

RSXAP Code Documentation

Version control

The RSXAP package is now under version control using SUBVERSION on hahn.lbl.gov. The repository can be viewed at <http://hahn.lbl.gov/svn/rsxap>. The SUBVERSION manual is available at <http://svnbook.red-bean.com/en/1.4/index.html>.

The repository's structure follows the SUBVERSION suggestions, and look like this:

```
rsxap/  
  trunk/  
    bin/  
    doc/  
      examples/  
    include/  
    lib/  
    source/  
  branches/  
  tags/  
  r1/
```

Bringing an existing RSXAP under version controlled

First, move the existing work into a backup directory, eg. "pre_svn_rsxap/". This includes the directories bin/, man/, include/, lib/, and source/. The repository only holds those programs and source codes that are part of RSXAP, so if you have a FEFF installation, etc., I suggest you place those in an extras/ directory, probably including an extras/bin/ directory. Then, to get RSXAP from the repository, simply type:

```
svn checkout svn://hahn.lbl.gov/rsxap/trunk/doc-username harry \  
  -password harryssecret  
svn checkout svn://hahn.lbl.gov/rsxap/trunk/bin  
svn checkout svn://hahn.lbl.gov/rsxap/trunk/lib  
svn checkout svn://hahn.lbl.gov/rsxap/trunk/include  
svn checkout svn://hahn.lbl.gov/rsxap/trunk/source
```

Changes from the original, non-versioned RSXAP organization

- No longer using links for main names to current versions (no rsfit -> rsfit36, for instance). If you need to work with a different version, give it a different name
- placed older source for codes that are no longer necessary, but might ruffle some feathers if they are completely eradicated, are places in source/antiques.

- Old (pre-svn) versions and the `current/` directory link are not in the repository (we're replacing that system, right?), so a code is typically in something like `source/rsfit`, not `source/rsfit/current`.
- All extraneous files have been erased! Some of these may have been sample input files used in debugging. In some cases, these are now in `doc/examples`, but this directory needs some attention. It should have examples that work, and I haven't checked into that.

Committing code to SVN

One of the great things about svn is how easy it is to work with files. First, you should update the repository from `~exafs/source/` with `svn update`. Once you have your complete, checked-out version, you simply edit the file you want to change, then within that directory you simply type: `svn commit -m "Note for the log"`, and it remembers who you are (at least after the first authentication), and commits the file to the repository. Things get more complicated if there is a conflict (like someone checked out a file since you did and made changes before you committed yours. See the SUBVERSION manual for how to deal with this situation, but the system does a good job of providing tools to rectify conflicts.

Some rules for committing code to RSXAP

- Do NOT commit `.o` or executable files
- When making changes to libraries, *consider* writing a note to "ChangeLog" file.

Notes regarding my initial port of RSXAP to SUBVERSION

- When porting sureduce, found that version on `exafs.ucsc.edu` uses its own `sab_cor.F`, rather than the one in `EXAFS.a`. Is it OK to use the one in `EXAFS.a`?
- manipulate ported ok, but gives errors when running...
- Many "extra" codes, such as `atoms`, `feff`, etc., are now in `extras/` rather than `source/`. These are NOT part of RSXAP, and so are not included in the svn tree.

The HAHN svnserv server

`hahn.lbl.gov` is running the Apache svn server only for looking at the repository. The repository is really run with the svnserv server, which handles the authentication through an encrypted password scheme. You will need to contact me by phone (Corwin Booth, 510-486-6079) to get a username/password pair for accessing the repository. Other than the password, all communication is in cleartext.