Care and feeding of one-liners

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Those are my principles, and if you don't like them... well, I have others.

-- Groucho Marx

Problem

- You're a "cool perl dood";
  you can whip up a one liner in 1 minute.
- But actually, after testing it, doing the work, and checking that it did it right, you've probably spent 10-20 minutes.
- At 2 one-liners per week, this is 15-30 hours per year.
- Often, you need the same, or very similar code again and again and again …

Some ideas

1. Oh well, that’s life!
   - The virtues of lazyness
2. Keep a notebook
   - But that means using paper … yuck
3. Save each one to a file
   - But then its not a one-liner
   - What order are they used?
4. Post them to perlmonks …

My idea: Makefile

- Put the code into Makefiles, and check into CVS.
- Advantages:
  - Made for little bits of code
  - Easy to integrate bash, perl, octave, etc.
  - Keeps track of order of operations
- Disadvantages:
  - Different *make* programs
  - *make* uses '$' character as special

Example: keep only some files

Escape end of line

Escape $$

```
cleanresults:
    find -type f -name ims*jpg |\
      perl -n\
       -e'chomp;'\
       -e'($$n)=/ims\d-(\d+)\.jpg$$/ or '\
       -e     'die "name:$$_";'\
       \
       -e'unless ($$n=~/((0\d|15|20|30)01)/) {'\
       -e   'print "del $$_\n";'\
       -e   'unlink $$_   '\
       -e      'or die "Cant unlink $$_";'\
       -e'}'
```

Example: test file differences

```
cleanresults-same:
   for dir in *_results/test? ; do \
     echo "Cleaning dir=$$dir" ;\
     pfn="" ;\
     ls -r $$dir/ims*.jpg | \
     while read fn ; do \
       if [ -z $$pfn ] ; then \
         pfn=$$fn ; \
       else \
         if [ -z "`diff -q $$fn $$pfn`" ]; then\
           rm $$pfn ;\
         else \
           echo "$$pfn is different" ;\
         fi ; \
         pfn=$$fn ; \
       fi ; \
     done ;\
   done
```

Don't need to quote bash code

Escape $$

Example: create graphs

```
ERRGRAPH= dir1/test1.gif \
          dir2/test2.gif

$(ERRGRAPH): %.gif: %.txt.bz2
        ( echo "dd=[ ...";\
          bzip2 -dc $< ;\
          echo "];"; \
          echo " \
           dd( 1:420:length(dd),:)=[]; \
           eopen('`pwd`/$@.ps'); \
           eglobpar; \
           ePlotAreaWidth= 50; \
           ePlotAreaHeight=60; \
           eplot(dd(:,1),dd(:,2),'',0); \
           eclose; "; \
         ) | octave -q
         convert -crop 0x0 $@.ps $@
```

