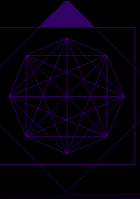


Introducing an Interface for CA-Endevor for MVS and NATURAL/PREDICT

GEM at CA-World'97

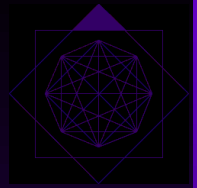
Session: GCE32S

Alexander Gaugler, ATLANTIS GmbH



ATLANTIS

Beratungsgesellschaft für
Informationsverarbeitung mbH



E/NAT

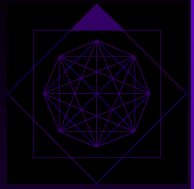
or

“CA-Endevor for MVS NATURAL Interface”

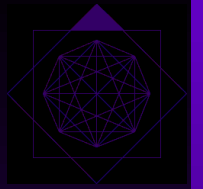
Interface between
CA-Endevor and NATURAL/PREDICT
Version 2.1

E/NAT is a registered trademark of ATLANTIS Beratungsgesellschaft fuer Informationsverarbeitung mbH, Stuttgart, Germany.
All other product names used in this presentation are registered trademarks or trademarks of their respective holders and are accepted.

Agenda

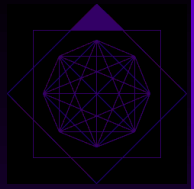


- Development goals and additional features
- Object types supported
- The connection between CA-Endevor and E/NAT
- The user interface
- Action processing
- Defining E/NAT parameters, *Member Conversion Table*
- Summary
- Further information



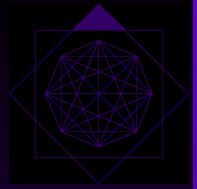
E/NAT Development Goals and Additional Features

E/NAT Development Goals



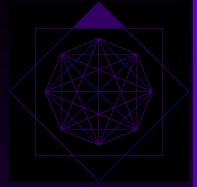
- Completely integrated solution for CA-Endevor
 - ▶ Consideration of all panel options
 - ▶ Same menu branches
 - ▶ E/NAT messages are shown directly on the CA-Endevor panels

E/NAT Development Goals



- Completely CA-Endevor compliant behavior
 - Processing element by element
 - Foreground- and batch-processing
 - Supports package processing
 - Full backout-support for NATURAL objects
 - Supports generate- / delete-processor

E/NAT Development Goals



■ High security

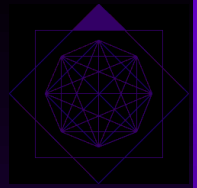
- ▶ no NATURAL utilities
- ▶ secure condition code control
- ▶ no interpretation of the NATURAL source code

■ Optimum performance

- ▶ only 1 single active NATURAL copy

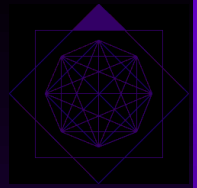
NATURAL has to be ended only when the ADABAS SVC for the NATURAL/PREDICT system file changes

E/NAT Development Goals



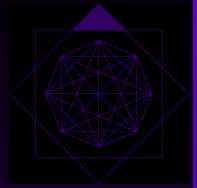
- Automatic compliance with NATURAL conventions and requirements
 - ▶ Generate map leaves map source (for CAT of program!)
 - ▶ Generate copycode applies only to source
 - ▶ Package-backout will delete all affected programs from NATURAL bufferpool
 - ▶ ...

E/NAT Development Goals



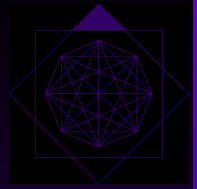
- Readable source code
- Source changes comprehensible line by line
- Flexible *Generate Action*:
 - CAT (generate object, default)
 - STOW (generate object and source)
 - CAT© (generate object and copy source with original timestamp)
 - SAVE (save source only)

E/NAT Development Goals



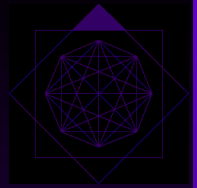
- Use of the PREDICT active references
 - ▶ **manually**
through specific selection or
 - ▶ **automatically**
through inclusion of all dependent NATURAL and PREDICT objects during selection of each NATURAL or PREDICT element

E/NAT Development Goals



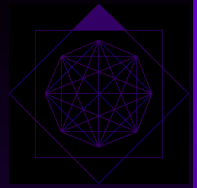
- Support for all NATURAL and PREDICT objects required for application development
- Support for long (32 character) PREDICT object IDs
 - ▶ predefined MCT entries or
 - ▶ automatic prompting during action processing
- Simple administration
- Simple processors

E/NAT Additional Features



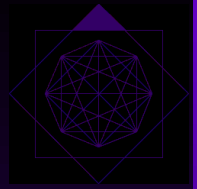
- User exits available for customer specific processing
 - ▶ Session start
 - ▶ Before / after action
 - ▶ Change to another NATURAL library
 - ▶ Conversion of member name into element name and vice versa

E/NAT Additional Features

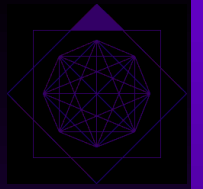


- User entry available to supply records for the Member Conversion Table (MCT)
- Batch utilities available to LOAD and UNLOAD MCT records
 - ▶ mass updates
 - ▶ initial load

E/NAT Additional Features

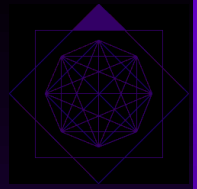


- E/NAT exits can also be used for CA-Endevor elements that are not supported by E/NAT (3GL programs, ...)
- Change between NATURAL environments
 - ▶ with different FUSER or FDIC settings across DB boundaries
 - ▶ with different ADABAS-SVCs



Object Types Supported by E/NAT

Object Types Supported



■ NATURAL

♦ Routines

- Program
- Subprogram
- Subroutine
- Helproutine

♦ Maps

- Map
- Form
- Helptext

♦ Data Areas

- Global
- Local
- Parameter

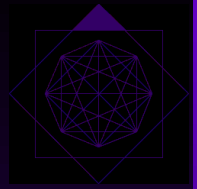
♦ SYSERR-Messages

- Short and Long
- All languages

♦ Others

- Copycode
- Text, Recording etc.

Object Types Supported



■ PREDICT

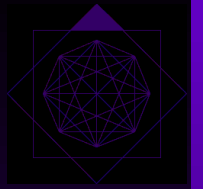
◆ Files with fields

- Definition (file with elementary fields),
- Generated code
 - DDM,
 - ADACMP,
 - Copycode etc.

◆ Verifications

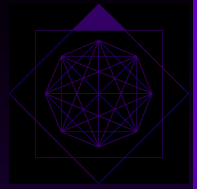
- Definition
- Rule code

Object Types Supported



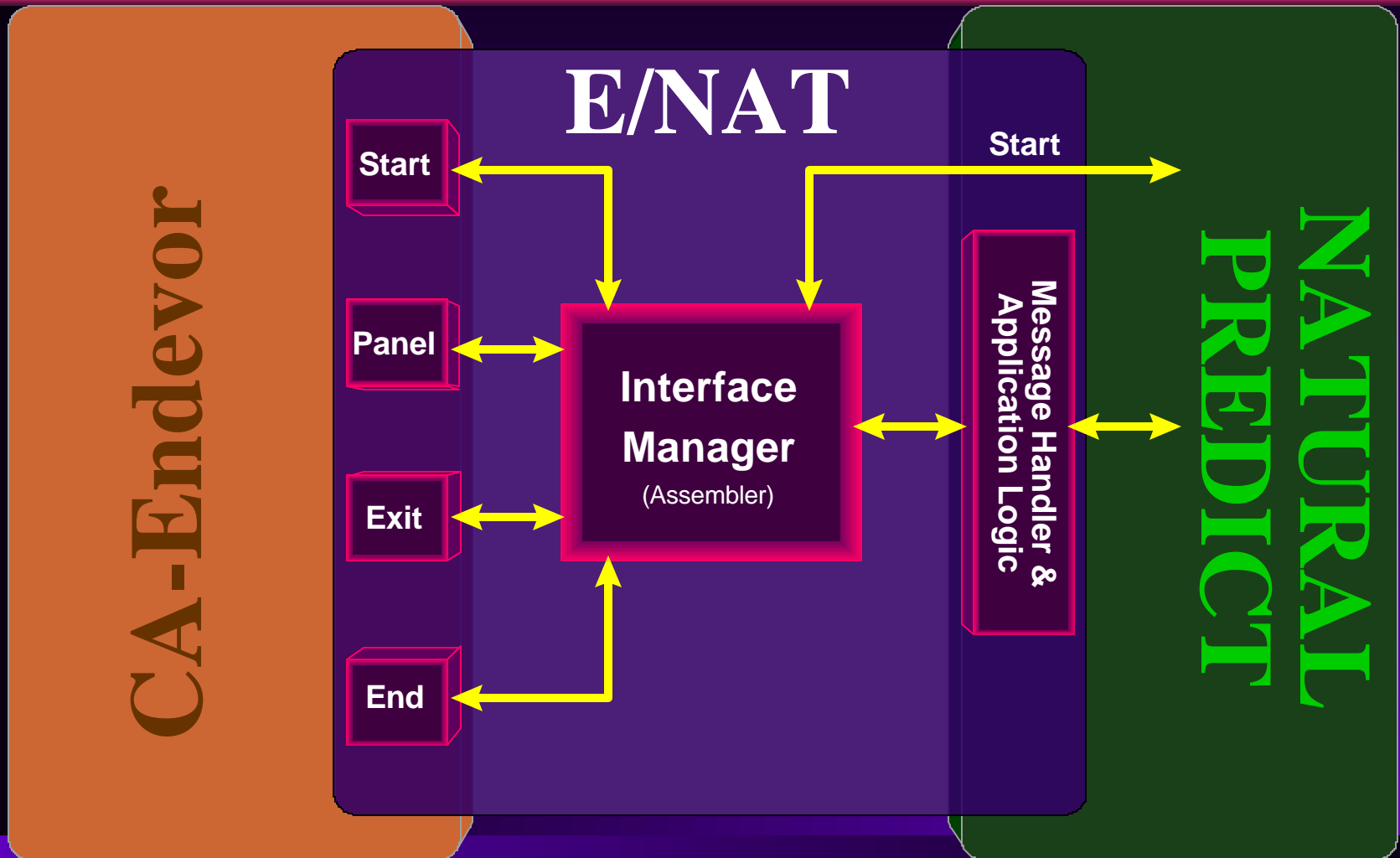
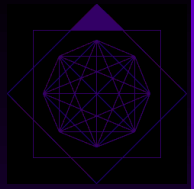
■ PREDICT (continued)

