

COBOL and the HP3000

Discussion led by

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Agenda

- **Considerations**
- **Staying with MPE**
- **COBOL Conversion -
Migration strategies**
- **Complimentary technologies**
- **Questions and Answers**
- **Summary**

Considerations

- **Time to market**
- **ROI and TCO**
- **Risk**

Staying with MPE

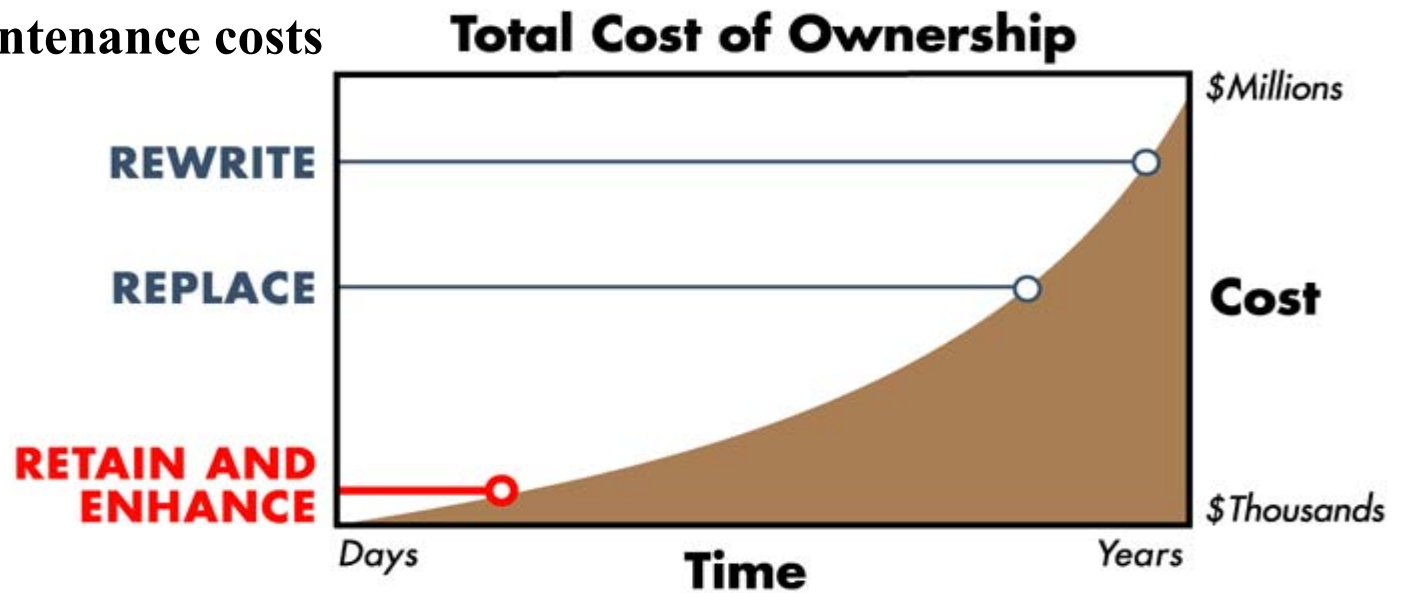
- **Hardware costs may increase over time**
- **Extend 5 has many innovative tools that provide many complimentary technologies**

COBOL Conversion - Migration

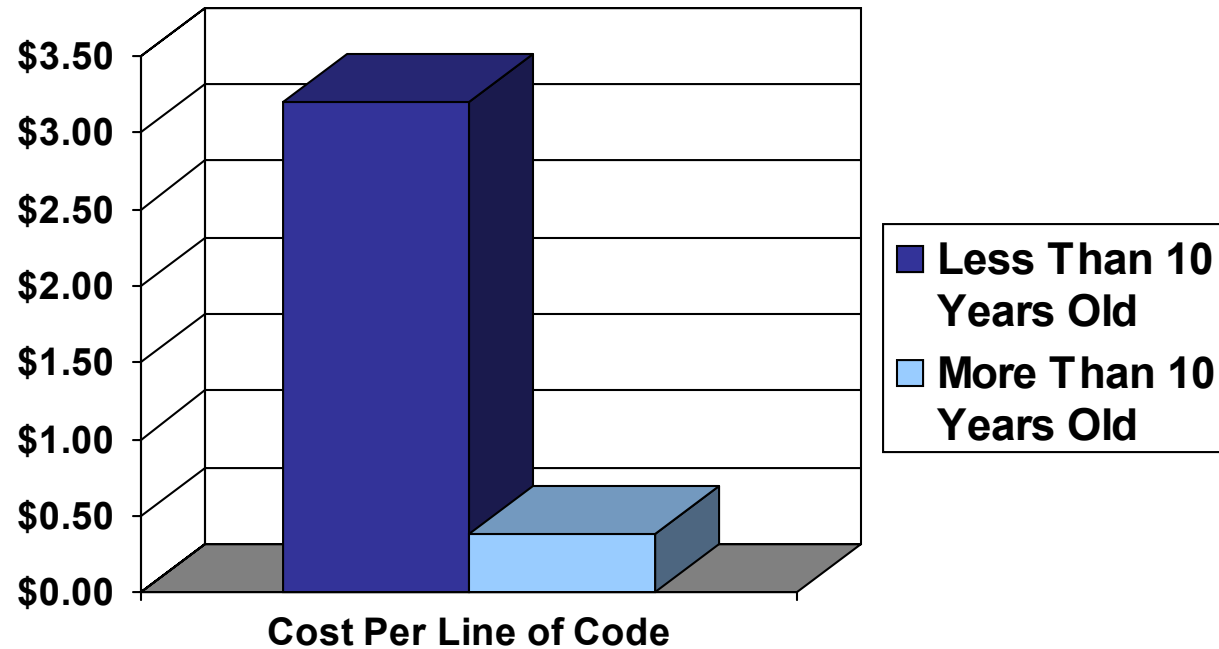
- **Replace**
- **Rewrite**
- **Re-engineer**
- **Re-host application**

