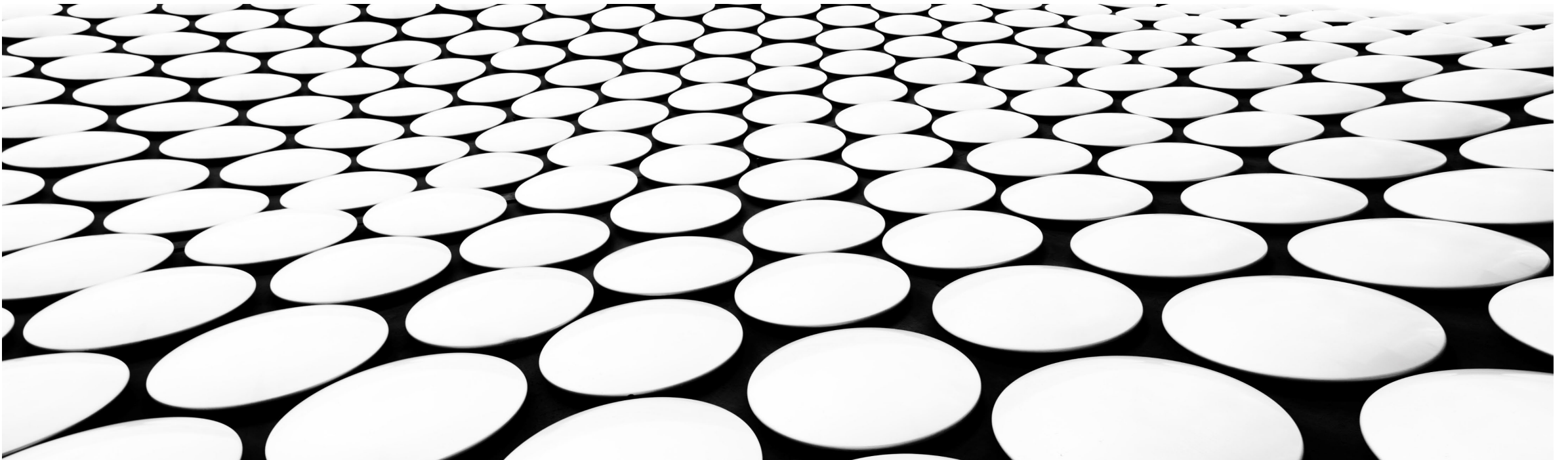

HIGH-TECH DARWINISM, PART 1

ONE PRODUCT MANAGER'S EXPERIENCE WITH DEC'S SOFTWARE PRODUCT STRATEGY

Bob Nusbaum





TWO OVER-ARCHING THEMES



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BEFORE DEC

- Math major at University of Michigan, 1970 (2½ programming courses)
- 1 year at RCA Computer Systems Division
- 2 weeks at First National Bank of Boston
- Inforex 1972-76
- Business school, 1976-78

INFOREX IN 1972

- Market leader in key-to-disk data entry systems (keypunch replacement)
- About \$70M in revenue from first-generation product (System 1301)
- Two major products under development at that time
 - Second generation data entry product (System 3300)
 - Turnkey file management system (System 5000)

(Think PFS: File 15 years earlier)

THE INFOREX SYSTEM 5000

A PRODUCT TOO FAR AHEAD OF ITS TIME

- Hardware – a rip-off of DEC PDP-11
- Software – crafted from scratch in assembler
- Simple, intuitive operation via 2-letter commands
 - CF = Create Form (by typing fixed text and field codes on the screen), EF = Edit Form, DF = Delete Form
 - Commands to Create a File (Sequential or multi-key Indexed), load /dump file to/from tape, Erase File, etc.
 - Interactive record-level commands: Append Record (Sequential), Insert Record (Indexed), Update Record, Delete Record)
- The first customer's third application

HOW DID IT DO?