- ▶ Databases
- ▶ Keywords
- ▶ Modules
- ▶ Programs
- ▶ Relationships
- ▶ Reports
- ▶ Systems
- ▶ Users

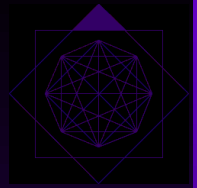


The Connection between E/NAT and CA-Endevor

The Physical Connection



The Logical Connection

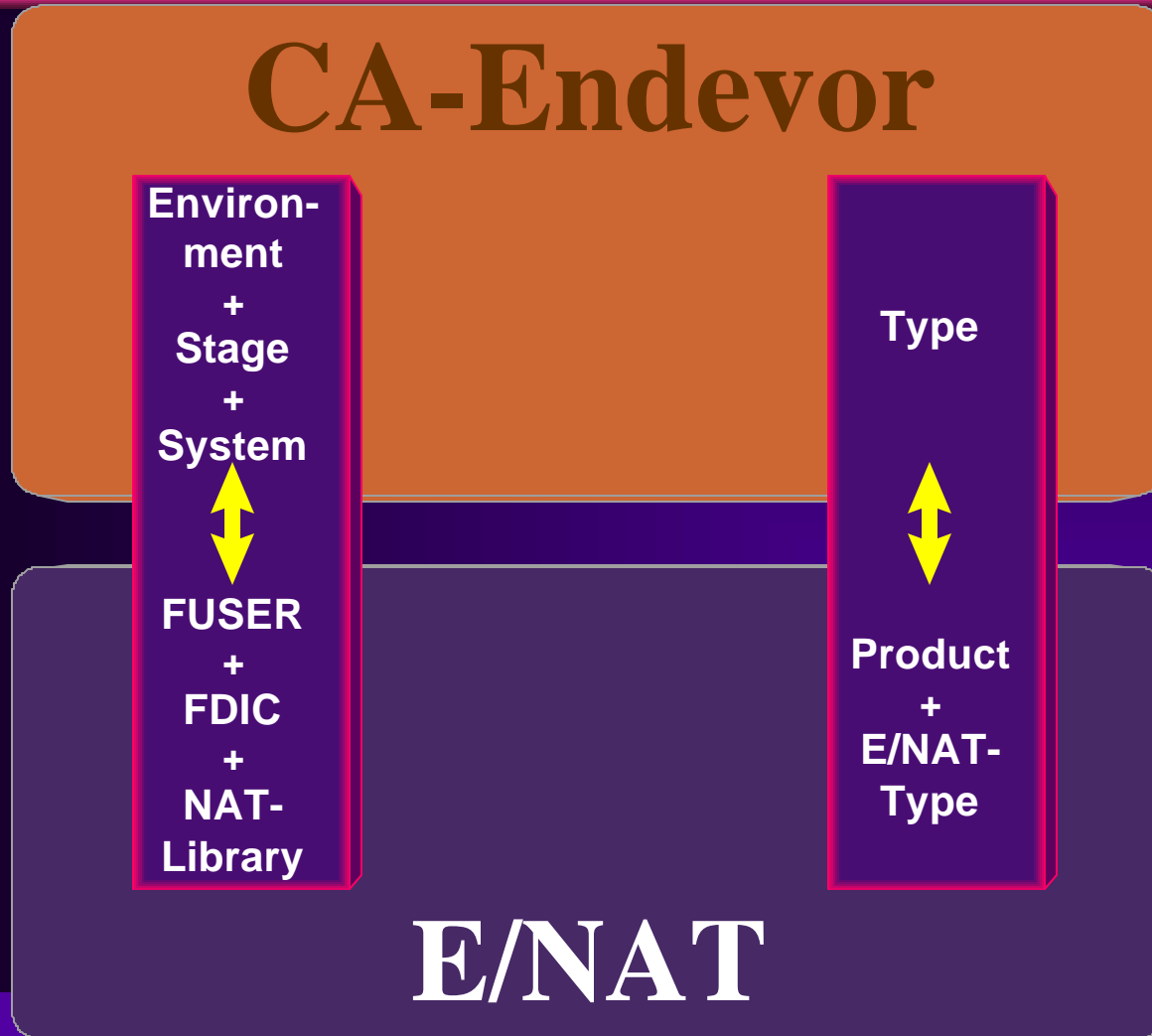


Example:

Environment = DEV
Stage = 1
System = FINANCE



FUSER = (18,9)
FDIC = (18,11)
Library = FIN-DEV

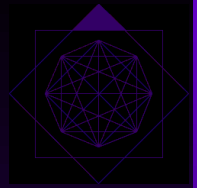


Example:

Type = NATMAP



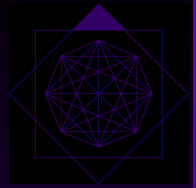
Product = NATURAL
E/NAT-Type = MAP



The User Interface

Principles

The User Interface



```
----- ADD/UPDATE ELEMENTS -----
OPTION   ===> L

blank - Member list      A, U - Add, Update an element

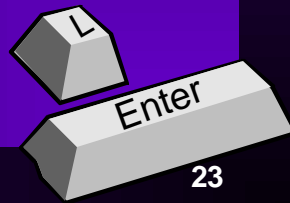
TO ENDEVOR:              ACTION OPTIONS:
ENVIRONMENT   ===> EW      CCID                      ===>
SYSTEM        ===> TEST   GENERATE ELEMENT         ===> N (Y/N)
SUBSYSTEM     ===> GGR    DELETE INPUT SOURCE      ===> N (Y/N)
ELEMENT       ===>
TYPE          ===> NATPGM  NEW VERSION              ===>
STAGE:        1          OVERRIDE SIGNOUT           ===> N (Y/N)
                                           PROCESSOR GROUP         ===>
                                           UPDATE IF PRESENT       ===> N (Y/N)
                                           INCLUDE PREDICT XREF    ===> N (F/N)

COMMENT       ===>
FROM ISPF LIBRARY:
PROJECT       ===>
LIBRARY       ===> YX00037
TYPE          ===>
MEMBER        ===>
                                           LIST OPTIONS:
                                           DISPLAY LIST            ===> Y (Y/N)
                                           THRU MEMBER            ===>

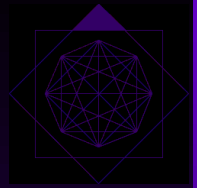
FROM OTHER PARTITIONED OR SEQUENTIAL DATA SET:
DATA SET NAME ===> 'DVO. KM IOTBS. HFAHFHF. TST. V01'
```

L - Set Library type

FROM ISPF LIBRARY:
PROJECT ===>
LIBRARY ===> YX00037
TYPE ===>
MEMBER ===>



The User Interface



----- ADD/UPDATE ELEMENTS -----

OPTION ===>

blank - Member list A, U - Add, Update an element L - Set Library type

TO ENDEVOR:

ENVIRONMENT ===> EW
SYSTEM ===> TEST
SUBSYSTEM ===> GGR
ELEMENT ===>
TYPE ===> NATPGM
STAGE: 1

COMMENT ===>

ACTION OPTIONS:

CCID ===>
GENERATE ELEMENT ===> N (Y/N)
DELETE INPUT SOURCE ===> N (Y/N)
NEW VERSION ===>
OVERRIDE SIGNOUT ===> N (Y/N)
PROCESSOR GROUP ===>
UPDATE IF PRESENT ===> N (Y/N)
INCLUDE PREDICT XREF ===> N (F/N)

FROM NATURAL LIBRARY:

LIBRARY ===> YX00037

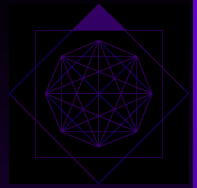
MEMBER ===>
PATH ===> DEV

LIST OPTIONS:

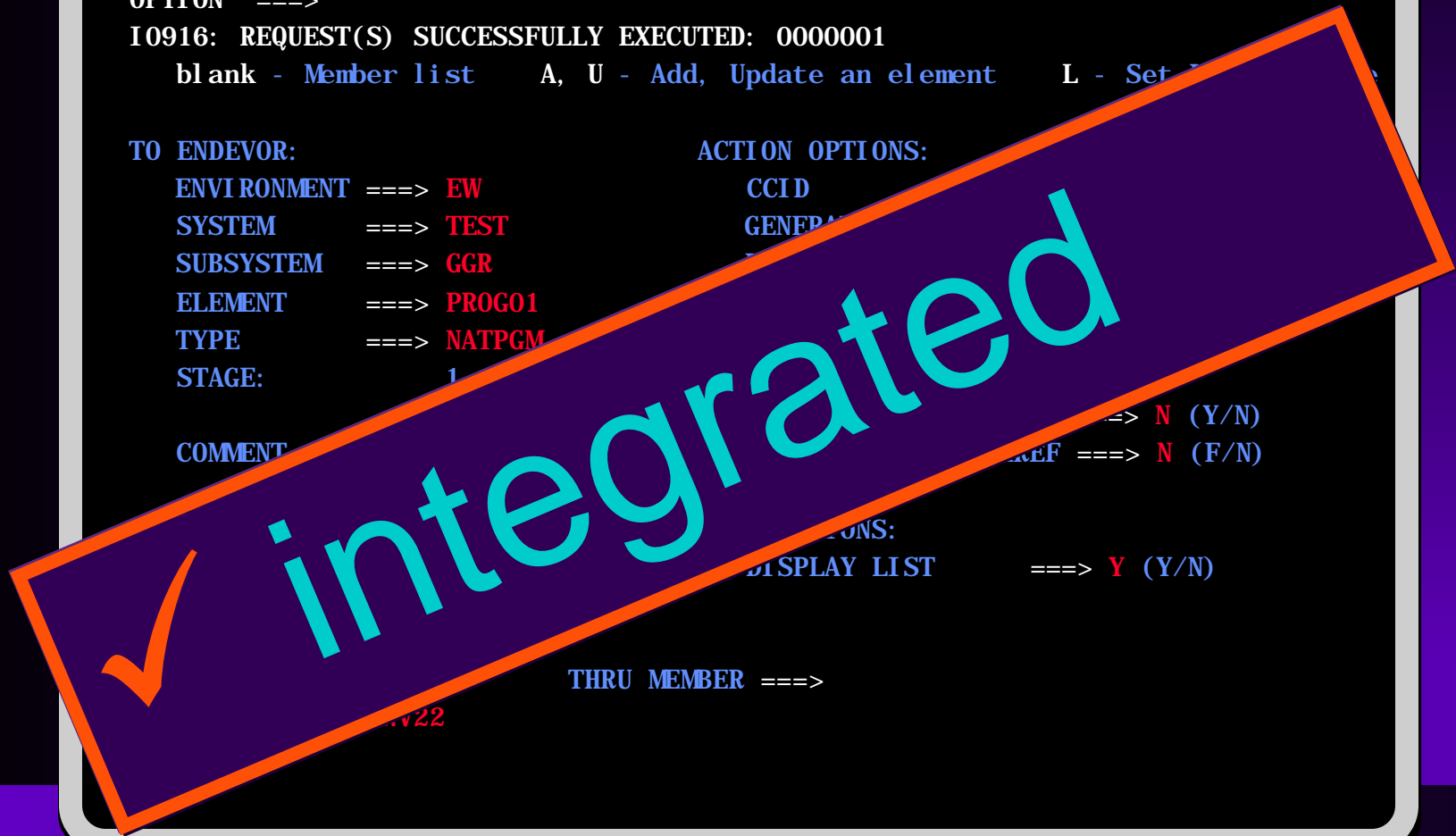
DISPLAY LIST ===> Y (Y/N)

