



ViaNova 3000

No-nonsense migrations

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Presentation Overview

Part 1

- Company introduction (short)
- ViaNova, concepts & components
- The ViaNova 3000 Roadmap

Part 2

- ViaNova 3000: a real-life migration
- edWin/3K & MPMUX without ViaNova 3000
- Summary



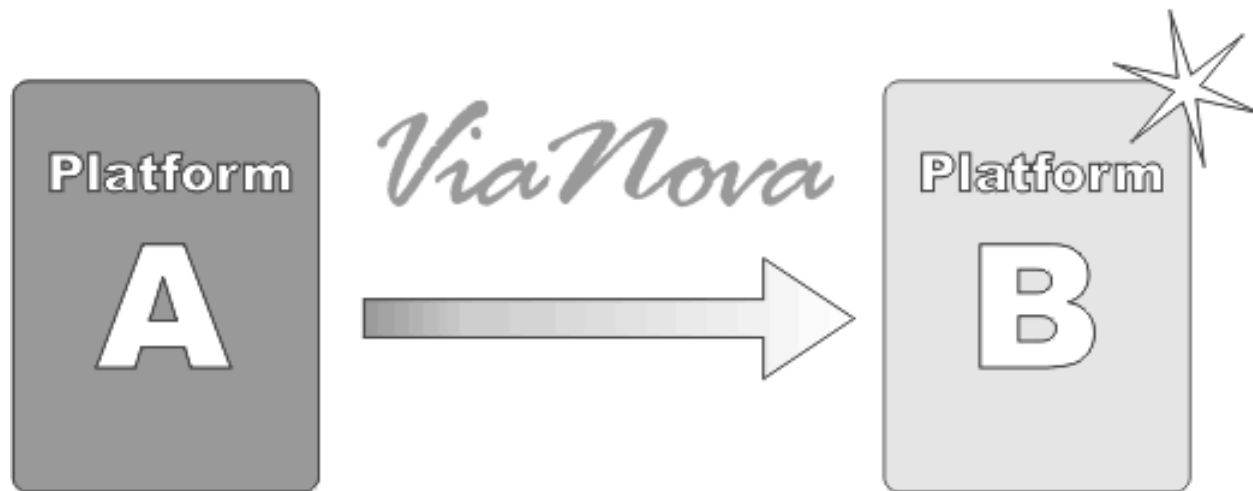
Ordina Denkart NV

Supplying added-value transformations
since 1988



The Purpose of ViaNova 3000

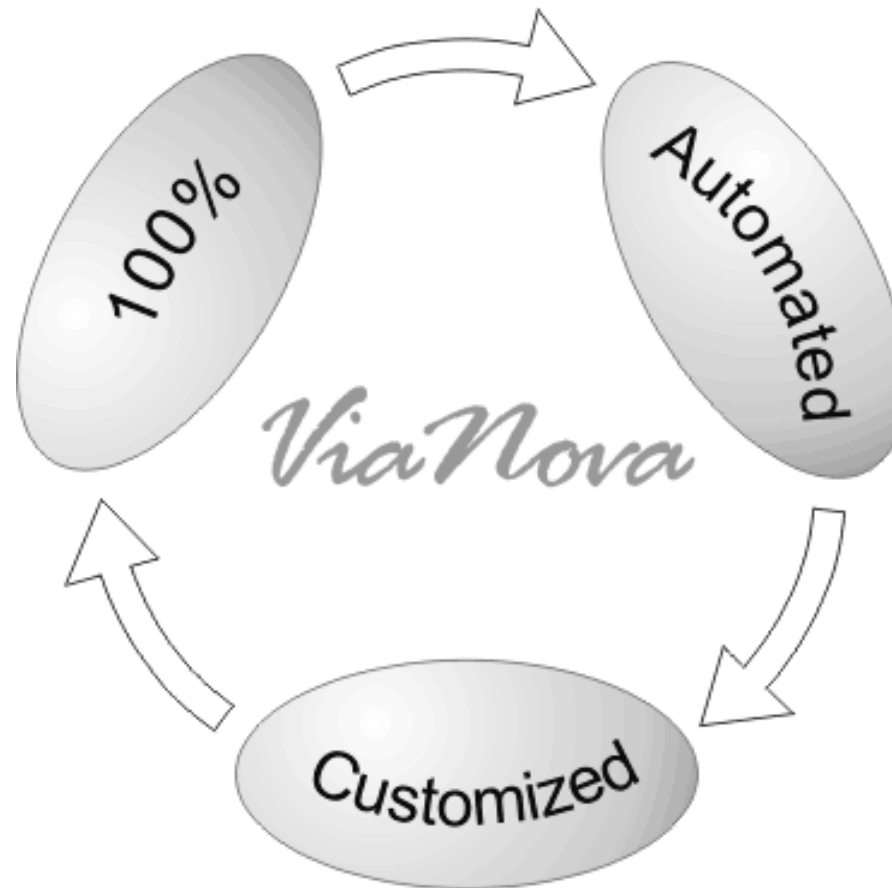
The prime objective is to migrate one environment to another.



With Added-Value!

