programming components, for example, business logic or calculations. ActiveX components have no user interface.

ActiveX Control

Windows: A standardized programming component with a user interface e.g. radio buttons or list boxes, which can be used in Natural dialogs. Natural can get a selection list of the ActiveX controls available from the registry. You can view the default settings in the Property pages using the Component Browser.

Adabas

Software AG's high-performance, multi-threaded, adaptable database management system for multiple platforms.

Address Space

Area in which Natural runs.

AIV = Application-Independent Variable

1. A Natural variable used to assign values across programs. See the section *User-Defined Variables* (in the *Programming Guide*) and the `DEFINE DATA` statement (in the *Statements* documentation).
2. *Mainframe:* `AIV` is also a Natural system command which lists all active AIVs.

Ajax = Asynchronous JavaScript and XML

A method of building interactive browser-based applications that process user requests immediately.

ALF = Access Layer Format

Predict: Represents a predefined, database system independent format with which you can exchange data between Predict Case and Natural Engineering Workbench. All the data you wish to transfer with the Predict Coordinator must first be put in a transfer medium.

AMODE = Addressing Mode

The number of bits (24 or 31) of a virtual address used during program execution.

API

See ***Application Programming Interface***.

AppID

In the Windows system registry, each application is represented by an AppID. The AppID is a globally unique ID, which can be found under the registry key HKEY_CLASSES_ROOT\AppID. **DCOM** uses the AppID to group classes to applications. Also, for example, security settings are defined on the basis of the AppID. Natural creates for each NaturalX server ID one AppID in the registry.

For further information, see the section ***Server ID***.

Application

A logical view of a collection of interconnected programming elements. Together, they form a functional unit which covers the business logic for a particular business problem. An application consists of a set of libraries and their Natural objects and/or sub-applications (business objects). The contents of a library (Natural objects, resources, etc.) can belong to different applications. Information concerning an application (the application description) is held in the development server file which is accessible from all platforms.

There are two types of application:

- **Base Applications**
  Base applications consist of one application on one platform, for example, a theater ticket booking system.
- **Compound Applications**
  Compound applications consist of multiple base applications, for example, a theater administration application combining applications for booking tickets, billing customers and mailing customers with performance information. The base applications can be on multiple platforms.

Application Description

A list of all the elements belonging to an application, stored in the development server file. The database file (at present FDIC on the mainframe) in which application information is physically stored. See ***Development Server File***.

Application Description Layer	The code which handles access to the application description.
Application Programming Interface (API)	A programming object that allows the user to access and possibly modify data or to use services that are specific to Natural, a subcomponent or a subproduct. The purpose of an application programming interface is to retrieve or modify information or use services that are not accessible by Natural statements. Application programming interfaces can be invoked from Natural objects using `CALLNAT` or `CALL` statements, depending on the respective application interface.
Application Wizard	*Windows:* A tool for defining what belongs to a certain application. Dialog boxes guide the user through creating an application description for an existing application.
Application Workspace	*Windows:* Used to view a visual representation of an application in a tree view. The application workspace shows all elements belonging to the current application.
ASM = Natural Authorized Services Manager	Provides the following authorized operating system functions for use within Natural: ■ propagating Natural buffer pool objects; ■ writing system management facility (**SMF**) records; ■ holding Natural session information in the Session Information Pool (**SIP**). ASM provides functions via PC routines and runs in its own address space.
Association	*Predict:* Predict documentation objects can be linked using associations. Different types of associations are used to link objects of different types. Associations are unidirectional (child and parent association). Additional association types can be defined by the data dictionary administrator using the Metadata Administration functions of Predict.
Asynchronous Natural Session	An asynchronous Natural session is an “online” session (i.e. running under a TP monitor) which is not associated with any terminal and therefore cannot interact with a terminal user.
Asterisk Notation	*Predict:* The wildcard character "*" (an asterisk) can be used to specify input parameters that address groups of values. For example, if

	"datab*" is entered as an ID, all IDs starting with the characters "datab" are addressed.
Attribute	*Predict:* Predict documentation objects have attributes describing the object.
Automation Object	*Windows:* A program which can be used via an automation interface. For further information, see your Microsoft documentation.

B

Base Application	See ***Application***.
BMP = Basic Multilingual Plane	
BMP = Batch Message Processing	*`IMS TM`:* Programs running asynchronously in batch mode under control of **IMS TM**.
BOM = Byte Order Mark	
Bootstrap Module	A module used to call a program. The bootstrap module provides the environment needed to run the program.
BLOB	A BLOB is a “Binary Large Object”, in other words, a very large variable.
BT = BACKOUT TRANSACTION	A Natural statement issued to cancel a database transaction and restore the condition of the data before starting the transaction. See also ***Transaction*** and `END TRANSACTION` (**ET**).
Buffer Pool	In Natural, this is a storage area used by the Natural nucleus to execute Natural objects (see also ***Object Types***). When a Natural object is requested for execution, it is read from the system file and placed in the buffer pool, where it can be used by several users simultaneously.

C

Cache	A buffer area used to temporarily store copies of data most recently retrieved from the main memory. This avoids unnecessary access to system files and external databases/file systems thus reducing CPU time consumption and speeding up response time.
CATALOG	In Natural, the term "catalog" refers to the Natural system command `CATALOG`. This command compiles (catalogs) source code and stores

the generated object code as a cataloged object in a Natural system file.

Cataloged Object

In Natural, a cataloged object is the executable (compiled) form of a Natural object. A cataloged object is stored as an object module in a Natural system file.

Mainframe: An object that is cataloged on the mainframe is executable on the mainframe only. On the mainframe, it is possible to optimize a cataloged object using the **Natural Optimizer Compiler**.

Windows and UNIX: As of Natural Version 5.1, cataloged objects are portable across all Windows and UNIX supported by Natural (not on the mainframe). It is also possible to specify the **endian mode** for a cataloged object if required.

Synonyms: The term “GP” or “generated program” is also used synonymously to cataloged object. In Predict Application Control, the term “loadable” is used.

See also ***Source Object***, ***Object*** and ***Object Types***.

CF = Coupling Facility

z/OS: Hardware component used to control and coordinate access to data shared by the operating systems participating in a **Parallel Sysplex** environment. The CF is used by the Natural Authorized Services Manager (**ASM**) and the **Natural Roll Server** to communicate in a Parallel Sysplex environment.

CGI = Common Gateway Interface

Used by Natural Web Interface to provide Internet services in Natural.

CHECK

In Natural, the term "check" refers to the Natural system command `CHECK`. This command checks whether the syntax of the source code contains any errors.

Child

Predict: Associations are used to document how Predict objects are related to other Predict objects. An association is established by linking objects to an object either as child or parent. For example, a field is the child of a file; a file is the child of a database.

CICS = Customer Information Control System

z/OS: IBM's online transaction processing system.

CICSplex = CICS Complex

A set of interconnected **CICS** regions acting as resource managers, and combining to provide a set of coherent services for a customer's business needs.*

Class

Natural classes encapsulate data structures (objects) with corresponding functionality (methods). See also ***NaturalX Class***.

The internal structure of the objects of a class object is defined with a data area (object data area). The methods of a class are implemented as subprograms.

Class Builder

Windows: Supports the definition and implementation of NaturalX and DCOM component classes as Natural classes. A Natural class can be composed of various components: Natural objects (for example, an object data area) or objects which exist only in the class source (for example, interface components). The Class Builder represents each component of the class in the form of a node. By selecting these nodes, the class and its components can be managed in a context-sensitive manner. See *Class Builder* in the *Editors* documentation.

Class GUID

If a NaturalX class is to be registered as a **DCOM** class, a globally unique ID (GUID) must be defined for the class, to make sure it can be unambiguously identified in a network. In Natural, a GUID is assigned to a class in the ID clause of the `DEFINE CLASS` statement. A GUID is represented by an alphanumeric constant which can be generated in the data area editor. The Natural Studio Class Builder automatically assigns a new GUID to each new class.

Class Name

The name defined in the *`class-name`* operand in the `DEFINE CLASS` statement. This name is used in the `CREATE OBJECT` statement to create objects of that class. See also `DEFINE CLASS` in the *Statements* documentation.

Class Module Name

The name of the Natural module in which a Natural class is defined.

Client Stub

See ***RPC Stub***.

CLOB

A CLOB is a “character large object”.

Cluster

VSAM: A data set defined to VSAM. A cluster can be a key-sequenced data set (**KSDS**), an entry-sequenced data set (**ESDS**), or a relative-record data set (**RRDS**).*

Code Point

Any value in the Unicode code space, i.e., U+000000 - U+10FFFF.

Code Page

See also ***Unicode***.

Code Unit

The minimal bit combination that can represent a unit of encoded text for processing or interchange.

COM = Component Object Model

Microsoft's framework for developing and supporting program component objects. COM provides a set of interfaces allowing clients and servers to communicate within the same computer. Components from different machines can be combined using **DCOM**.

Compiler

The Natural compiler translates source programs into pseudo-code. See also ***Natural Optimizer Compiler***.

Com-plete

Software AG's general-purpose, fully conversational online transaction processing (OLTP) software.

Compound Application

See ***Application***.

Component Browser

Windows: Used to view ActiveX components which are available for developing NaturalX applications. It comprises the following features:

- Available ActiveX components and their dispatch and dual interfaces are listed.
- Data types are mapped to Natural formats.
- The external components' help files are directly accessible.
- Natural programming examples are automatically generated.

Conceptual File

Predict: File objects of type Conceptual are used for design purposes in the early phases of application development.

Configuration Files

Windows and UNIX: The base directory for FNAT/FUSER is found by looking into the following configuration files:

- **Local Configuration File - Natural.INI**
  The local configuration file contains buffer pool assignments and installation assignments. It is located in the appropriate *etc* directory for each installed Natural version.
- **Global Configuration File - NATCONF.CFG**
  The global configuration file contains DBMS assignments, dictionary server assignments, assignments of printer profiles, and system file assignments.

For further information, see *Overview of Configuration File Parameters* in the *Configuration Utility* documentation.