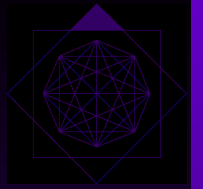
THRU MEMBER ===>

The User Interface



```
----- ADD/UPDATE ELEMENTS -----
OPTION ==>
I0916: REQUEST(S) SUCCESSFULLY EXECUTED: 000001
  blank - Member list  A, U - Add, Update an element  L - Set
TO ENDEVOR:          ACTION OPTIONS:
ENVIRONMENT ==> EW          CCID
SYSTEM ==> TEST          GENERAL
SUBSYSTEM ==> GGR          STAGE
ELEMENT ==> PROG01        TYPE
TYPE ==> NATPGM          STAGE: 1
COMMENT ==>              REF ==> N (Y/N)
ACTION OPTIONS:
DISPLAY LIST ==> Y (Y/N)
THRU MEMBER ==>
```

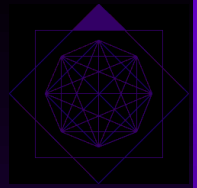




Action Processing ADD

Screen shots showing details of user
interface and integration

ADD / Member Selection



----- ADD/UPDATE ELEMENTS -----

OPTION ===>

blank - Member list A, U - Add, Update an element L - Set Library type

TO ENDEVOR:

ENVIRONMENT ===> EW
SYSTEM ===> TEST
SUBSYSTEM ===> GGR
ELEMENT ===>
TYPE ===> NAT*
STAGE: 1

COMMENT ===>

ACTION OPTIONS:

CCID ===>
GENERATE ELEMENT ===> N (Y/N)
DELETE INPUT SOURCE ===> N (Y/N)
NEW VERSION ===>
OVERRIDE SIGNOUT ===> N (Y/N)
PROCESSOR GROUP ===>
UPDATE IF PRESENT ===> N (Y/N)
INCLUDE PREDICT XREF ===> N (F/N)

FROM NATURAL LIBRARY:

LIBRARY ===> YX00037

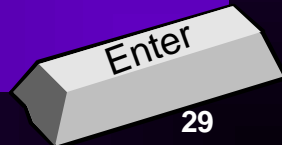
LIST OPTIONS:

DISPLAY LIST ===> Y (Y/N)

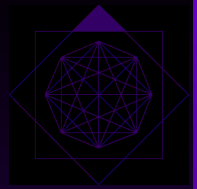
MEMBER ===>

THRU MEMBER ===>

PATH ===> NV22



ADD / Member Selection



```
----- E/NAT-Interface      Versi on 2.1 -----
COMMAND ==> SELMEM

FROM Path:      NV22      Library: YX00037  Member: *      Fmt:
TO  Environment: EW      Stage: 1      System: TEST    Subsys: GGR

NATURAL Types to be listed      8 / 19  PREDICT Types to be listed      8 / 11

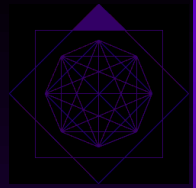
Routines          ==> X      Databases          ==>
Copycodes         ==> X      Files              ==>
Texts, Recordings ==> X      Keywords           ==>
Maps              ==> X      Modules            ==>
Data Areas        ==> X      Programs           ==>
SYSERR- Messages ==> X      Relationships      ==>
                                   Reports              ==>
                                   Systems              ==>
                                   Users                ==>
                                   Verifications       ==>

ENDEVOR Options
  INCLUDE PREDICT XREF ==> N
  DISPLAY LIST        ==> Y

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help          End   Menu          <<   >>
```



ADD / Member Selection



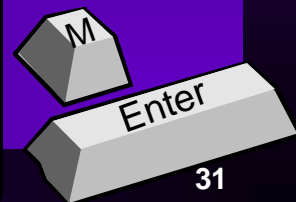
```

----- E/NAT-Interface      Versi on 2.1 -----
COMMAND ==> SELMEM          NATURAL  NOT MSG      8 / 19

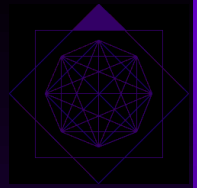
FROM Path:      NV22        Library: YX00037  Member: *          Fmt:
TO  Envi ronment: EW        Stage:  1          System: TEST      Subsys: GGR

M  MEMBER              ELEMENT      TYPE      COMMENT
A
AZNL2                  NATPGM
AZNP2                  NATPGM
CMKEY                  NATPGM
CMASH                  NATPGM
CMMSG                  NATPGM
CMTCP                  NATPGM
CMUB                   NATPGM
CMUB2                  NATPGM
CMULT                  NATPGM
CMX                    NATPGM
CMXG                   NATDAT
CMZUL                  NATPGM
M  ENTEST              NATPGM

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help           End   Menu           -   +           <<   >>
    
```



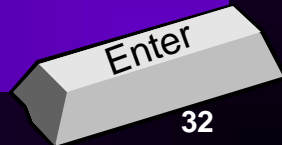
ADD / Member Selection



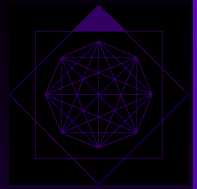
```
--
CO      ELEMENT   : ENTEST
        TYPE      : NATPGM  ROUT
FR      ENV       FROM:          TO: EW
TO      STG       FROM:          TO: 1 EW
        SYSTEM FROM:          TO: TEST
M
        ---Source--- ---Object---
Date    : 26. 10. 1993      n/a
Time    : 12: 24: 05
Versi on/SM : 2. 2 / 0004 /
Useri d   : YX00130
Termi nal - Id: T945
OP- System : MWS/ESA
TP- System : CICS
Transakti on: NAXE
DAT- Si ze :
E- Si ze  :          5115
BP- Si ze :

si on 2.1 -----
/ 19
ber: *          Fmt: SRC
tem: TEST      Subsys: GGR
PE          COMMENT

M
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help      End Menu      -      +      <<      >>
```



ADD / Member Selection

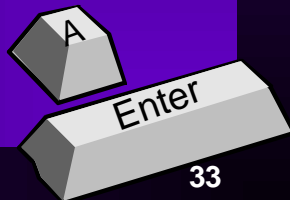


```
----- E/NAT-Interface      Versi on 2.1 -----
COMMAND ==> SELMEM      NATURAL  NOT MSG      8 / 19

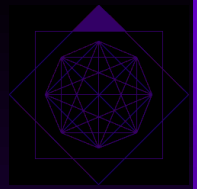
FROM Path:      NV22      Li brary: YX00037  Member: *      Fmt:
TO  Envi ronment: EW      Stage: 1      System: TEST      Subsys: GGR

M  MEMBER      ELEMENT      TYPE      COMMENT
A
AZNL2          NATPGM
AZNP2          NATPGM
CMKEY          NATPGM
CMASH          NATPGM
CMMSG          NATPGM
CMTCP          NATPGM
CMUB           NATPGM
CMUB2          NATPGM
CMULT          NATPGM
CMX            NATPGM
CMXG           NATDAT
CMZUL          NATPGM
A  ENTEST      NATPGM

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help      End  Menu      -      +      <<      >>
```



ADD / Member Selection

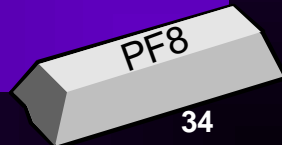


```
----- E/NAT-Interface      Versi on 2.1 -----
COMMAND ==> SELMEM          NATURAL  NOT MSG      8 / 19

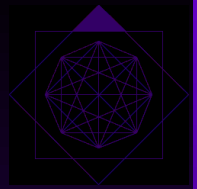
FROM Path:      NV22        Library: YX00037  Member: *          Fmt:
TO  Envi ronment: EW        Stage:  1         System: TEST       Subsys: GGR

M  MEMBER                ELEMENT      TYPE      COMMENT
A
AZNL2                    NATPGM
AZNP2                    NATDAT
CMKEY                    NATPGM
CMASH                    NATPGM
CMMSG                    NATPGM
CMTCP                    NATPGM
CMUB                     NATPGM
CMUB2                    NATPGM
CMULT                    NATPGM
CMX                      NATPGM
CMXG                     NATDAT
CMZUL                    NATPGM
ENTEST                   *WRITTEN    NATPGM

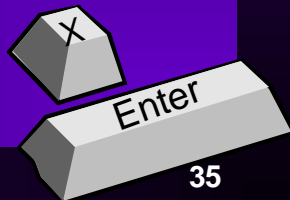
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help          End   Menu          -   +           <<   >>
```



