

Ticket #7296 (new Bugs)**Bug-fix and improvements to test utility functions**Opened **3 days** agoLast modified **4 minutes** agoReported by: Marco Guazzone
<marco.guazzone@...>Owned by: **guwi17**Milestone: **To Be Determined**Component: **uBLAS**Version: **Boost 1.52.0**Severity: **Problem**

Keywords:

Cc:

Description

Three years ago I introduced in `libs/numeric/ublas/test/utis` a small set of utility functions for testing purpose.

Now, I corrected some bugs and added new and hopefully useful functions.

Furthermore, I fixed the license part.

I attach a patch file along with the whole include file.

I tested it against the following tests:

```
begin_end
num_columns
num_rows
size
test_complex_norms
```

and all works.

I had to skip the following tests since they fail (not for the new version of `utis.hpp`):

```
test_assignment
test_coordinate_matrix_sort
test_inplace_solve
```

Could you add it?

Attachments

- **utis.patch** (10.1 KB) - added by Marco Guazzone <marco.guazzone@...> **3 days** ago.
Patch file for `utis.hpp`
- **utis.hpp** (8.6 KB) - added by Marco Guazzone <marco.guazzone@...> **3 days** ago.
The new (i.e., already patched) `utis.hpp`
- **utis-new.patch** (12.5 KB) - added by Marco Guazzone <marco.guazzone@...> **2 days** ago.
New patch file for `utis.hpp`
- **utis.2.hpp** (11.0 KB) - added by Marco Guazzone <marco.guazzone@...> **2 days** ago.
The new (i.e., already patched by `utis-new.patch`) `utis.hpp`
- **utis-201208280915.patch** (12.5 KB) - added by Marco Guazzone <marco.guazzone@...> **2 days** ago.
Patch file for `utis.hpp` to be applied against the version you currently find in boost trunk
- **utis_UBLA_UBLAS-201208280915.patch** (1.2 KB) - added by Marco Guazzone <marco.guazzone@...> **2 days** ago.

Patch file for `utils.hpp` to be applied against the version of `utils.hpp` patched with `utils-new.patch` (i.e., the one named `utils.2.hpp`)

- **`utils.3.hpp`** (11.0 KB) - added by Marco Guazzone <marco.guazzone@...> **2 days** ago.
The new (i.e., already patched by `utils-201208280915.patch`) `utils.hpp` file.
- **`utils-fix_complex-201208281922.patch`** (7.9 KB) - added by Marco Guazzone <marco.guazzone@...> **37 hours** ago.
Patch file for `utils.hpp` to make it works with complex numbers. To be applied to the version of `utils.hpp` in the current boost trunk.
- **`utils.4.hpp`** (14.3 KB) - added by Marco Guazzone <marco.guazzone@...> **37 hours** ago.
The new `utils.hpp` file that you should obtain after applying the `utils-fix_complex-201208281922.patch` patch.
- **`test_ticket7296.cpp`** (8.1 KB) - added by Marco Guazzone <marco.guazzone@...> **37 hours** ago.
Test case for `utils.hpp`. It also shows that now `utils.hpp` works with complex value types.
- **`utils-201208301042.patch`** (19.0 KB) - added by Marco Guazzone <marco.guazzone@...> **2 minutes** ago.
Patch file for `utils.hpp` to be applied against `utils.4.hpp`
- **`utils.5.hpp`** (17.7 KB) - added by Marco Guazzone <marco.guazzone@...> **76 seconds** ago.
The new patched `utils.hpp` (i.e., the one resulting after applying patch `utils-201208301042.patch`)
- **`test_ticket7296.2.cpp`** (10.9 KB) - added by Marco Guazzone <marco.guazzone@...> **9 seconds** ago.
The updated `test_ticket7296.cpp` for the new version of `utils.hpp` named `utils.5.hpp`

Change History

Changed 3 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment `utils.patch`** added

Patch file for `utils.hpp`

Changed 3 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment `utils.hpp`** added

The new (i.e., already patched) `utils.hpp`

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

comment:1

The previously attached patch contained simpler macros but some output messages was less informative (for the user). Now, with the new attached patch `utils-new.patch`, those output messages are again informative.

Sorry for the inconvenience.

