Migration from IMAGE to Eloquence

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Overview

- Product overview
- Eloquence Database concepts
- Administrative Tasks
- Migration
- Future development

What's New

- The Eloquence product was transferred to Marxmeier Software AG
- Eloquence ported to Itanium architecture
- Eloquence B.07.00 released
- Eloquence Partner Program

Product Overview

An introduction to the
Eloquence product

Eloquence at a Glance

- Excellent compatibility and performance for IMAGE based applications
- Cost effective
- Supports multiple platforms
- Proven solution

Excellent compatibility

- All TurboIMAGE intrinsics are supported and behave identical
- HP3000 applications can typically be ported with no or only minor changes

Cost Effective

- Eloquence saves considerable time and effort in the migration process and allows focusing on other tasks
- Eloquence is easy to manage and retains existing know how
- Eloquence is priced attractively

Complete Package

- The Eloquence database comes with
  - Comprehensive set of database utilities
  - Structural maintenance
  - Integrated indexing (TPI subset)
  - On-line backup
  - MPE migration tools

Eloquence Environment

- Eloquence is supported by a wide range of HP3000 tools, eg.
  - SUPRTOOL
  - Speedware (to be released)
  - Cognos Powerhouse (to be released)
- Different options available for access with ODBC and JDBC

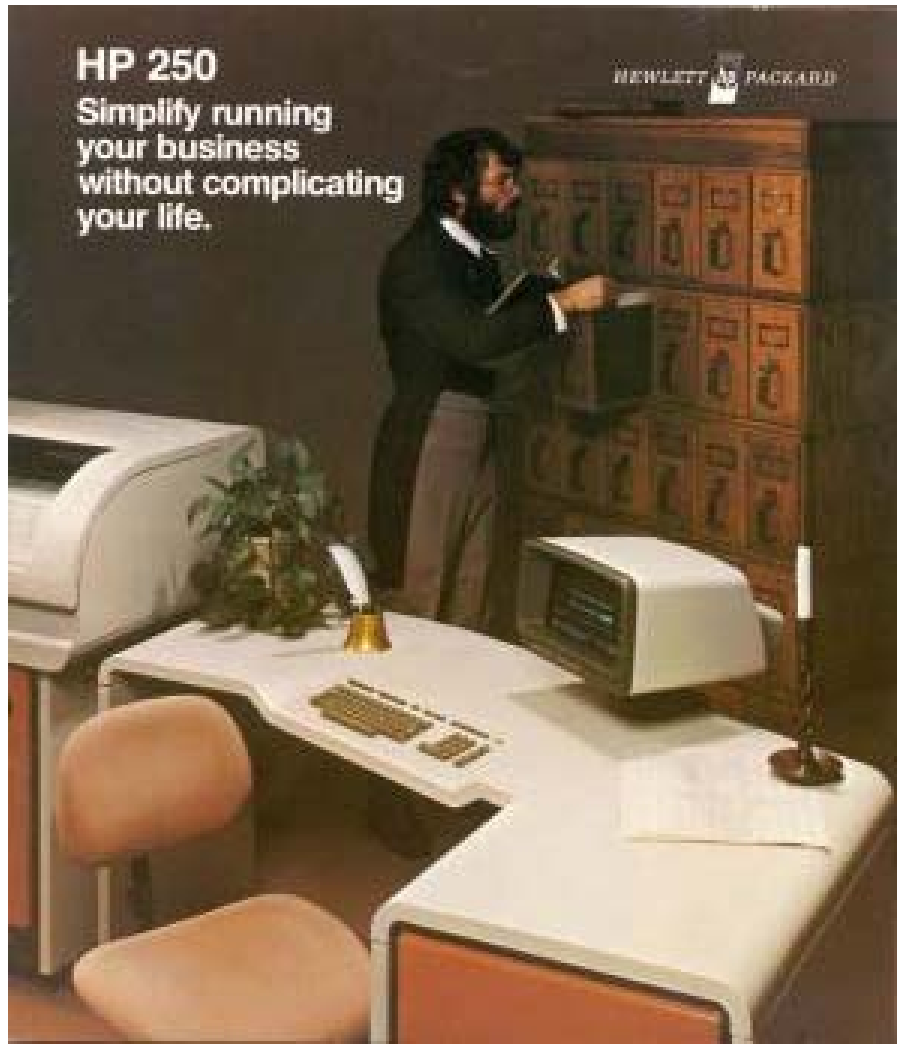
Product History

- Eloquence was created by Marxmeier Software and sold to Hewlett-Packard
- Eloquence was first released in 1989 as a migration solution to move HP250/HP260 applications to HP-UX
- Since then Eloquence has gone through continuous development

Product History

- Marxmeier Software has been responsible for developing and supporting the Eloquence product
- The Eloquence product was transferred to Marxmeier Software AG in 2002


The HP 250
Branch Office Computer.
You never knew power
could be this simple.


HP 250
Simplify running
your business
without complicating
your life.
HEWLETT PACKARD

Product Components

- Eloquence programming language (based on HP Business Basic)
- Eloquence database (based on IMAGE)
- Graphical User Interface
- Development Environment

Product Overview

- Eloquence is a product of Marxmeier Software AG, Germany
- Support is available from Marxmeier and Support partners worldwide
- Eloquence is available on the HP-UX, Linux and Windows platform

Product Overview

- About 2500+ installations worldwide
- Used by about 60+ VARs / ISVs worldwide
- Covers a wide range of installations from a single user to a few hundred concurrent users

Product Overview

- Eloquence is typically used to implement vertical and customer specific solutions
- Solutions based on Eloquence include
  - ERP, Order Management, Material Management
  - Financial Accounting / Payroll
  - Civil Services,
  - Financial Services, ...

