Subject: Unit Testing
Posted by Robbie on Wed, 03 Jan 2007 02:14:09 GMT

Hi,

Are there any implementations of Unit Testing in IDL yet? I've put
together a white paper for unit testing in IDL. It is fairly straight
forward, and I've tried to make it easy to run tests of currently
compiled code. However, there is no point implementing it if someone
has a better idea of how to go about unit testing.

http://www.barnett.id.au/idl/UnitRun.html

Robbie

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UnitRun is an adaptation of testing frameworks such as NUnit, JUnit and
PyUnit. The final aim of this project is to fully support xUnit testing
automation, including support for fixtures.
Unit test procedures
Unit tests are called using specially named test procedures.
Expected procedure names:

   * hashtable__test
   * hashtable__test0
   * hashtable__test1
   * hashtable__test0000445

A simple test case

unitSearch

```
pro hashtable__test1
  obj = obj_new('hashtable')
  obj -> Add, 'one', 1
  unitAssert, obj -> isContained('one')
  obj_destroy, obj
end
```

The unitSearch directive indicates that all subsequent test procedures
should be included as unit tests. The unitAssert procedure reports the
result of the test.

   1. The unitAssert procedure reports the name of the test procedure

(see HELP, CALLS=calls)
  2. The unitAssert procedure reports <success> if the argument is
greater than one
  3. The unitAssert procedure reports <fail> in any other circumstance
including unhandled execptions

Running tests

reslove_routine, 'hashtable__test1'
unitRun

The unitRun procedure looks for all specially named test procedures.
All test procedures are re-resolved. Only procedures with the
unitSearch directive will be included in unit test.

unitRun, ['hashtable__test1','hashtable__test2']

The unitRun procedure can be used to manually call a sequence of test
procedures. In this case procedures are called directly without paying
attention to unitSearch.

unitRun, LOG_FILE='unitRun.log'

The unitRun procedure can dump the test results to a log file instead
of dumping the results to the IDL command line.
Expected exceptions

```
pro hashtable__test2
  obj = obj_new('hashtable')
  obj -> Add, 'one', 1
  unitException, 'obj -> Add, 5, 6'
  obj_destroy, obj
end
```

The unitException procedure executes a single IDL statement which is
expected to result in an exception. The unitException does not
currently distinguish between message blocks or names.

  1. The unitException procedure reports <success> if an exeception
was encountered
  2. The unitException procedure reports <fail> if no exception was
encountered