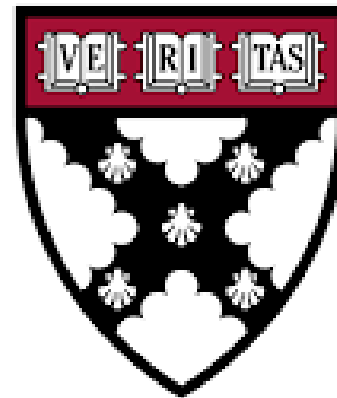
HOW DID I FEEL ABOUT IT?



+

Ease of use

“I COULD DO A BETTER JOB THAN THOSE IDIOTS IN MARKETING!”



**Harvard
Business
School**

DEC IN 1978

STRUCTURE

- Central Engineering
 - NO Base Product Marketing
- “Product Line” marketing groups, most with their own engineering groups
 - Channel (COEM, TOEM)
 - Vertical industry (e.g. Lab, Edu, Mfg)
 - Application (e.g., Office)
- Field

CULTURE

- “Best Engineering Company in the World”
 - Upside
 - Downside

TECHNOLOGY

- Terminals just starting to transcend “glass Teletypes” (VT100 in 1977)
- Most software (EDT, DTR) still line-oriented

WELCOME ABOARD!

- Hired into Small Systems Software, ML5-5
 - Jack Mileski, Manager of Product Management
 - Hired to product manage RSX-11M, replacing Kurt Friedrich
- First day of work
 - “There have been some changes...”
 - Gil Steil, Development Manager



“THE RULE OF 3”

EXAMPLE #1

“Anything worth doing is worth doing (at least) three times!”

- PDP-11 operating systems:
 - RT-11
 - RSX family (including IAS)
 - RSTS/E

OFF AND RUNNING - SORTA

- Product – forms software and full-screen text editor
- New team: Tom McIntyre, Development Manager
 - Cheryl Vedoe, Form Editor
 - Darrell Duffy, Form Driver and Keyboard Editor
- Language support
 - BASIC
 - FORTRAN
 - Assembler
- Target platforms – PDT-11 series, all 64KB
 - PDT-11/150: dual 8” diskettes, running RT-11, funded – and sold EXCLUSIVELY - by COEM
 - PDT-11/130: dual TU58 tape cassettes, running RT-11, funded by Central Engineering
 - PDT-11/110, memory only, running RSX-11S, funded by Central Engineering