Current Release

- Eloquence B.07.00 has been released
- Major database enhancements include
  - Substantially improved TurboIMAGE compatibility
  - Native support of TurboIMAGE item types
  - Forward recovery
  - Increased Image limits
  - Structural maintenance
  - Performance improvements
- Support for Itanium architecture (HP-UX)

Ordering

- The Eloquence product can be ordered
  - from an Eloquence distributor
  - from the Eloquence web site or Marxmeier Software AG

Product Options

- The “unlimited license” option (AH0) provides an unlimited user license
- The “entry license” option (000) and additional user licenses allow competitive pricing for entry level configurations

Product Options

- The corresponding TurboIMAGE compatibility option (3k) option must be ordered in addition

Obtaining Eloquence

- The Eloquence product can obtained by download from the Eloquence web site
- CD-ROM media can be ordered as an alternative

Product Evaluation

- The “Personal Edition” provides a free two user license with a database up to 50 MB
- A temporary license provides an unlimited version of Eloquence for evaluation purposes

Eloquence Partners

- Business Partners (ISV)
  - Provide solution based on Eloquence
- Distributors
  - Offer Eloquence and additional services (consulting and support) to ISVs and end users
- Technical Partners
  - Offer complementary products supported with Eloquence

Eloquence Distributors

- North America
  - Eloquence3000
  - MB Foster
  - Marcal Systems Inc
- Asia Pacific
  - Pathway Pacific Pty Ltd

Eloquence Distributors

- Europe
  - Cheops (France)
  - Cladera (Spain)
  - ISI (Italy)

Partner Information

- Information about Eloquence partner and the Eloquence partner program is available at

  http://www.hp-eloquence.com/partner/

Database Concepts

An introduction to the Eloquence database architecture

Overview

- The Eloquence database is almost 100% compatible to TurboIMAGE at the application level
- The underlying architecture is different

Eloquence Architecture

- Based on IMAGE
  - Excellent performance and compatibility for IMAGE based applications
- Client/Server architecture
  - Network transparent
  - Multiple platforms supported

Eloquence Architecture

- Additional locking options available
- Dynamic, nested transactions, transaction isolation
- Integrated Indexing, hashing is not used
- Dynamic dataset expansion

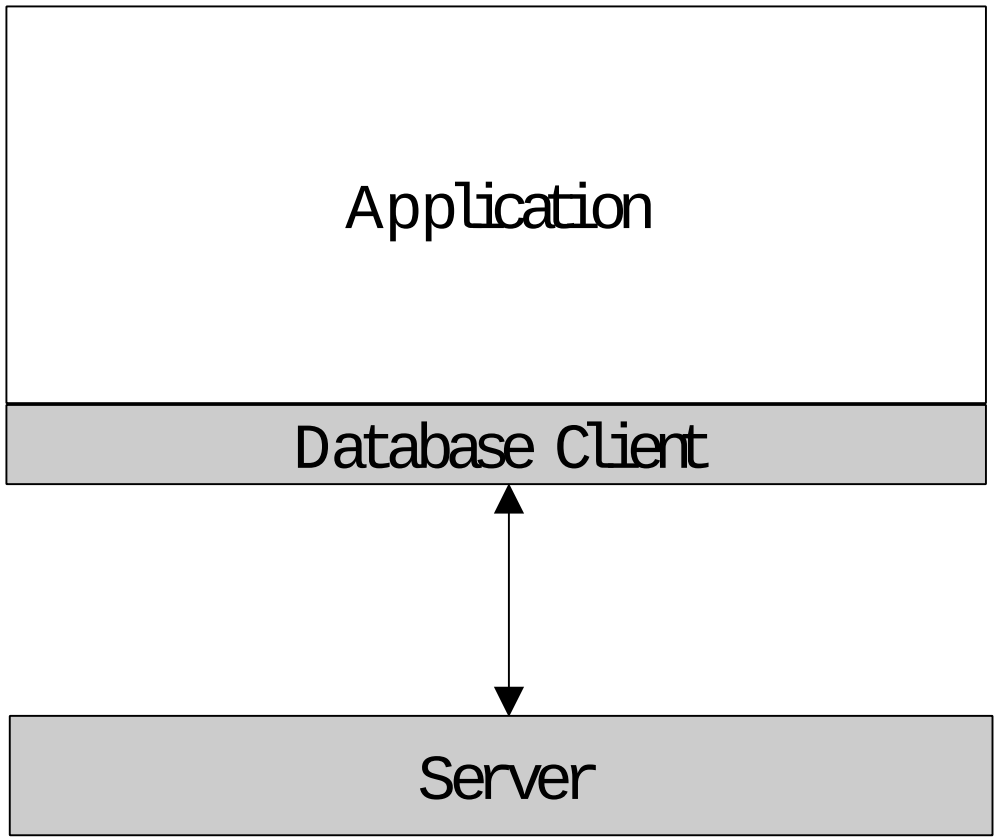
Eloquence Architecture

- Deadlock detection and recovery
- New security subsystem
- Online backup and forward recovery
- Databases do not reside in the file system
- Structural information is maintained in the database (no ROOT file)

Client-Server Architecture

- Database access is performed by a server process
- The application is linked with the database API
- The server is connected through the network (or shared memory)