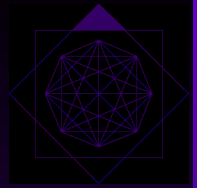
ADD / Member Selection



```
----- E/NAT-Interface      Versi on 2.1 -----  
COMMAND ==> SELMEM      NATURAL  NOT MSG      8 / 19  
  
FROM Path:      NV22      Library: YX00037  Member: *      Fmt:  
TO  Envi ronment: EW      Stage: 1      System: TEST      Subsys: GGR  
  
M  MEMBER              ELEMENT      TYPE      COMMENT  
GGRNOCAT              NATPGM  
ID0001G              NATDAT  
ID0001I              NATDAT  
ID0002C              NATPGM  
KMPRDDIS              NATPGM  
KMV001D              NATMAP  
X KMV001L              NATPGM  
KMV002D              NATMAP  
KMV003D              NATMAP  
KMV004D              NATMAP  
KMV004I              NATDAT  
KMV005D              NATMAP  
NATPGH              NATPGM  
NLTMDRE              NATPGM  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End      Menu      -      +      <<      >>
```

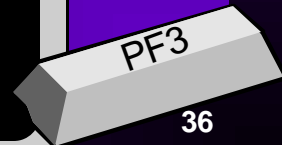


ADD / Member Selection

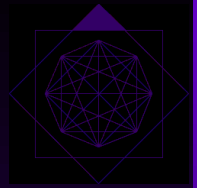


```
----- E/NAT-Interface          Versi on 2.1 -----  
COMMAND ==> XREF   Level  1          8 / 19  
  
FROM Path:      NV22      Library: YX00037  Member: KMW001L    Fmt: SRC  
TO  Environment: EW       Stage:  1        System: TEST       Subsys: GGR  
  
M  MEMBER              ELEMENT      TYPE      COMMENT              USE/REF VIA  
   KMW004I              NATDAT     NATDAT     Use LDA  
   KMW04#U              PRDFI      PRDFI      Use View
```

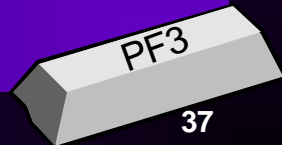
```
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End   Menu      -   +      <<   >>
```



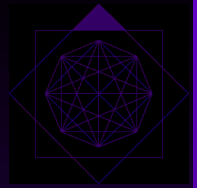
ADD / Member Selection



```
----- E/NAT-Interface      Versi on 2.1 -----  
COMMAND ==> SELMEM      NATURAL  NOT MSG      8 / 19  
  
FROM Path:      NV22      Library: YX00037  Member: *      Fmt:  
TO  Envi ronment: EW      Stage: 1      System: TEST      Subsys: GGR  
  
M  MEMBER      ELEMENT      TYPE      COMMENT  
GGRNOCAT      NATPGM  
ID0001G      NATDAT  
ID0001I      NATDAT  
ID0002C      NATPGM  
KMPRDDIS      NATPGM  
KMV001D      NATMAP  
KMV001L      NATPGM  
KMV002D      NATMAP  
KMV003D      NATMAP  
KMV004D      NATMAP  
KMV004I      NATDAT  
KMV005D      NATMAP  
NATPGH      NATPGM  
NLTMDRE      NATPGM  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End      Menu      -      +      <<      >>
```



ADD / Member Selection

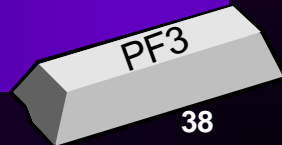


----- E/NAT-Interface Version 2.1 -----
COMMAND ==> SELMEM NATURAL MSG 8 / 19

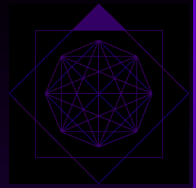
FROM Path: NV22 Library: YX00037 Member: * Fmt:
TO Environment: EW Stage: 1 System: TEST Subsys: GGR

M	MEMBER	ELEMENT	TYPE	COMMENT
	4711		NATMSG	

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help End Menu - + << >>



ADD / Member Selection



----- ADD/UPDATE ELEMENTS -----

OPTION ==>

I0916: REQUEST(S) SUCCESSFULLY EXECUTED: 0000001

blank - Member list A, U - Add, Update an element L - Set Library type

TO ENDEVOR:

ENVIRONMENT ==> **EW**
SYSTEM ==> **TEST**
SUBSYSTEM ==> **GGR**
ELEMENT ==>
TYPE ==> **NAT***
STAGE: **1**

COMMENT ==>

ACTION OPTIONS:

CCID ==>
GENERATE ELEMENT ==> **N (Y/N)**
DELETE INPUT SOURCE ==> **N (Y/N)**
NEW VERSION ==>
OVERRIDE SIGNOUT ==> **N (Y/N)**
PROCESSOR GROUP ==>
UPDATE IF PRESENT ==> **N (Y/N)**
INCLUDE PREDICT XREF ==> **N (F/N)**

FROM NATURAL LIBRARY:

LIBRARY ==> **YX00037**

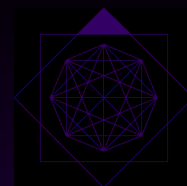
LIST OPTIONS:

DISPLAY LIST ==> **Y (Y/N)**

MEMBER ==>

THRU MEMBER ==>

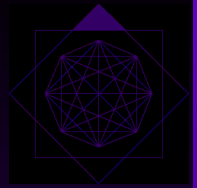
PATH ==> **NV22**



Action Processing DISPLAY / BROWSE

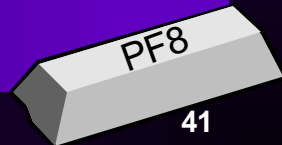
Screen shots showing how NATURAL
sources are stored

Browse NATURAL Source

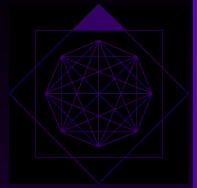


```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 0000000 COL 001 080
COMMAND ===>                                SCROLL ===> CSR
***** TOP OF DATA *****
*****
**
** ELEMENT BROWSE                                29JAN96  10:32 **
**
** ENVIRONMENT:  EW          SYSTEM: TEST        SUBSYSTEM: GGR      **
** ELEMENT:     EN9401X     TYPE:  NATPGM       STAGE:     EW      **
**
*****
*****
----- SOURCE LEVEL INFORMATION -----
VV. LL SYNC USER      DATE      TIME  STMTS CCID      COMMENT
-----
01. 00      YX00037  13DEC95  13:25    92
THIS ELEMENT HAS NOT BEEN PROCESSED.
RETRIEVED  YX00037  13DEC95  13:33

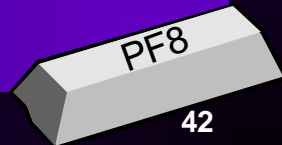
+00      * -----
+00      * (c) Copyright 1994 by
```



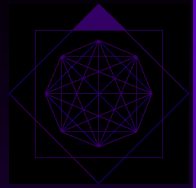
Browse NATURAL Source



```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 0000022 COL 001 080
COMMAND ==>                                SCROLL ==> CSR
+00 *      ATLANTIS Beratungsgesellschaft fuer Informationsverarbeitung mbH
+00 *      -----
+00 *      System .: ENDEVOR/NATURAL-Interface Version 1.0
+00 *      Objekt.: Subprogramm EN9401X
+00 *      Funktion: Rahmen für den USEREXIT "Before ENDEVOR Action", der
+00 *      vor Ausführung einer ENDEVOR-Aktion auf durch das Inter
+00 *      face behandelte Elemente/Member aufgerufen wird.
+00 *      Der Userexit wird in jedem Falle aufgerufen, d.h. er
+00 *      muß mindestens so wie ausgeliefert existieren.
+00 *
+00 *      Autor...: YX00037 / Gaugler, Alexander   ATLANTIS D-70378 Stuttg
+00 *      -----
+00 *      *****
+00 *      * Rahmen für User-Exits 01 *
+00 *      * Auslieferung als Source! *
+00 *      *****
+00 *
+00 *      -----
+00 DEFINE DATA
+00     PARAMETER USING EN9400P          /* Standard-PDA Exits
+00 END-DEFINE
+00 *      -----
```

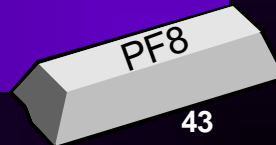


Browse NATURAL Source

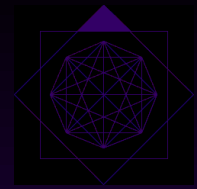


```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 0000044 COL 001 080
COMMAND ==>                                SCROLL ==> CSR
+00 *                                         /* Protokollierung
+00 EXIT-RC      := 0001                      /* Aktion erfolgr., Anzeige INFO
+00 EXIT-MSG     := 'Default-Code for Userexit 01 was executed, no action.
+00 EXIT-AKTION  := 'INFO'
+00 EXIT-USERAREA := 'EN9401X'              /* User-Area, frei verwendbar.
+00 **WRITE '=' EN9400P.NAT-LIBRARY MEMBER
+00 *
+00 * =====
+00 * Inline Subroutinen
+00 * =====
+00 * -----
+00 DEFINE SUBROUTINE DUMMY
+00 * -----
+00 WRITE 'Dummy' EJECT
+00 *
+00 END-SUBROUTINE                          /* DUMMY
+00 * =====
+00 END
+00 =====
+00 ===== End of Source =====
+00 =====
+00 I ..
```

