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Using CPAN For Private Code

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On The Menu Tonight...

- * Reasons To Create CPAN Distros
- * Case Study: Foo Financial Company
- * Assorted Tools You Can Use

This presentation was originally titled...

Why You Should Create CPAN Distros

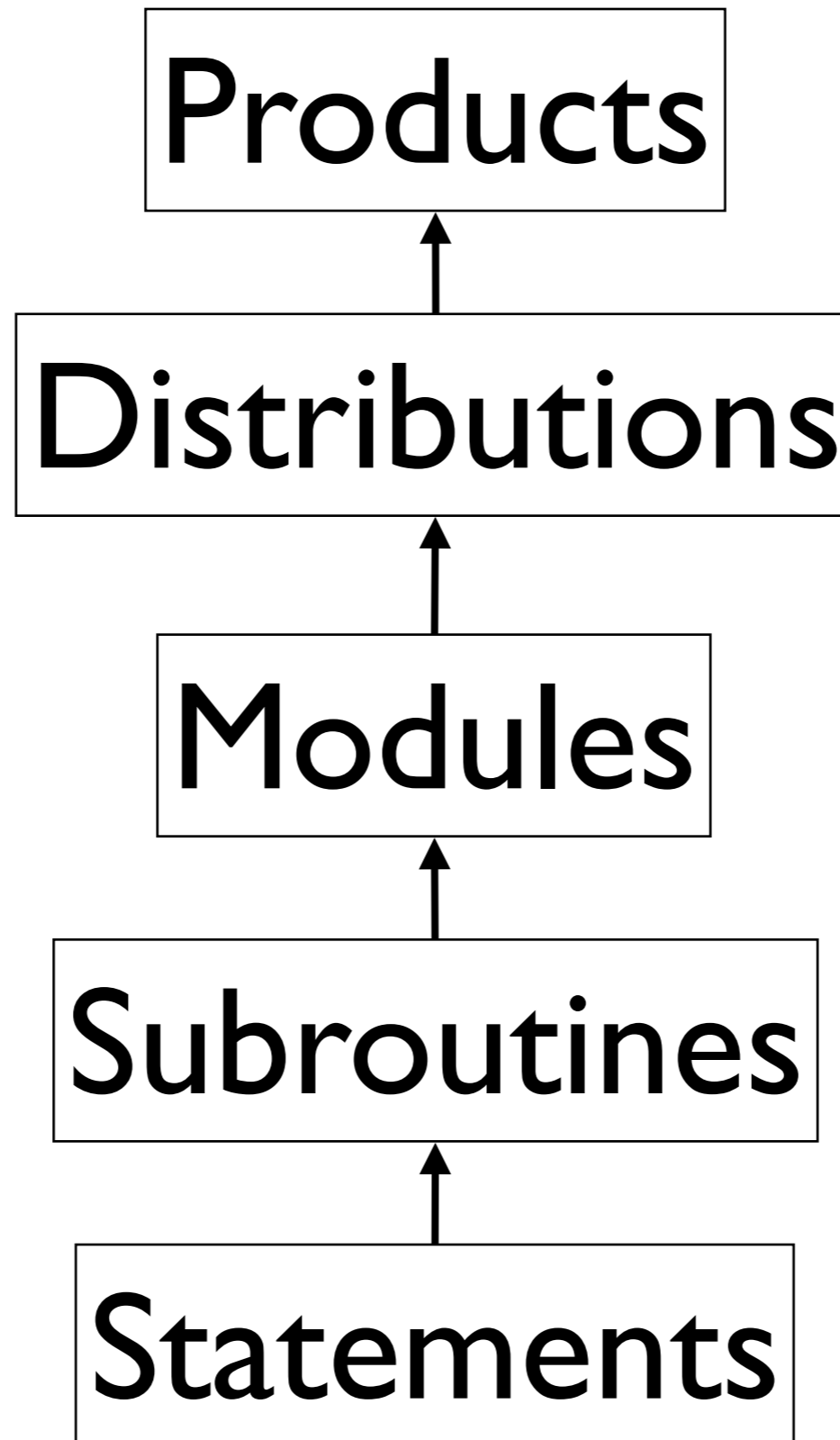
But it really is about...

Why Perl Applications Should Have Build Systems

...and CPAN is just one way to do it.

Well, why?

Organization!



A Well-Known Layout

A proper place for...

*scripts

*libraries

*tests

Dependency Management

- *CPAN.pm Does All The Work
- *Meta-Version Control
- *Detect Circular Dependencies
- *Identify Dependency Flavors:
 - *“requires”
 - *“build_requires”
 - *“configure_requires”
 - *“author_requires”

Separation Of Concerns



- * Usernames and Passwords
- * Resource Paths
- * Configuration Stuff

Sharing And Distribution

- * Easy to identify (i.e. named, versioned)
- * Easy to transport (as *.tar.gz files)
- * Well-known install procedure

Tool Chain Support

- *CPAN

- *Module::Build

- *More on this later..

Case Study: Foo Financial Company

- * 500k lines of Perl code
- * 100s of scripts, 100s of modules
- * No automated test cases
- * RCS-like version control
- * Quasi-separate DEV and PROD
- * Deploy by manually copying to PROD

Havoc Ensued

- * Which files need to be deployed?
- * Which versions of the files?
- * How do I roll back?
- * What are the parts of this system?
- * How do changes affect other parts?

A Solution:

- * Divide product into Distros.
- * Publish Distros into a private CPAN.
- * Assemble product from private CPAN.
- * Automate everything!



commit

SVN

trunk/
 Foo-Reporting/
 Foo-Interfaces/
 Foo-Utilities/
 Foo-Everything/

trunk/CPAN/authors/id/F/FOO/
 Foo-Reporting-8.01.tar.gz
 Foo-Interfaces-2.37.tar.gz
 Foo-Utilities-6.01.tar.gz
 Foo-Everything-1.02.tar.gz

Empty Distro.
 Simply depends
 on other top-
 level Foo::*
 modules

A private CPAN,
 containing
 everything that
 Foo depends on

A temporary
 location, that will
 contain all Foo::*
 modules and
 their non-core
 dependencies

checkout

CruiseControl

```

$ ./Build
$ ./Build test
$ ./Build install
$ ./Build dist

Foo-Reporting-8.01.tar.gz

$ cpan Foo-Everything
  
```

add & commit

Every
 commit
 produces a
 Distro with a
 new version
 number

HTTP GET

installs

/tmp/lib/perl5/site_perl

Foo/Reporting.pm
 Foo/Interfaces.pm
 Foo-Utilities.pm

archives

Finished product!

Foo-1.45.tar.gz

Some Tips:

- * At first, put Everything in one fat Distro.
- * But later, may 1000 Distros bloom!
- * Think about how to name & number versions.
- * Create special accounts for automated jobs.
- * Any SCM and build server will do the job.
- * Know your target Perl environment.

Some Supporting Tools

*CPAN::Mini

*CPAN::Mini::Inject

*CPAN::Site

*Module::Starter

*Dist::Zilla

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