Client-Server Architecture



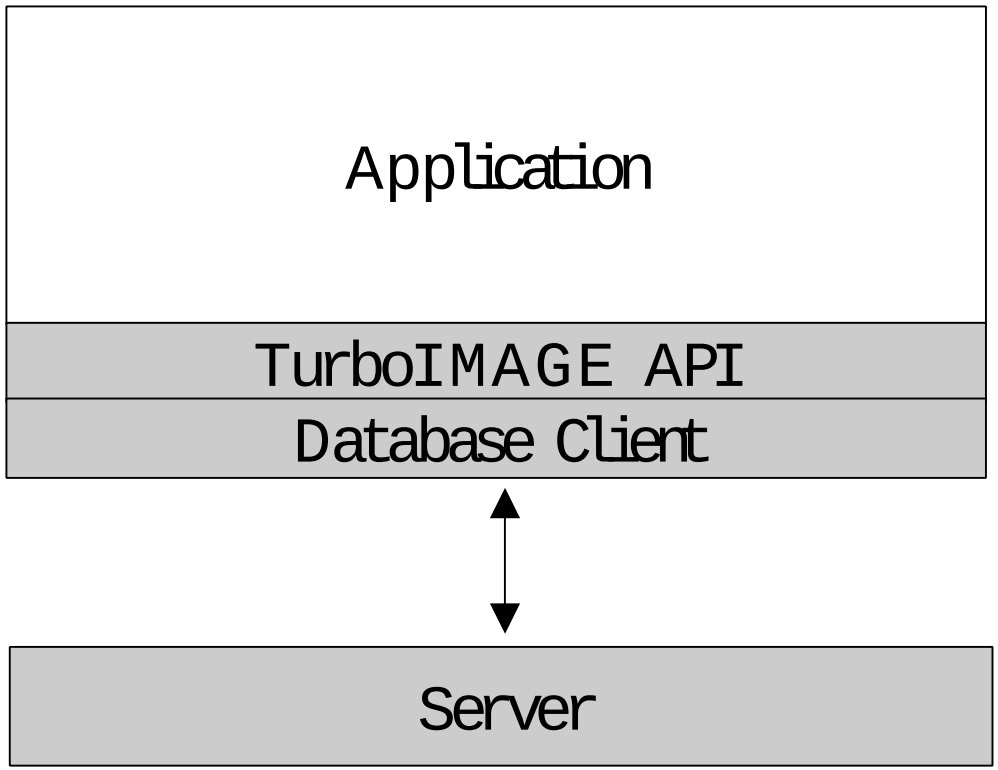
TurboIMAGE compatibility

- Compatibility goes beyond intrinsic calls and also includes a performance profile
- Applications are built on assumptions and take advantage of specific behavior

TurboIMAGE compatibility

- TurboIMAGE compatibility is implemented at different levels
  - The database server implements functionality at the backend
  - The database client and utilities provide support for TurboIMAGE functionality
  - The TurboIMAGE compatibility API implements source code compatibility

TurboIMAGE compatibility



Multiple Platforms

- Eloquence is available for multiple operating systems and architectures
  - HP-UX on PA-RISC and IA-64
  - Linux on Intel IA-32 and IA-64
  - Windows NT/2000/XP on Intel IA-32

Network Transparent

- Applications running on different machines and operating systems can access a common database
- Requests and results are translated transparently
  - Character set encoding
  - Byte order conversion

Indexing

- Eloquence comes with integrated indexing
- Indexes are used instead of hashing with master sets
- Eloquence implements a commonly used subset of the TPI functionality

Locking

- Locking is fully compatible with TurboIMAGE
- Eloquence does not impose a locking strategy
- Write operations do not require a previous lock. If a conflicting lock is granted, a status is returned

Locking

- READ Locks are supported
- Selective DBUNLOCK
- Multiple DBLOCKs are allowed
- Deadlock conditions are detected and a status is returned

Transactions

- All databases are part of a transaction
- Uncommitted changes are not visible to other processes
- Transactions are not limited in size
- Nested transactions

Transactions (cont)

- Committed transactions are persistent
- A checkpoint operation truncates the transaction journal in a regular interval

Database Names

- A database name is not restricted to 6 characters
- Databases do not reside in the file system but are managed through a server process
- A database name addresses a specific server instead of a file location

Database Names

- Syntax

```
[[hostname][:service]/]database
```

  - Hostname specifies database server system
  - Service specifies database server instance

Database Names

- The following examples specify the same database:

  localhost:eloqdb/SAMPLEDB
  :eloqdb/SAMPLEDB
  SAMPLEDB

Database Security

- The database server maintains a list of users
- Database access privileges are assigned to groups
  - Similar to TurboIMAGE user classes
  - A user can be a member of multiple groups

Database Security

- The new DBLOGON procedure may be used to specify user and password
- With the TurboIMAGE compatibility API the DBOPEN password argument can be used to specify a user and password
- A default user is used if no specific user is specified

Database Environment

- A database environment consists of
  - a configuration file
  - one or more data volumes
  - a transaction log volume
- Multiple database environments can coexist on the same machine, each managed by a separate server process

Volumes

- Volume files are a storage container managed by the database server
- A maximum of 255 volume files are supported in a server environment
- The maximum size of a single volume file is 128 GB (currently limited to 2 GB on HP-UX and Linux)

Server Catalog

- Eloquence does not use a ROOT file
- Structural information is maintained in the database environment
- The server catalog is initialized with the dbvolcreate utility and maintained with the schema and dbutil utilities

Database Limits

- Eloquence B.07.00 Image limits
  - 2048 data items
  - 500 data sets
  - 64 / 16 paths
  - Entry length 5120 bytes

Scalability

- Database / data set size is limited by the disk space allocated to the database environment
  - Current limit is ~500 GB
  - Hard limit is ~32 TB
- Number of concurrent users per database environment is currently limited to 1000
- Recommended number of users is up to 500