Conflict Management

Predict: First phase of the Coordinator Check Cycle. With Predict Version 3.3 and above, all objects have an Internal ID. Conflict Management means the resolution of conflicts resulting from this

Internal ID. A possible conflict could be two objects with the same object ID but different Internal IDs.

Conflicts resulting from the Internal ID must be resolved in the Coordinator FDIC before data can be loaded or imported to the Main FDIC.

Con-form

A text formatter which is automatically installed with **Con-nect**.

Con-nect

Software AG's office communication system that provides a wide variety of office support functions including electronic mail, text processing, document and time management.

Connection

`Predict:` A connection between an external and a documentation object is established when either the external object has been generated from the documentation object or the documentation object has been incorporated from the external object. Most connected external and documentation objects can be disconnected explicitly.

The connection is realized on the Predict side with the implementation pointer, an attribute of documentation objects.

Consistency Check

Predict: Third phase of the Coordinator Check Cycle. Objects to be transferred are checked for logical consistency, for example that a file number only occurs once within a database. The same checks are performed as in Maintenance functions.

Constants

Natural supports the following types of constants:

- Numeric Constants
- Alphanumeric Constants
- Date and Time Constants
- Hexadecimal Constants
- Logical Constants
- Floating Point Constants
- Attribute Constants
- Handle Constants

See *User-Defined Constants* in the *Programming Guide*.

Coordinator Check Cycle

Predict: When objects are loaded or imported using the Predict Coordinator, they have to pass a check cycle consisting of the following phases: Conflict Management, Security and Consistency Check.

Conflicts in either of the phases must be resolved on the Main or Coordinator FDIC before the Load or Import function can continue.

Coordinator FDIC

Predict: The Coordinator FDIC is a Predict file which is used to store data temporarily when using the Coordinator functions Load or Import. Conflicts must be resolved on this Coordinator FDIC before the load/import operation can be continued. The data on the Coordinator FDIC is deleted after the function has been successfully executed.

Coupled Field

Predict: Fields that are copied from fields in standard files or master files are called coupled fields.

Cross-Reference List

Predict: A listing produced by Predict function X in the Retrieval and Active Retrieval menu showing all objects to which a given object is linked by an association.

CSA = Common System Area / Common Storage Area

1. *CICS:* A common system area is a major CICS storage control block that contains areas and data required for the operation of CICS.* See also ***ECSA***.
2. *z/OS:* A common storage area which is available to all address spaces in z/OS.

CSECT = Control Section

That part of a program specified by the programmer to be a relocatable unit, all elements of which are to be loaded into adjoining main storage locations.*

CSV = Comma-Separated Values

Files with statistical tables are stored in CSV format to delimiter columns for spreadsheet manipulation.

CUI

Abbreviation for “character user interface”.

Current Objects

Predict: Some retrieval types (for example: files with children) report on both the attributes of objects that meet the specified selection criteria and the attributes of objects that are related to these objects. When specifying output options, the objects that meet the specified selection criteria are called the current objects.

Current Virtual Machine / Current Network

Predict: Network and virtual machine objects document the hardware and operating system environment of an information processing system. Predict stores a current virtual machine and a current network which is then used

- as default parent for databases and virtual machine objects
- as the target environment for Generate/ Incorporate/Compare functions and some AOS functions called from the Predict Special functions menu.

Current virtual machine and current network are specified in the Predict Defaults.

D

Database	*Predict:* Predict documentation objects of type database document a collection of physical and/or logical files. The way files are collected to form an object of type database depends on the type of database documented.
Dataspace	*Predict:* Predict documentation objects of type dataspace document DB2 tablespaces and SQL/DS DBspaces.
Data Control Language (DCL)	See ***DCL***.
Data Definition Object	*Predict:* External objects created with generation functions, for example definitions for the Adabas compression utility, COBOL copy code, data definition modules (DDMs), DB2 databases, verification rules.
Data Definition Language	See ***DDL***.
Data Definition Module (DDM)	See ***DDM***.
Data Dictionary Object	*Predict:* See ***Object***.
Data View	A data view references database fields defined in a **data definition module** (DDM). A data view can contain all or some of the field definitions in the DDM and is defined in a `DEFINE DATA` statement or a data area.
DB	Abbreviation for “database”.
DBA	Abbreviation for “database administrator”.
DBCS = Double-Byte Character Set	A character set where each character is represented by two bytes. This set is typically used to represent symbols of languages (for example, Chinese and Japanese) which need more codes than available with single-byte character sets (**SBCS**).
DBD = Database Description	*DL/I:* A description of the physical characteristics of a **DL/I** database. It defines the structure, segment keys, physical organization, names, access method, devices and other details of the database.*

DBID = Database Identification	The database number.
DB2 = DATABASE 2	A relational database management system in which data is presented to the user in the form of tables. It can be accessed by a CICS application programs issuing SQL requests.*
DCL = Data Control Language / DIGITAL Command Language	*SQL:* Data control language handles data security aspects by providing statements for granting and revoking privileges.
DCOM = Distributed Component Object Model	A Microsoft component technology which allows objects on different computers to communicate through common protocols, including internet and web-based protocols. DCOM extends **COM** to a distributed component software model which specifies how software components interact in a distributed environment.
DDE = Dynamic Data Exchange	A protocol defined by Microsoft to enable different applications to exchange data.
DDL = Data Definition Language	Used to create, modify and delete SQL data structures.
DDM = Data Definition Module	A logical definition of a physical database file referenced by Natural objects. DDMs contain information on the individual fields of the file relevant for their use within objects. On the mainframe, DDMs are stored in the system file FDIC. Under Windows and UNIX, they are stored in the system file FUSER in the relevant library. For information on the DDM structure, see the section *Data Definition Modules - DDMs* in the *Accessing Data in a Database* part of the *Programming Guide*. See the section *DDM Editor* in the *Editors* documentation.
Debugger	See ***Natural Debugger***.
Development Server File	Database file (at present FDIC on the mainframe) in which application descriptions are physically stored. See ***Application Description***.
DIGITAL Command Language (DCL)	See ***DCL***.
Distributed Component Object Model (DCOM)	See ***DCOM***.
DL/I = Data Language/One	An access method to manipulate hierarchical databases.
DLL	Abbreviation for “dynamic link library”.

DML = Data Manipulation Language	A language used to manipulate **SQL** data structures.
DSECT	Abbreviation for “dummy control section”.
DTD = Document Type Definition	Schema specification method for SGML and XML documents. DTDs are either contained in the document or belong to its external subset and are then referenced from within the document's document type declaration per URL. Known DTDs are e.g. DocBook, CML, IBTWSH, and HTML. dtd2html generates HTML documentation for SGML DTDs. For XML, DTDs will be replaced by the new XML Schema specification method.
Dynamic Definition	Any definition of Natural variables that is not part of a `DEFINE DATA` clause.
Dynamic Parameter	Assigned by specifying individual parameters and/or an alternative parameter file when starting Natural. Valid for the current Natural session.
Dynamic Variable	Using variables with the attribute `DYNAMIC`, large binary and alphanumeric data structures may be processed in Natural without the need to define a space limit at development time. Dynamic variables are defined without any length. Memory is allocated at execution time either implicitly, when the dynamic variable is used as a target operand or explicitly with an `EXPAND` or `RESIZE` statement. Dynamic variables can only be defined in a `DEFINE DATA` statement. See *Introduction to Dynamic Variables and Fields* in the *Programming Guide*.

E

ECSA = Extended Common System Area	*z/OS:* A major element of z/OS virtual storage above the 16 MB line. This area contains pageable system data areas that are addressable by all active virtual storage access spaces. It duplicates the common system area (**CSA**) which exists below the 16 MB line.*
EDIT Line	*Predict:* The bottom line in the input screen of the functions Add, Copy and Modify. This line determines whether certain attributes are to be created or modified. If Y is entered in input fields in the EDIT line, a Predict editor is called.
Elementary Field	*Adabas:* A single-valued field (scalar) as opposed to a multi-valued field (**multiple-value field** or **periodic group**). *Predict:* See ***Field***. In previous versions of Predict, the Predict object type Field was called “Elementary Field”.

ELPA = Extended Link Pack Area

z/OS: A major element of z/OS virtual storage above the 16 MB line. It duplicates the link pack area (**LPA**).*

Endian Mode

Windows and UNIX: Type of architecture for which the compiler generates **GPs**. There are two modes:

big-endian
The high-order byte of the number is stored in memory at the lowest address, and the low-order byte at the highest address (the big end comes first).

little-endian
The low-order byte of the number is stored in memory at the lowest address, and the high-order byte at the highest address (the little end comes first).

Determined by the `ENDIAN` session/profile parameter. The `ENDIAN` parameter is used to increase the execution performance of **portable GPs**.

EntireX Broker

EntireX Broker controls communication among the distributed application components within your IT architecture. The Broker supports many types of communication models: synchronous and asynchronous, client/server, peer-to-peer, publish and subscribe. The follow-up technology is **EntireX**.

Entire Connection

Software AG product for handling host-to-PC communication. Entire Connection provides mainframe terminal emulation, a high-level application program interface, unattended workstation operation, data conversion facilities and related communication tasks.

Entire DB Engine

Software AG's entity relationship database that is based on **Adabas**.

Entire Net-Work

Software AG's middleware which provides a common communications service for database applications, query tools, cooperative processing applications, application development tools and other software.

Entire Operations

Software AG's system for scheduling, executing and controlling job networks. It provides all functions required for processing jobs in online or batch mode.

Entire Output Management

Software AG product for processing any type of print data in heterogeneous client/server environments without changing the applications or programs that created the data.

Entire System Server

Software AG's self-contained software package that provides operating system services in a Natural environment. When installed on

computers that are linked by Entire Net-Work, Entire System Server supports distributed computing environments that can encompass heterogeneous operating systems.

EntireX

Software AG's middleware technology for open enterprise computing. It provides a powerful infrastructure to develop distributed applications, the components of which can be ported to a wide range of operating environments. EntireX enables you to integrate legacy applications (e.g. on the mainframe) and GUI-front-ends.