List of files to operate on

Rule to create gif from txt.bz2

Insert entire file into input stream

Octave code to create graph in *ps file

imagemagick to convert to gif

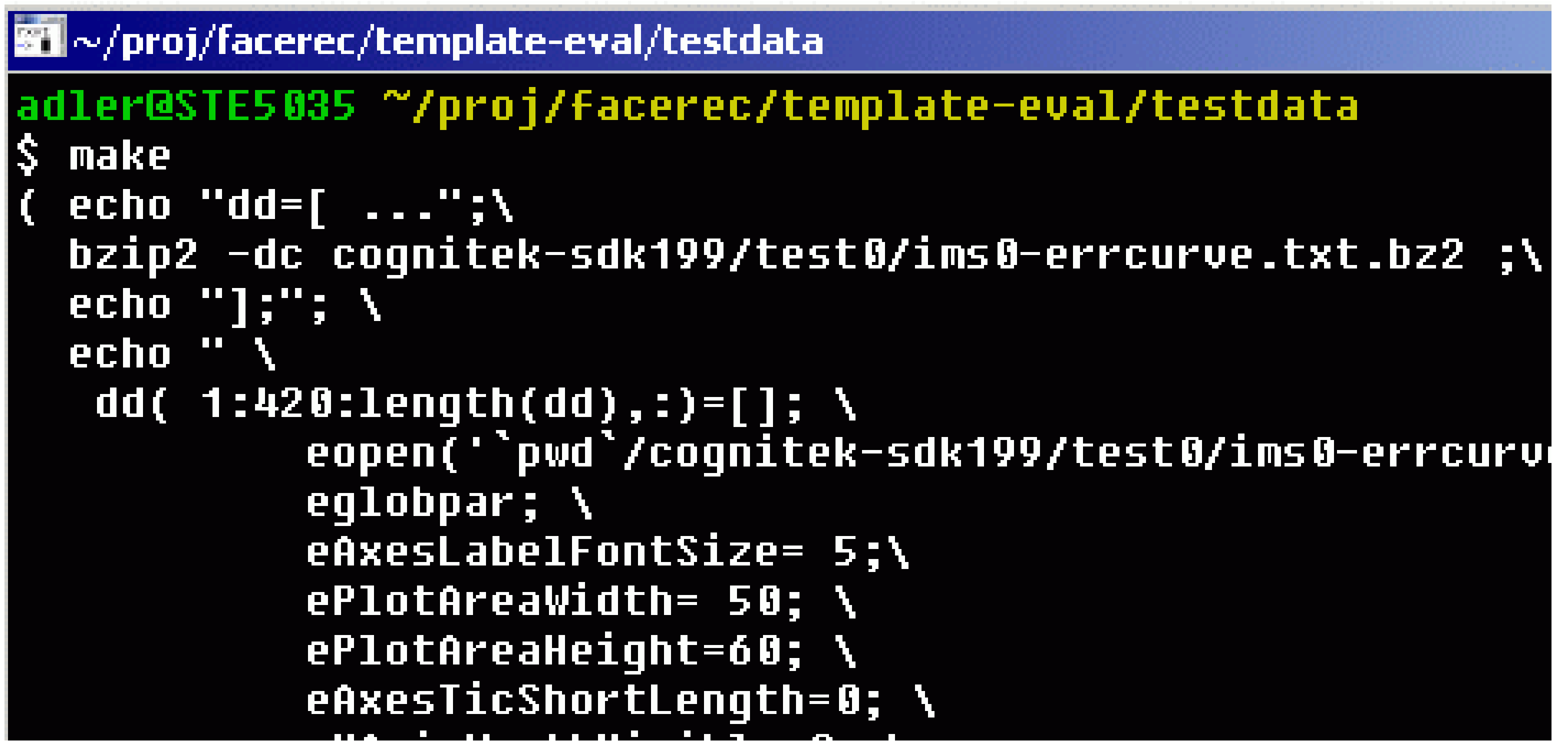
Example: create graphs

```
results.html: $(ERRGRAPH)
    perl -MFile::Find -w\
    -e'print q{'\
    -e'<HTML><HEAD><TITLE>$@</TITLE></HEAD>'\
    -e'<BODY><H1>$@</H1>'\
    -e'<H3>Target Image</H3>'\
    -e'<IMG SRC="./imt1-targ.jpg">'\
    -e'};'\
    \
    -e'for my $$dir qw($^) {'\
    -e  'my @files=();'\
    -e  'find( sub { '\
    -e      'local $$_= $$File::Find::name;'\
    -e      'return unless /ims\d-\d+\.jpg$$/;'\
    -e      'push @files, $$_;'\
    -e    '}, $$dir );'\
    -e  'print qq{<H2>FR Engine: $$dir</H2>};'\
    \
```

