RHEOS Versioning - A Brief Overview

Abstract

This document is a short explanation of how the RHEOS versioning procedure works, and how it relates to documentation, CI testing and the RHEOS central package repository.

1 Basic Versioning Procedure

```
function _derivCD(tol)
    x = Vector(0.0:0.001:1.5)
    y = x.^2
    dy = 2*x
    dy_numeric = RHEOS.derivCD(y, x)
    isapprox(dy_numeric, dy, atol=tol)
end
@test _derivCD(tol)
```

This function tests the central difference derivative function in RHEOS. Notice that although it is an approximate test it still returns a discrete boolean true/-false value indicating whether or not the result is within a prescribed absolute tolerance. (In this case the tol used is defined as a global constant earlier in the source file.)

2 Testing Considerations

The RHEOS github repository is set-up with Travis CI and Appveyor to test on their Linux and Windows servers respectively. If any of the tests fail, this will be indicated on the appropriate badge in the github repository readme page.

If all tests pass locally, but fail on either Travis CI or Appveyor you will need to investigate. To do this you should log in to either Travis CI (https://travis-ci.org/) or Appveyor (https://www.appveyor.com/) and find the build whose test has failed. This will show the terminal window, the same as would be displayed as if you had the tests locally, so you can identify which test has failed.

3 Relation to Documentation