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d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these

materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

```
This library is free software; you can redistribute it and/or  
modify it under the terms of the GNU Lesser General Public  
License as published by the Free Software Foundation; either  
version 2.1 of the License, or (at your option) any later version.
```

```
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but WITHOUT ANY WARRANTY; without even the implied warranty of  
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Lesser General Public License for more details.
```

```
You should have received a copy of the GNU Lesser General Public  
License along with this library; if not, write to the Free Software  
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
```

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the  
library `Frob' (a library for tweaking knobs) written by James Random Hacker.
```

```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
```

That's all there is to it!

1.3 ng-bootstrap 4.2.1

1.3.1 Available under license :

The MIT License (MIT)

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1.4 libwebsockets 2.2

1.4.1 Available under license :

Libwebsockets and included programs are provided under the terms of the GNU Library General Public License (LGPL) 2.1, with the following exceptions:

1) Static linking of programs with the libwebsockets library does not constitute a derivative work and does not require the author to provide source code for the program, use the shared libwebsockets libraries, or link their program against a user-supplied version of libwebsockets.

If you link the program to a modified version of libwebsockets, then the changes to libwebsockets must be provided under the terms of the LGPL in sections 1, 2, and 4.

2) You do not have to provide a copy of the libwebsockets license with programs that are linked to the libwebsockets library, nor do you have to identify the libwebsockets license in your program or documentation as required by section 6 of the LGPL.

However, programs must still identify their use of libwebsockets. The following example statement can be included in user documentation to satisfy this requirement:

"[program] is based in part on the work of the libwebsockets project (<https://libwebsockets.org>)"

3) Some sources included have their own, more liberal licenses, or options to get original sources with the liberal terms.

Original liberal license retained

- lib/sha-1.c - 3-clause BSD license retained, link to original
- win32port/zlib - ZLIB license (see zlib.h)

Relicensed to libwebsocket license

- lib/base64-decode.c - relicensed to LGPL2.1+SLE, link to original
- lib/daemonize.c - relicensed from Public Domain to LGPL2.1+SLE, link to original Public Domain version

Public Domain (CC-zero) to simplify reuse

- test-server/*.c
- test-server/*.h
- lws/*.*

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Version 2.1, February 1999

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as the successor of the GNU Library Public License, version 2, hence
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We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using

a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices

stating that you changed the files and the date of any change.

c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in

these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

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1.5 rxjs 6.4.0

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1.6 ngx-translate-http-loader 4.0.0

1.6.1 Available under license :

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1.7 ngx-cookie-service 1.0.10

1.8 boost 1.62.0

1.8.1 Available under license :

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```

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```

```
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```

```
#include <boost/mpl/push_back.hpp>
```

```

#include <boost/mpl/quote.hpp>
#include <boost/mpl/transform.hpp>
#include <boost/mpl/vector.hpp>

template <typename X>
struct f { using type = X; };

template <int i>
struct t { };

using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;

using result = boost::mpl::transform<vector, boost::mpl::quote1<f>>::type;

int main() { }
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />

  <title>License &#8212; Boost.HigherOrderFunctions 0.6 documentation</title>

  <link rel="stylesheet" href="../../_static/boostbook.css" type="text/css" />
  <link rel="stylesheet" href="../../_static/pygments.css" type="text/css" />

  <script type="text/javascript">
    var DOCUMENTATION_OPTIONS = {
      URL_ROOT:    './..',
      VERSION:    '0.6',
      COLLAPSE_INDEX: false,
      FILE_SUFFIX: '.html',
      HAS_SOURCE:  true,
      SOURCELINK_SUFFIX: '.txt'
    };
  </script>
  <script type="text/javascript" src="../../_static/jquery.js"></script>
  <script type="text/javascript" src="../../_static/underscore.js"></script>
  <script type="text/javascript" src="../../_static/doctools.js"></script>
  <link rel="index" title="Index" href="../../genindex.html" />
  <link rel="search" title="Search" href="../../search.html" />
  <link rel="prev" title="Acknowledgements" href="acknowledgements.html" />
</head>
<body role="document">

```

```
<table cellpadding="2" width="100%"><tr>
<td valign="top"></td>
</tr></table>
```

```
<div class="spirit-nav">
<a accesskey="p" href="acknowledgements.html"></a>
<a accesskey="u" href="../index.html"></a>
<a accesskey="h" href="../index.html"></a>
<a accesskey="n" ></a>
</div>
```

```
<div class="document">
<div class="chapter">
<div class="body" role="main">
```