Dependencies

Target name

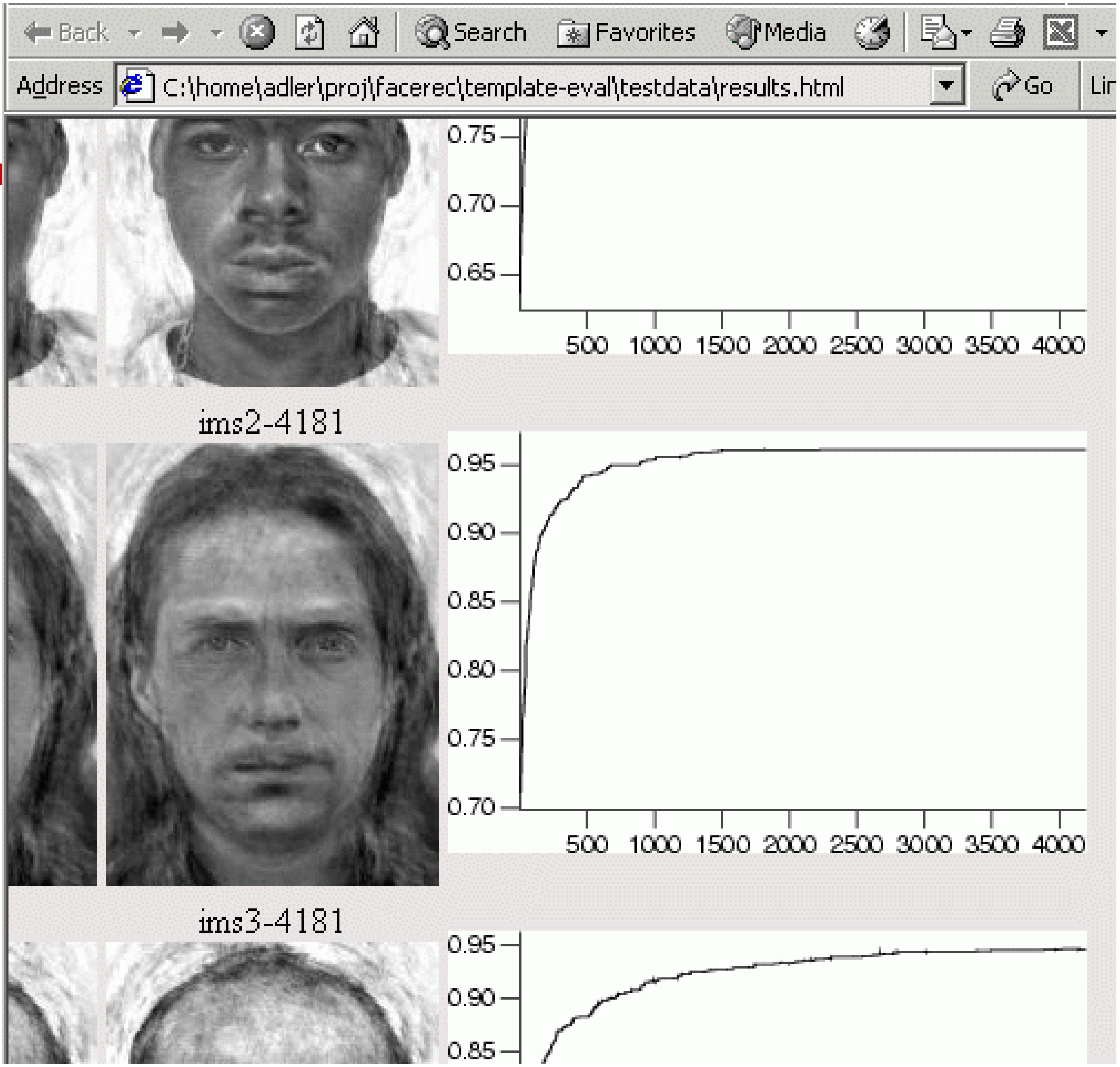
Usage: *make*



```
~/proj/facerec/template-eval/testdata
adler@STE5035 ~/proj/facerec/template-eval/testdata
$ make
( echo "dd=[ ...";\
  bzip2 -dc cognitek-sdk199/test0/ims0-errcurve.txt.bz2 ;\
  echo "];"; \
  echo " \
   dd( 1:420:length(dd),:)=[]; \
           eopen('`pwd`/cognitek-sdk199/test0/ims0-errcurv
           eglobpar; \
           eAxesLabelFontSize= 5;\
           ePlotAreaWidth= 50; \
           ePlotAreaHeight=60; \
           eAxesTicShortLength=0; \
```

Results

web page created which summarizes generated images and graphs



Advantages

- Keeps short code in one place
- Automatic dependencies
  - Large jobs logically break up into smaller ones. Debuging can focus on pieces of job
  - Only works if dependencies are files. No Databases, for example
- Mix languages
- File format, easy to version control