ROI and TCO

- Time to market
- Cost of defect removal
- Evaluate maintenance costs

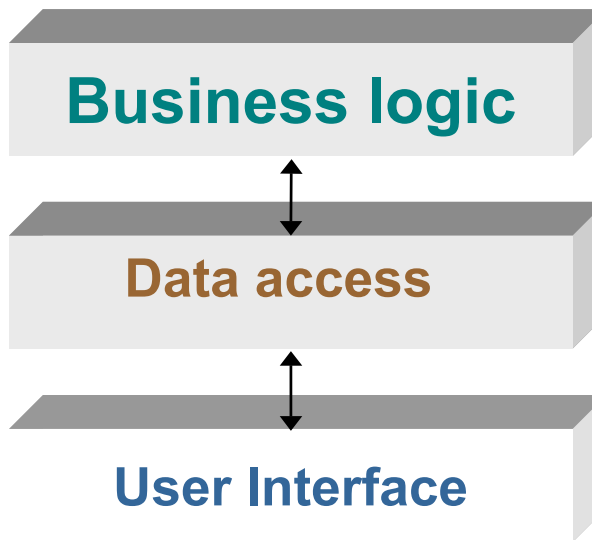


Rewriting or re-engineering applications



Evolving or re-hosting COBOL

Consider this three-tier programming model



Business Logic

- **Logic does not change due to the language being the same – COBOL**
- **Macros – supported on and off of the HP3000**
- **SPL, System Intrinsic, and C routines**

SPL, System Intrinsic, and C routines

- **C routines**
- **Relinking**

Data Access

- **Image Intrinsic**
- **KSAM Intrinsic or KSAM using COBOL File I-O**

Image

- **Replace with embedded SQL**
- **Possible drop in utilities**
- **HP Eloquence**

Intrinsic to SQL statements

```
CALL "DBOPEN" USING DBNAME,  
PASSWORD, DB-MODE, STATUS1.
```

```
EXEC SQL  
    CONNECT TO :DBASE-NAME AS C1  
        USER :USERID  
        USING " PASSWD-NAME  
END-EXEC.
```

Intrinsic to SQL statements

```
CALL "DBBEGIN" USING DBNAME, TEXT1,  
DB-MODE, STATUS1, TEXTLEN.
```

```
EXEC SQL
```

```
DECLARE CR1 CURSOR FOR
```

```
SELECT "*" FROM PETS_TABLE
```

```
END-EXEC.
```

Intrinsic to SQL statements

```
CALL "DBFIND" USING DBNAME, TEXT1, DB-  
MODE, STATUS1, SEARCH-ITM, TEXTLEN.
```

```
EXEC SQL
```

```
DECLARE CR1 CURSOR FOR
```

```
SELECT "*" FROM PETS_TABLE
```

```
WHERE PET_NAME = "Fluffy"
```

```
END-EXEC.
```

Intrinsic to SQL statements

•CALL “DBGET” USING DBNAME, DB-MODE, STATUS1,
LIST, PETS-BUFFER, NOT-USED-PARAM-16

EXEC SQL

FETCH CR1 INTO :PET-ID, :PET-NAME, :A-TYPE,
:ANIMAL-TYPE, :A-BREED, :A-STAT,
:DATE-LAST-VISIT, :OWNER-ID

END-EXEC.

Intrinsic to SQL statements

DB-CLOSE.