EntireX Broker Stub

Interface between the **Natural RPC** runtime and the EntireX Broker transport layer which exchanges marshaled data between client and server.

EntireX DCOM

Software AG product used to develop **DCOM** components in a heterogeneous networking environment.

EntireX Manager

Replaced by **System Management Hub**.

Entry-Sequenced Data Set (ESDS)

See ***ESDS***.

ESDS = Entry-Sequenced Data Set

VSAM: A data set whose records are physically in the same order in which they were put in the data set. It is processed by addressed direct access or addressed sequential access and has no index. New records are added at the end of the data set.*

ET = END TRANSACTION

A Natural statement issued to confirm completion of a database transaction. See also ***Transaction*** and `BACKOUT TRANSACTION` (**BT**).

Event-driven Programming

Windows: Event-driven programming allows an application to be driven by input received through the graphical user interface. Thus, the order in which code executes depends on which events occur, which in turn depends on what the user does. See *Introduction to Event-Driven Programming* in the *Programming Guide*.

Export

Predict: The Coordinator function Export is used to export Predict data in a form which allows data exchange with other systems. You can also export text from attributes of a Predict object (for example extended description or subquery of a File), or from the output of a display-oriented Predict function (for example Retrieval or Active Retrieval), to an external target (for example Natural, a Con-nect document or a PC ASCII file).

External Class

A NaturalX class can be a local, an internal or an external class. This depends on the way the class was registered. An external class is a class that has been registered as a **DCOM** class with the `REGISTER`

command option `ES` (ExternalSingle) or `EM` (ExternalMultiple). Objects of external classes can be created and accessed by other processes.

For further information, see ***Local Class*** and ***Internal Class***.

External Object

Predict: Objects of applications (data processing systems) that are documented in Predict with documentation objects. External objects can be generated from documentation objects with Generation functions and documentation objects can be created from external objects using Incorporate functions. Comparison functions compare external and documentation objects.

External Interface

Windows: An external interface is an interface which is defined in an interface module, that is included by the class.

Extract

Predict: An Extract is a predefined object type in Predict which fulfills two main functions:

- grouping objects logically,
- creating a set of objects to be transferred with the Predict Coordinator.

F

FDIC

System file containing cross-reference information and DDMs. If Predict is installed at your site, FDIC is the Predict dictionary file. If Predict is not installed at your site, FDIC is identical to either FNAT or FUSER and on the mainframe contains DDMs only. FDIC is specified with the `FDIC` profile parameter as described in the *Parameter Reference*.

FDICX

VSAM: Alternate index path for VSAM base **cluster FDIC**.

FDT = Field Definition Table

Adabas: The table of field definitions of an Adabas file as stored and used by Adabas.

Field

Predict: Predict objects of type Field document the smallest logical unit of reference within a **File**.

Field Definition Table (FDT)

See ***FDT***.

File

Predict: A Predict object of type File contains the definition of a collection of fields.

File Coupling

Adabas: File coupling is used to select records from one file that are related (coupled) to records in another file. Files are coupled by using

Adabas descriptors. You can either couple files physically (hard coupling) using ISN lists, or logically (soft coupling) by evaluating the search result (`FIND` statement) dynamically at runtime.

File Relation

Predict: A Predict object of type File Relation documents a logical or physical relationship between two Files which is established using Fields in the Files. In earlier versions of Predict, File Relations were called "Relationships". The name was changed for reasons of consistency with other Software AG products.

FNAT

Natural **system file** in which Natural system objects and parameter profiles are stored. Specified with the `FNAT` profile parameter as described in the *Parameter Reference*.

FNR = File Number

Usually the file number of a Natural **system file**.

Front-End

Windows and UNIX: Prepares screen and printer output.

Mainframe: See ***Front-End Stub***.

Front-End Stub

z/OS: A component of the Natural Server environment used by the Natural DB2 Stored Procedures Server and the Natural Development Server. The front-end stub interacts between the client/server protocol and the Natural server front-end.

FSEC

Natural Security **system file**.

FSEQ

Abbreviation for "file sequence".

FSPOOL

Natural Advanced Facilities spool system file. See also ***System File***.

FUSER

Natural system file in which all user-generated objects are stored. Specified with the `FUSER` profile parameter as described in the *Parameter Reference*. See also ***System File***.

G

GDA = Global Data Area

A Natural object which contains data elements that can be shared by multiple Natural objects.

For further details, see the section *Global Data Area* in the *Programming Guide*.

Generation

Predict: External data definition objects can be generated from Predict File objects with generation functions.

Generated Program (GP)

In Natural, the executable (cataloged) object generated by the compiler.

Mainframe: An object that is cataloged on the mainframe is executable on the mainframe only. On the mainframe, it is possible to optimize a cataloged object using the **Natural Optimizer Compiler**.

Windows and UNIX: As of Natural Version 5.1, generated programs are portable across all Windows and UNIX platforms supported by Natural (not on the mainframe). It is also possible to specify the **endian mode** for a generated program if required.

Synonyms: The term "cataloged object" is often used synonymously to GP. In Predict Application Control, the term "loadable" is used.

See also ***Source Object***, ***Object*** and ***Object Types***.

Generation Task

Predict: The generation of data definition objects can be performed comfortably by including several generation tasks in an implementation plan. A generation task is the call of a Predict generation function.

Global Parameter

See ***Session Parameter***.

GP

See ***Generated Program***.

GUI

Abbreviation for "graphical user interface".

GUID

A GUID (globally unique identifier) is a constant that is guaranteed to be unique worldwide in the COM/**DCOM** model. It is used to unambiguously identify classes and their interfaces in a network. If a Natural class is to be registered as DCOM class, a GUID must be assigned to the class and to each of its interfaces. In Natural, a GUID is represented by an alphanumeric constant which can be generated in the data area editor. The Natural Studio Class Builder automatically assigns a new GUID to each new class.

For further information, see the section *Globally Unique Identifiers (GUIDs)* in the *Programming Guide*.

H

Hexadecimal Notation

The following is an overview of the hexadecimal notations used for hexadecimal formats in the Natural documentation and also in the documents concerning the Natural add-on products:

Notation	Example	Explanation	Natural Documents
H	H'5A3'	Used in the Natural programming	*Programming Guide*, *Statements* and other

Notation	Example	Explanation	Natural Documents
		language (NPL).	NPL-related reference documentation.
X	X'5A3'	Most common notation on mainframe operating systems. It is used in assembler language, PL/I, Cobol, JCL, scripts, commands and other places.	Natural for Mainframes documentation (e.g. *Installation*, *Operations*, *TP Monitor Interfaces*).
0x	0x5A3	Used in the C programming language and its syntactical descendants.	Natural for Windows/UNIX (e.g. *Installation*, *Operations*), Natural Development Server, Natural Web I/O Interface.
UH	UH'00C4007000660065006C'	Used in the Natural programming language (NPL) for defining Unicode constants.	*Unicode and Code Page Support* documentation, see U Constants in the section *Natural Data Format U for Unicode-Based Data*.

HF = Hierarchical File System

UNIX file system available with z/OS UNIX services.

HTML

Abbreviation for “Hypertext Markup Language”.

HTTP

Abbreviation for “Hypertext Transfer Protocol”.

HTTP Cookies

Provide the server with a mechanism to store and retrieve state information on the client application's system. This mechanism allows web-based applications to store information about selected items, user preferences, registration information, and other information that can be retrieved later. Used in the `REQUEST DOCUMENT` statement.

For further information, see `REQUEST DOCUMENT` in the *Statements* documentation.

HTTPS

Abbreviation for "Hypertext Transfer Protocol Secure". It constitutes an additional layer between HTTP and the TCP/IP protocol stack.

I

ICU = International Components for Unicode

See also IBM's web site at ***http://www-01.ibm.com/software/globalization/icu/***.

ID = Identifier

Predict: With one exception, Predict objects are uniquely identified by two attributes: Object type and ID. Objects of different types can therefore have the same ID.

Field objects are uniquely identified by three attributes: Object type, ID of the File to which they belong, and ID of the field itself. Field objects in different Files can therefore have the same ID.

IIS

Abbreviation for "Internet Information Services" (Microsoft).

Import

Predict: The Coordinator function Import is used to import data from a transfer medium to a Predict environment. You can also import text from various external sources, such as Natural, a PC ASCII file or a Con-nect document, to a text attribute of a Predict object, for example the extended description of any Predict object, or the subquery of a File.

IMS

See ***Information Management System***.

IMS DB = IMS Database Manager

z/OS: Component of IMS: the IMS database management system from IBM that provides access to **DL/I** databases. See also ***Information Management System***.

IMS DC = IMS Data Communication

Obsolete. Replaced by **IMS TM**.

IMS TM = IMS Transaction Manager

z/OS: Component of IMS: the IMS online transaction processing system from IBM. See also ***Information Management System***.

Incorporation

Predict: Predict data dictionary objects can be created by incorporating external objects (for example, an existing Natural data definition module or Adabas field definition table).

Information Management System (IMS)

Any of several system environments available with Database Manager (**IMS DB**) and Transaction Manager (**IMS TM**), capable of managing complex databases and terminal networks.*

INPL = Initial Natural Program Load

Natural utility used to load or scan Natural modules or DDMs from Software AG data sets (for example Natural INPL tapes) from work file 1. In addition, it provides a Natural Security Recover function that enables you to force an initialization of the Natural Security environment.

Instance

In the object-oriented programming model, data structures and functions (so-called "methods") are packaged together in objects. Each object belongs to a class, which describes the internal structure of the object and its interfaces, properties and methods. If an object belongs to a certain class, it is also called an instance of that class.

Interface

Interfaces are used by classes to provide clients with services. An interface is a collection of methods and properties. A client accesses these services by creating an object of the class and using the methods and properties of its interfaces.

You define an interface as follows:

- Define the `INTERFACE` clause to specify an interface name.
- Define the properties of the interface with `PROPERTY` definitions.
- Define the methods of the interface with `METHOD` definitions.