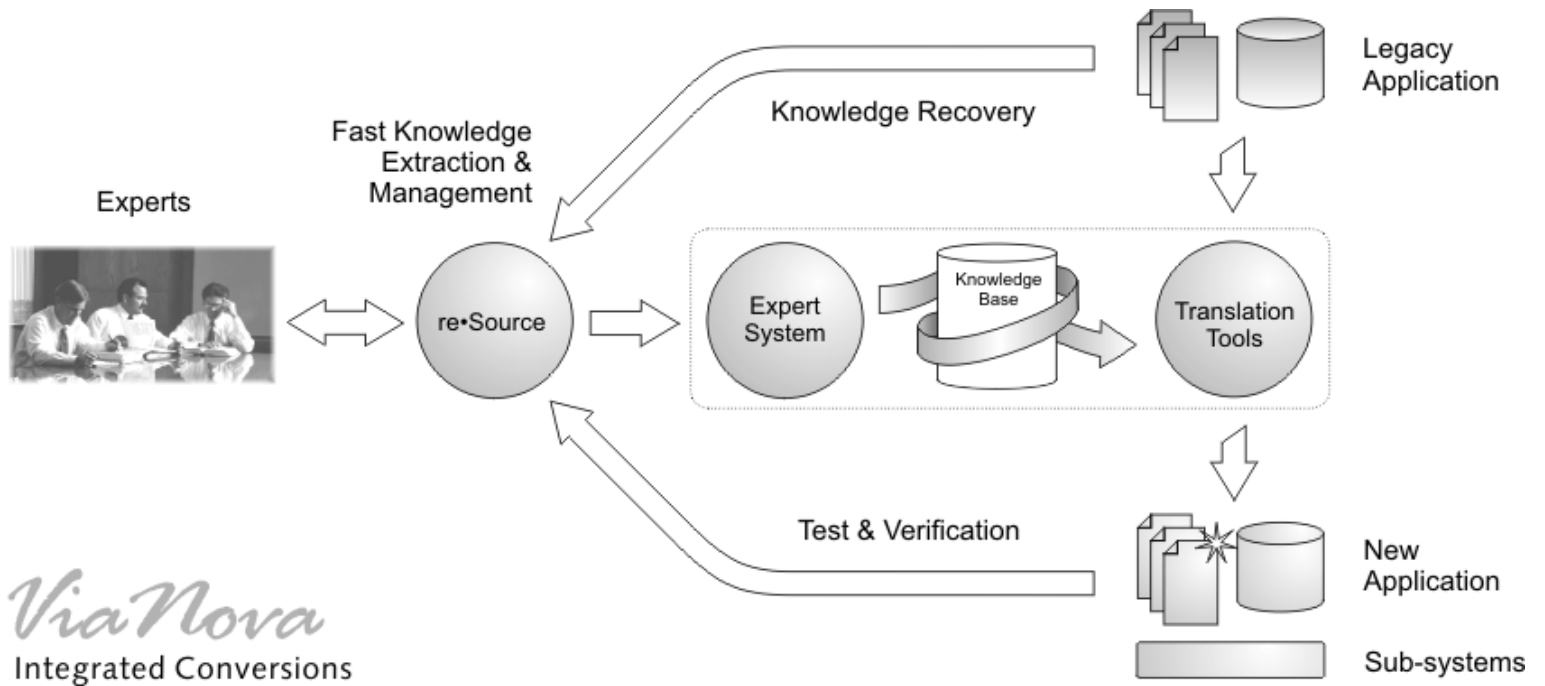


Key Concepts of ViaNova 3000





The ViaNova 3000 Tool chain

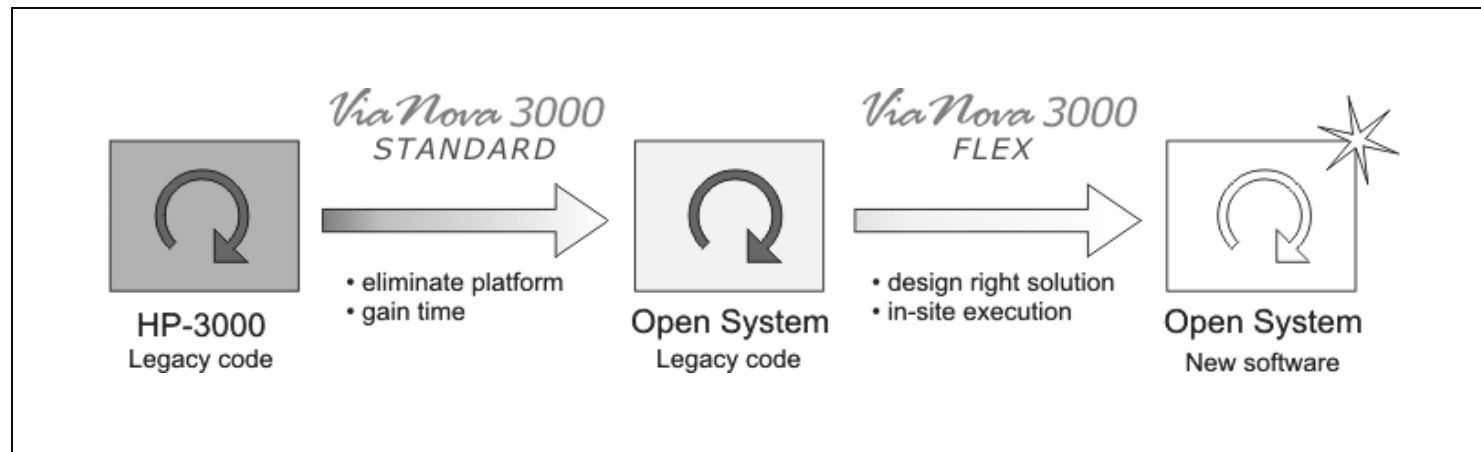


ViaNova
Integrated Conversions



ViaNova 3000

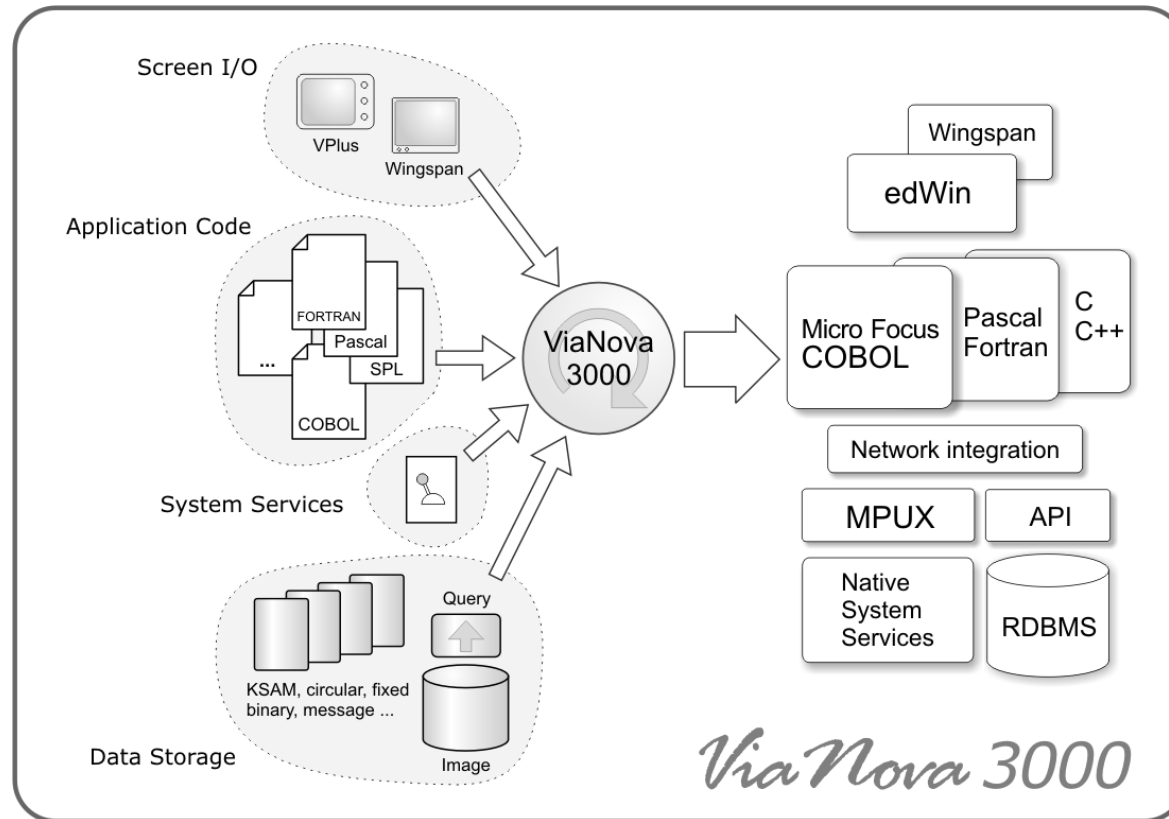
An end-to-end solution



- For platform migrations, re-engineering or both
- Uses specialized migration tools & products
- Go *OPEN* without waste of *TIME* (or resources)



ViaNova 3000 Roadmap





Part 2: Some real-life info

- Customer case: ViaNova at SUMMIT
- MPUX™ in the field: examples
- edWin/3K™ connects users everywhere



ViaNova 3000 in Practice

- ViaNova 3000 offers a **STANDARD** solution as well as a **FLEXible** one
- ViaNova can be infinitely customized
- MPE emulation as broad as needed
- Example: SUMMIT Information Systems



ViaNova 3000 in Practice

SUMMIT Information Systems

- Software services for Credit Unions
- Main driver: *diversify to other platforms*
- Migration started before HP announcement



SUMMIT: Initial environment

- 1.7 million lines of FORTRAN/C code
- Duplicated data interfaces handled through proprietary data definition tools
- Own sub-system for User I/O, different proprietary UI clients



SUMMIT Requirements

- Change platform AND language
Integrate all in single development environment
- Keep code maintainable
Ex. compliance with coding standards
- Avoid emulation where possible!
Tailored solution essential



SUMMIT: Project Set-up

- Migrate to C++
Eliminate FORTRAN altogether
- From HP e3000 to HP 9000 in 2 steps
First code, then platform
- Image data goes into Eloquence
Other data migrated to customized MPUX



SUMMIT: The Project

- **Phase 1: C++ Executable on MPE**
Define interfaces to migrate to.
Perform automated conversion.
Use code freeze for re-training.
- **Phase 2: Migrate to HP 9000/HP-UX**
Parallel development
Eliminate intrinsics altogether.
Deliver SPX (custom MPE) and sub-systems.