**CALL "DBCLOSE" USING DBNAME,
PASSWORD, DB-MODE, STATUS1.**

SQL-CLOSE.

EXEC SQL DISCONNECT ALL END-EXEC.

KSAM

- **Replace with COBOL file I-O**
- **Acucorp Vision file system**
- **Possible drop in utilities**

User Interface

- **VPLUS**
- **COBOL Display and Accept**
- **SPL, System Intrinsic, and C routines**

VPLUS

- **SCREENJET**
- **COBOL Display and Accept**

Display and Accept

- Extend5 supports COBOL display and accept statements
- Extend5 offers development and deployment tools to assist in going GUI

Complimentary Technologies

extendTM5
with **ACUCOBOLTM - GT**

acuCORP



Core Capabilities

Powerful software solutions providing application modernization in the following areas:

extendTM5
with ACUCOBOLTM-GT



GUI Enhancement



Internet Deployment



Data Access



Distributed Computing



Programmer Productivity

acuCORP



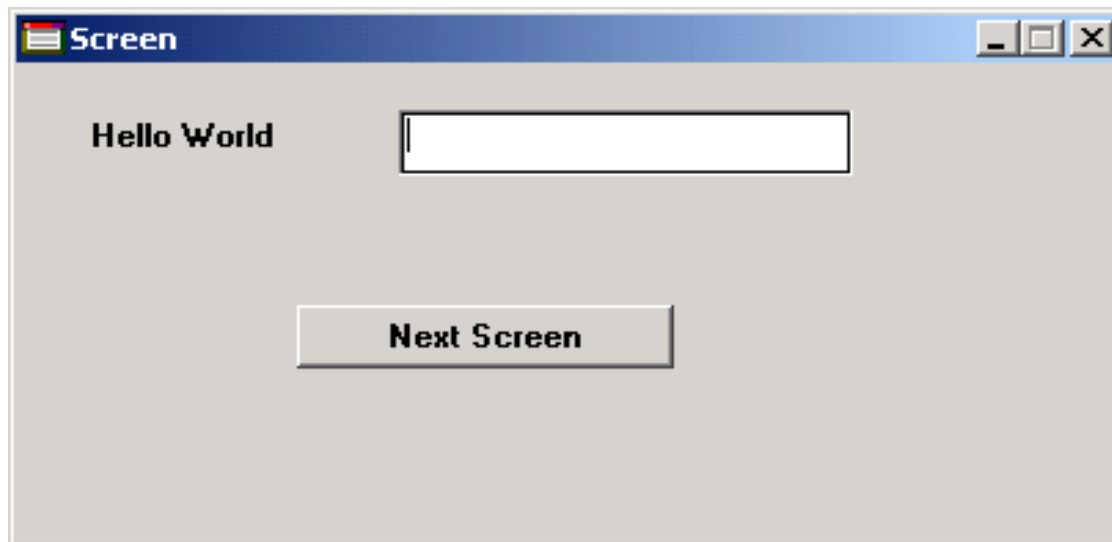
ACUCOBOL-GT™

- **ACUCOBOL-GT is a portable, ANSI standard, COBOL development system with compiler, runtime, file system, debugger, and support utilities**
- **Fast compilation and execution - scaleable high performance**
- **Fully portable object code**
 - **Runs on all open systems supported (including AIX, HP3000, Linux for S/390 and zSeries, Windows NT/2000, Unix and Linux) without recompilation**
- **Flexible interface to various data sources**
- **Full-featured debugging tools**
- **Native COBOL GUI syntax**
- **Support for Internet deployment**

AcuBench™

- **AcuBench is a fully integrated Windows rapid application development tool designed specifically for COBOL programmers**
- **All programming is done using COBOL syntax. Designed to maximize COBOL programmer productivity**
- **Includes:**
 - **COBOL-intelligent Editor**
 - **VB-like Screen Designer**
 - **Full Project Manager**
- **Manages individual programs and entire projects**
- **Support for AIX, HP3000, Linux, Unix, NT/2000 Servers. Remote file handling, execution, and debugging from Windows**

COBOL GUI



COBOL GUI

01 Screen1.

03 Screen1-La-1, Label,

COL 3.70, LINE 3.00, LINES 1.80 SIZE 8.40

ID IS 1, TITLE "Hello World".

03 Screen1-Ef-1, Entry-Field,

COL 15.00, LINE 2.80, LINES 2.30 SIZE 16.30

3-D, ID IS 2, VALUE ws-item-1.