Interface GUID

If a NaturalX class is to be registered as a **DCOM** class, a globally unique ID (GUID) must be defined for each of its interfaces, to make sure the interfaces can be unambiguously identified in a network. The GUID is assigned to an interface in the `ID` clause of the `INTERFACE` statement. In Natural, a GUID is represented by an alphanumeric constant, which can be generated in the data area editor. The Natural Studio Class Builder automatically assigns a new GUID to each new interface.

Interface Inheritance

Interface inheritance means giving different classes the same interfaces, but implementing the interfaces differently in the different classes. This makes it possible to write client programs that only rely on these interfaces and are able to work with any class that has these interfaces.

Interface Module

A Natural copycode module which defines interfaces. The interface module can be used in a class to define the contained interfaces. The class can overwrite the method and property implementations, but all other settings of the interface are used as defined in the interface module.

Internal Class	A NaturalX class can be a local, an internal or an external class. This depends on the way the class was registered. An internal class is a class that has been registered as a **DCOM** class with the `REGISTER` command option `IM` (InternalMultiple). Objects of internal classes cannot be created by other processes, but they can be accessed by other processes. This requires that the object has been passed to the client process for example as return value of a method. For further information, see ***Local Class*** and ***External Class***.
Internal Code	*Predict:* Each Predict object type is internally identified by an internal code. Internal codes are assigned by Predict and cannot be changed by the user.
Internal ID	*Predict:* As of Predict Version 3.3, all objects have an internal ID. This ID is allocated automatically when an object is added. It is unique worldwide and remains with the object throughout its entire life span.
Internal Interface	An interface which is defined directly in the class, or an interface of an interface module, which is defined in the interface module.
I/O Buffer = Input/Output Buffer	An area that contains the most frequently used data and data relationships. It helps to minimize physical input/output activity, thus saving computer time.
IOCB	Abbreviation for “input/output control block”.
IPL = Initial Program Load	The procedure which initializes the loading of an operating system.
ISAPI = Internet Server Application Programming Interface	Used by Natural Web Interface to provide internet services in Natural.
ISN = Internal Sequence Number	A unique identifier for variable-length records stored in an **Adabas** database file. Each ISN is assigned a relative Adabas block number (RABN) in which the record is physically stored.
Isolated Database	*Predict:* Database that cannot be accessed using Adabas Star.
IUPD = INPL Update	Contains fixes for an **INPL**.

J

JCL = Job Control Language	*z/OS:* Control language used to describe a **job** and its requirements to an operating system.*

Jobs are needed for installing and maintaining Natural and executing Natural in batch mode.

JES = Job Entry Subsystem

z/OS: An IBM licensed program that receives jobs into the system and processes all output data produced by the jobs.*

Job

A unit of work defined by a user that is to be accomplished by a computer. Loosely, the term job is sometimes used to refer to a representation of a job. This representation may include a set of computer programs, files, and control statements to the operating system.*

K

Keyword

Natural: See *Natural Reserved Keywords* in the *Programming Guide*.

Predict: Objects of type keyword are used as an additional means of reference to data dictionary objects. Up to 32 keywords may be assigned to any given object.

KSDS = Key-Sequenced Data Set

A VSAM file whose records are loaded in key sequence and controlled by an index.*

L

Label

A Natural statement can be marked by placing a label in front of it. A label is an arbitrary name. A statement which is marked with a label can be referenced at another point in the program by specifying its label.

Large Variable

Windows and UNIX: Large variables for alpha and binary data are based on the well known Natural formats A and B. The limitations of 253 for format A and 126 for format B are no longer in effect. The new size limit is 1 GB. These large static variables and fields are handled in the same manner as traditional alpha and binary variables and fields with regard to definition, redefinition, value space allocation, conversions, referencing in statements, etc. All rules concerning alpha and binary formats apply to these large formats.

See *Introduction to Dynamic Variables and Fields* in the *Statements* documentation.

LDA = Local Data Area

A Natural object which contains data element definitions that can be used by multiple Natural objects. For further information, see the section *Local Data Area* in the *Programming Guide*.

Library Structure	*Predict:* Predict objects of type library structure contain system objects documenting the Natural steplib structure.
Link	*Predict:* Predict documentation objects can be linked using associations (see ***Association***).
Load	*Predict:* Loads Migrate data from the **Coordinator FDIC**. Data to be loaded must pass through all three phases of the **Coordinator Check Cycle**.
Local Class	A NaturalX class can be a local, an internal or an external class. This depends on the way the class was registered. A local class is a class that has not been registered as a **DCOM** class. Therefore, objects of local classes can neither be created nor accessed by other processes, but only by programs in the current Natural session. For further information, see ***Internal Class*** and ***External Class***.
Logical File	*Predict:* A logical file definition does not necessarily contain information on the physical implementation of the file. A logical file definition is basically the definition of the file structure.
LPA = Link Pack Area	*z/OS:* A major element of z/OS virtual storage below the 16MB line. The storage areas that make up the LPA contain all the common reentrant modules shared by the system. The LPA provides economy of real storage by sharing one copy of the modules, protection because LPA code cannot be overwritten even by key 0 programs, and reduced path length because the modules can be branched to. The LPA is duplicated above the 16MB line as the extended link pack area (**ELPA**).*
LSO = Library Search Order	The sequence in which Natural searches through the libraries when loading a Natural object.
LU = Logical Unit	The underlying network entity that provides access to the Systems Network Architecture (**SNA**) network for the user.

M

Main FDIC	*Predict:* The Main FDIC is the target environment of a Load or Import operation using the Predict Coordinator.
Mainframe	Refers to the mainframe operating systems such as z/OS. See also ***Operating System - Terms Used in Documentation***.

Map	A screen layout referenced in a program. A map provides formatting instructions for screen layouts referenced in a program. It defines input and output fields and assigns them program variables. Natural objects of the type map are created with the map editor as described in the Natural *Editor* documentation.
Mapping	*Windows Single Point of Development:* In a remote development context, you can map a development server to your Windows session and then map applications. For further information, see the section *Application Workspace* in the *Remote Development Using SPoD* documentation and the description of the `MAP` command in the *System Commands* documentation.
Master Field	*Predict:* Field in a master file.
Master File	*Predict:* A file from which a view has been created. A master file is at the intermediate level of the data hierarchy within Predict: its fields can inherit attributes from standard fields, and attribute values in a master field are rippled to lower-level views and userviews.
Member	*Predict:* Natural or third generation language object for which XRef data exists.
Message Processing Program (MPP)	See ***MPP***.
Metadata Structure	*Predict:* The Predict data dictionary structure consists of object types, their attributes and association types. This structure can be enlarged by defining new object types and association types using Predict's Metadata Administration functions. Predict's predefined object types cannot be modified.
Method	*Object-oriented programming:* A method is a function that an object/instance of a class can perform when requested by a client.
MPP = Message Processing Program	An IMS application program that is driven by transactions and has access to online IMS databases and message queues.*
Multiple-Master View	*Predict:* A view which can be derived from one or more master files, for example ORACLE view.
Multiple-Value Field	*Adabas:* A field that can have multiple values (or occurrences). The number of occurrences of each multiple-value field in a file can be up to 65,534 values, or occurrences, in a single record. The maximum number of occurrences depends on the Adabas version and the definition of the **FDT**. In Natural, you access a multiple-value field in Adabas by defining it as an array.

N

NATPARM	*Mainframe:* A placeholder for the name of the Natural **parameter module**, which is defined by the user. *Windows and UNIX:* See ***Parameter File***
Natural Advanced Facilities	Natural Advanced Facilities consists of NATSPOOL, the spooling and report management system which permits Natural program output to be spooled and subsequently routed to physical printers.
Natural Command	Natural commands are used to perform functions during a Natural session.
Natural Command Processor (NCP)	Consists of two components: maintenance and runtime. The SYSNCP utility, as described in the *Tools and Utilities* documentation, is the maintenance part which comprises all facilities used to define and control navigation within an application. The `PROCESS COMMAND` statement (see the *Statements* documentation) is the runtime part used to invoke Natural programs.
Natural Configuration Utility	*Windows and UNIX:* You use the Natural Configuration Utility to maintain the following: ■ Global and local configuration files. ■ Natural parameter files. For further information, see the *Configuration Utility* documentation.
Natural Construct	An application generator which provides a variety of highly flexible application structure templates. It automates many aspects of Natural software production and can be used by IT-experts and IT non-experts alike.
Natural Construct Spectrum	Provides access to mainframe Natural from Windows. Using Natural Construct Spectrum and the software development kit (SDK), application developers can create all the components of a client/server and web application, including Natural object subprograms that perform maintenance and browse functions, and GUI dialogs or web pages that communicate with these Natural object subprograms. Communication between server and client components of an application is performed by a combination of Entire Broker and Entire Net-Work (or Entire Broker configured to use TCP/IP), as well as Construct Spectrum's middleware components.
Natural Debugger	*Mainframe/Windows/UNIX:* The debugger enables you to:

- temporarily control or influence the program flow of a Natural application by modifying variables,
- check the program flow through a calls history,
- detect logical application errors in a Natural program by checking the contents of its variables using breakpoints or conditions for program interruption;
- permanently watch variables.

The debugger helps you to understand programs written by other people more easily, develop your own applications more quickly and better understand the logic of Natural if you are a first-time user.

For further information, see the *Debugger* documentation.

Natural Development Server

Enables the Natural Studio development environment to be mapped onto a remote Natural environment. You can then develop and test Natural applications in remote environments without leaving the common work-area of Natural Studio.

See the Natural Development Server documentation for further information.

Natural Engineer

Mainframe/Windows: Tool for checking Natural code, maintaining it and ensuring its compliance to defined requirements. Enables you to reengineer and maintain Natural applications into the future, applying standards, maintaining flexibility and preparing for the adoption of new technologies.

Natural for Ajax

Using Natural for Ajax, you can create rich internet applications which use the Ajax (Asynchronous JavaScript and XML) technology. This enables Natural users on Windows, UNIX and mainframe platforms to develop and use Natural applications with a browser-based user interface, similar to GUI desktop applications.

Natural ISPF (Integrated Structured Programming Facility)

Natural ISPF is Software AG's application development tool for building, testing and maintaining applications throughout their life cycle.

