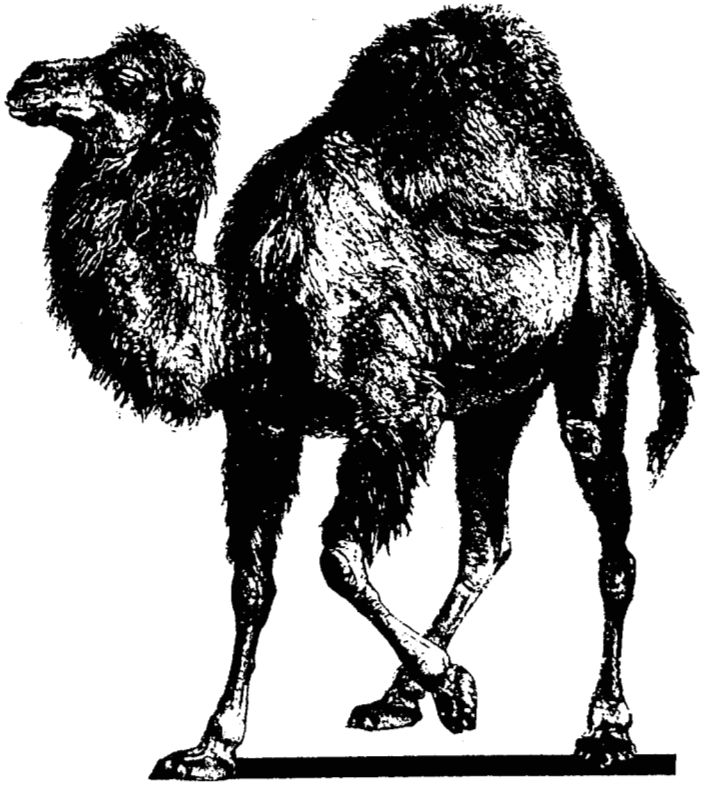
REXX, PERL, AND VISUAL BASIC

BEBO WHITE
STANFORD LINEAR ACCELERATOR CENTER

REXX

and (not vs.)

Perl



Bebo White
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THE REXX LANGUAGE

A PRACTICAL APPROACH TO PROGRAMMING

SECOND EDITION

UNIX Programming

Programming

perl

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O'Reilly & Associates, Inc.

Caveats

- I am a REXX bigot, but the cards weren't stacked against Perl; I am not a Perl expert (much less bigot);
- the most important thing about comparing these languages is determining how well they support their environment; this is largely implementation-dependent;
- I have never used REXX and Perl on the same system;
- this talk started out as "REXX vs. Perl" - but they really aren't competitors;
- I like Perl; it makes Unix far more "approachable" for me;
- I think that some of the features of Perl can contribute to the development of REXX;

REXX and Perl Have a Similar Background

BOTH-

- were developed largely by an single individual;
- were developed for a particular operating system and strongly utilize features of that system;
- have their roots in a "popular" high level programming language;
- have "natural typing";
- emphasize string processing;
- provide a strong built-in function library;
- emphasize readability and an understandable block structure;
- have useful debugging capabilities;

Perl Names

BLATZ - a filename or directory "handle"
$BLATZ - a scalar variable
@BLATZ - a normal array
%BLATZ - an associative array
&BLATZ - a subprogram
***BLATZ** - everything named BLATZ

- does not harken back to EXEC, EXEC2 or Batch;
- does increase the readability /understandability of a program;
- allows program entities to be associated in a subtle way;
- eliminates part of a "style controversy";

Perl Lists

- an ordered list of scalars;
- can be like an array, or "user-defined types";
- can be fully dynamic;
- incorporates some of the capabilities of Parse; for example -
  - **@ARGV** consists of **$ARGV[0]** to **$ARGV[$#ARGV]**
  - **($name,$address) = split(/:/,<NAMES>)**

Perl "Gotchas"
(for REXX users)

- the default value of a variable is the null string;
- a value is TRUE if it isn't the null string, 0 or "0";
- there are different comparison operators for numerics and strings;
- some operators are borrowed from sed, awk, and various Unix utilities;

Some General Conclusions

- REXX is easier to learn and more readable; REXX is more accessible to a greater audience;
- Perl's syntax is harder to learn and read (unless you're a big C fan); appeals to "hackers";
- Perl is an excellent interpreted shell script/systems language, but not a common embedded macro language for Unix;
- Perl is more consistent with a "Unix mindset" than REXX;
- Some Perl operations are very arcane (e.g., ++i, i++);
- Perl has many more redundancies than REXX;
- Perl has better support for aggregate types than REXX; both languages lack support for non-trivial datatypes;
- Perl is more compact for some things (e.g., string processing); compactness <----> safety?

- Perl has an extensive collection of pattern matching operators; REXX relies more heavily on PARSE;
- Perl has built-in file feature operators; where REXX relies on OS;
- Perl has a package mechanism which REXX lacks;
- REXX is more extensible than Perl;

Can REXX Learn From Perl?

- Associative arrays are very "CMS-like"; can be weakly implemented by the REXX ABBREV;
- Perl lists allow for a *for each* construct;
- Perl makes extensive use of the <STDIN>, <STDOUT>, <STDERR> streams; REXX LINEIN, LINEOUT capabilities not always implemented;
- PIPELINES can add some Perl capabilities to REXX;