03 Screen1-Pb-1, Push-Button,

COL 6.60, LINE 7.50, LINES 2.40 SIZE 13.70

EXCEPTION-VALUE 5, ID IS 3,

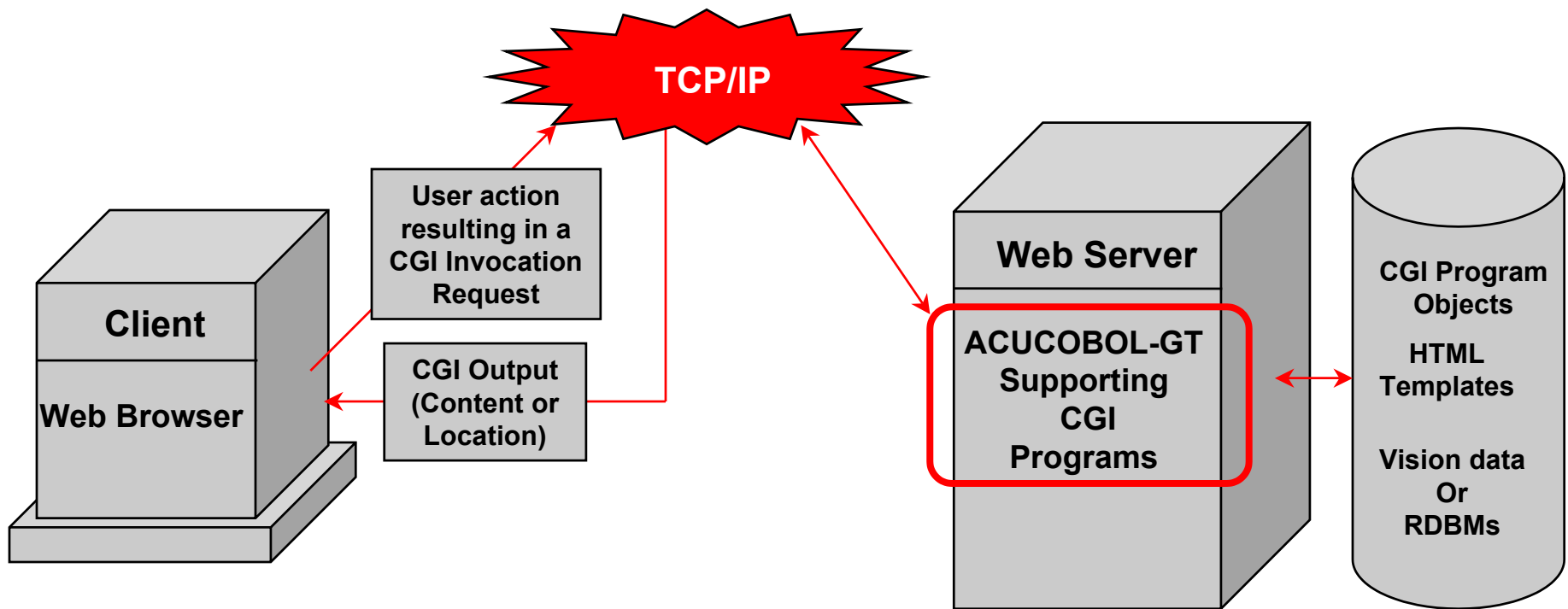
TITLE "Next Screen".

Character-to-GUI Wizard

Built into the AcuBench™ integrated development environment

- Allows you to convert character user interfaces *that have been coded in COBOL* to graphical
- Does *not* require that the COBOL program use the Screen Section

COBOL CGI



CGI

HTML Variables - COBOL program

01 cgi-form is external-form.

05 ws-param1 pic 9 is identified by "param1".

05 ws-param2 pic 9 is identified by "param2".

.....

ACCEPT CGI-FORM.

IF WS-PARAM1 = 1

IF WS-PARAM2 = 2

Relational database access

Direct interface between ACUCOBOL-GT programs and a relational database

- Dynamically creates SQL from COBOL I/O
- Runs “beneath” the COBOL application and is completely invisible to the end user
- Provides rapid deployment of an RDBMS in a legacy COBOL environment
- Provides incremental conversion from indexed files to RDBMS tables
- Can determine on a file-by-file basis which database or file system should be accessed

Thin Client Technology

- Host GUI ACUCOBOL-GT applications on Unix, Linux, HP3000 or Windows servers
- Application and data all reside centrally on server
- GUI displayed on Windows client
- Application distribution not required - everything resides on server
- Maximize performance and security while minimizing distributed software maintenance challenges
- Everything is in COBOL

Questions and Answers



Summary

- **Acucorp is dedicated to the Legacy Modernization solution for cross-platform business applications development**
- **All our products are designed and built to support this in a COBOL-friendly manner**
- **We aim to be our customers “systems programmers” – we handle the technology, they build the applications**
- **We have been doing this successfully for 13 years**