Database Utilities

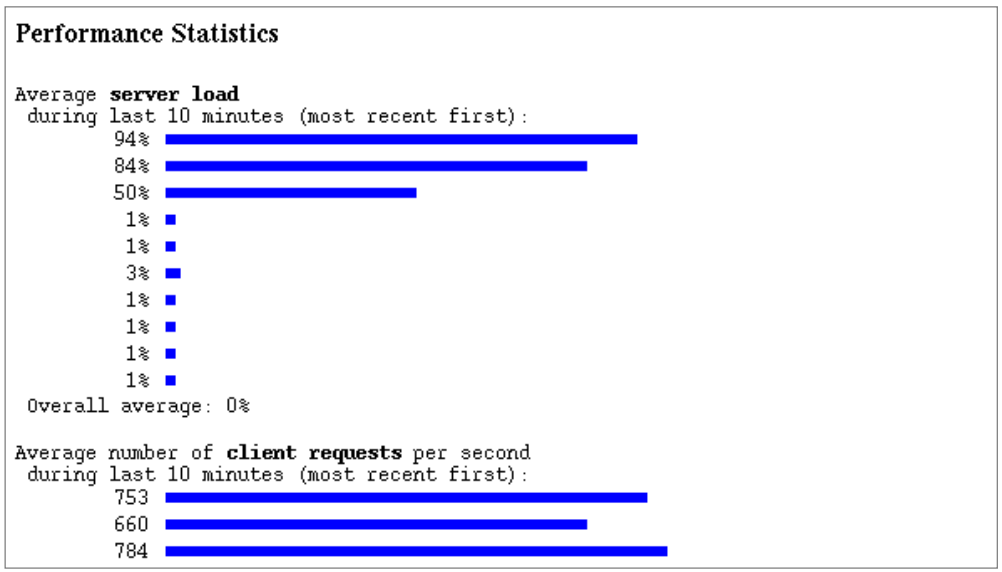
An overview on the Eloquence database utilities

Offline utilities

- dbvolcreate / dbvolextend / dbvolchange / dblogreset - database volume management
- dbvoldump - display volume properties
- dbfsck - volume consistency check and simple repair tool
- dbrecover - forward recovery

Administrative utilities

- dbctl - server management utility
- HTTP status monitor



HTTP Status (cont)

Server Volumes

ID	Type	Path
1	DATA	/data3/dalex/db/db01.vol
2	LOG	/data3/dalex/db/db02.vol
3	DATA	
4	DATA	
5	DATA	
6	DATA	
7	DATA	

Database Locks

Session	Database	DBID	Status	Mode	Qualifier
0x827d6d0	SAMPLE	1	GRANTED	6	expression
set=1 item=@ (effective set lock)					
0x825a440	SAMPLE	1	BLOCKED	4	set 1

Volume Statistics

ID	Type	Cur.Sz	Ext.Sz	Max.Sz	Free	Used	Seek Cnt	Read Cnt	Write Cnt
1	DATA	1024.0	1.0	1024.0	0.0	1024.0	285	3251	277
2	LOG	48.5	1.0	0.0	48.4	0.1	27777	14	30279
3	DATA	1024.0	1.0	1024.0	0.0	1024.0	9	1237	6
4	DATA	1024.0	1.0	1024.0	0.0	1024.0	9	418	6
5	DATA	1024.0	1.0	1024.0	0.0	1024.0	34	1188	28
6	DATA	1024.0	1.0	1024.0	0.0	1024.0	7	1215	6
7	DATA	1024.0	1.0	0.0	931.3	92.7	2433	853	2568

Database utilities

- schema - Schema processor
- dbcreate / dberase / dbpurge - create / erase / purge database
- dbtables - database cross reference
- prschema - re-create schema from database
- dbdumpcat - catalog information utility