Start of
internal
source
format



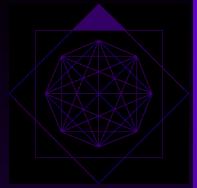
Browse NATURAL Source



```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 0000066 COL 001 080
COMMAND ==>                                SCROLL ==> CSR
+00 T. . NAT2. ün. 2. 2 0006. . . ENENTW EN9401X YX00130 YX00130 2X52 . . . M -S. .
+00 T. . . . . Á. . . . . ; 0$Šİ. . ñMWS/ESA CICS . . . . . 1014201. 19950418NAXC
+00 T. . . . . . . . . . . U. . . . . à. - . . . . . <. . m . . . . . :. .
+00 T. . * -----
+00 T. . * (c) Copyright 1995 by
+00 T. . * ATLANTIS Beratungsgesellschaft fuer Informationsverarbeitung mb
+00 T. . * -----
+00 T. &* System .: ENDEVOR/NATURAL-Interface Version 1.0
+00 T. - * Objekt. .: Subprogramm EN9401X
+00 T. Ø* Funktion: Rahmen für den USEREXIT "Before ENDEVOR Action", der
+00 T. Ø* vor Ausführung einer ENDEVOR-Aktion auf durch das Int
+00 T. °* face behandelte Elemente/Member aufgerufen wird.
+00 T. . * Der Userexit wird in jedem Falle aufgerufen, d.h. er
+00 T. . * muß mindestens so wie ausgeliefert existieren.
+00 T. . *
+00 T. . * Autor. . .: YX00037 / Gaugler, Alexander ATLANTIS D-70378 Stut
+00 T. . * -----
+00 T. &* *****
+00 T. - * * Rahmen für User-Exits 01 *
+00 T. Ø* * Auslieferung als Source! *
+00 T. Ø* *****
+00 T. °*
```



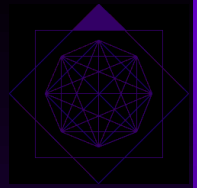
Browse NATURAL Source



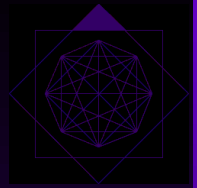
```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 00000088 COL 001 080
COMMAND ==>                                SCROLL ==> CSR
+00 T. . * -----
+00 T. . DEFINE DATA
+00 T. . PARAMETER USING EN940OP          /* Standard-PDA Exits
+00 T. . END-DEFINE
+00 T. . * -----
+00 T. &*                                /* Protokollierung
+00 T. -EXIT-RC := 0001                    /* Aktion erfolgr., Anzeige IN
+00 T. ØEXIT-MSG := 'Default-Code for Userexit 01 was executed, no actio
+00 T. ØEXIT-AKTION := 'INFO'
+00 T. °EXIT-USERAREA := 'EN9401X'        /* User-Area, frei verwendbar.
+00 T. . **WRITE '=' EN940OP. NAT-LIBRARY MEMBER
+00 T. . *
+00 T. . * =====
+00 T. . * Inline Subroutinen
+00 T. . * =====
+00 T. &* -----
+00 T. -DEFINE SUBROUTINE DUMMY
+00 T. Ø* -----
+00 T. ØWRITE 'Dummy' EJECT
+00 T. °*
+00 T. . END-SUBROUTINE                    /* DUMMY
+00 T. . * =====
```



Browse NATURAL Source



```
BROWSE -- YX00037.C1#1TMPL.LIST ----- LINE 00000110 COL 001 080
COMMAND ==>
+00      I          ..
+00      T. . END
***** BOTTOM OF DATA *****
```

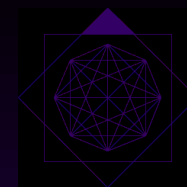


Action Processing RETRIEVE

Screen shots showing how
error and success messages are presented

Retrieve NATURAL Source

How are errors returned?



----- RETRIEVE ELEMENTS -----

OPTION ===> **R**

blank - Element list

R - Retrieve element L - Set Library

ELEMENT DISPLAY OPTIONS:

S - Summary B - Browse H - History

M - Master C - Changes

FROM ENDEVOR:

ENVIRONMENT ===> **EW**

SYSTEM ===> **TEST**

SUBSYSTEM ===> **GGR**

ELEMENT ===> *

TYPE ===> **NAT***

STAGE ===> **1**

COMMENT ===>

ACTION OPTIONS:

CCID ===>

EXPAND INCLUDES ===> **N** (Y/N)

SIGNOUT ELEMENT ===> **Y** (Y/N)

OVERRIDE SIGNOUT ===> **N** (Y/N)

REPLACE MEMBER ===> **N** (Y/N)

1 - EW

2 - BE

TO NATURAL LIBRARY:

LIBRARY ===> **YX00037**

MEMBER ===>

PATH ===> **NV22**

LIST OPTIONS:

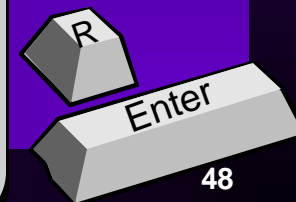
DISPLAY LIST ===> **Y** (Y/N)

WHERE CCID EQ ===>

WHERE PROC GRP EQ ===>

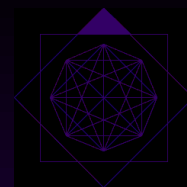
BUILD USING MAP ===> **N** (Y/N)

FIRST FOUND ===> **N** (Y/N)



Retrieve NATURAL Source

How are errors returned?

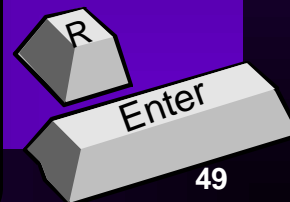


RETRIEVE ----- ELEMENT SELECTION LIST ---- ROW 1 TO 8 OF 8
COMMAND ==> SCROLL ==> PAGE

TO NATURAL Lib: YX00037

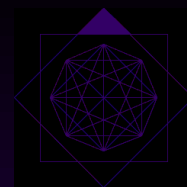
ELEMENT	NEWNAME	TYPE	ENVIRON	S	SYSTEM	SUBSYSTEM	VV. LL	RC
ENOFFEN		NATTXT	EW	1	TEST	GGR	01. 00	0000
R ENTEST		NATPGM	EW	1	TEST	GGR	01. 00	0000
EN0001C		NATCPY	EW	1	TEST	GGR	01. 00	0000
EN0001G		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0001I		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0052D		NATMAP	EW	1	TEST	GGR	01. 00	0000
EN9401X		NATPGM	EW	1	TEST	GGR	01. 00	0000
TST000P		NATPGM	EW	1	TEST	GGR	01. 02	0000

***** BOTTOM OF DATA *****



Retrieve NATURAL Source

How are errors returned?



```
RETRIEVE ----- ELEMENT SELECTION LIST ---- ROW 1 TO 8 OF 8
COMMAND ==>
I0028: MEMBER already exists, REPLACE-Option is: <N>
TO NATURAL Lib: YX00037
```

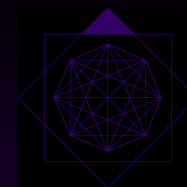
ELEMENT	NEWNAME	TYPE	ENVIRON	S	SYSTEM	SUBSYSTEM	VV. LL	RC
ENOFFEN		NATTXT	EW	1	TEST	GGR	01. 00	0000
ENTEST	* C1U0990E	NATPGM	EW	1	TEST	GGR	01. 00	0000
EN0001C		NATCPY	EW	1	TEST	GGR	01. 00	0000
EN0001G		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0001I		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0052D		NATMAP	EW	1	TEST	GGR	01. 00	0000
EN9401X		NATPGM	EW	1	TEST	GGR	01. 00	0000
TST000P		NATPGM	EW	1	TEST	GGR	01. 02	0000

***** BOTTOM OF DATA *****



Retrieve NATURAL Source

How are errors returned?



----- RETRIEVE ELEMENTS -----

OPTION ===> **R**

blank - Element list

R - Retrieve element L - Set Library

ELEMENT DISPLAY OPTIONS:

S - Summary B - Browse H - History

M - Master C - Changes

FROM ENDEVOR:

ENVIRONMENT ===> **EW**

SYSTEM ===> **TEST**

SUBSYSTEM ===> **GGR**

ELEMENT ===> *

TYPE ===> **NAT***

STAGE ===> **1**

COMMENT ===>

ACTION OPTIONS:

CCID ===>

EXPAND INCLUDES ===> **N** (Y/N)

SIGNOUT ELEMENT ===> **Y** (Y/N)

OVERRIDE SIGNOUT ===> **N** (Y/N)

REPLACE MEMBER ===> **Y** (Y/N)

1 - EW

2 - BE

TO NATURAL LIBRARY:

LIBRARY ===> **YX00037**

MEMBER ===>

PATH ===> **NV22**

LIST OPTIONS:

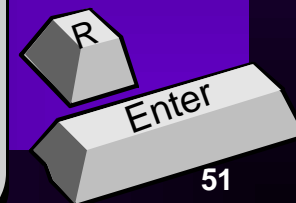
DISPLAY LIST ===> **Y** (Y/N)

WHERE CCID EQ ===>

WHERE PROC GRP EQ ===>

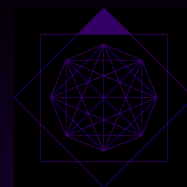
BUILD USING MAP ===> **N** (Y/N)

FIRST FOUND ===> **N** (Y/N)



Retrieve NATURAL Source

How is success displayed?

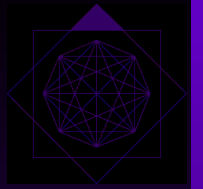


RETRIEVE ----- ELEMENT SELECTION LIST ---- ROW 1 TO 8 OF 8
COMMAND ==> SCROLL ==> PAGE

TO NATURAL Lib: YX00037

ELEMENT	NEWNAME	TYPE	ENVIRON	S	SYSTEM	SUBSYSTEM	VV. LL	RC
ENOFFEN		NATTXT	EW	1	TEST	GGR	01. 00	0000
ENTEST	*RETRIEVED	NATPGM	EW	1	TEST	GGR	01. 00	0000
EN0001C		NATCPY	EW	1	TEST	GGR	01. 00	0000
EN0001G		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0001I		NATDAT	EW	1	TEST	GGR	01. 00	0000
EN0052D		NATMAP	EW	1	TEST	GGR	01. 00	0000
EN9401X		NATPGM	EW	1	TEST	GGR	01. 00	0000
TST00P		NATPGM	EW	1	TEST	GGR	01. 02	0000

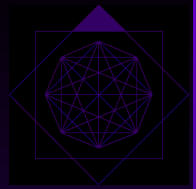
***** BOTTOM OF DATA *****



Generating SCL for Batch Actions or Package Processing

What will be generated by E/NAT?