Natural Nucleus

The main functional Natural component which comprises the kernel of Natural.

Mainframe: Consists of the environment-independent and the environment-dependent nucleus. The environment-independent nucleus can be used by several mainframe operating and TP systems. The

environment-dependent nucleus contains components that depend on the operating and TP systems.

Windows and UNIX: The only part of Natural which is operating system-dependent.

Natural Object Handler

Processes objects for distribution of applications. This is done by unloading the objects in the source environment into work files and loading them from work files into the target environment. The Natural Object Handler consists of the utility SYSOBJH which is located in the library SYSOBJH, and the direct command interface. For further information, see the section *General Information* in the *Object Handler* part of the *Tools and Utilities* documentation.

Natural Optimizer Compiler

Mainframe: A Natural compiler which generates machine code wherever possible (otherwise it generates pseudo code).

Natural Profiler

The Natural Profiler is a tool for the dynamic analysis of Natural applications. It collects profiling data whenever a Natural event occurs, for example when a program is started or before a database call. The Profiler visualizes the event data in NaturalONE as an event trace. Additionally, it shows the time consumption and hit count of the executed objects, Natural statements and program lines. A Natural Profiler analysis is a base for a performance optimization of a Natural application.

The Natural Profiler is available for UNIX, Windows and mainframe platforms.

Natural Roll Server

z/OS: The Natural Roll Server is used to save the context of a Natural session at certain events:

- across terminal I/O operations in the TP monitor environments CICS and IMS TM
- while waiting for the next client request in an NDV, NWO or RPC server with front-end under CICS

Natural RPC (Remote Procedure Call)

Implements RPC techniques in a Natural environment. Natural RPC enables Natural to call Natural subprograms, applications, procedures and object methods on a remote computer through a network via EntireX Broker. The client sends a request to the server which provides the service. Request transmission is executed through client and server **stubs**.

The connections between client, server and services are configured for each Natural client using the Natural utility **SYSRPC**.

For further information, see the *Natural RPC (Remote Procedure Call)* documentation.

Natural Runtime

1. The product Natural Runtime provides the environment necessary for executing Natural applications.
2. The virtual machine which interprets Natural code.

Natural Security

A comprehensive security system which enables you to control, check or prevent access to your Natural environment.

For further information, see the *Natural Security* documentation.

Natural Session

A Natural session is the user-dependent Natural runtime context required for the Natural runtime system to execute Natural programs.

Natural Studio

Windows: Natural's GUI development environment. Natural Studio integrates the previously separate editors and tools into one easy-to-use work area.

See *Using Natural Studio* and *First Steps*.

Natural Web Interface

Natural Web Interface offers comfortable web enabling of existing Natural applications. Natural Web Interface is a link between a web server (HTTP server) and your Natural environment. This can be on a separate server machine (such as a mainframe) or on the same machine as the HTTP server (e.g. Netscape's Communication Server or Microsoft's IIS).

Natural Web Adaptor Server Extensions

Part of Natural Web Interface, the implementations of various server interfaces such as CGI, ISAPI and NSAPI.

NaturalX

Used for writing object-based Natural applications. On Windows platforms, it allows to create distributed Natural applications using distributed object technology (currently DCOM).

NaturalX Class

Following the object-based programming approach, NaturalX classes encapsulate data structures (objects) with corresponding functionality (methods).

The internal structure of the objects of a class object is defined with a data area (object data area). The methods of a class are implemented as subprograms.

NaturalX classes can be made known to **DCOM** using the Natural command `REGISTER`, after which they are accessible in a network.

Classes can be *internal*, *external* or *local*.

For further information on classes, see the sections *Programming Techniques*, *Defining Classes*, *Using Classes and Objects* and *Internal, External and Local Classes*.

NaturalX Client

A NaturalX client is a process which creates or accesses NaturalX objects.

NaturalX Server

A NaturalX server is a process which manages one Natural session. The Natural session managed by a NaturalX server is used to host COM objects.

Network

Entire Operations: A network that comprises a set of jobs and general processing instructions in order to perform a particular task.

Predict: Together with Predict objects of type virtual machine, networks document the hardware and operating system environment of a data processing system.

Node

Entire Operations: A node is a server definition that refers to the machine on which requests to the operating system are executed.

Predict: Predict objects of type node are used together with objects of type server to document remote procedure calls.

Node Name

Entire Operations: A logical short or long name for a numerical operating system server node.

Natural RPC: The name of the node to which the remote `CALLNAT` is sent. With EntireX Broker, the node name is the name of the EntireX Broker as defined in the EntireX Broker attribute file in the field BROKER-ID. See also ***Natural RPC***.

NSAPI = Netscape Application Programming Interface

Used by Natural Web Interface to provide internet services in Natural.

O

Object

Object-oriented programming: In the object-oriented programming model, data structures and functions (so-called “methods”) are packaged together in objects. Each object belongs to a class that describes the internal structure of the object, its interfaces, properties and methods.

Entire Operations: An single component of a job network required to maintain, execute or control job processing. Basic objects are networks, jobs, schedules and owners.

Predict: Information in Predict is stored in the form of the following objects: data dictionary object, documentation object, Predict object. Data dictionary objects are also called Predict objects or documentation objects. See also ***Object Types***.

Natural: See also ***Cataloged Object***, ***Source Object*** and ***Object Types***.

Object Data Area

Object-oriented programming: Where the current values of all properties of an object are stored. Other variables which are not accessible by clients as properties can also be defined in the object data area. These variables are used by the methods of the object to maintain the internal state of the object. The structure of the object data area of all objects of one class is specified in the `OBJECT USING` clause in the `DEFINE CLASS` statement. An object data area is created with the data area editor as a local data area.

Object Data Variable

Object-oriented programming: Each property needs a variable in the object data area of the class to store its value - this is referred to as the object data variable stored. Also other variables can be defined in the object data area, which are not accessible by clients as properties, but just used by the methods of the class.

ODA

See ***Object Data Area***.

Object Locking

Windows: Prevents concurrent updating of programs in a remote development environment. For further information, see *Object Locking* in the *Remote Development Using SPoD* documentation.

Object Types

Natural: The following are examples of Natural object types: program, map, copycode, text, subprogram, helproutine, subroutine, class, data areas (global, local, parameter), dialog and function. For further information, see the section *Objects for Natural Application Management* in the *Programming Guide*.

Predict: Information in Predict is stored in the form of the following objects: data dictionary object, documentation object, Predict object. Data dictionary objects are also called Predict objects or documentation objects. Predict documentation objects are of a certain type, for example database or program. Additional object types can be defined using the Metadata Administration functions of Predict. Each object type has its own type-specific attributes.

Object Type Code

Predict: Each type of object within the Predict metastructure is identified by a unique object type code. An object type code consists of two letters (for example FI for file).

Operating System - Terms Used in Documentation

Wherever necessary, operating system specific information in the present documentation is identified by the following terms:

- *Mainframe*: Refers to z/OS operating systems, as well as all TP monitors/interfaces supported by Natural and Natural add-on products under these operating systems.
- *UNIX*: Refers to all UNIX systems supported by Natural and Natural add-on products.
- *Windows*: Refers to all Windows systems supported by Natural and Natural add-on products.

All operating systems supported by Natural and Natural add-on products are listed in the Product Version Availability section of Software AG's Empower web site at ***https://empower.software-ag.com/***.

Operand

An operand can be one of the following:

- constant;
- user-defined variable or user-defined function;
- view field;
- system variable or system function.

Operands are used in conjunction with the Natural statements. For more information, see *Operand Definition Table* in the *Statements* documentation:.

Output Mode

Predict: The Output mode - together with the Retrieval Type - determines how dictionary data is evaluated by Predict retrieval functions. Note that not all output modes are available for all retrieval types.

Owner

Entire Operations: The owner of a job network. Each Entire Operations user is assigned to one or more owners and can only maintain the networks of these owners.

Predict: An owner is basically a group of one ore more users. An owner can represent an organizational unit, for example. Responsibilities can be documented in Predict by assigning an owner to the owner list of a user and the same owner to the owner list of an object.

P

Packagelist

Predict: Predict objects of type packagelist document DB2 packages.

Parallel Sysplex

1. A set of z/OS systems that communicate and cooperate with each other through multisystem hardware components and software services to process customer workloads.*
2. A sysplex that uses one or more coupling facilities.*

Parameter

See the following:

- ***Dynamic Parameter***
- ***NATPARM***
- ***Natural Configuration Utility***
- ***Parameter File***
- ***Parameter Module***
- ***Printer Profile***
- ***Profile***
- ***Profile Parameter***
- ***Profile Parameter Hierarchy***
- ***SYSPARM Utility***
- ***Session Parameter***
- ***Static parameter***

Natural RPC (Remote Procedure Call): All **Natural RPC** parameters are documented in the environment-specific *Operations* documentation of Natural. For mainframe Natural, these parameters are included in the NTRPC macro (static definition) or are defined with the profile parameter RPC (dynamic definition).

Parameter File

Mainframe: See ***Parameter Module***.

Windows and UNIX: By default, the parameter specifications in the parameter file *NATPARM.SAG* are used to determine the characteristics of your Natural environment. Initially the NATPARM parameter file contains the default values supplied by Software AG. If you want to use Natural with parameter values other than the system defaults, you can modify the default parameter file *NATPARM.SAG* and/or create your own parameter files using the **Natural Configur-**

ation Utility. All parameter files must have names of 8 characters and the extension *.SAG*.

Parameter Module

Windows and UNIX: See ***Parameter File***.

Mainframe: Contains all profile parameter settings required to configure your Natural environment. A Natural parameter module is created and generated during the installation process.

Parent

Predict: Associations are used to document how Predict objects are related to other Predict objects. An association is established by linking objects to an object either as child or parent. For example, a database is the parent of a file, a file is the parent of a field.

Passive Cross-References

Windows - XRef Evaluation: The passive cross-reference function shows which objects use the current object. For example, if you have a copycode you might want to know in which parts of your application it is included. Results are displayed in a tree view with the referenced ("used") object at the top. There are some types of objects which by default only have passive cross-references, such as copycodes, DDMs and methods.