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```

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```

```
    (http://www.boost.org/LICENSE\_1\_0.txt)
```

```
--><div class="section" id="license">
```

```
<h1>License<a class="headerlink" href="#license" title="Permalink to this headline"></a></h1>
```

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```

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```

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ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER</p>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<div class="clearer"></div>
```

```
</div>
```

```

<div class="footer" role="contentinfo">
<table xmlns:rev="http://www.cs.rpi.edu/~gregod/boost/tools/doc/revision" width="100%"><tr>
<td align="left"></td>
<td align="right"><div class="copyright-footer">
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    <a href="http://www.boost.org/LICENSE_1_0.txt"
target="_top">http://www.boost.org/LICENSE_1_0.txt</a>)
    </p>
</div></td>
</tr></table>
</div>
</body>
</html>
<!DOCTYPE html>
<html>
<head></head>
<body>
<h3>
    Copyright Test
</h3>
<p class="copyright">
    1963, 1964, 1965 Jane Doe
</p>
<p class="copyright">
    2018 Joe Blow, John Coe
</p>
<p class="copyright">
    1977, 1985 Someone else
</p>
</body>
</html>

```

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//

```
// See http://www.boost.org/libs/intrusive for documentation.
```

```
//
```

```
////////////////////////////////////
```

```
#ifndef BOOST_INTRUSIVE_DETAIL_MPL_HPP
```

```
#define BOOST_INTRUSIVE_DETAIL_MPL_HPP
```

```
#ifndef BOOST_CONFIG_HPP
```

```
# include <boost/config.hpp>
```

```
#endif
```

```
#if defined(BOOST_HAS_PRAGMA_ONCE)
```

```
# pragma once
```

```
#endif
```

```
#include <boost/intrusive/detail/config_begin.hpp>
```

```
#include <boost/move/detail/type_traits.hpp>
```

```
#include <cstdint>
```

```
namespace boost {
```

```
namespace intrusive {
```

```
namespace detail {
```

```
using boost::move_detail::is_same;
```

```
using boost::move_detail::add_const;
```

```
using boost::move_detail::remove_const;
```

```
using boost::move_detail::remove_cv;
```

```
using boost::move_detail::remove_reference;
```

```
using boost::move_detail::add_reference;
```

```
using boost::move_detail::remove_pointer;
```

```
using boost::move_detail::add_pointer;
```

```
using boost::move_detail::true_type;
```

```
using boost::move_detail::false_type;
```

```
using boost::move_detail::enable_if_c;
```

```
using boost::move_detail::enable_if;
```

```
using boost::move_detail::disable_if_c;
```

```
using boost::move_detail::disable_if;
```

```
using boost::move_detail::is_convertible;
```

```
using boost::move_detail::if_c;
```

```
using boost::move_detail::if_;
```

```
using boost::move_detail::is_const;
```

```
using boost::move_detail::identity;
```

```
using boost::move_detail::alignment_of;
```

```
using boost::move_detail::is_empty;
```

```
using boost::move_detail::addressof;
```

```
using boost::move_detail::integral_constant;
```

```
using boost::move_detail::enable_if_convertible;
```

```
using boost::move_detail::disable_if_convertible;
```

```

using boost::move_detail::bool_;
using boost::move_detail::true_;
using boost::move_detail::false_;
using boost::move_detail::yes_type;
using boost::move_detail::no_type;
using boost::move_detail::apply;
using boost::move_detail::eval_if_c;
using boost::move_detail::eval_if;
using boost::move_detail::unvoid_ref;
using boost::move_detail::add_const_if_c;

template<std::size_t S>
struct ls_zeros
{
    static const std::size_t value = (S & std::size_t(1)) ? 0 : (1 + ls_zeros<(S>>1u)>::value);
};

template<>
struct ls_zeros<0>
{
    static const std::size_t value = 0;
};

template<>
struct ls_zeros<1>
{
    static const std::size_t value = 0;
};

// Infrastructure for providing a default type for T::TNAME if absent.
#define BOOST_INTRUSIVE_INSTANTIATE_DEFAULT_TYPE_TMPLT(TNAME) \
    template <typename T> \
    struct boost_intrusive_has_type_ ## TNAME \
    { \
        template <typename X> \
        static char test(int, typename X::TNAME*); \
        \
        template <typename X> \
        static int test(...); \
        \
        static const bool value = (1 == sizeof(test<T>(0, 0))); \
    }; \
    \
    template <typename T, typename DefaultType> \
    struct boost_intrusive_default_type_ ## TNAME \
    { \
        struct DefaultWrap { typedef DefaultType TNAME; }; \
    }

```