SUMMIT: issues & solutions

- **Double file access interface**
Conversion tools provide global consistency across C-programs, FORTRAN-code, etc.
- **Proprietary user interface**
Maintain socket I/O, Escape sequences
- **Coding standards compliance**
An MPUX wrapper library was delivered: SPX
Control & maintenance transferred to the Customer
- **MPE Batch jobs**
Tailored automatic conversion to UNIX shell scripts



SUMMIT: Issue & Solution 1

<u>Subject</u>	Double Data File Interface	
<u>Example</u>	<ul style="list-style-type: none">• Synchronization of interfaces• Propagation of changes• Simpler management	
<u>Usage</u>	Frequent	<u>Standard language</u> Yes
<u>Solution</u>	Tools with application-wide overview	



SUMMIT: Issue & Solution 1

Original FORTRAN code

```
EQUIVALENCE
* (AA REC( 1), AA APP SSN),
* (AA REC( 3), AA APP NUMBER),
* (AA REC( 4), AA APP KEY),
* (AA REC( 10), AA SUBS CHANGE),
* (AA REC( 11), AA AMORT TYPE),
* (AA REC( 12), AA ATTACHMENT),
* (AA REC( 13), AA SALES PRICE),
* (AA REC( 15), AA CLOSING COST),
:
```



During translation:
Analyse Field Size & Layout
Map to C-structure
Translate FORTRAN refs.



Original C code

```
typedef struct {
    long    lAppSsn;
    USHORT  usAppNumber;
    char    caAppKey[12];
    char    caSubsChange[2];
    char    caAmortType[2];
    char    cAttachment;
    char    cPad1;
    long    lSalesPrice;
    long    lClosingCost;
    long    lPrepaidEscrow;
    long    lOtherFinancing;
    long    lOtherEquity;
    long    lCashDeposit;
    long    lSellerClosing;
    :
```



Maintain C record layout



SUMMIT: Issue & Solution 1

<u>Solution</u>	
<i>Applicable to other conversions</i> Yes, any mixed environment	
<i>Traceability</i> High	<i>Maintainability</i> High
<i>Portability</i> High	<i>Readability</i> High
<i>Availability</i> Unix, Linux, NT	<i>Future development</i> Dedicated generator
<i>Manual work</i> Limited	<i>External dependencies</i> None



