decompose - building from source

Instructions on how to build decompose from source.

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1 Dependencies

1.1 CellML DOM API

Currently requires the subversion trunk version of the Auckland implementation of the CellML API. See the CellMLSimulator build instructions for more information on getting the CellML API ready for use.

1.2 libxml2

The CellML API also requires libxml2 to be present, so assuming you get that to build you should be fine.

2 CMake - cross-platform make

`decompose` uses the CMake build system.

In the `decompose` source tree there are modules for finding the required header and library files described above. Unless you have installed everything in the system folders, you need to provide a little bit of help to CMake in order to find all the required files. Here is what I use, based on the install paths from above and using a `csh`...

```
> setenv CMAKE_INCLUDE_PATH $HOME/std-libs/CellML-new-CCGS/include
> setenv CMAKE_LIBRARY_PATH $HOME/std-libs/CellML-new-CCGS/lib
```

`CMAKE_INCLUDE_PATH` is used to add extra paths to search for the required header files and `CMAKE_LIBRARY_PATH` the required libraries.

3 decompose

The `decompose` source is currently only available via the SourceForge.net subversion respository. You can grab the source using:

```
>   svn checkout https://cellml.svn.sourceforge.net/svnroot/cellml/decompose/trunk
  decompose
```

for the current `trunk` code.

Once you have the source checked out, all the dependencies installed, and set the CMake environment variables then you're all set to try building `decompose`. I generally make a `build` directory inside `decompose`, but you should be able to build it from anywhere. The `CMAKE_BUILD_TYPE` is used to control the type of build, with `Debug` and `Release` being the two tested types. Something like this...

```
> cd decompose
```

```
> mkdir -p build/debug
> cd build/debug
> cmake -DCMAKE_BUILD_TYPE=Debug ../..
> make
> cd ../..
> mkdir -p build/release
> cd build/release
> cmake -DCMAKE_BUILD_TYPE=Release ../..
> make
```

If you are building somewhere else, simply replace `../..` with the path to the `decompose` source directory. Thats pretty much it...