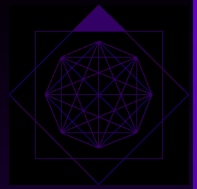
Generating SCL for Batch or Package Processing



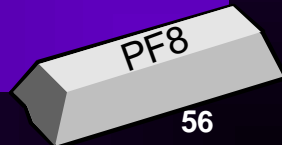
```
EDIT ---- DVT. NDVLEO. CNTL(GGRTEST) - 01.00 ----- COLUMNS 001 072
COMMAND ===> SCROLL ===> PAGE
***** TOP OF DATA *****
000001 *****
000002 ***** E/NAT-Interface      Version 2.1 for MVS/ESA and TSO
000003 ***** Generating SCL
000004 ***** Start on 26.01.96 at 08:46:08
000005 ***** User-Id TSO = YX00037
000006 ***** User-Id Interface = YX00037 Gaugler, Alexander      ATLANTIS
000007 ***** ENDEVOR- Jobidentific. = TSU08646
000008 ***** Unique identification = YX00037$
000009 ***** ENDEVOR- Mode      = FOREGROUND
000010 ***** ENDEVOR parameters used:
000011 ***** SITE-ID              :
000012 ***** PATH                  : NV22
000013 ***** FROM ENVIRONMENT        :
000014 ***** TO ENVIRONMENT          : EW
000015 ***** SYSTEM                  : TEST
000016 ***** SUBSYSTEM               : GGR
000017 ***** TYPE                   : NAT*
000018 ***** FROM STAGE NAME         :
000019 ***** TO STAGE NAME            : EW
000020 ***** FROM STAGE ID           :
000021 ***** TO STAGE ID           : 1
```



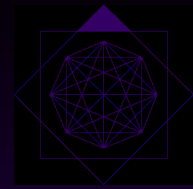
Generating SCL for Batch or Package Processing



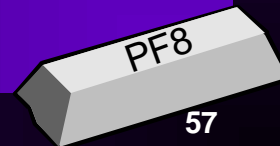
```
EDIT ---- DVT. NDVLEO. CNTL(GGRTEST) - 01.00 ----- COLUMNS 001 072
COMMAND ==> SCROLL ==> PAGE
000022 ***** FROM SYSTEM :
000023 ***** TO SYSTEM : TEST
000024 ***** CCID :
000025 ***** BYPASS GEN PROCESSOR : N
000026 ***** DELETE INPUT SOURCE : N
000027 ***** NEW VERSION :
000028 ***** COPYBACK :
000029 ***** OVERRIDE SIGNOUT : N
000030 ***** PROCESSOR GROUP :
000031 ***** UPDATE IF PRESENT : N
000032 ***** ONLY COMPONENT :
000033 ***** EXPAND INCLUDES :
000034 ***** REPLACE :
000035 ***** COMMENT :
000036 ***** SIGNOUT USER :
000037 ***** NO SIGNOUT :
000038 ***** SEARCH MAP :
000039 ***** ISPF MEMBER :
000040 ***** ISPF THRU MEMBER :
000041 ***** DISPLAY LIST : Y
000042 ***** ISPF DATA SET NAME :
000043 *****
```



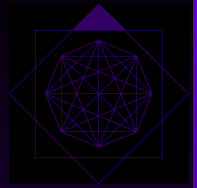
Generating SCL for Batch or Package Processing



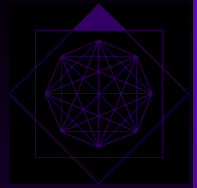
```
EDIT ---- DVT. NDVLEO. CNTL(GGRTEST) - 01.00 ----- COLUMNS 001 072
COMMAND ==> SCROLL ==> PAGE
000044 ***** Initialisation Start
000045 *****
000046 SET OPTIONS
000047 .
000048 *****
000049 ***** Initialisation End
000050 *****
000051 ***** Elements Start
000052 *****
000053 UPDATE ELEMENT ENTEST
000054 FROM DSNAME '
000055 TO ENVIRONMENT EW
000056 STAGE 1
000057 SYSTEM TEST
000058 SUBSYSTEM GGR
000059 TYPE NATPGM
000060 OPTIONS COMMENT ' NV22 YX00037 ENTEST'
000061 .
000062 CLEAR TO ALL .
000063 CLEAR FROM ALL .
000064 CLEAR OPTIONS ALL .
000065 *****
```



Generating SCL for Batch or Package Processing



```
EDIT ---- DVT. NDVLEO. CNTL(GGRTEST) - 01.00 ----- COLUMNS 001 072
COMMAND ===> SCROLL ===> PAGE
000066 ***** Generating SCL
000067 ***** Ended on 26.01.96 at 08:46:17
000068 ***** SCL for 1 Element generated.
000069 *****
*****
***** BOTTOM OF DATA *****
```



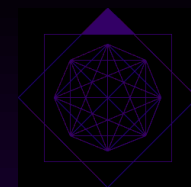
Defining E/NAT Parameters

Via CA-Endevor panels you select

1. **4** (Environment) and
2. **N** (NATURAL)

Defining E/NAT Parameters

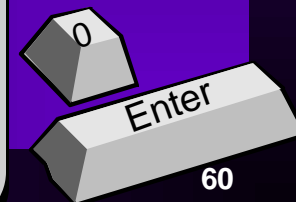
General parameters



```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ==> 0      E/NAT Systemfile: DEV (NATTS0/1)
```

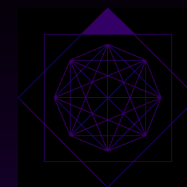
- 0 Parameters - Definition of installation specific parameters
- 1 TYPES - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type
- 2 NATURAL - ADABAS/NATURAL-Parameter for physical environment
- 3 SYSTEMFILE - NATURAL Systemfile Definitions
- 4 PATH - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE
- 5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions
- 6 CONVERSION - Conversion table member into element

```
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---  
Check Help      End      Menu      <<      >>
```



Defining E/NAT Parameters

General parameters



----- E/NAT-Interface Version 2.1 -----

COMMAND ==> 0

Definition of installation specific parameters

PF-Key definition:

PFKey Name

Others:

Enter / Validation

ENTR Check

NATURAL *LANGUAGE ==> 2

Save data / OK

PF12 OK

ALARM on message ==> N

Help

PF1 Help

ZSM-SYSERR-Lib ==> EN

End

PF3 End

Max. Level XREF ==> 4

Menu

PF4 Menu

ENDEVOR version ==> 3.7

Scroll backward

PF7 -

Scroll forward

PF8 +

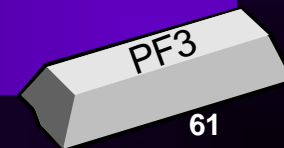
Shift to left

PF10 <<

to right

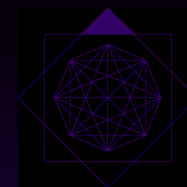
PF11 >>

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Check Help End Menu << >> OK



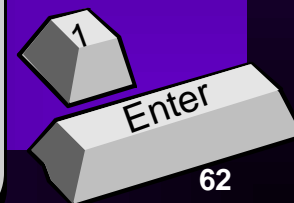
Defining E/NAT Parameters

Types



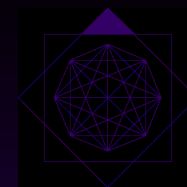
```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ==>> 1      E/NAT Systemfile: DEV (NATTS0/1)  
  
0 Parameters - Definition of installation specific parameters  
1 TYPES      - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type  
2 NATURAL    - ADABAS/NATURAL-Parameter for physical environment  
3 SYSTEMFILE - NATURAL Systemfile Definitions  
4 PATH       - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE  
5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions  
6 CONVERSION - Conversion table member into element
```

```
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---  
Check Help      End      Menu      <<      >>
```



Defining E/NAT Parameters

Types



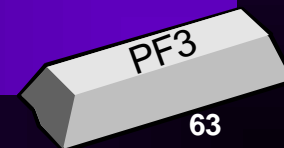
----- E/NAT-Interface Version 2.1 -----

COMMAND ==> 1

Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type

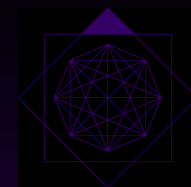
ENDEVOR ==>	Product	Type	ENDEVOR ==>	Product	Type
NATPGM	NATURAL	ROUT	DOC*	NATURAL	NONE
NATMAP	NATURAL	MAP	PRDDA	PREDICT	DA
NATCPY	NATURAL	COPY	PRDDS	PREDICT	DS
NATDAT	NATURAL	DA	PRDKY	PREDICT	KY
NATTXT	NATURAL	TEXT	PRDMO	PREDICT	MO
NATMSG	NATURAL	MSG	PRDPA	PREDICT	PA
PRDFI	NATURAL	FI EL	PRDPR	PREDICT	PR
PRDVE	PREDICT	VE	PRDRL	PREDICT	RL
PRDSY	PREDICT	SY	PRDRP	PREDICT	RP
PRDUS	PREDICT	US	COB*	NATURAL	NONE

Enter- PF1--- PF2--- PF3--- PF4--- PF5--- PF6--- PF7--- PF8--- PF9--- PF10--- PF11--- PF12---
Check Help End Menu << >> OK



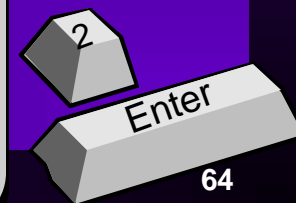
Defining E/NAT Parameters

ADABAS/NATURAL environment



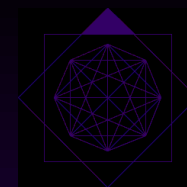
```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ==> 2      E/NAT Systemfile: DEV (NATTS0/1)  
  
0 Parameters - Definition of installation specific parameters  
1 TYPES      - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type  
2 NATURAL    - ADABAS/NATURAL-Parameter for physical environment  
3 SYSTEMFILE - NATURAL Systemfile Definitions  
4 PATH       - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE  
5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions  
6 CONVERSION - Conversion table member into element
```

```
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---  
Check Help      End      Menu      <<      >>
```



Defining E/NAT Parameters

ADABAS/NATURAL environment



----- E/NAT-Interface Version 2.1 -----

COMMAND ==> 2

Page 1 of 2

ADABAS/NATURAL-Parameter for physical environment

PO file

ADABAS

NATURAL

NATURAL

line 1 defines the
initial environment

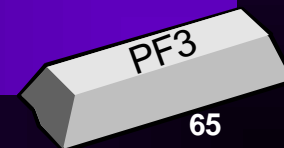
Nr paramet.

module

Dynamic parameter

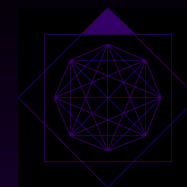
1 ADSVC232 Onl. NAT#TO
Bat. NAT#BA
2 Onl.
Bat.
3 Onl.
Bat.
4 Onl.
Bat.
5 Onl.
Bat.

