Status of Software Management

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CD Run II Computing Meeting
January 8, 1997

Reporting on work done with
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Outline

- Run 2 Release Area.
- Libraries and Linking.
- More on Linking Options.
- Setting up the environment.
- Working with cvs.

Run 2 Release Area

- Large scale test of Software Management has begun.

- We have installed in the Run 2 release area, the version of the offline package that was in /cdf/upgrade/offline/8_00 (based on offline v7_12t).

```
> setup -d cdfsoft2
Setting CVSROOT for cdfsoft2 repository

> echo $CDFSOFT2_DIR
/cdf/software/dist/releases/1.0.7

> ls $CDFSOFT2_DIR
AbsEnv        cal      g_i        mon      tau
BaBar         cas      generator  muo      tmp
CLHEP         cdfcp    geom       p_u      top
Examples      cdfdb    gmu        part     trk
Framework     cos      gnt        qfl      trs
GNUmakefile   cot      inc        r_n      trybos
HepTuple      cpr      include    results  uipack
ReleaseLog    dic      isl        s_i      ups
SoftRelTools  doc      jet        sim      uti
a_c           dsp      lib        sv2      vtx
bin           e_l      man        svx      ybos
bnk           ele      met        svxii
```

- The system uses cpp for preprocessing.

- Include syntax is now #include "package/file.inc" (e.g. inc/bcs.inc, svxii/svxii.hh, gnt/G3detector.hh).

Libraries and Linking

- We have built all the libraries:

```
> ls $CDFSOFT2_DIR/lib/IRIX5
APPMain.o         libcdfdb.a       libgnt.a      libsvx.a
anmain.o          libclhep.a       libjet.a      libsvxii.a
libAbsEnv.a       libcos.a         libmet.a      libtau.a
libBaBar.a        libcot.a         libmon.a      libtop.a
libHepTuple.a     libcpr.a         libmuo.a      libtrk.a
liba_c.a          libdic.a         libp_u.a      libtrs.a
libapp.a          libdsp.a         libpart.a     libtrybos.a
libappexample.a   libe_l.a         libqfl.a      libuipack.a
libbnk.a          libele.a         libr_n.a      libuti.a
libcal.a          libgenerator.a   libs_i.a      libvtx.a
libcas.a          libgeom.a        libsim.a      libybos.a
libcdfcp.a        libgmu.a         libsv2.a
```

- We have linked acdump against the libraries:

```
> setup offline version_7_12
> cp $CDFSOFT2_DIR/SoftRelTools/GNUmakefile.link_ana \
      GNUmakefile
> ls
GNUmakefile  acdumpev.f
> gmake
> ls
GNUmakefile  acdumpev.f   acdumpev.o   testlink.exe
> pwd
/spool/rharris/testlink
```

- You can change the default executable name:

```
> gmake EXENAME=acdumpev.exe
> ls
GNUmakefile  acdumpev.exe  acdumpev.f   acdumpev.o
```

More on Linking Options

- We recommend you let gmake compile and link to all the source code in your default directory, which should contain just the code for the job.
- Alternatively, you can do things the old way with an options file:
- If gmake finds a file myana.opt in your area, it will only compile and link to those files in myana.opt.

```
> ls
GNUmakefile  acdumpev.f   junk.f   myana.opt
> gmake
> ls
GNUmakefile   acdumpev.o    myana.opt
acdumpev.f    junk.f        testlink.exe
```

- You can change the name of the options file that gmake looks for:

```
> ls
GNUmakefile   acdumpev.f    acdumpev.opt
> gmake OPTFILE=acdumpev.opt
> ls
GNUmakefile   acdumpev.f   acdumpev.o   acdumpev.opt  testlink.exe
```

- And you can set both exename and optfile name:

```
> ls
GNUmakefile   acdumpev.f    acdumpev.opt
> gmake EXENAME=acdumpev.exe OPTFILE=acdumpev.opt
> ls
GNUmakefile  acdumpev.exe  acdumpev.f   acdumpev.o   acdumpev.opt
```

Setting up the Environment

- The UPS setup command sets up the environment.

- Eventually you will be able to setup everything with:

  setup cdfsoft2 for run 2
  setup cdfsoft1 for run 1

  setup cdfsoft2 v1.0.7 for a specific run2 release
  (we have linked 1.0.7 and are working on 1.0.8).

- So far we haven't completed all the environment setup so you must currently do a

  setup offline version_7_12

  to pickup build_job, setup rbio, and get .dab files.

- Soon, you will also want to put the following commands in your .login:

  source ~cdfman/cdf2.cshrc for run2
  source ~cdfman/cdf1.cshrc for run1

  just like you currently source ~cdfman/CDF_BASE for offline version 7_12. This is almost done.

Working with CVS and SoftRelTools

- For more details see CDF 3891.

- The location CVSROOT is setup in cdfsoft2.

```
> setup cdfsoft2
Setting CVSROOT for cdfsoft2 repository
> echo $CVSROOT
cdfcvs@cdfsga.fnal.gov:/cdf/code/cdfcvs/run2
> ls /cdf/code/cdfcvs/run2
AbsEnv        cal     g_i        muo     tau
BaBar         cas     generator  murat   test
CLHEP         cdfcp   geom       p_u     tool
CVSROOT       cdfdb   gmu        part    top
Examples      cos     gnt        qfl     trk
Framework     cot     inc        r_n     trs
HepTuple      cpr     isl        s_i     uipack
SoftRelTools  dic     jet        sim     uti
Trybos        dsp     klaus      sv2     vtx
a_c           e_l     met        svx     ybos
bnk           ele     mon        svxii
```

- To develop a package, first create a "test release" in your area.

```
> newrel -t current testrel2
next, add pkg, checkout or ln -s to your packages, then gmake installdirs
> cd testrel2
> ls
GNUmakefile   doc       lib    results   ups
bin           include   man    tmp
```

- Then add the pakckage to your test release

```
> addpkg jet
   Release 1.0.8 uses jet version V00-00-01, will check that out
   cvs server: Updating jet
   U jet/GNUmakefile
   U jet/etvect.F
   .
   .
   .
   > ls
   GNUmakefile    doc        jet     man       tmp
   bin            include    lib     results   ups
```

- Make and test your modifications, and then see if anybody else has done anything to the package in the meantime.

```
> cvs -n update -A
cvs server: Updating .
M jtc90s.F                        This indicates I modified jtc90s.F
cvs server: Updating ups
```

- CVS will let you know if you know about any difference between your package and the repository.

- If somebody else modified the repository, you need to do a real update of your area with cvs update -A.

- Then you can try and commit back your changes:

```
> cvs commit -m "I added the best jet corrections ever" jtc90s.cdf
```