117.7 Building a binary distribution

[This section provides a short overview only...]

Building should proceed differently depending on whether the version of perl you install is already present and used on your system, or is a new version not yet used. The description below assumes that the version is new, so installing its DLLs and *.pm* files will not disrupt the operation of your system even if some intermediate steps are not yet fully working.

The other cases require a little bit more convoluted procedures. Below I suppose that the current version of Perl is `5.8.2`, so the executables are named accordingly.

1. Fully build and test the Perl distribution. Make sure that no tests are failing with `test` and `aout_test` targets; fix the bugs in Perl and the Perl test suite detected by these tests. Make sure that `all_test` make target runs as clean as possible. Check that `os2/perlrexx.cmd` runs fine.

2. Fully install Perl, including `installcmd` target. Copy the generated DLLs to LIBPATH; copy the numbered Perl executables (as in *perl5.8.2.exe*) to PATH; copy `perl_.exe` to PATH as `perl_5.8.2.exe`. Think whether you need backward-compatibility DLLs. In most cases you do not need to install them yet; but sometime this may simplify the following steps.

3. Make sure that `CPAN.pm` can download files from CPAN. If not, you may need to manually install `Net::FTP`.

4. Install the bundle `Bundle::OS2_default`

   ```
   perl5.8.2 -MCPAN -e "install Bundle::OS2_default" < nul |& tee 00cpan_i_1
   ```

   This may take a couple of hours on 1GHz processor (when run the first time). And this should not be necessarily a smooth procedure. Some modules may not specify required dependencies, so one may need to repeat this procedure several times until the results stabilize.

   ```
   perl5.8.2 -MCPAN -e "install Bundle::OS2_default" < nul |& tee 00cpan_i_2
   perl5.8.2 -MCPAN -e "install Bundle::OS2_default" < nul |& tee 00cpan_i_3
   ```

   Even after they stabilize, some tests may fail.

   Fix as many discovered bugs as possible. Document all the bugs which are not fixed, and all the failures with unknown reasons. Inspect the produced logs *00cpan_i_1* to find suspiciously skipped tests, and other fishy events.

   Keep in mind that *installation* of some modules may fail too: for example, the DLLs to update may be already loaded by *CPAN.pm*. Inspect the `install` logs (in the example above *00cpan_i_1* etc) for errors, and install things manually, as in

   ```
   cd $CPANHOME/.cpan/build/Digest-MD5-2.31
   make install
   ```

   Some distributions may fail some tests, but you may want to install them anyway (as above, or via `force install` command of `CPAN.pm` shell-mode).

   Since this procedure may take quite a long time to complete, it makes sense to "freeze" your CPAN configuration by disabling periodic updates of the local copy of CPAN index: set `index_expire` to some big value (I use 365), then save the settings

   ```
   CPAN> o conf index_expire 365
   CPAN> o conf commit
   ```

   Reset back to the default value 1 when you are finished.

5. When satisfied with the results, rerun the `installcmd` target. Now you can copy `perl5.8.2.exe` to `perl.exe`, and install the other OMF-build executables: `perl__.exe` etc. They are ready to be used.