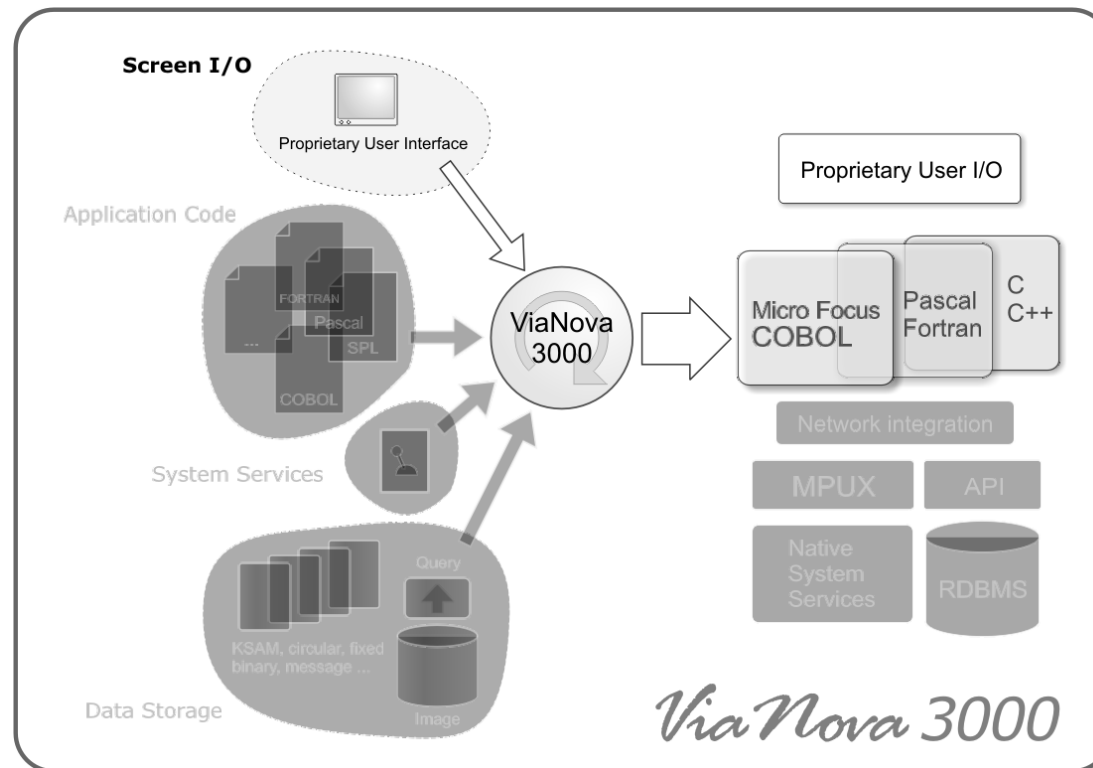
SUMMIT: Issue & Solution 2

<u>Subject</u>	Proprietary User Interface (non-VPlus)	
<u>Example</u>	<ul style="list-style-type: none">• Escape codes• Socket I/O• Different proprietary clients	
<u>Usage</u>	Frequent	<u>Standard language</u> Yes
<u>Solution</u>	Modular design of ViaNova 3000	



SUMMIT: Issue & Solution 2

Accommodate Proprietary UI





SUMMIT: Issue & Solution 2

<u>Solution</u>	
<i>Applicable to other conversions</i> Yes	
<i>Traceability</i> High	<i>Maintainability</i> High
<i>Portability</i> Medium	<i>Readability</i> High
<i>Availability</i> Unix, Linux, NT	<i>Future development</i> As on MPE
<i>Manual work</i> Limited	<i>External dependencies</i> None



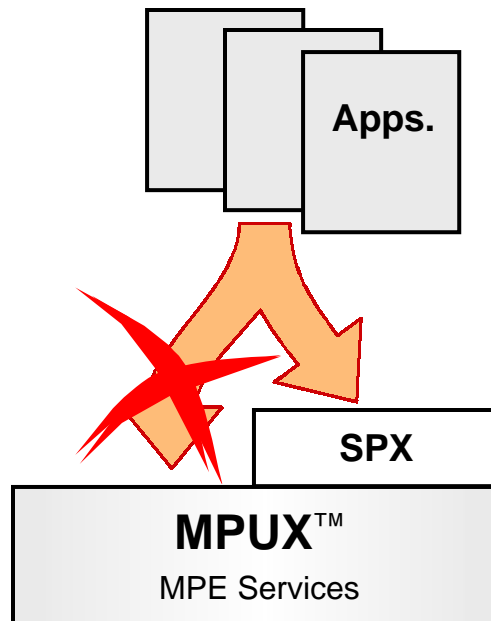
SUMMIT: Issue & Solution 3

<u>Subject</u>	Integration into new environment	
<u>Example</u>	<ul style="list-style-type: none">• Company standards• Eliminate old platform• Isolate dependencies	
<u>Usage</u>	Frequent	<u>Standard language</u> Yes
<u>Solution</u>	Free customizing in ViaNova 3000	



SUMMIT: Issue & Solution 3

SPX: System API abstraction



- Interface complies with Coding Standards
- Intrinsic are automatically hidden in separate layer
- Customer becomes independent of proprietary product



SUMMIT: Issue & Solution 3

<u>Solution</u>	
<i>Applicable to other conversions</i> Yes	
<i>Traceability</i> High	<i>Maintainability</i> High
<i>Portability</i> Customer dependent	<i>Readability</i> High
<i>Availability</i> Unix, Linux, NT	<i>Future development</i> New platform
<i>Manual work</i> Limited	<i>External dependencies</i> None



SUMMIT: Issue & Solution 4

Subject Translation of MPE Batch jobs

Example

- File Equations
- Program flow

Usage Frequent

Standard language Yes

Solution Unix scripts and utilities



SUMMIT: Issue & Solution 4

MPE Batch Job Translation

```
!COMMENT
!FILE DEOYINFO=DEOYINFO.DATA,OLD;DEV=DISC
!IF FINFO("GLOBMTPT.DATA",0) = TRUE THEN
!XEQ GLOBMTPT.DATA
! IF XXXXXX_LOCATION = "ONLINE" THEN
! FILE DEOYLOG=DIRS5498.EOY.CCC,OLD;DEV=DISC
! ELSE
! COMMENT *** IT APPEARS YOU ARE A INHOUSE CLIENT...
! COMMENT *** ARE GOING TO USE THE DEFAULT;
! IF FINFO("DEOYLOG.DATA",0) = FALSE THEN
! BUILD DEOYLOG.DATA;REC=-72,32,F,ASCII;DISC=1000
! ELSE
! TELLOP USING CURRENT DEOYLOG.DATA FOR LOGGING
! FILE DEOYLOG=DEOYLOG.DATA,OLD;DEV=DISC
! ENDF
! ENDF
!ENDIF
```

Original Job

```
export DEOYINFO="DEOYINFO.DATA,OLD;DEV=DISC"
if [[ $(spxcomfunc -f "FINFO(\"GLOBMTPT.DATA\",0)") -eq ${TRUE} ]]
then
    spxrun ../DATA/globmtpt
    if [[ XXXXXX_LOCATION = "ONLINE" ]]
    then
        export DEOYLOG="DIRS5498.EOY.CCC,OLD;DEV=DISC"
    else
        echo " *** IT APPEARS YOU ARE A INHOUSE CLIENT SO WE"
        echo " *** ARE GOING TO USE THE DEFAULT;"
        if [[ $(spxcomfunc -f "FINFO(\"DEOYLOG.DATA\",0)") -eq ${FALSE} ]]
        then
            spxcommand -c "build DEOYLOG.DATA;REC=-72,32,F,ASCII;DISC=1000"
        else
            spxcommand -c "tellop USING CURRENT DEOYLOG.DATA FOR LOGGING"
            export DEOYLOG="DEOYLOG.DATA,OLD;DEV=DISC"
        fi
    fi
fi
```