But it would run on any RT-11 system with the new VT100 terminal

FMS-11 V1 FOR RT-11: INITIAL MARKET RECEPTION



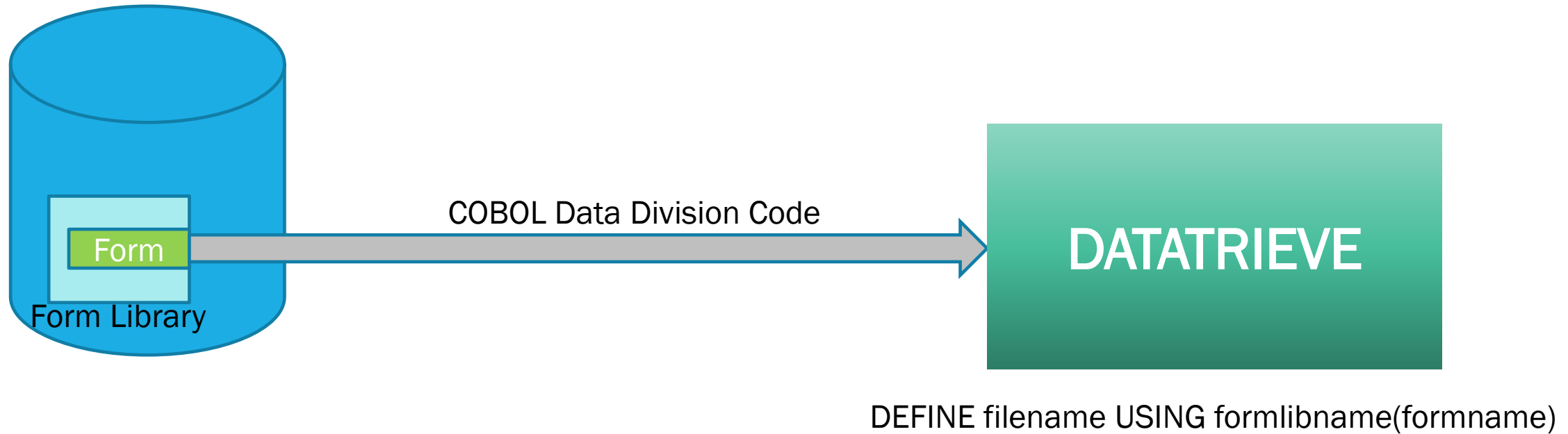


SAVED BY

- Seducing a Woman
- Wheat



FMS V2 AND DATATRIEVE



NAMED DATA

- ❖ Named fields, but not on-screen
- ❖ Created using the Form Editor
- ❖ Constant values assigned during form creation / editing
- ❖ Readable by name (like on-screen fields) by application
 - Read at run-time
 - No source changes
 - No re-linking

“Bob, you’re the product manager, do something!”

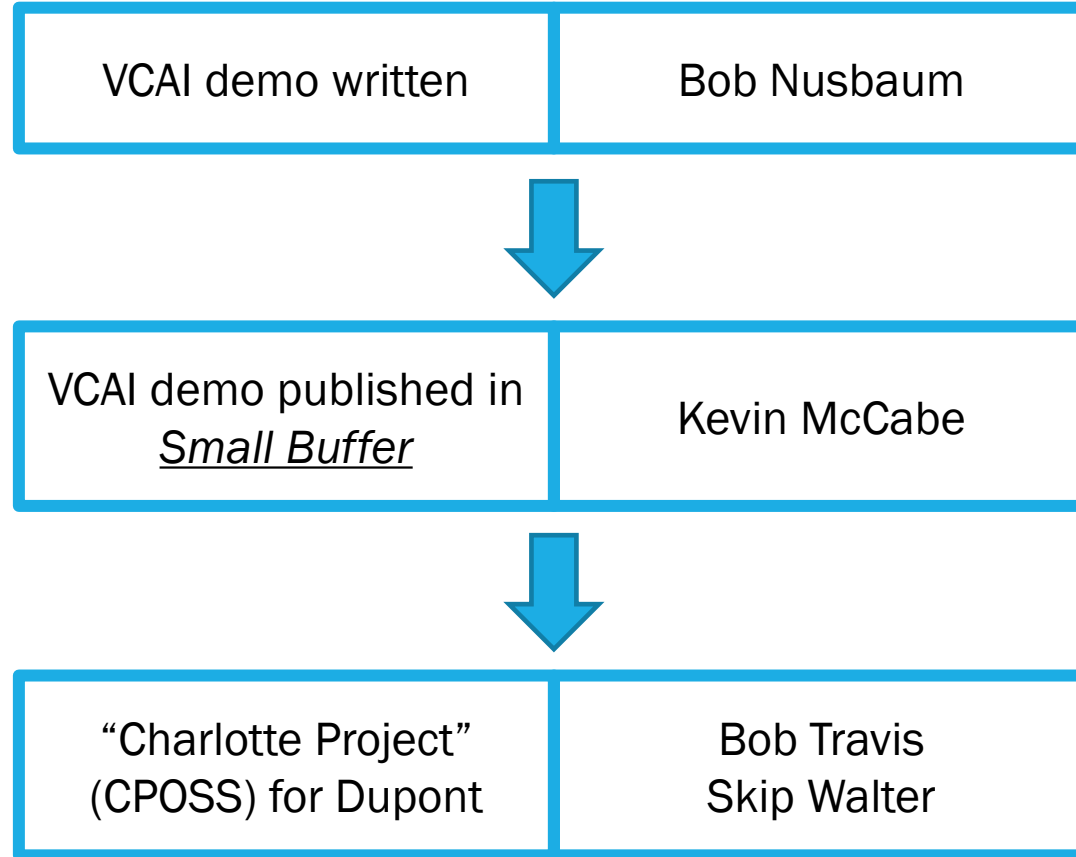
- Darrell Duffy, FMS Form Driver developer