Enter- PF1--- PF2--- PF3--- PF4--- PF5--- PF6--- PF7--- PF8--- PF9--- PF10--- PF11--- PF12---
Check Help End Menu - + << >> OK



Defining E/NAT Parameters

System files

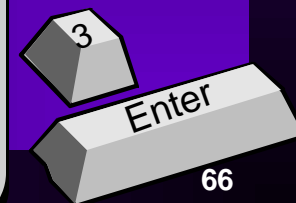


----- E/NAT-Interface Version 2.1 -----

OPTION ==> **3** E/NAT Systemfile: **DEV (NATTS0/1)**

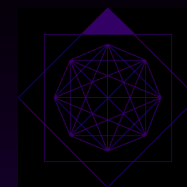
- 0 Parameters - Definition of installation specific parameters
- 1 TYPES - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type
- 2 NATURAL - ADABAS/NATURAL-Parameter for physical environment
- 3 SYSTEMFILE - NATURAL Systemfile Definitions
- 4 PATH - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE
- 5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions
- 6 CONVERSION - Conversion table member into element

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help End Menu << >>



Defining E/NAT Parameters

System files



----- E/NAT-Interface Version 2.1 -----

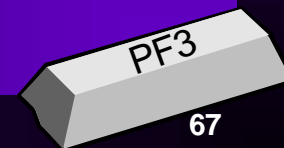
COMMAND ==> 3

Page 1 of 2

NATURAL Systemfile Definitions

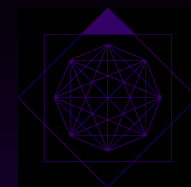
Nr.	E/NAT ID	NATURAL _FUSER__ DBID FNR	PREDICT __FDIC__ DBID FNR	NATURAL table reference	E/NAT Nr.	E/NAT ID	NATURAL _FUSER__ DBID FNR	PREDICT __FDIC__ DBID FNR	NATURAL table reference
1	PROD	8 19	8 11	1	11				
2	DEV	2 9	2 11	2	12				
3	TEST	3 9	3 11	2	13				
4	QA	4 9	4 11	2	14				
5	NLT	8 19	8 11	3	15				
6	GGR	8 19	8 11	3	16				
7					17				
8					18				
9					19				
10					20				

Enter- PF1--- PF2--- PF3--- PF4--- PF5--- PF6--- PF7--- PF8--- PF9--- PF10--- PF11--- PF12---
Check Help End Menu - + << >> OK

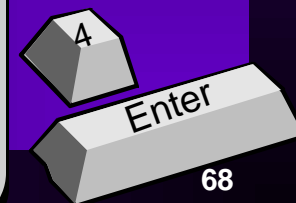


Defining E/NAT Parameters

PATH definitions

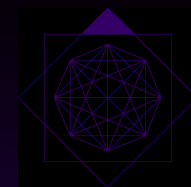


```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ==> 4      E/NAT Systemfile: DEV (NATTS0/1)  
  
0 Parameters - Definition of installation specific parameters  
1 TYPES      - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type  
2 NATURAL    - ADABAS/NATURAL-Parameter for physical environment  
3 SYSTEMFILE - NATURAL Systemfile Definitions  
4 PATH       - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE  
5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions  
6 CONVERSION - Conversion table member into element  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11--PF12---  
Check Help      End      Menu      <<      >>
```



Defining E/NAT Parameters

PATH definitions



----- E/NAT-Interface

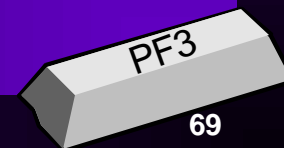
Version 2.1 -----

COMMAND ==> 4

PATH definitions (sources/targets) for ENDEVOR ADD/UPDATE and RETRIEVE

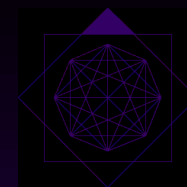
Nr.	Path name	ENAT ID	Nr.	Path name	ENAT ID	Nr.	Path name	ENAT ID	Nr.	Path name	ENAT ID
1	DEV	DEV	11			21			31		
2	TEST	TEST	12			22			32		
3	QA	QA	13			23			33		
4	PROD	PROD	14			24			34		
5	SYS	DEV	15			25			35		
6			16			26			36		
7			17			27			37		
8			18			28			38		
9			19			29			39		
10			20			30			40		

Enter- PF1--- PF2--- PF3--- PF4--- PF5--- PF6--- PF7--- PF8--- PF9--- PF10--- PF11--- PF12---
Check Help End Menu << >> OK



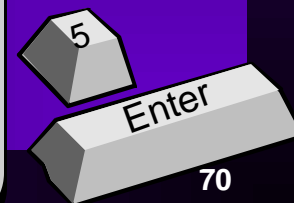
Defining E/NAT Parameters

Environment/Stage/System definition



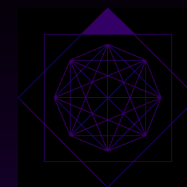
```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ==> 5      E/NAT Systemfile: DEV (NATTS0/1)  
  
0 Parameters  - Definition of installation specific parameters  
1 TYPES      - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type  
2 NATURAL    - ADABAS/NATURAL-Parameter for physical environment  
3 SYSTEMFILE - NATURAL Systemfile Definitions  
4 PATH       - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE  
5 ENVIRONMENT - ENVIRONMENT/STAGE/SYSTEM definitions  
6 CONVERSION - Conversion table member into element
```

```
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---  
Check Help      End      Menu      <<      >>
```

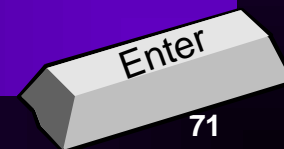


Defining E/NAT Parameters

Environment/Stage/System definition

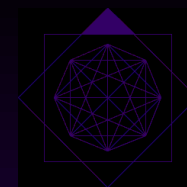


```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ===> _  
  
blank   - Display Environment/Stage/System definitions  
C Create - Define Environment/Stage/System definitions  
K Clone - Copy all Environment/Stage entries  
# Delete - Delete all Environment/Stage entries  
  
ENVIRONMENT  ===>  
STAGE NUMBER ===>  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End Menu                <<  >>
```



Defining E/NAT Parameters

Environment/Stage/System definition



```

----- E/NAT-Interface          Version 2.1 -----
COMMAND ==>

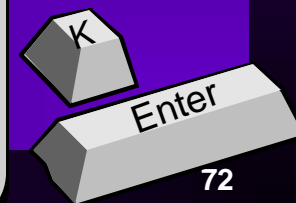
Page 1 of 1

ENVIRONMENT/STAGE/SYSTEM Definition

          Endeavor          NATURAL          E/NAT

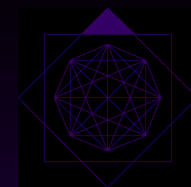
Nr.  Cmd  Environment StageNbr  System  Library  File-Id
-----
  1   K    PROD          1    FIN    EFIN     PROD
  2   _    PROD          2    FIN    PFIN     PROD
  3
  4
  5
  6
  7
  8
  9
 10
 11
 12

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Check Help          End  Menu          -    +          <<  >>          OK
  
```



Defining E/NAT Parameters

Environment/Stage/System definition



----- E/NAT-Interface Version 2.1 -----

OPTION ==> **K**

```
KLONE  from ENVIRONMENT/STAGE  PROD      / 1
to     ENDEVOR Environment      EDUC
       Stage                    1
       NATURAL Library          (optional)
       E/NAT   File Id          (optional)
```

ENVIRONMENT ==> **PROD**

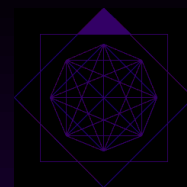
STAGE NUMBER ==> **1**

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help End Menu << >>

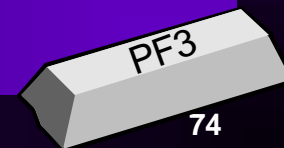


Defining E/NAT Parameters

Environment/Stage/System definition

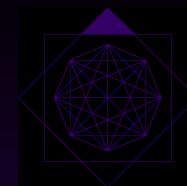


```
----- E/NAT-Interface      Version 2.1 -----  
OPTION  ===> _  
  
blank   - Display Environment/Stage/System definitions  
C Create - Define Environment/Stage/System definitions  
K Clone - Copy all Environment/Stage entries  
# Delete - Delete all Environment/Stage entries  
  
ENVIRONMENT  ===>  
STAGE NUMBER ===>  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End Menu                <<  >>
```

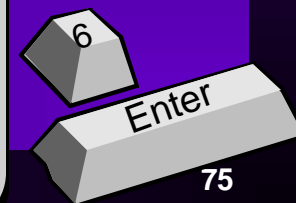


Defining E/NAT Parameters

Member Conversion Table

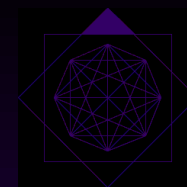


```
----- E/NAT-Interface      Version 2.1 -----  
OPTION ==> 6      E/NAT Systemfile: DEV (NATTS0/1)  
  
0 Parameters      - Definition of installation specific parameters  
1 TYPES           - Conversion table ENDEVOR-Type into NATURAL/PREDICT-Type  
2 NATURAL         - ADABAS/NATURAL-Parameter for physical environment  
3 SYSTEMFILE     - NATURAL Systemfile Definitions  
4 PATH           - Sources/targets for ENDEVOR ADD/UPDATE and RETRIEVE  
5 ENVIRONMENT    - ENVIRONMENT/STAGE/SYSTEM definitions  
6 CONVERSION     - Conversion table member into element  
  
Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---  
Check Help      End   Menu                <<   >>
```