Translated Version



SUMMIT: Issue & Solution 4

<u>Solution</u>	
<i>Applicable to other conversions</i> Yes, other scripting languages	
<i>Traceability</i> High	<i>Maintainability</i> High
<i>Portability</i> Medium	<i>Readability</i> High
<i>Availability</i> Unix, Linux, NT	<i>Future development</i> Shell scripts
<i>Manual work</i> Limited	<i>External dependencies</i> None



SUMMIT: MPUX support

- Non-standard package
- INTRINSICS support through wrappers
- MPE-compatible JCL where unavoidable
- SPOOLER



Case Summary

- Project near completion
- Two beta customers scheduled to go into production in April 2003
- Intention to proceed with REACTOR
 - Same powerful migration technology
 - Perfectly integrated in current environment

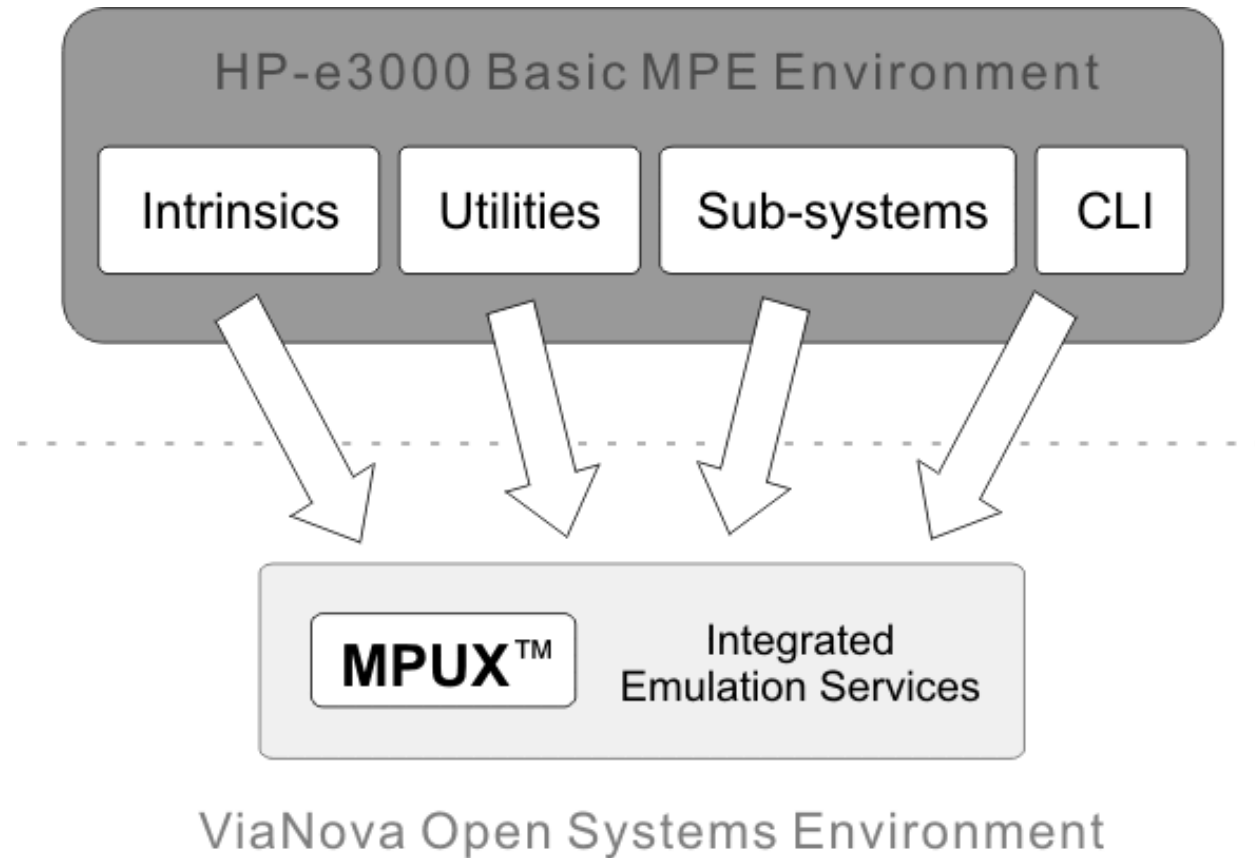


MPUX™ in the field

a few examples



MPUX™ integrates MPE services





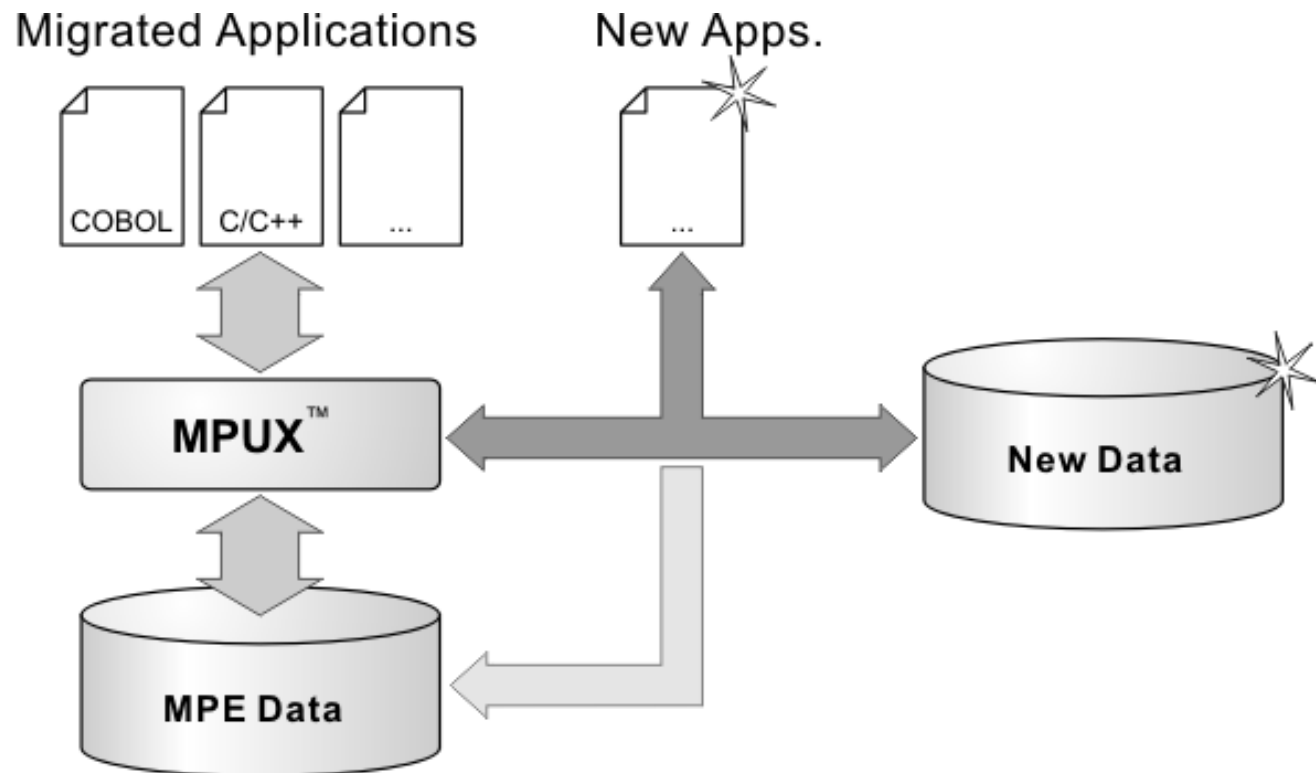
MPUX benefits

MPUX offers these immediate benefits:

- Support for over 150 intrinsics
- Sub-systems for printing and streaming
- MPE-compatible tools (FCOPY, SORT...)
- File systems and Account support
- A dual-mode CLI: access MPE & UNIX!



MPUX & Your data files





MPUX™ Customer A

MPE applications parse LISTF output

To figure out something about files:

- An application starts a LISTF command
- The output is captured in a temporary file
- The application parses the temporary file

Therefore LISTF in MPUX must be completely MPE-compatible (1:1)



MPUX™ Customer A – (cont'd)

```
C:\winnt\System32\telnet.exe
#S1 EXEC 0 462 462 03/21 2:41P MGR.SYS
#S2 EXEC 16757 462 462 03/21 2:41P MGR.LAB

2 JOBS:
0 INTRO
0 WAIT
2 EREC: INCL 2 SESSIONS
JOBPENCE: 4; JLIMIT= 999; SLIMIT= 128

PUB.LAB: ll
ACCOUNT= LAB          GROUP= PUB