For further information, see the Single Point of Development documentation.

Passive Help

Predict: Passive help provides descriptive information on functions. Context-sensitive online help information can be displayed by entering a question mark in the Retrieval Type/Function field of a menu, or from the Help Main Menu.

PCB = program communication block

DL/I or **IMS** control block that describes an application program's interface to a DL/I or IMS database or, additionally, for message processing and batch message processing programs, to the source and destination of messages. See also ***PSB = Program Specification Block***.*

PDA = Parameter Data Area

A Natural object used to define the data elements that are passed as parameters to a subprogram, external subroutine or helproutine. For further details, see the section *Parameter Data Area* in the *Programming Guide*.

Periodic Group

Adabas: A periodic group field defines consecutive fields (a series of **elementary fields** and/or **multiple-value fields**) in the **FDT** that repeat together in a record. The fields defined by a periodic group can be repeated up to 65,534 times per record, depending on the Adabas version and the definition of the FDT. In Natural, you access

a periodic group in Adabas by defining all fields as separate arrays, or by defining a group as an array.

Physical File

Predict: See ***Master File***.

Placeholder

Predict: When an object that is linked to another object is loaded/imported, and the referenced object is not loaded/imported and does not exist in the target environment, a placeholder is added in the target environment for the referenced object. The purpose of this placeholder is to reserve the object ID of the referenced object in the target environment so that the link in the old environment can be recreated in the new environment at a later time.

A placeholder contains the following information:

- object ID
- internal ID
- subtype (if applicable)
- transfer status placeholder

Platform - - Terms Used in Documentation

Wherever necessary, platform-specific information in the present documentation is identified by the following terms:

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PLOG = Protection Log

Adabas: A file that records before-and-after images of records and other elements when changes are made to an Adabas database. Used to recover the database (up to the last completed transaction or **ET**) after restart.

Plug-in Manager

Windows: The Natural Studio user interface is extensible by plug-ins. Plug-ins can be activated and deactivated with the Plug-in Manager. Part of the Natural Studio functionality itself is delivered

in the form of plug-ins. A sample plug-in is delivered in source code in the library SYSEXPLG. For further information, see the section *Plug-in Manager* in the documentation *Using Natural Studio* and the documentation *Extending Natural Studio with Plug-ins*.

Portable GPs

Windows and UNIX: GPs which are cataloged with Natural Version 5 are now portable across any Natural-supported UNIX and Windows platform. This means that GPs which are cataloged with Natural Version 5 are now executable with Natural Version 5 on these platforms without recompilation. This feature simplifies the deployment of applications across UNIX and Windows platforms. Command processor GPs operate as before. See also ***Generated Programs***.

Predict

Software AG's open, operational data dictionary for fourth-generation-language development with Natural. It is a central repository of application metadata and provides documentation and cross-reference features. Predict lets you automatically generate code from definitions, enhancing development and maintenance productivity.

Predict Coordinator

Predict: Utility that enables data exchange between different FDIC files and between Predict and Natural Engineering Workbench. The Coordinator uses its own FDIC file called the Coordinator FDIC which serves as temporary storage. The application that contains the Coordinator functions is located in the Natural library SYSDICBE.

Printer Profile

Windows and UNIX: Profile information for printers is specified in the global configuration file which initially contains the printing defaults supplied by Software AG. The settings in the global configuration file can be modified using the **Natural Configuration Utility**.

Process

An operating system process is an element of work that has its own memory space, code, data, and other operating-system resources and which consists of one or more threads.

Processing Rule

A processing procedure defined for a map field which checks the content of the field and reacts depending on that content. The check can also include several fields. Processing rules can be stored centrally in Predict (free rules) and/or be permanently assigned to **DDM** fields (automatic rules).

Profile

Mainframe: Using the utility SYSPARM, you can specify a string of profile parameters and store it under a profile name. To use a profile, start Natural with the dynamic parameter `PROFILE=profile-name`. The string of parameters stored under that profile name is passed to Natural as dynamic parameters. A profile in this context means a string of profile parameters stored under a profile name.

Profile Parameter

A Natural profile parameter defines a characteristic of the Natural environment.

The value for a profile parameter is taken from the following three sources:

- Runtime assignment of a session parameter which is specified in the Natural `SET GLOBALS` statement or the `GLOBALS` system command (highest priority).
- Dynamic assignment which is valid for the current Natural session. This is made by specifying an individual parameter when starting Natural.
- Static assignment which is specified in the Natural parameter module/parameter file (lowest priority). On the mainframe, this is the parameter module linked to the **Natural nucleus**. Under Windows and UNIX, this is the parameter file *NATPARM.SAG*.

For further information, see the platform-specific Natural *Operations* documentation.

Profile Parameter Hierarchy

Natural profile parameters are set at different hierarchically organized levels as illustrated in the table below (priority from high to low).

During session (highest priority)	Development environment settings. Program/statement level settings. Session parameter settings. Natural Security definitions.
Dynamic during session start	Dynamic parameter entry. Predefined user parameter profiles. Predefined dynamic parameter sets.
Static	Alternative parameter file/module. Natural standard parameter file/module.

See also *Profile Parameter Usage* in the *Operations* documentation.

Profiler

A profiler is a tool for dynamic program analysis. It measures the frequency and duration of instructions to simplify program optimization.

See also ***Natural Profiler***.

ProgID	The ProgID (programmatic identifier) of a **DCOM** class is a meaningful name by which the class is identified in client programs. For Natural classes, the name defined in the `class-name` operand in the `DEFINE CLASS` statement is written into the registry as a ProgID when the class is registered as a DCOM class with the `REGISTER` command.
Program	*Predict:* A Predict object of type program documents data processing objects of different types and languages.
Program-driven Application	Applications in which programs control the portions of code that execute - not an event. Execution starts with the first line of executable code and follows a defined pathway through the application, calling additional programs as instructed in the predetermined sequence.
Property	Attributes of an object that can be accessed by clients. In Natural classes, property values of an object are stored in the object data area. Therefore, an object data variable must be assigned to each property. For further information, see ***Object Data Variable***.
Property Implementation	The object data variable that is assigned to a property. For further information, see ***Object Data Variable***.
Protocol Access Layer	Coding of access calls to and from the communication protocol (at present TCP/IP) to and from client and server.
PSB = Program Specification Block	**DL/I** or **IMS** control block that describes databases and logical message destinations available for an application program. A PSB consists of one or more program communication blocks (**PCB**s).*
PU = Physical Unit	**SNA**: In Systems Network Architecture (SNA), a physical unit identifies a network node that supports communication sessions between logical units (**LU**s).

R

RABN	Abbreviation for “relative Adabas block number”.
RAD	Abbreviation for “Rapid Application Development Model”.
RBA = Relative Byte Address	*VSAM*: The displacement in bytes of a stored record or control interval from the beginning of the storage space allocated to the data set to which it belongs.*
Registry	A central repository on Windows platforms for configuration data - database for configuration files. Physically, the registry is the two files *System.dat* and *User.dat*. Logically, the registry is the configura-

tion data that you see in the Registry Editor. The registry contains configuration information of all kinds for both hardware and software. For example, the registry contains information about **DCOM** classes and their assignment to servers. For further information, see your Microsoft documentation.

Registry Key

Registry keys are entries made in the Windows system registry of the server when a class is registered. Registry keys are also added in the client system registry when the client registration file is executed.

For detailed background information about the registry keys and their administration, refer to the registry documentation of the appropriate platform.

Related Objects

Predict: Generic term for parent and child objects.

Relationship

Predict: See ***File Relation***.

Report Listing

`Predict:` Predict objects of type report listing are used to log transfer operations with the Predict Coordinator and conversion functions.

Reserved Word

Part of the Natural programming language. Letter combinations not available to users for their own use.

See the section *Natural Reserved Keywords* in the *Programming Guide*.

Restrictions

Predict: Collection of keywords, owners and text strings used as selection criteria when retrieving information on objects. Restrictions can be stored in profiles or specified for temporary use.

Retrieval

Predict: Subsystem which provides selective output of information (objects, their attributes and associations) to the terminal or, in batch mode, to the spool.

Retrieval Model

Predict: A retrieval model consists of two parts: a retrieval structure and a definition of the contents and the layout for the reports that are to be created

Retrieval Operation

`Predict:` When retrieving information from the dictionary, a Retrieval type and an Output mode must be specified. These settings together determine the type of Retrieval operation that is indicated in the header of reports.

Retrieval Type

Predict: The Retrieval type determines the type of information Predict to be retrieved from the dictionary. Retrieval types are either type-independent, for example, Objects with children, or type-specific, for example Difference of files.

Rippling

Predict: The automatic updating of all derived fields at lower hierarchical levels when the corresponding field at a higher hierarchical level is modified.

The hierarchical levels are as follows:

- standard files
- master files
- userviews

Routine

Collective term for Natural object types which cannot be executed on their own such as, helproutine, subprogram, subroutine.

RPC = Remote Procedure Call

A client/server communication technique that is applied to call applications, procedures and object methods on a remote computer through a network. The client sends a request to the server which provides the service. Request transmission is executed through client and server **stubs**.

See also *Natural RPC (Remote Procedure Call)*.

RPC Stub

Natural RPC: The client subprogram via which the server subprogram is called. The RPC stub has the same name and contains the same parameters as the corresponding server subprogram.

The RPC stub accepts the `CALLNAT` requests on the client side, marshalls the Natural `CALLNAT` parameters and passes them to the RPC client runtime. The RPC client runtime then passes the parameters to the client's EntireX Broker stub. For further information, see the sections *Creating Stub Programs* and *Working with Automatic Natural RPC Execution* in the *Natural RPC (Remote Procedure Call)* documentation.

RRDS = Relative-record Data Set

VSAM: A data set organization, in which records are of fixed length and are accessed by their relative record numbers (**RRN**).*

RRN = Relative Record Number

VSAM: A unique identifier for each record stored in a relative record data set (**RRDS**).

RSL = Record-sharing Level

VSAM: An option that allows record-level sharing of VSAM data sets from multiple address spaces across multiple systems.