```

typedef typename
    ::boost::intrusive::detail::if_c
    < boost_intrusive_has_type_ ## TNAME<T>::value
    , T, DefaultWrap>::type::TNAME type;
};
//

#define BOOST_INTRUSIVE_OBTAIN_TYPE_WITH_DEFAULT(INSTANTIATION_NS_PREFIX, T,
TNAME, TIMPL) \
    typename INSTANTIATION_NS_PREFIX
    boost_intrusive_default_type_ ## TNAME< T, TIMPL >::type
//

#define BOOST_INTRUSIVE_HAS_TYPE(INSTANTIATION_NS_PREFIX, T, TNAME) \
    INSTANTIATION_NS_PREFIX
    boost_intrusive_has_type_ ## TNAME< T >::value
//

#define BOOST_INTRUSIVE_INSTANTIATE_EVAL_DEFAULT_TYPE_TMPLT(TNAME)\
template <typename T, typename DefaultType>
struct boost_intrusive_eval_default_type_ ## TNAME
{
    template <typename X>
    static char test(int, typename X::TNAME*);

    template <typename X>
    static int test(...);

    struct DefaultWrap
    { typedef typename DefaultType::type TNAME; };

    static const bool value = (1 == sizeof(test<T>(0, 0)));

    typedef typename
        ::boost::intrusive::detail::eval_if_c
        < value
        , ::boost::intrusive::detail::identity<T>
        , ::boost::intrusive::detail::identity<DefaultWrap>
        >::type::TNAME type;
};
//

#define BOOST_INTRUSIVE_OBTAIN_TYPE_WITH_EVAL_DEFAULT(INSTANTIATION_NS_PREFIX, T,
TNAME, TIMPL) \
    typename INSTANTIATION_NS_PREFIX
    boost_intrusive_eval_default_type_ ## TNAME< T, TIMPL >::type
//

```



```

#define BOOST_INTRUSIVE_INTERNAL_STATIC_BOOL_IS_TRUE(TRAITS_PREFIX,
TYPEDEF_TO_FIND) \
template <class T>\
struct TRAITS_PREFIX##_bool\
{\
    template<bool Add>\
    struct two_or_three {yes_type _[2 + Add];};\
    template <class U> static yes_type test(...);\
    template <class U> static two_or_three<U::TYPEDEF_TO_FIND> test (int);\
    static const std::size_t value = sizeof(test<T>(0));\
};\
\
template <class T>\
struct TRAITS_PREFIX##_bool_is_true\
{\
    static const bool value = TRAITS_PREFIX##_bool<T>::value > sizeof(yes_type)*2;\
};\
//

#define BOOST_INTRUSIVE_HAS_STATIC_MEMBER_FUNC_SIGNATURE(TRAITS_NAME,
FUNC_NAME) \
template <typename U, typename Signature> \
class TRAITS_NAME \
{ \
private: \
    template<Signature> struct helper;\
    template<typename T> \
    static ::boost::intrusive::detail::yes_type test(helper<&T::FUNC_NAME>*); \
    template<typename T> static ::boost::intrusive::detail::no_type test(...); \
public: \
    static const bool value = sizeof(test<U>(0)) == sizeof(::boost::intrusive::detail::yes_type); \
}; \
//

#define BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED(TRAITS_NAME, FUNC_NAME) \
template <typename Type> \
struct TRAITS_NAME \
{ \
    struct BaseMixin \
    { \
        void FUNC_NAME(); \
    }; \
    struct Base : public Type, public BaseMixin { Base(); }; \
    template <typename T, T t> class Helper{}; \
    template <typename U> \
    static ::boost::intrusive::detail::no_type test(U*, Helper<void (BaseMixin::*)(), &U::FUNC_NAME>* = 0); \
    static ::boost::intrusive::detail::yes_type test(...); \
    static const bool value = sizeof(::boost::intrusive::detail::yes_type) == sizeof(test((Base*)0)); \
}; \

```

```

};\
//

#define BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED_IGNORE_SIGNATURE(TRAIT_NAME,
FUNC_NAME)\
BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED(TRAIT_NAME##_ignore_signature, FUNC_NAME)
\
\
template <typename Type, class> \
struct TRAIT_NAME \
: public TRAIT_NAME##_ignore_signature<Type> \
{ };\
//