FILENAME CODE      SIZE  TYP  LOGICAL RECORD  EOF  LIMIT R/B  SECTORS #X MX
-----
ERECHM1  256B FA      26    26  1      32  * * *
ERECHM2   80B FA       3     3  3      32  * * *
SORTIME   80B FA       6     6  3      32  * * *
UDC       256B FA     12    12  1      32  * * *

UDC
US USER
LL USER
LS USER
DIR USER
PUB.LAB:print udc
us
showjob
*****
dir
listf,2
*****
ls
listf
*****
ll
listf,2
*****
PUB.LAB:ls
FILENAME
ERECHM1
ERECHM2
SORTIME
UDC
PUB.LAB:
```

HP e3000

MPUX

```
Ctrl-Alt-F1 - VMware Workstation - Ordina Denkart NV - Linux.vmx
File Power Settings Devices View Help
[sa@pca_omware test]$ mpuxci
MPUX/CI Release: B.1.0 Copyright Ordina Denkart 2000. All rights reserved

PUB.SYS: listf,2
ACCOUNT= SYS          GROUP= PUB

FILENAME CODE      SIZE  TYP  LOGICAL RECORD  EOF  LIMIT R/B  SECTORS #X MX
-----
ABC       160B UAM       0    1023  1      16  * *
CATALOG   128W FB      2163  2163  1      2176 * *
CATALTXT  80B FA     14033  14033  3      4400 * *
GHI       80B FA     14033  14033  3      4400 * *
ZORRO    128W FB       9    1023  1      16  * *

PUB.SYS:build NEWFILE:rec=-00,,f,ascii
PUB.SYS: listf,2
ACCOUNT= SYS          GROUP= PUB

FILENAME CODE      SIZE  TYP  LOGICAL RECORD  EOF  LIMIT R/B  SECTORS #X MX
-----
ABC       160B UAM       0    1023  1      16  * *
CATALOG   128W FB      2163  2163  1      2176 * *
CATALTXT  80B FA     14033  14033  3      4400 * *
GHI       80B FA     14033  14033  3      4400 * *
```

MPUX makes migrating comfortable

- **MPE-compatible:** you know what you are dealing with
- **No code changes required:** it'll work as it did before



MPUX™ Customer B

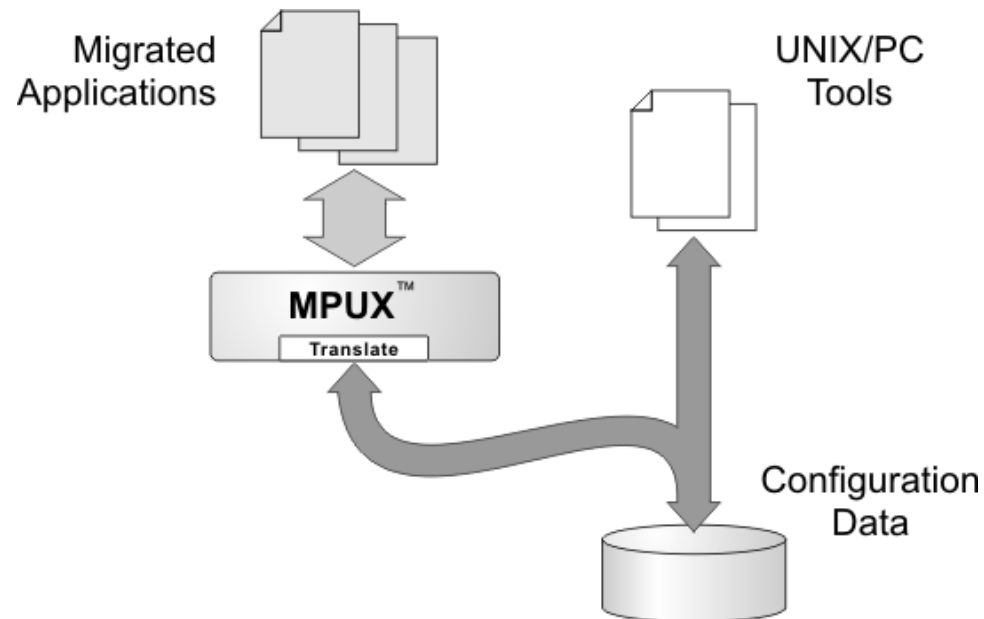
Use new tools in old environment

Use native tools to modify appl. environment.