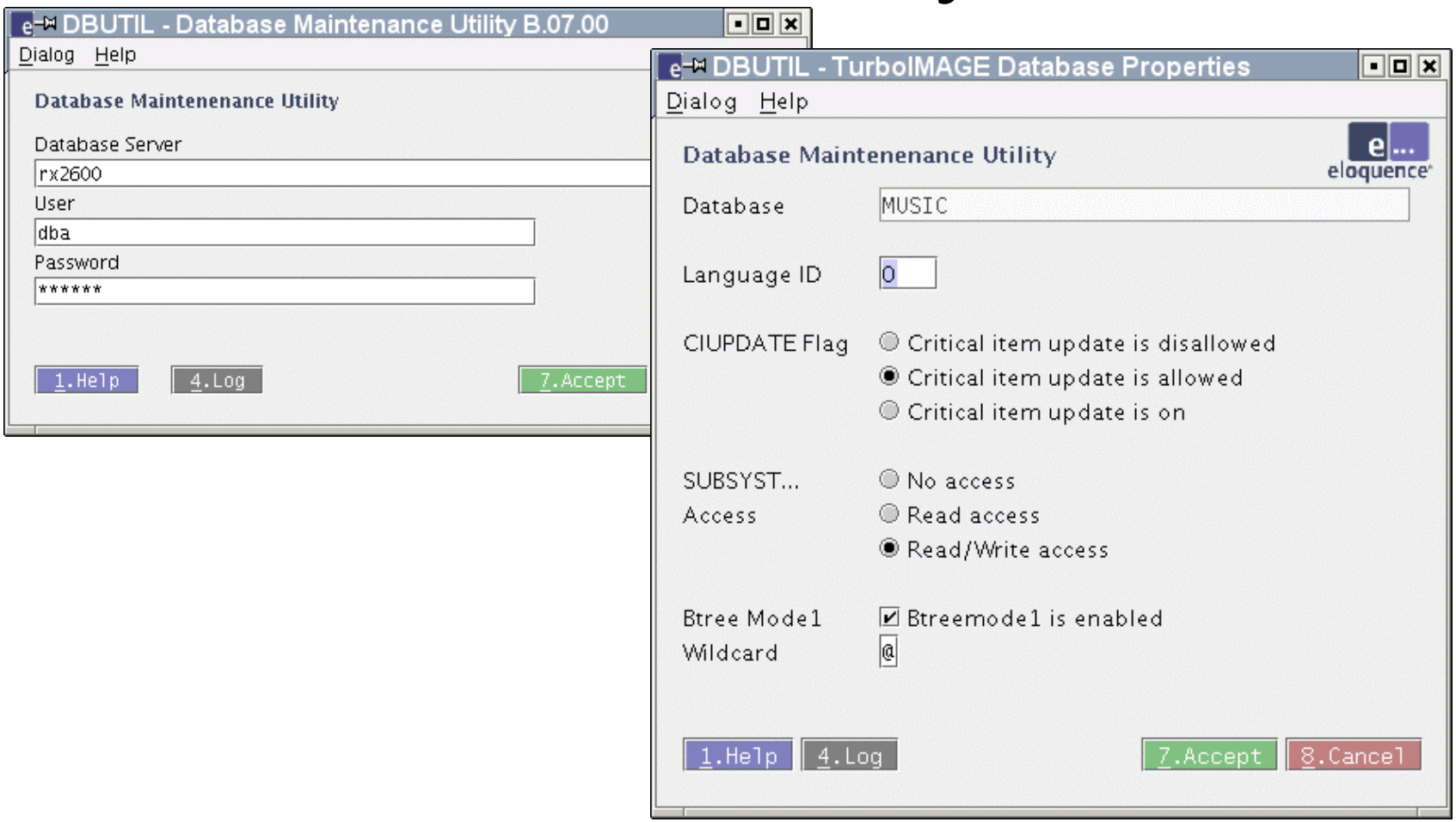
Database utilities

- dbexport / dbimport - export/import data base content to/from text file
- dbinfo - information on database tables
- dbutil - structural maintenance and database security management
- QUERY utility

dbutil utility

- dbutil provides central point for database administration
  - security management
  - structural maintenance
- dbutil can be used interactively (dialog based) or controlled by a script

dbutil utility



QUERY utility

- The Eloquence QUERY utility is different from the HP3000 QUERY
  - limited capabilities
  - uses different syntax
  - a TurboIMAGE compatible QUERY version will be added to Eloquence

Installation and Configuration

Installation and Configuration of the Eloquence database

Overview

- Install the product and OS patches
- Configure the operating system
- Configure automatic server startup
- Create the database environment
- Platform differences

Evaluation License

- By default the “Personal Edition” license key is installed
- A temporary license key can be created during installation
- A temporary license key can be requested from the Eloquence web site

Create eloqdb user/group

- Create a user name and a group name e.g. eloqdb to be used as the owner/group of the database files
- On Windows the system account is used by default

Configure Kernel Parameters

- On Unix and Linux Eloquence can use shared memory for communication
- HP-UX kernel parameters need to be configured
  - semaphores related parameters
  - shared memory related parameters
  - process data size

Setup database environment

- Database environment (server instance) consists of
  - Server configuration file (eloqdb.cfg)
  - Primary data volume
  - Transaction log volume(s)
  - Additional data volume(s) as required

Server configuration file

- Default server configuration file is /etc/opt/eloquence6/eloqdb6.cfg
- This file defines server properties
  - configuration
  - scaling and tuning parameters
  - volume files

Simple Server Configuration

```
[Server]
Service = eloqdb
ServiceHTTP = 8103
UID = eloqdb
GID = eloqdb
EnableIPC = 1
SyncMode = 0
```

Simple Server Configuration

```
[Config]
Threads = 100
IOThreads = 4
BufferCache = 64
CheckPtSize = 50
```

Shared Memory

- EnableIPC
  - EnableIPC=0 (default) disables use of shared memory communication
  - EnableIPC=1 enables use of shared memory on HP-UX and Linux
  - EnableIPC=2 enables use of a single shared memory segment for HP-UX (recommended)

Sync/Async Mode

- SyncMode
  - SyncMode=1 (default) pushes all committed transactions to disk immediately and waits for completion
  - SyncMode=0 (recommended) writes changes to disk asynchroneously and does not wait for completion

Database Server Configuration

- Threads
  - Defines the max. number of concurrent connections for this server instance
- IOThreads
  - Defines the max. number of concurrent I/O operations (default=4)
  - Depends on the I/O capabilities

Database Server Configuration

- BufferCache
  - Defines the memory reserved for the database cache
  - The more the better

Create volume files

- dbvolcreate /var/opt/eloquence6/data01.vol
- dbvolextend –t log /var/opt/eloquence6/log.vol
- dbvolextend –t data /var/opt/eloquence6/data02.vol

Start the database server

- Start the default database server
  - /sbin/init.d/eloq6 start [instance …]
- Check if the server is active
  - /sbin/init.d/eloq6 status [instance …]
- Stop the default database server
  - /sbin/init.d/eloq6 stop [instance …]

Troubleshooting

- The Eloquence database writes diagnostic messages to the syslog
  - HP-UX: /var/adm/syslog/syslog.log
  - Linux: /var/log/messages
  - Windows: application event log

Linux Installation

- Eloquence uses the RPM package manager
  - RedHat Linux 7.x and 8.0 and SuSE Linux 7.x and 8.x have been certified
  - Other Linux distributions may be used but additional manual steps may be required