Runtime

1. The part of the **Natural nucleus** that executes a Natural program, as opposed to the compiler.
2. The time during which a Natural program is executed.

S

SAA = Systems Application Architecture	A set of common standards and procedures for working with IBM systems and data. SAA enables different software, hardware and network environments to coexist. It provides bases for designing and developing application programs that are consistent across different systems.*
SBCS = Single-Byte Character Set	A character set where each character is represented by one byte, as opposed to the double-byte character set (**DBCS**).
SCP = System Control Program	*Mainframe:* The Natural SCP environment is part of the Natural CICS Interface. A dump is taken for all SCP failures.
SDI	Abbreviation for "Single-Document Interface".
Selection Criteria	*Predict:* Predict retrieval functions can be applied to individual objects or to groups of objects. Search criteria are specified to select objects to which retrieval functions are to be applied.
Selection Window	*Predict:* See ***Active Help***.
Server	*Predict:* Predict objects of type server are used together with objects of type node to document remote procedure calls.
Server Front-End	*z/OS:* A component of the Natural Server environment used by the Natural DB2 Stored Procedures Server and the Natural Development Server. . It is a functionally extended environment-dependent nucleus (see ***Natural Nucleus***) which provides the front-end server with additional functions such as initializing the server environment, session roll in/out and the execution of Natural objects.
Server ID	A server ID is a character string that identifies a NaturalX server. The server ID is a Natural-owned key in the Windows system registry, keeping together all classes that belong to a given NaturalX server. It is an arbitrary alphanumeric string of 32 characters which does not contain blanks and which is not case sensitive. The server ID is defined with the Natural parameter `COMSERVERID=serverid`.
Server Name	*Natural RPC:* The name of the server on which the `CALLNAT` is to be executed. With EntireX Broker, the server name is the name defined in the field SERVER in the EntireX Broker attribute file.

Server Task

Natural RPC: A server task is a Natural task which offers services (subprograms). This is typically a batch task or asynchronous task. It is identified by a **server name**.

Service Directory

Natural RPC: Contains information on which server provides which services (subprograms). The service directory can either be locally available on each client node or it can be located on a remote directory server, referenced by the RDS session parameter. Generated with the SYSRPC utility to implement the service directory.

The service directory is implemented by the Natural subprogram NATCLTGS which is generated by the SYSRPC utility.

Session

Natural: The user-dependent Natural runtime context required for the Natural runtime system to execute Natural programs for one individual user.

Session Parameter

Assigned with the system command `GLOBALS` (or a `SET GLOBALS` statement) within the current Natural session. They override static and dynamic assignments.

Natural session parameters may be used with certain Natural statements to control such factors as the size of a report and how fields are to be displayed.

At the installation of Natural, the Natural administrator sets these parameters to default values which are then valid for all users of Natural.

For further information, see the *Parameter Reference*.

To see which parameter values apply to your session, enter the system command `GLOBALS`.

Session Variable

Predict: With many Predict functions, parameter values must be specified. Predict stores parameter values temporarily in session variables. Whenever possible, parameter values that have been omitted are taken from these session variables. Which parameters values can be taken from session variables depends on both the function and the parameter type.

Shared Nucleus

A synonym for the environment-independent nucleus. See also ***Natural Nucleus***.

Single-master View

Predict: A view which is always derived from one master file only, for example an Adabas userview.

Single Point of Development	*Windows:* The concept of platform-independent development realized as of Natural 5 for Windows. Natural 5 focuses on the following: ■ remote development of z/OS applications with Natural Studio; ■ advanced web and XML capabilities featuring an XML toolkit and direct access from Natural to any resource in the internet.
SIP = Session Information Pool	Holds the Natural session information records and is used in connection with the Natural Authorized Services Manager (**ASM**).
SIR = Session Information Record (Natural) / Session Information Retrieval (IBM)	*Natural:* The Natural CICS interface permanently holds information about all active Natural sessions. A session information record (SIR) is maintained for each session. *IBM:* The function that allows an operator to enable or disable session information retrieval for a particular gateway or for all gateway sessions. When a gateway session ends, trace information about the most recent sequence or FID0 numbers to cross the gateway is passed back to all system services control points (SSCPs) that have enabled SIR for that session or for all sessions. This information can also be passed back to the requesting host.*
SIT = System Initialization Table	A **CICS** table that contains information to initialize and control system functions, module suffixes for selection of user-specified versions of CICS modules and tables, and information used to control the initialization process. You can generate several SITs, using the resource definition macro DFHSIT, and then use the SIT system initialization parameter to select the one that best meets your current requirements at initialization time.*
SMA = System Maintenance Aid	See ***System Maintenance Aid***.
SMF = System Management Facility	A standard feature of z/OS that collects and records a variety of system and job-related information.*
SNA = Systems Network Architecture	The IBM architecture that defines the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks. The layered structure of SNA allows the ultimate origins and destinations of information (the users) to be independent of and unaffected by the specific SNA network services and facilities that are used for information exchange.*

SOAP = Simple Object Access Protocol	XML-based messaging convention which, in combination with the EntireX XML Wrapper, enables any Natural application to be initiated by an XML document sent via HTTP.
Software AG Editor	*Mainframe:* You can use the Software AG Editor as an alternative to the Natural program editor. You need to have Natural ISPF installed and to set your editor profile appropriately (see the *Editors* documentation for further information on editor profiles).
Source Field	*Predict:* Field that is used in the definition of a derived field. Derived fields are super/ hyper/subfields/descriptors and phonetic descriptors.
Source Object	In Natural, a source object (or a saved object) contains Natural source code. A source object is stored as an object module in a Natural system file. See also ***Cataloged Object***, ***Object*** and ***Object Types***
SPA = Scratch Pad Area	***IMS TM:*** A terminal-specific area to temporarily store data processed during user transactions. A program controls clearance of the area.
SPoD	See ***Single Point of Development***.
SQL = Structured Query Language	A programming language that is used to define and manipulate data in a relational database.*
SSA = Segment Search Argument	**IMS** or **DL/I**: The part of a DL/I call that identifies a segment or group of segments to be processed. SSAs may be simple segment names or they may be qualified to include constraints on the values of fields within the named segment types.*
SSL = Secure Sockets Layer	Is a standard security technology to establish an encrypted link between a server and a client.
Standard Field	*Predict:* A field in a standard file. Standard files and fields enforce standard use of fields in different files.
Standard File	*Predict:* A standard file documents the overall layout of all data processed within an organization (data definitions and/or company standards). Fields in standard files do not refer to an implemented data structure directly: field definitions in a standard file are rippled to master files of different types. See ***Rippling***.
Startup Transactions - *STARTUP	The `*STARTUP` system variable contains the name of the program used to start a session.

If you map a Natural Development Server environment (`*SERVER-TYPE`) from NaturalONE and use the startup program supplied by `*STARTUP`, make sure that this program does not perform screen I/O and terminates properly in its containing library.

See also the description of the *STARTUP system variable.

Statements

See the *Statements* documentation.

Static Parameter

Mainframe: Assigned by profile parameters specified in the Natural **parameter module** which is created during the installation.

Windows and UNIX: The parameter settings specified in *NAT-PARM.SAG*.

Steplib

A steplib is a Natural user library or system library that is concatenated with the current user or system library. A steplib can be used as a single storage location for multiple objects that are shared by different applications. This avoids redundant storage of identical objects and helps to organize applications. In addition, if Natural Security is installed, a steplib can be used to restrict access to particular objects.

Storagespace

Predict: Predict objects of type storagespace document DB2 storagegroups.

STOW

In Natural, the term "stow" refers to the Natural system command `STOW`. This command saves and, at the same time, catalogs (compiles) source code as a source object and as a cataloged object in a Natural system file. Both objects then have the same time stamps.

Stub

A socket program that establishes the link between the local application program and the broker. See also ***RPC Stub***.

Subtype

Predict: Object types can have subtypes. The object type file, for example, has the subtypes Adabas file, Adabas userview, DB2 table, DB2 view, etc. The subtypes of the object type file, for example, are also called file types.

Super Natural

Software AG's end-user tool for extracting and processing data from mainframe or PC files. It offers menu-driven query specification, interactive report layout specification, and flexible customization of end-user profiles.

SVC = Supervisor Call

A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system

from inappropriate user entry. All operating system requests must be handled by SVCs.*

Syncpoint = Synchronization Point

CICS and **IMS TM**: A logical point in execution of an application program where the changes made to the databases by the program are consistent and complete and can be committed to the database. The output, which has been held up to that point, is sent to its destination(s), the input is removed from the message queues, and the database updates are made available other applications.*

SYSPARM Utility

Mainframe: Used for creating and maintaining parameter profiles. You can specify a string of profile parameters once, store this string under a profile name, and then invoke Natural with the dynamic parameter `PROFILE=profile-name`. The string of parameters stored under that profile name is passed to Natural as dynamic parameters.

SYSRPC

Utility for configuring the services, and server connections for each Natural client using remote procedure calls. See *SYSRPC Utility* in the *Tools and Utilities* documentation.

System

Predict: Predict objects of type system document a collection of programs forming an application or a part of an application.

System Command

Natural system commands perform functions you need to create, maintain or execute Natural objects. In addition, Natural system commands are used to monitor and administer your Natural environment.

System File

The Natural system files (FNAT, FUSER) contain information, data programs, modules, etc., which are required for the Natural system to function. Products like Predict, Natural Security, Natural Advanced Facilities and Natural for VSAM require their own system files (FDIC, FSEC, FSPOOL, FDICX).

System Function

Preprogrammed functions offered by Natural. See the *System Functions* documentation.

System Library

Natural-internal library created in FNAT at installation, not available for customer-modification. All Natural system library names start with the letters "SYS" (with some exceptions on the mainframe).

SYSTEM Library

The library which is searched if a Natural object is not found in either the current library or in the steplibs. There is a SYSTEM library in both FNAT and FUSER. See ***Steplib***.

System Maintenance Aid (SMA)

Software AG product used to install and maintain Software AG mainframe products.