- MPE emulation dictates basic data organization and access methods
- However UNIX/PC tools cannot be changed
- Adapt data organization, Reverse emulation



MPUX™ Customer B – (cont'd)



MPUX makes for better integration

- **MPUX Flexibility:** can be customized to your liking
- **Use native tools:** best way to get used to new platform



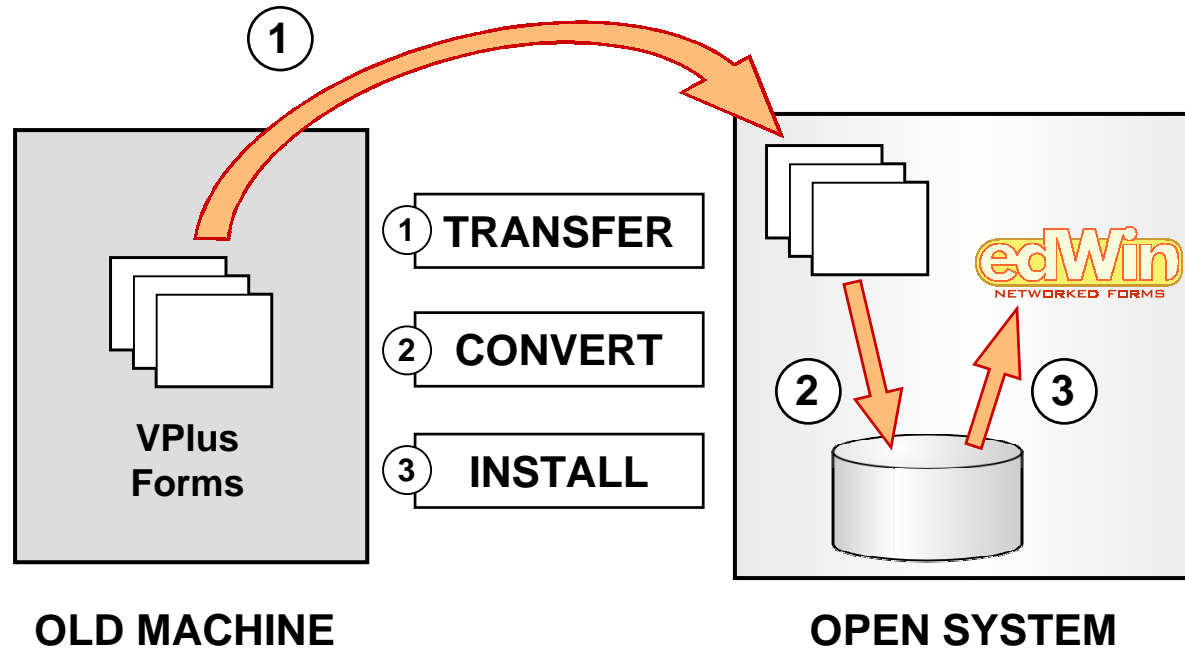
**edWin/3K™ connects users
everywhere**



Migrate Vplus in 3 simple steps

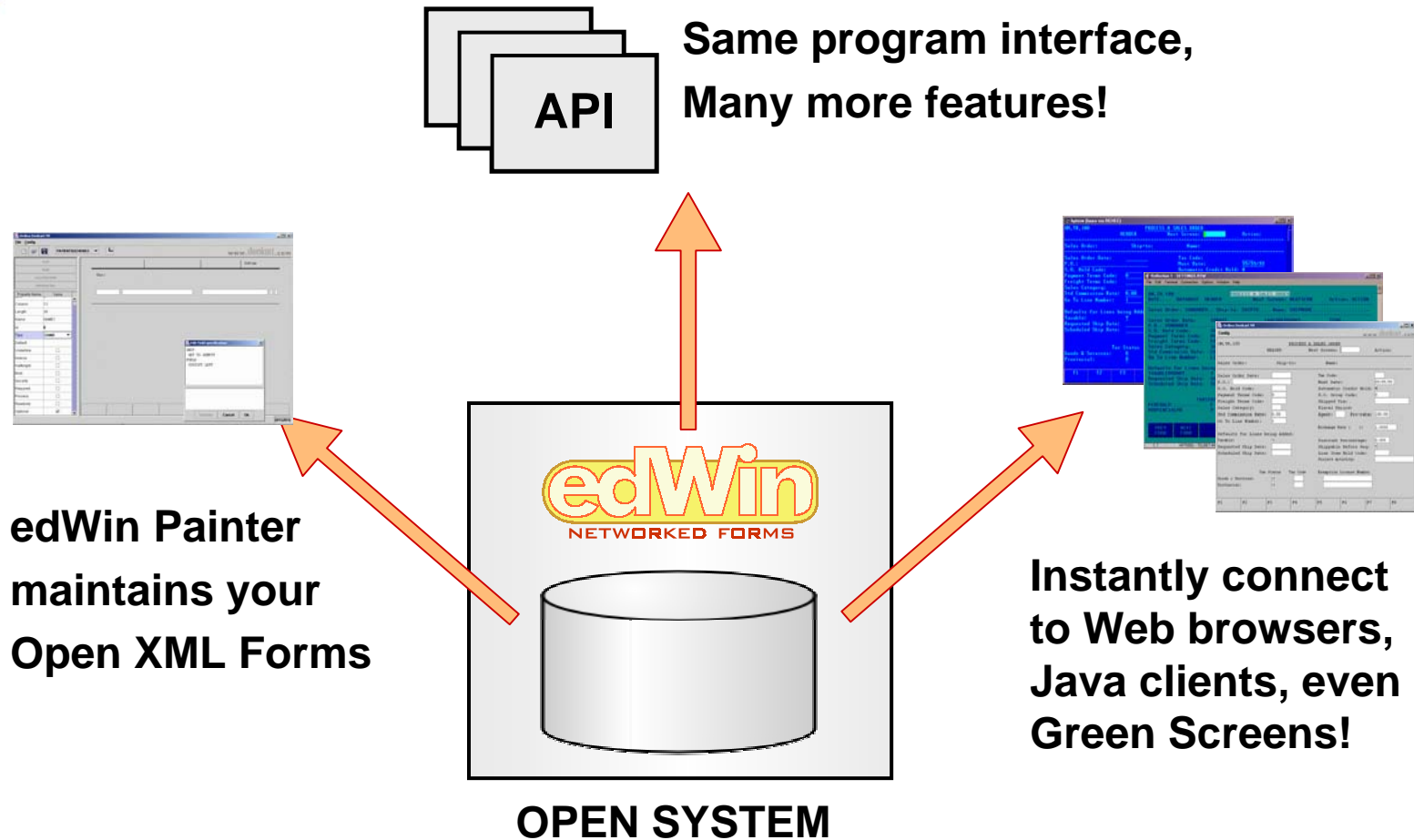


migrates quickly & completely:





After migration: you got edWin!





edWin™ benefits

edWin offers these immediate benefits:

- edWin supports *all* of VPlus
- There's no need to change anything
- Screen I/O is automatically *OPEN* and *platform independent*.



edWin/3K™ Example A

Easy client distribution

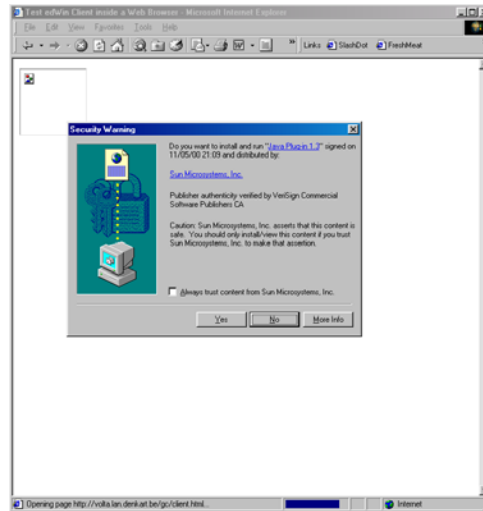
Actually, there's not much installation needed

- Web/Java interfaces are downloadable
- Browser-model irrelevant
- Wide range of supported client platforms

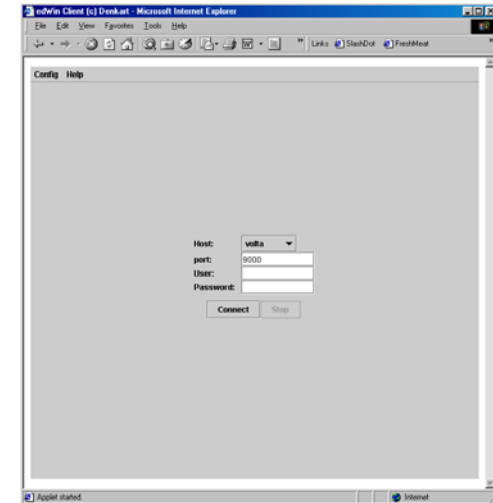


edWin/3K™ Example A – (cont'd)

Connect to edWin/3K Application Server



Automatic
installation



And you're ready to go!



edWin/3K™ Example B

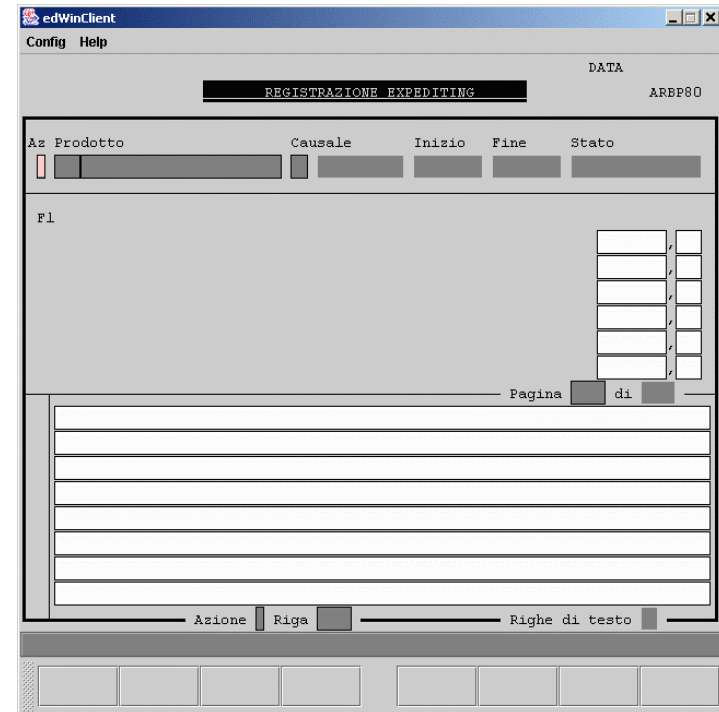
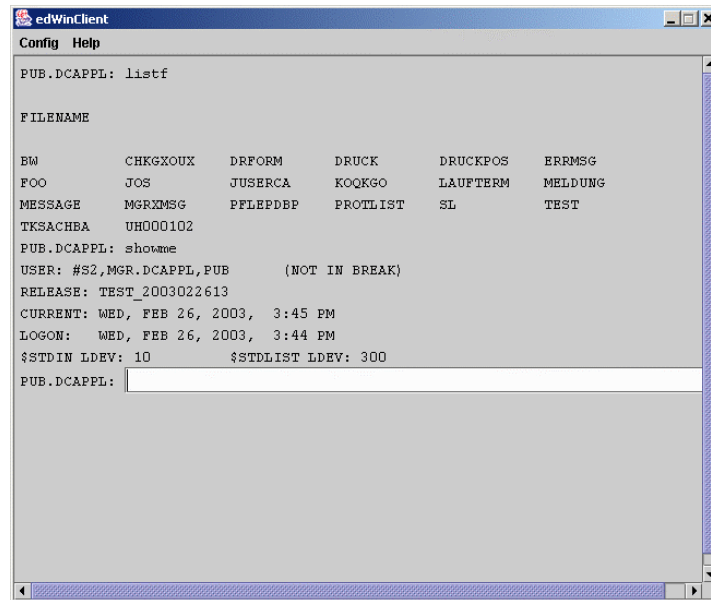
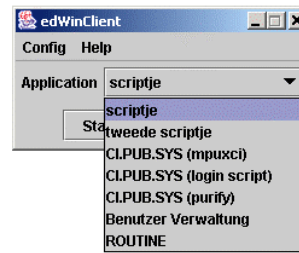
edWin: Compatibility & New features

edWin has fundamentally different architecture

- Client-Server model for advanced networking
- Graphical and Browser-based clients
- Nevertheless FULL Forms & Line-mode support
- Menu offers access to Applications and even CI screens



edWin/3K™ Example B – (cont'd)





Presentation Summary



Results after a ViaNova 3000 Migration

The **entire** environment is transferred
to a new platform

The new environment makes you feel
right at home



Advantages of a ViaNova 3000 Migration

- The end-result is what you want!
- The environment is now **platform-independent.**
- Future development is not bound by any intermediate layer or emulation.



ViaNova 3000: a 100% solution

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