Linux Installation

- For installation or update execute the command below

```
$ rpm -U Eloquence-B0700.glibc2.2-1.i386.rpm
```

- Temporary license option is not available during installation

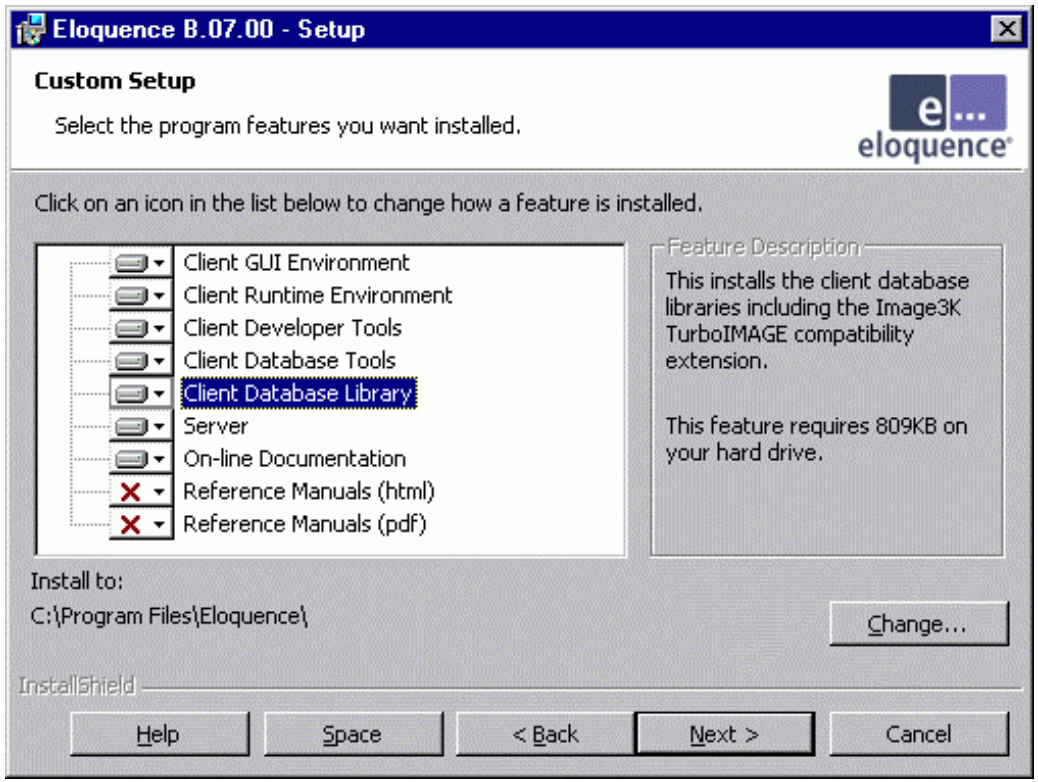
Windows Installation

Installing Eloquence on Windows and Windows platform specifics

Windows Installation

- Eloquence uses the standard Windows Installer
- Different setup programs are used for Windows 2000-XP, NT and 95/98/ME
- Different setup programs for download and CD-ROM installations

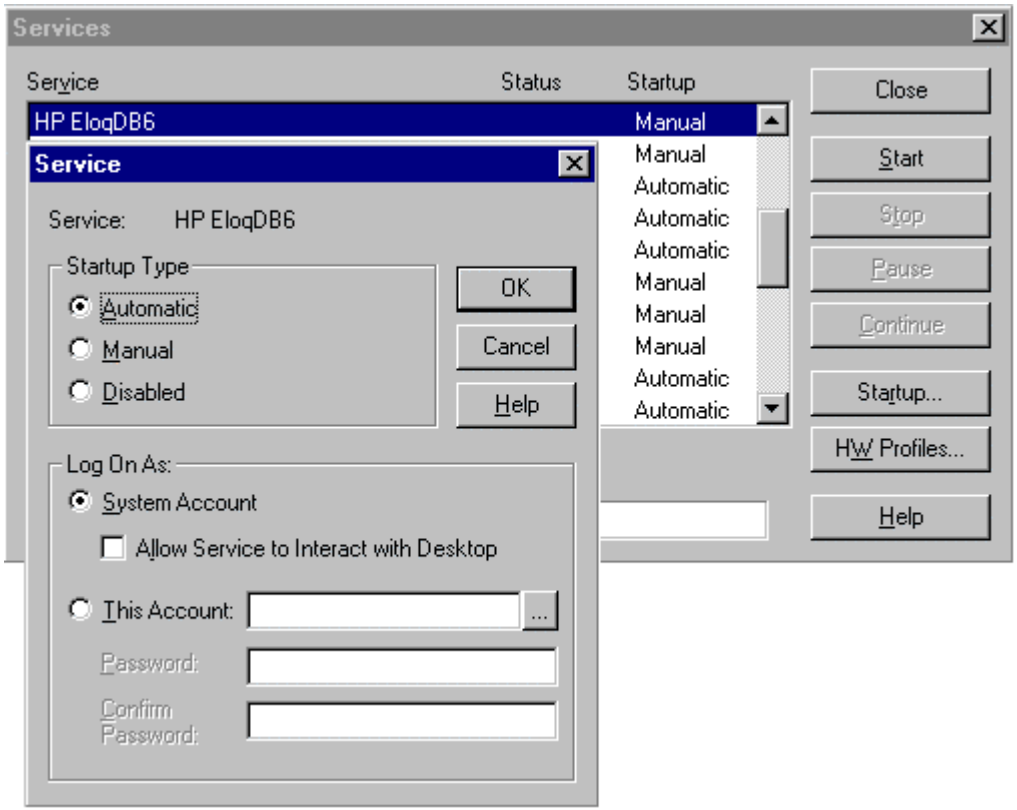
Select Product Features



Configure Services

- Configure automatic start mode for the Eloquence database in the service control panel (eloqdb6 service)
- Start the eloqdb6 service manually for the first time
- The eloqsd service is often not needed and should not be started