THE “VCAI” DEMO

- Written portably in BASIC
- User types a digit into the single variable field on the form
- Program uses value to retrieve next action from Named Data of that name
 - 1 → open a form in the same form library
 - 2 → open a form in a different form library
 - 3 → run a program
 - 4 → run a command file (subprocess)

THE SPAWN OF VCAI



“THE RULE OF 3” EXAMPLE #2

“Anything worth doing is worth doing (at least) three times!”

- Forms software:

- FMS (on PDP-11s and VMS)
- Indent (from COEM group, for RSTS/E and DIBOL-only multi-user CTS-300 RT-11 systems)
- CATS / TDMS for VMS (Central Commercial Engineering)

“RULE OF 3” PRODUCT POSITIONING RESULTS



OFFICE AUTOMATION SYSTEMS – A NEW MARKET

COMBINING WP, E-MAIL, CALENDAR, ETC.

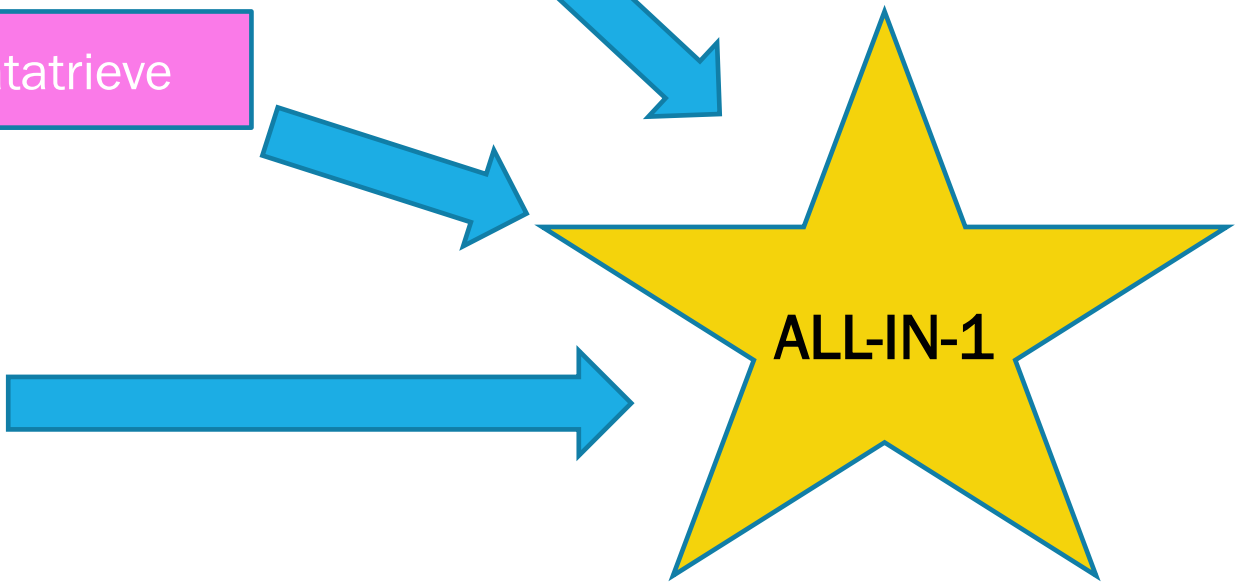
- Leading players:
 - Wang Office, IBM PROFS, Data General CEO
- DEC “OFIS” project in ZKO
 - Platform: VMS
 - All-star team of architects and developers
 - “But first, we need an architecture...”

WHAT HAPPENED?

OFIS

Charlotte Project
(CPOSS)
(built on FMS and its
Named Data)

FMS + Datatrieve





QUESTIONS?

COMMENTS?