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment `utils-new.patch`** added

New patch file for `utils.hpp`

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment `utils.2.hpp`** added

The new (i.e., already patched by `utils-new.patch`) `utils.hpp`

Changed 2 days ago by guwi17

comment:2

(In [\[80267\]](#)) boost/numeric/ublas/triangular.hpp - applied patch, see [#4024](#)
libs/numeric/ublas/test/test_inplace_solve.cpp - fixed includes

libs/numeric/ublas/test/utis.hpp - applied patch (after s/BOOST_UBLA_TEST
/BOOST_UBLAS_TEST/g), see [#7296](#)

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

comment:3

The previous patch file utis-new.patch contained bad macro names:
BOOST_UBLA_TEST_CHECK_EQ and BOOST_UBLA_TEST_CHECK_EQUAL. Specifically, UBLA_
should be UBLAS_. The new attached patch fix this.

I attach two patches:

- utis-201208280915.patch is the patch file to be used if applied against the original (unpatched) utis.hpp (i.e., the one you find in the actual boost trunk).
- utis-201208280915.patch is the patch file to be used if applied against the patched utis.hpp (i.e., the ones named utis.2.hpp in the above attachments).

As before, I also attach the new (patched) version of utis.hpp.

Again, sorry for this inconvenience, and thanks to *guwi17* for pointing it out.

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment** [utis-201208280915.patch](#) added

Patch file for utis.hpp to be applied against the version you currently find in boost trunk

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment** [utis_UBLA_UBLAS-201208280915.patch](#) added

Patch file for utis.hpp to be applied against the version of utis.hpp patched with
utis-new.patch (i.e., the one named utis.2.hpp)

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

- **attachment** [utis.3.hpp](#) added

The new (i.e., already patched by utis-201208280915.patch) utis.hpp file.

Changed 2 days ago by Marco Guazzone <marco.guazzone@...>

comment:4

In the last my comment, read the second utis-201208280915.patch as
utis_UBLA_UBLAS-201208280915.patch.

Changed 37 hours ago by Marco Guazzone <marco.guazzone@...>

comment:5

To date, some macros in utis.hpp fail when the value type has a complex type.

I've tried to fix it and to test the fix I have created a test-suite for the macros contained
in utis.hpp.

I'm going to upload the patch file together with the test suite.

Changed 37 hours ago by Marco Guazzone <marco.guazzone@...>

- **attachment** [utis-fix_complex-201208281922.patch](#) added

Patch file for utis.hpp to make it works with complex numbers. To be applied to the
version of utis.hpp in the current boost trunk.

Changed 37 hours ago by Marco Guazzone <marco.guazzone@...>

■ **attachment** [utils.4.hpp](#) added

The new `utils.hpp` file that you should obtain after applying the `utils-fix_complex-201208281922.patch` patch.

Changed 37 hours ago by Marco Guazzone <marco.guazzone@...>

■ **attachment** [test_ticket7296.cpp](#) added

Test case for `utils.hpp`. It also shows that now `utils.hpp` works with complex value types.

Changed 4 minutes ago by Marco Guazzone <marco.guazzone@...>

comment:6

I've tried to make some macro more robust to complex expressions by using (when needed) macro expansion inside parenthesis. Furthermore,

- I fixed a bug: I forgot to add an increment of the variable used to count test failures
- I added two more macros for performing relative closeness comparison in case of vectors and matrices
- I replaced the use of `unsigned long` with `std::size_t` (I think it's better)
- I enhanced the doc

As usual, I add the new patch file (wrt `utils.4.hpp`) together with the whole new `utils.hpp` file and the updated test-case.

Changed 2 minutes ago by Marco Guazzone <marco.guazzone@...>

■ **attachment** [utils-201208301042.patch](#) added

Patch file for `utils.hpp` to be applied against `utils.4.hpp`

Changed 76 seconds ago by Marco Guazzone <marco.guazzone@...>

■ **attachment** [utils.5.hpp](#) added

The new patched `utils.hpp` (i.e., the one resulting after applying patch `utils-201208301042.patch`)

Changed 10 seconds ago by Marco Guazzone <marco.guazzone@...>

■ **attachment** [test_ticket7296.2.cpp](#) added

The updated `test_ticket7296.cpp` for the new version of `utils.hpp` named `utils.5.hpp`