} //namespace detail
} //namespace intrusive
} //namespace boost

#include <boost/intrusive/detail/config_end.hpp>

#endif //BOOST_INTRUSIVE_DETAIL_MPL_HPP
=====
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```

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Examples:

- adapted geometry types e.g. array, Boost.Polygon
- implemented file-format e.g. WKB
- implemented specific strategy or algorithm e.g. intersections

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]

[section:mpl MPL Interoperability]

All the value based traits in this library conform to MPL's requirements for an [@../.../libs/mpl/doc/refmanual/integral-constant.html Integral Constant type].

Please note that these types no longer inherit from ``mpl::true_`` or ``mpl::false_`` etc, and the library will no longer implicitly include any MPL header. However there is an implicit conversion from ``integral_constant`` to the corresponding MPL types, therefore tag-dispatching that uses MPL types in function overloads will still work as before.

[endsect]

[article Invalid copyright years

[quickbook 1.5]

[copyright 2010-2001 Timequake man]

]

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[article Copyright Test

[quickbook 1.5]

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]

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=US-ASCII">

<title>MPL Interoperability</title>

<link rel="stylesheet" href="../../../../doc/src/boostbook.css" type="text/css">

```

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<link rel="up" href="../index.html" title="Chapter&#160;1.&#160;Boost.TypeTraits">
<link rel="prev" href="intrinsic.html" title="Support for Compiler Intrinsics">
<link rel="next" href="examples.html" title="Examples">
</head>
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<td align="center"><a href="http://www.boost.org/users/people.html">People</a></td>
<td align="center"><a href="http://www.boost.org/users/faq.html">FAQ</a></td>
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href="../index.html"></a><a accesskey="n"
href="examples.html"></a>
</div>
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<a name="boost_typedtraits.mpl"></a><a class="link" href="mpl.html" title="MPL Interoperability">MPL
Interoperability</a>
</h2></div></div></div>
<p>
All the value based traits in this library conform to MPL's requirements for
an <a href="../../../../../libs/mpl/doc/refmanual/integral-constant.html" target="_top">Integral
Constant type</a>.
</p>
<p>
Please note that these types no longer inherit from <code class="computeroutput"><span
class="identifier">mpl</span><span class="special">::</span><span class="identifier">true_</span></code> or
<code class="computeroutput"><span class="identifier">mpl</span><span class="special">::</span><span
class="identifier">false_</span></code> etc, and the library will no longer
implicitly include any MPL header. However there is an implicit conversion
from <code class="computeroutput"><span class="identifier">integral_constant</span></code> to the
corresponding MPL types, therefore tag-dispatching that uses MPL types in function
overloads will still work as before.
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<td align="left"></td>
<td align="right"><div class="copyright-footer">Copyright &#169; 2000, 2011 Adobe Systems Inc, David
Abrahams,
Frederic Bron, Steve Cleary, Beman Dawes, Aleksey Gurtovoy, Howard Hinnant,

```

Jesse Jones, Mat Marcus, Itay Maman, John Maddock, Alexander Nasonov, Thorsten Ottosen, Roman Perepelitsa, Robert Ramey, Jeremy Siek, Robert Stewart and Steven Watanabe

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</div></td>
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href="..index.html"></a><a accesskey="n"
href="examples.html"></a>
</div>
</body>
</html>
```

```
[/
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```

```
]
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```
var group__group_ext_mpl =
[
  [ "integral_c", "structboost_1_1mpl_1_1integral__c.html", null ],
  [ "list", "structboost_1_1mpl_1_1list.html", null ],
  [ "vector", "structboost_1_1mpl_1_1vector.html", null ]
];
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```

```
#include <boost/mpl/push_back.hpp>
#include <boost/mpl/vector.hpp>
```

```
template <int i>
struct t { };
```

```
using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;
```

```
int main() { }
////////////////////////////////////
//
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// http://www.boost.org/LICENSE_1_0.txt)
//
// See http://www.boost.org/libs/container for documentation.
//
////////////////////////////////////
```

```
#ifndef BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
#define BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
```