System Management Hub	Software AG's product and cross-platform product management framework. Its architecture permits plug-in integration of existing products, separation of implementation-specific management technologies and re-use as a product-independent, cross-platform framework.
System Program	*Predict:* Programs that are not available as source code are documented with Predict objects of type Program with subtype E (external object) and language Z (system program). Whenever a system program is created in Predict, XRef data is written for it.
System Variable	System variables are used to display system information. They may be referenced at any point within a Natural program. See the *System Variables* documentation.

T

TAC	Abbreviation for "transaction code".
Task	*Mainframe:* In a multiprogramming or multiprocessing environment, one or more sequences of instructions treated by a control program as an element of work to be accomplished by a computer.* *Windows and UNIX:* See ***Process***.
TCB = Task Control Block	*z/OS:* A control block allocated by the operating system which contains all information on tasks relevant for the system.
TD = Transient Data	***CICS:*** Data temporarily stored in a facility. A transient object is automatically deleted when it is no longer used.
Terminal Command	You can define another special character as control character using the session parameter `CF`. See the *Terminal Commands* documentation.
Thousands Separator	To structure the output of large integer values, it is common practice to insert separators between every three digits of an integer to separate groups of thousands. This separator is called a "thousands separator".
Dynamic Thousands Separator	In Natural, a "dynamic thousands separator" is a specific character in the edit mask to indicate the position where the thousands separators are inserted at runtime.
Thousands Separator Character	The "thousands separator character" is the character to be used as the thousands separator at runtime.

Thread	*Mainframe:* A storage space which contains all the data for a particular Natural session. *Windows and UNIX:* The basic (memory) entity within an application to which the operating system allocates CPU time. Threads allow parallel computing in single and multiple processors. They execute independently from each other.
TLS = Transport Layer Security	Is the successor of **SSL**.
TP Monitor = Teleprocessing Monitor / Transaction Processing Monitor	*z/OS:* A control program for the administration and management of online transaction processing (OLTP) applications. TP monitor technology complements the operating system and serves as an intermediate tier encapsulating access to resources. The user or application programmer is thus shielded from technical details on the operating system level, for example concerning database access.
Transfer Medium	*Predict:* When data is transferred using the Predict Coordinator, the transfer medium used can be a PC work file, a Natural work file or a file in a database. For the Coordinator functions Unload and Export, the transfer medium is the target environment; for the Coordinator functions Load and Import, the transfer medium is the source environment.
Transaction	1. Input of application data submitted by a single user that initiates a sequence of information exchange and execution of operational steps (input - data processing - output). A transaction code is needed to initiate the process. 2. Natural performs database updating operations based on transactions (database transactions), which means that all database update requests are processed in logical transaction units. A logical transaction is the smallest unit of work (as defined by user) which must be performed in its entirety to ensure that the information contained in the database is logically consistent. The statements `END TRANSACTION` (**ET**) and `BACKOUT TRANSACTION` (**BT**) cause the database to unlock all records since the begin of the transaction. See also *Database Access* in the *Programming Guide*.
Translator Database	*Predict:* Database that contains the ADASTAR translation table that is used to determine the physical file behind any logical file number when using Adabas Star.
Tree View	Visual representation of element hierarchy.

Type Information

When a NaturalX class is registered as a **DCOM** class, a type library is generated for the class and connected to the class by a Windows system registry entry. Clients can use the type information contained in the type library to check the descriptions of the interfaces, methods and properties of the class either at compile time or at runtime.

Type Library

When a NaturalX class is registered as a **DCOM** class, a type library is generated for the class and connected to the class by a Windows system registry entry. Clients can use the type information contained in the type library to check the descriptions of the interfaces, methods and properties of the class either at compile time or at runtime.

U

UCB

Abbreviation for "unit control block user".

UDF

User defined function.

Unicode

For information on Unicode terms used in the Natural documentation, refer to the glossary that is published for the current Unicode version on the Unicode Home Page:

- ***http://www.unicode.org/***
- ***http://www.unicode.org/versions/Unicode4.0.0/b1.pdf***

Unload

Predict: There are two methods of unloading Predict objects:

- Using extracts. Using the menu functions, you can only unload objects that are contained in an extract. Up to ten extracts can be specified for one unload operation.
- Using unload commands. In the command line you can also specify individual objects or ranges of objects. The scope of the function can be limited by parameters.

URI

Abbreviation for "Uniform Resource Identifier".

Example:

```
http://guest:guestpwd@si15.hq.sag:80/xml/mycar.xml
```

Protocol	http
User ID	guest
Password	guestpwd
Port	80

Path	/xml
File	mycar.xml

User

Entire Operations: A user defined to an Entire Operations environment with an individual profile that determines the maintenance and control functions allowed for the user.

Predict: Predict objects of type user document persons using a system. A logical connection between users and documentation objects is established by means of owners. See ***Object Types***.

URL

Abbreviation for "Uniform Resource Locator", a subtype of Uniform Resource Identifier (URI). In popular usage and in some technical publications it is a synonym for URI.

User-Defined Variable

A field which you define yourself in a program. It is used to store values or intermediate results obtained at some point in program processing for additional processing or display.

You define a user-defined variable by specifying its name and its format/length in the `DEFINE DATA` statement. See the section *User-Defined Variables* in the *Programming Guide*.

User Exit

A user exit is a point in Natural, a subcomponent or a subproduct where control is passed to a **user exit routine**.

User Exit Routine

A user exit routine assumes control at a defined **user exit** to manipulate data or make decisions. Usually, a sample user exit is delivered in source form. The instructions contained in the user exit have to be written or adjusted by the user. Most user exit routines take advantage of the Natural language; a small subset has to be written in Assembler language on mainframe systems and C on non-mainframe systems.

Userview

Predict: Userviews are logical views of master files defined for use in the data declaration sections of programs. The number and sequence of fields in a userview can differ from the master files and - within certain compatibility rules - certain attributes of fields in userviews can differ from the corresponding values at the physical/logical level.

V

Variable

See ***System Variable*** and ***User-Defined Variable***.

Verification

Predict: A Predict object of type verification documents the rules for the validation of field values. Natural processing rules can be generated from Predict objects of type verification.

Version

According to the Software AG Maintenance Policy, the version (or release) of a Software AG product is defined as follows:

- **Major Version**

  The first digit of the version indicates a major release with significant new features and functionality and, possibly, major architecture changes.

- **Minor Version**

  The second digit of the version indicates a minor release with some new features and functionality and fixes.

- **Service Pack**

  The third digit of the version indicates a Service Pack which is an accumulation of fixes delivered as a planned release. It can be denoted by "SP" in the version numbering.

- **Fix**

  The fourth digit of the version indicates a specific fix that can be cumulative.

In the product documentation, the current version is often represented by a placeholder such as `vrs`, `v.r.s`, `vr`, `v`, `nnn` or `nn`, for example, in data set or module names.

For further information on the Software AG Maintenance Policy, you can view the relevant section on Software AG's Empower website at ***https://empower.softwareag.com***.

View

Predict: See ***Userview***.

Virtual Machine

Predict: Together with objects of type Network, Predict objects of type Virtual Machine document the hardware and operating system environment of a data processing system.

VM = Virtual Machine

A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system.*

VSAM = Virtual Storage Access Method	An IBM access method to maintain records of different data set organizations: key-sequenced data sets (**KSDS**), entry-sequenced data sets (**ESDS**) or relative-record data sets (**RRDS**).
VTAM = Virtual Telecommunications Access Method	An application programming interface (API) for communicating with Systems Network Architecture (**SNA**) telecommunication devices and their users.

W

WTO = Write-to-Operator	An optional user-coded service that allows a message to be written to the system console operator informing the operator of errors and unusual system conditions that may need to be corrected.*
Work File Format	Describes the structure of the data that is saved in the target file. For example, the work file format ENTIRE CONNECTION writes two files: *.NCD* and *.NCF*. For more information, see *Work File Formats* in the *Operations* documentation.
Work File Type	A file that is available to Natural, that writes a certain work file format. For example, there are two different work files types that save data in Entire Connection format. These file types are ENTIRE CONNECTION and TRANSFER. For more information, see the profile parameter `WORK`.

X

X-Arrays	X-arrays, or eXtensible Arrays, are arrays of which one can alter the number of occurrences at runtime. This can help you manage memory more efficiently. For example, you can use a large number of array occurrences for a short time and then reduce memory when the application is no longer using the array. See *X-Arrays* in the *Programming Guide* for more information.
XCF = Cross-systems Coupling Facility	A component that provides functions to support cooperation between authorized programs running within a sysplex.* Natural only uses XCF in connection with **Parallel Sysplex**.
XML	Abbreviation for “Extensible Markup Language”.

XML Toolkit

Windows: Enables developers to process XML documents within Natural. The toolkit includes a wizard which generates Natural source code and provides the following features:

- Mapping Natural data definitions to DTDs;
- Serialization;
- Mapping DTDs to Natural data definitions;
- Parsing an XML file and assigning its contents to a Natural data structure.

XRef Data = Active Cross-References

Predict: XRef data is stored in Predict for implemented objects; it is stored independent of documentation objects. Predict's active retrieval functions retrieve information from XRef data and from Predict documentation objects to determine

- whether objects documented in the dictionary are not yet implemented,
- whether implemented members are not yet documented or
- whether documentation data differs from the implementation.

XRef data records for Natural objects are created by Natural when a Natural object is cataloged. XRef data is generated when an object is cataloged and the `XREF` parameter has been specified accordingly.

XRef Evaluation

Windows: The XRef Evaluation Plug-In is used to navigate through cross-reference information created during `CAT` or `STOW` commands in the development server file. The information is displayed in a tree view in Natural Studio. Both types of references - active and passive (i.e. referencing and referenced) can be displayed. Navigating through the hierarchies of active and passive references is possible within the tree-view. See the Single Point of Development documentation.

Z

Zap

A product error correction for changing the contents of an executable module at a specified address. Known as a patch in IBM terminology.

zIIP

The IBM System z Integrated Information Processor (zIIP) is a specialty engine directed toward data serving workloads.