Defining E/NAT Parameters

Member Conversion Table - Select



```
----- E/NAT-Interface      Version 2.1 -----
OPTION  ==> S

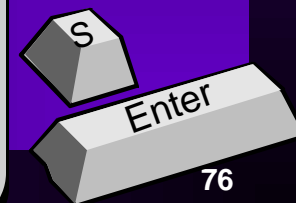
A  Add      - Add a new conversion rule
U  Update   - Update an existing conversion rule
D  Display  - Display an existing conversion rule
S  Select   - Select conversion rule from a list
L  Unl ock  - Unlock an unloaded rule which was locked during UNLOAD
#  Delete   - Delete an existing conversion rule

TYPE      ==> _____
MEMBER     ==> _____
ELEMENT    ==> _____

ENDEVOR Options

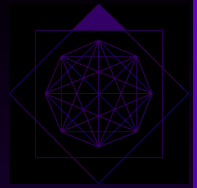
DISPLAY LIST      ==> Y

Enter- PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help      End  Menu      <<  >>
```



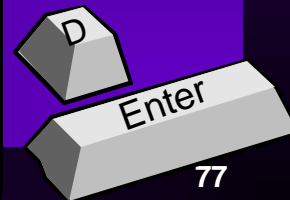
Defining E/NAT Parameters

Member Conversion Table - Display



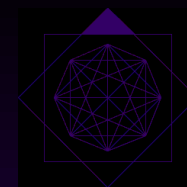
```

----- E/NAT Interface          Version 2.1 -----
OPTION  ==> S                               Page 1
S  TYPE      MEMBER                      ELEMENT  L LAST UPDATE
-  NATPGM    EXAMPL- 1                   EXAMPLE01 N YX00037 1997-03-04
-  PRDDA     PRODUCTION                   PROD      N YX00037 1997-02-23
-  PRDDA     DEVELOPMENT                 DEV       N YX00240 1996-12-14
-  PRDFI     EMPLOYEES                   EMPL     N YX00037 1997-01-18
-  PRDKY     VERSION210Beta              V210BETA N YX00037 1997-03-04
-  PRDPR     FINANCE_MAINMENU            FINMAINMEN N YX00037 1997-03-04
-  PRDSY     FINANCE                     FIN       N YX00037 1997-03-04
-  PRDSY     MARKETING                   MKT      N YX00037 1997-03-04
-  PRDSY     REVISION                    REV      N YX00037 1997-03-04
-  PRDSY     SECURITY                    SEC      N YX00037 1997-03-04
-  PRDUS     DOUGLAS_STEVE               P#00024965 Y YX00050 1997-02-07
D  PRDUS     PETERSON_RON                P#00017934 Y YX00050 1997-02-07
-  PRDUS     REYNOLDS_BURT              P#00048321 Y YX00050 1997-02-07
-  PRDUS     STEVENSON_EDGAR            P#00056109 Y YX00050 1997-02-07
-  PRDVE     DATE_IN_FUTURE              DT#FUTURE N YX00240 1997-03-03
----- - DISPLAY LIST ==> Y
S:  *          *          *
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help      End  Menu                <<  >>
  
```



Defining E/NAT Parameters

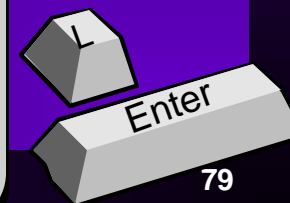
Member Conversion Table - Unlock



```

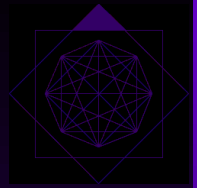
----- E/NAT Interface          Version 2.1 -----
OPTION  ==> S                               Page 1
S  TYPE      MEMBER                      ELEMENT  L LAST UPDATE
-  NATPGM    EXAMPL- 1                    EXAMPLE01 N YX00037 1997-03-04
-  PRDDA     PRODUCTION                   PROD      N YX00037 1997-02-23
-  PRDDA     DEVELOPMENT                   DEV       N YX00240 1996-12-14
-  PRDFI     EMPLOYEES                     EMPL      N YX00037 1997-01-18
-  PRDKY     VERSION210Beta                V210BETA N YX00037 1997-03-04
-  PRDPR     FINANCE_MAINMENU              FINMAINMEN N YX00037 1997-03-04
-  PRDSY     FINANCE                       FIN       N YX00037 1997-03-04
-  PRDSY     MARKETING                     MKT      N YX00037 1997-03-04
-  PRDSY     REVISION                      REV      N YX00037 1997-03-04
-  PRDSY     SECURITY                      SEC      N YX00037 1997-03-04
-  PRDUS     DOUGLAS_STEVE                 P#00024965 Y YX00050 1997-02-07
L  PRDUS     PETERSON_RON                 P#00017934 Y YX00050 1997-02-07
-  PRDUS     REYNOLDS_BURT                 P#00048321 Y YX00050 1997-02-07
-  PRDUS     STEVENSON_EDGAR              P#00056109 Y YX00050 1997-02-07
-  PRDVE     DATE_IN_FUTURE                DT#FUTURE N YX00240 1997-03-03
----- - DISPLAY LIST ==> Y
S:  *          *          *
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Check Help      End  Menu                <<  >>

```



Member Conversion Table

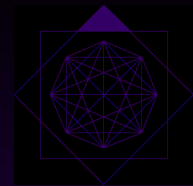
Adding entries



- There are four ways to add entries to the Member Conversion Table:
 - ▶ prepared by administrator
 - adds entries with online functions or
 - edits a PDS offline which can be loaded with MCT utility or
 - executes a NATURAL program which adds entries using the appropriate E/NAT entry subprogram
 - ▶ by user
 - when prompted during the very first ADD processing for a member with a name longer than 10 characters but without an existing MCT entry ...

Member Conversion Table

Adding entries - User prompt

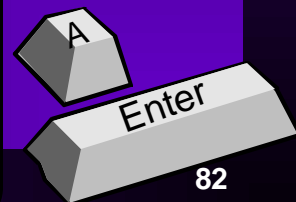


----- E/NAT-Interface Version 2.1 -----
COMMAND ==> SELMEM PREDICT USER 8 / 11

FROM Path: NV22 Library: YX00037 Member: S* Fmt:
TO Environment: DEV Stage: 1 System: MKT Subsys: PERS

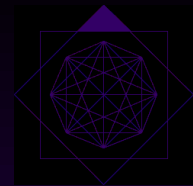
M	MEMBER	ELEMENT	TYPE	COMMENT
	SALAMA_TIMOTHY	P#00000213	PRDUS	
A	SMITH_MARTIN		PRDUS	
	SWANSON_HARRY	P#00036986	PRDUS	

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Check Help End Menu - + << >>



Member Conversion Table

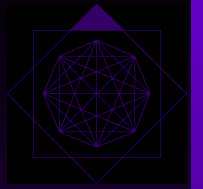
Adding entries - User prompt



```
-----  
                                Add a new MCT Entry for member  
-----  
                                TYPE      : PRDUS  
                                ELEMENT   : P#00016939  
FRO  MEMBER      : SMITH_MARTIN  
TO  MCT COMMENT: _____          Fmt:  
                                       Subsys: PERS  
M   Note: Leaving the requested information blank will  
    cancel this active action request!  
    Specification of a MCT comment is optional.      NT  
A  
SWANSON_HARRY                                P#00036986 PRDUS
```

```
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11--PF12---  
Check Help      End      Menu      -      +      <<      >>
```

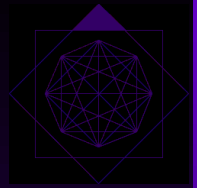




Summary

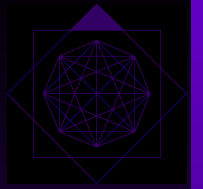
The main advantages

Main Advantages



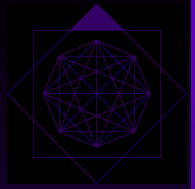
- Completely integrated solution for 3GL and NATURAL/PREDICT
- High security
- Optimum performance
- Flexibility due to user exit

Main Advantages

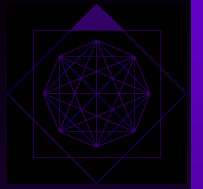


- Backout functionality
- Automatic compliance with NATURAL conventions and requirements
- Prepared for Year 2000
- Easy to install

Main Advantages

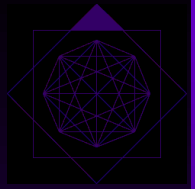


- No need for additional training
 - ▶ same menu branches as CA-Endevor
 - ▶ same selection codes as CA-Endevor
 - ▶ same features as CA-Endevor
 - ▶ same look and feel



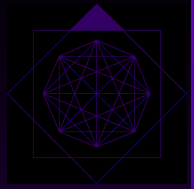
How to get Further Information

Further Information



- Presentation in your office
 - ✦ answers on additional questions
- Product Information Sheet
- Questions & Answers document
- Test installation
- Send your questions and you'll get our answers ...

Further Information



ATLANTIS
Beratungsgesellschaft für
Informationsverarbeitung mbH

**ATLANTIS Beratungsgesellschaft
für Informationsverarbeitung mbH**
Lueglensheidestrasse 22
70378 Stuttgart
Germany

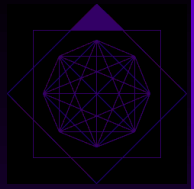
Phone: +49 (711) 95 39 23-0

Fax: +49 (711) 95 39 23-55

E-mail: enat@atlantis-ip.com

Internet: <http://www.atlantis-ip.com>

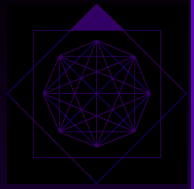
Further Information



Computer Associates

Please contact your local CA office.

Further Information

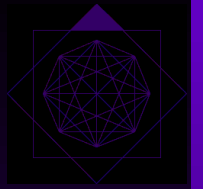


CA-World'97

CA-Endevor Users with NATURAL
SIG

GCE33S

Further Information



or

ASK NOW!