```
#ifndef BOOST_CONFIG_HPP
# include <boost/config.hpp>
#endif
```

```
#if defined(BOOST_HAS_PRAGMA_ONCE)
# pragma once
#endif
```

```
#include <boost/container/detail/config_begin.hpp>
#include <boost/container/detail/workaround.hpp>
#include <boost/move/detail/type_traits.hpp>
#include <boost/intrusive/detail/mpl.hpp>
```

```

#include <cstdint>

namespace boost {
namespace container {
namespace dtl {

using boost::move_detail::integral_constant;
using boost::move_detail::true_type;
using boost::move_detail::false_type;
using boost::move_detail::enable_if_c;
using boost::move_detail::enable_if;
using boost::move_detail::enable_if_convertible;
using boost::move_detail::disable_if_c;
using boost::move_detail::disable_if;
using boost::move_detail::disable_if_convertible;
using boost::move_detail::is_convertible;
using boost::move_detail::if_c;
using boost::move_detail::if_;
using boost::move_detail::identity;
using boost::move_detail::bool_;
using boost::move_detail::true_;
using boost::move_detail::false_;
using boost::move_detail::yes_type;
using boost::move_detail::no_type;
using boost::move_detail::bool__;
using boost::move_detail::true__;
using boost::move_detail::false__;
using boost::move_detail::unvoid_ref;
using boost::move_detail::and_;
using boost::move_detail::or_;
using boost::move_detail::not_;
using boost::move_detail::enable_if_and;
using boost::move_detail::disable_if_and;
using boost::move_detail::enable_if_or;
using boost::move_detail::disable_if_or;

template <class FirstType>
struct select1st
{
    typedef FirstType type;

    template<class T>
    const type& operator()(const T& x) const
    { return x.first; }

    template<class T>
    type& operator()(T& x)

```



```

    { return const_cast<type&>(x.first); }
};

template <class T, class=void>
struct is_transparent
{
    static const bool value = false;
};

template <class T>
struct is_transparent<T, typename T::is_transparent>
{
    static const bool value = true;
};

template <typename C, typename K, typename R>
struct enable_if_transparent
: boost::move_detail::enable_if_c<dtl::is_transparent<C>::value, R>
{
};

} //namespace dtl {
} //namespace container {
} //namespace boost {

#include <boost/container/detail/config_end.hpp>

#endif //ifndef BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
////////////////////////////////////
//
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//
// See http://www.boost.org/libs/interprocess for documentation.
//
////////////////////////////////////

#ifndef BOOST_INTERPROCESS_DETAIL_MPL_HPP
#define BOOST_INTERPROCESS_DETAIL_MPL_HPP

#ifndef BOOST_CONFIG_HPP
# include <boost/config.hpp>
#endif
#
#if defined(BOOST_HAS_PRAGMA_ONCE)

```

```

# pragma once
#endif

#include <cstdint>

namespace boost {
namespace interprocess {
namespace ipcdetail {

template <class T, T val>
struct integral_constant
{
    static const T value = val;
    typedef integral_constant<T,val> type;
};

template< bool C_ >
struct bool_ : integral_constant<bool, C_>
{
    static const bool value = C_;
};

typedef bool_<true>    true_;
typedef bool_<false>   false_;

typedef true_ true_type;
typedef false_ false_type;

typedef char yes_type;
struct no_type
{
    char padding[8];
};

template <bool B, class T = void>
struct enable_if_c {
    typedef T type;
};

template <class T>
struct enable_if_c<false, T> {};

template <class Cond, class T = void>
struct enable_if : public enable_if_c<Cond::value, T> {};

template <class Cond, class T = void>
struct disable_if : public enable_if_c<!Cond::value, T> {};

```

```

template<
    bool C
    , typename T1
    , typename T2
>
struct if_c
{
    typedef T1 type;
};

template<
    typename T1
    , typename T2
>
struct if_c<false,T1,T2>
{
    typedef T2 type;
};

template<
    typename T1
    , typename T2
    , typename T3
>
struct if_
{
    typedef typename if_c<0 != T1::value, T2, T3>::type type;
};

template<std::size_t S>
struct ls_zeros
{
    static const std::size_t value = (S & std::size_t(1)) ? 0 : (1u + ls_zeros<(S >> 1u)>::value);
};

template<>
struct ls_zeros<0>
{
    static const std::size_t value = 0;
};

template<>
struct ls_zeros<1>
{
    static const std::size_t value = 0;
};

```

```

} //namespace ipcdetail {
} //namespace interprocess {
} //namespace boost {

#endif //ifndef BOOST_INTERPROCESS_DETAIL_MPL_HPP
#!/usr/bin/env python
from subprocess import check_output as run
from datetime import datetime
from itertools import groupby
from operator import itemgetter
import re
import magic