Windows Configuration
Automatic server start



Administrative Procedures

Database backup

Database Backup

- Supported backup strategies
  - Off-line backup
  - On-line backup
- Related options
  - Forward logging

Off-line Backup

- Shutdown the eloqdb6 server process
- Backup all volume files

On-line Backup

- Enable on-line backup mode
- Backup the data volume file(s)
- Backup of the log volume is optional
- Disable on-line backup mode

On-line Backup

- In on-line backup mode, the data volumes are frozen
- Modifications during on-line backup are temporarily saved into the transaction log volume
- Any backup software can be used to create a consistent backup

On-line Backup

- The dbctl utility is used to enable on-line backup mode
- Example backup script

```
$ dbctl -u file:/root/credentials backup start
$ tar -cf /dev/rmt/0m /database
$ dbctl -u file:/root/credentials backup stop
```

Forward Logging

- Forward logging is used to record all modifications since a previous backup
- Forward is fast and involves only minimal processing
- The forward log files can be managed automatically by the server process

Forward Logging

- Forward logging is enabled in the server configuration

```
[ForwardLog]
FwLog = /path/to/fwlog-%N.log
```

Database Maintenance

- Make sure sufficient volume and disk space is available
  - Use the dbvoldump utility if the server is off-line
  - Use dbdumpcat or the HTTP status if the server is active

IMAGE Migration

How to migrate to Eloquence

TurboIMAGE Compatibility

- All TurboIMAGE intrinsics and almost all modes are supported and behave identical
- HP e3000 applications can usually be ported with no or only minor changes

TurboIMAGE Compatibility

- Not supported:
  - DBCONTROL modes which are specific to TurboIMAGE implementation details
  - DBCONTROL modes for btree maintenance
  - Item level security

TurboIMAGE Compatibility

- Partially supported
  - Static “transactions” currently have no effect. Support will likely be added in subsequent versions
  - IMAGE b-tree access (“superchains”). Eloquence Indexes can be used as a replacement. Full support will be available in the next release

TurboIMAGE Compatibility

- Required changes:
  - Eloquence database names are no longer restricted to 6 characters
  - Eloquence requires the database name is terminated with a space, semicolon or NUL character

Database security

- The database server maintains a list of users
- A database maintains security groups
  - Similar to TurboIMAGE user classes
  - Database privileges are assigned to groups
  - A user can be a member of multiple groups

Database security

- New DBLOGON procedure can be used to specify user and password
- A default user is used if no specific user is specified

TurboIMAGE Compatibility

- The Eloquence image3k library implements the TurboIMAGE intrinsics
- The application (or language runtime) is linked against the image3k library
- The image3k.h include file provides the function prototypes (C, C++)

Using Eloquence with ACU Cobol

- Link the Eloquence image3k library to the ACU Cobol runtime (runcbl)
- Load the Eloquence image3k library dynamically (using CALL)
- Eloquence currently uses native byte order (COMP-5 on Intel IA-32)
- The –D5 compiler option maps COMP to COMP-5

Using Eloquence MicroFocus Cobol

- Link the Eloquence image3k library to the application
- Compiling on the Intel IA-32 architecture requires compiler directive (maps COMP to COMP-5)

```
MAKESYN "COMP-5" = "COMP"
```

Migration Issues

Real World Issues

Overview

- Eloquence differences
- OS / Hardware differences

Data Set Capacity

- Data Set Capacity has a different meaning
  - Eloquence has no concept of a data set specific capacity
  - Eloquence returns the highest record number allocated for a data set as capacity value in DBINFO modes 202 and 205

Data Set Capacity

- Application may check for „enough room“ in a data set
- Application may check for an application specific relation of the available „space“ in related data sets

Data Set Capacity

- Solution:
  - Remove or disable capacity check
- Workaround:
  - Return „HUGE“ value as capacity
  - Trap Eloquence DBINFO 202 and 205 modes and return application specific „capacity“ value

Don’t lie to Schema

- TurboIMAGE does not care what you put in a character field
  - Eloquence may need to convert strings to different encoding
  - Eloquence may need to do a byte order conversion
  - Eloquence uses indexes which require type specific ordering

Don’t lie to Schema

- Solution:
  - Use separate fields for different information
  - Specify binary items
- Workaround:
  - Use Eloquence on a single platform
  - Use Eloquence binary item type ‘B’

Character Set encoding

- On MPE the HP-ROMAN8 character set encoding is often used
  - HP-Roman8 encoding is typically not available on other platforms
  - Eloquence defaults to HP-ROMAN8 character set on HP-UX and ISO-8859-1 on other platforms
  - Eloquence performs conversion “on the fly”

Byte Order

- PA-RISC (and HP-UX on Itanium) uses big endian byte order
- Intel IA-32 uses little endian byte order
- Eloquence performs conversion “on the fly” if necessary

Parameter Alignment

- TurboIMAGE requires most arguments to be 16 bit aligned
- Eloquence relaxes most alignment restrictions
- For string arguments no specific alignment is required

Record Numbers

- Eloquence uses a different algorithm to assign and re-use record numbers
- DBDELETE / DBPUT sequence likely results in different record number
- DBCONTROL HWPUT is not supported, application has no control over record number usage

Identical database names

- TurboIMAGE supports to use the same database name in different groups
- Eloquence requires a unique database name per server instance
  - Multiple server instances (eg. test / production environment)
  - Encode the group in the database name

Access to Database Files

- TurboIMAGE databases reside in the file system
- Applications could use file system operations to copy databases
- Eloquence databases reside in the volume files and are not accessible separately

Access to Database Files

- Solution
  - Copy whole database environment
  - Use dbstore to extract single database and dbrestore to restore database in another server instance
  - Use dbexport / dbimport

Data Migration

Move your databases from
TurboIMAGE to Eloquence

Overview

- Schema files are compatible and no change is required
- Eloquence includes MPE tools to export the database content to flat files
- Transfer the schema file and the export files to the target system
- On the target system run the schema processor, the dbcreate utility and the dbimport utility

DBEXPORT utility

- DBEXPORT is used to export the database content to one or multiple text files
- It provides an easy procedure to move your database content to Eloquence

DBEXPORT utility

```
: DBEXPORT "-v TESTDB"
Processing database : TESTDB

DATA SET                  ---  -  RECORDS   COUNT
--------------- --- - -------- --------
CUSTOMERS          001  M     1177     1177
PARTS              002  M      182      182
ID                 003  A       47
ORDERS             004  D       47       47
LINEITEMS          005  D      136      136
```

EXPORT file format

```
"24601",442,900126,"21089",5,"VK",1298.46
"24602",1120,880116,"25001",5,"VK",28073.01
"24603",1210,880125,"30010",5,"VK",1611.09
"24604",1258,880201,"13005",5,"VK",10508.16
"24605",1446,880227,"13007",11,"VK",0
"24606",1460,880227,"17007",7,"VK",1150.81
"24607",1462,880227,"17007",7,"VK",8300.82
"24608",2424,880704,"22002",5,"VK",3719.23
"24609",2612,880725,"22016",5,"VK",1396.02
"24610",2894,880907,"18012",5,"VK",14.56
"24611",3342,881027,"15017",5,"VK",808.33
...
```

DBINFO utility

- DBINFO lists the data sets for the specified database including data set name, type, number of entries and capacity

DBINFO utility

```
: DBINFO TESTDB
Processing database : TESTDB

SET NAME              ---  -  RECLEN CAPACITY ENTRIES
--------------- --- - ------ -------- --------
CUSTOMERS             001  M     112     1355     1177
PARTS                 002  M      53      524      182
ID                    003  A       2     2259       47
ORDERS                004  D      21     1008       47
LINEITEMS             005  D      22     1008      136
```

MPE Migration tools

- The MPE DBINFO and DBEXPORT utilities are available as source code
- Compiled versions for MPE are available in a tar or STORE archive format

Installation on MPE

- To install the tar archive on your system
  - Enter the POSIX shell
  - Use tar to extract the files
    `$ tar -xzvopf hp3kbin.tar.Z`
  - tar may issue a warning about being unable to restore the user and group which can be safely ignored

Installation on MPE

- To install the STORE archive on your system

```
: FILE EQ3KB=./EQ3KBIN;DEV=DISC
: restore *EQ3KB;;LOCAL;SHOW
```

  – This extracts the files in the current directory

Export the database

- When running from the POSIX shell the arguments are separated by a space

```
$ DBEXPORT -p SECRET -v TESTDB
```

- When running from the MPE shell (CI) you need to enclose the arguments in quotes

```
: DBEXPORT "-p SECRET -v TESTDB"
```

Transfer the files

- Transfer your schema file and the export files to the Eloquence system
- When transferring by ftp
  - use text mode to transfer the schema file
  - use binary mode to transfer the export files

Create and import the database

- On Eloquence, run the schema and dbcreate utilities to create the database
- Then use dbimport to load the database from the export files
- To use Eloquence indexes add them to the schema file or use the dbutil utility to add them subsequently

Create the database

- Run the Eloquence schema processor

```
$ dbschema schemafile
$ schema -T schemafile
```

- Option -T selects TurboIMAGE compatibility mode

Create the database

- After running schema, you need to create the database

```
$ dbcreate database
```

Import the data

- Use dbimport to load the database

```
$ dbimport -v database
```

- The option -v displays the import progress

Import the data

- On the Windows and Linux platform you should specify the -z roman8 option to indicate the source data uses the HP-ROMAN8 encoding
- This makes sure any national characters ("Umlaute") are converted

Eloquence Development

Upcoming Changes

QUERY support

- Port HP3000 QUERY application to Eloquence

New Platform support

- MPE port of the database client library
  - Allow access to the Eloquence database from MPE applications
  - Enables evaluation and testing with existing applications
- Add support for Linux on Itanium
  - Experimental version is available

API enhancements

- Support for multi-threaded applications
  - Experimental implementation will be available in May
- Language binding
  - Support big endian byte order on little endian systems (Cobol, Java)

Upcoming Features

- Audit log
  - Log database changes to an audit file along with session information
- Replication API
  - Add API to support database replication
  - Add a replication tag to each record

Unicode support

- Support Unicode string encoding
  - Transparent mapping of different character set encoding
  - Support for Asian characters

Performance / Scalability

- Read ahead and bulk retrieval
  - Reduce latency for predictable situations
    - DBFIND mode 1 & DBGET mode 5
    - DBGET mode 2
- Improve scalability on larger systems
  - More effective support for multiple CPUs
  - Increase concurrent user limit

eloquence

Thank you

More Information

- Detailed information is available on the Eloquence web site **http://www.hp-eloquence.com**
- Get in contact: **info@hp-eloquence.com**