def authors(filename):
    log = run(['git', 'log', '--follow',
              '--date=short', '--format=%aN%x09% ad', filename],
              universal_newlines=True)
    for line in log.splitlines():
        author, date = line.split('\t')
        if author != 'fix-copyright.py':
            yield author, datetime.strptime(date, '%Y-%m-%d')

def new_copyright(filename, previous):
    def f():
        au = list(authors(filename))
        alldates = map(itemgetter(1), au)
        aup = sorted(au + map(lambda a: (a, None), previous), key=itemgetter(0))
        for author, records in groupby(aup, itemgetter(0)):
            dates = filter(None, map(itemgetter(1), records))
            if not dates: dates = alldates
            start = min(dates)
            end = max(dates)
            fmt = '{0}' if start.year == end.year else '{0}-{1}'
            line = 'Copyright ' + fmt.format(start.year, end.year) + ' ' + author
            key = (start, author)
            yield key, line
    return map(itemgetter(1), sorted(f()))

def fix_copyright(filename):
    # Find copyright block in original file
    prefix = set()
    names = []
    lines = []
    with open(filename, 'r') as f:
        content = list(f)
    for i, line in enumerate(content[:15]):
        m = re.match(r'^(?P<prefix>\W*)(\c)?\s*?copyright\s*(\c)?\s+\d{4}(\s*-\s*\d{4})?\s+(?P<name>.+?)\s*$',
                    line, re.IGNORECASE)

```

```

if m:
    d = m.groupdict()
    prefix.add(d['prefix'])
    lines.append(i)
    names.append(d['name'].strip())
if len(prefix) != 1:
    print 'Not found:', filename
    return
prefix = list(prefix)[0]

print filename
new = iter(new_copyright(filename, names))
with open(filename, 'w') as f:
    for i, line in enumerate(content):
        if i in lines:
            for repl in new:
                print >>f, prefix + repl
        else:
            print >>f, line,
pass

def all_files():
    ls = run(['git', 'ls-files'], universal_newlines=True)
    for filename in ls.splitlines():
        if magic.from_file(filename, mime=True).split('/')[0] == 'text':
            yield filename

for f in all_files():
    fix_copyright(f)

```

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```
[article Invalid copyright  
[quickbook 1.5]  
[copyright No year]  
]
```

Maybe this should pass?

```
<?xml version="1.0" encoding="utf-8"?>
```

```
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```

```
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```

```
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```

```
-->
```

```
<section id="date_time.license">
```

```
<title>Boost Date-Time Library License</title>
```

```
<bridgehead renderas="sect2">Boost Date-Time Library License</bridgehead>
```

```
<!--
```

```
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```

```
<imagedata align="left"
```

```
format="GIF"
```

```
fileref="../../boost.png"
```

```
alt="C++ Boost" />
```

```
</ulink>-->
```

```
<!--hr /-->
```

```
<para>
```

The following is the overall license for the boost date_time library. This notice is found in all source files related to the library.

```
</para>
```

```
<para>
```

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```
</para>
```

```
<para>
```

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```
</para>
```

```
<!--hr / -->
```

```
<ulink url="mailto:jeff@crystalclearsoftware.com">Jeff Garland</ulink>
```

```
© 2000-2002
```

```
</section>
```

This is an attempt to acknowledge early contributions to the garbage collector. Later contributions should instead be mentioned in README.changes.

HISTORY -

Early versions of this collector were developed as a part of research projects supported in part by the National Science Foundation and the Defense Advance Research Projects Agency.

The garbage collector originated as part of the run-time system for the Russell programming language implementation. The first version of the garbage collector was written primarily by Al Demers. It was then refined and mostly rewritten, primarily by Hans-J. Boehm, at Cornell U., the University of Washington, Rice University (where it was first used for C and assembly code), Xerox PARC, SGI, and HP Labs. However, significant contributions have also been made by many others.

Some other contributors:

More recent contributors are mentioned in the modification history in README.changes. My apologies for any omissions.

The SPARC specific code was originally contributed by Mark Weiser. The Encore Multimax modifications were supplied by Kevin Kenny (kenny@m.cs.uiuc.edu). The adaptation to the IBM PC/RT is largely due to Vernon Lee, on machines made available to Rice by IBM. Much of the HP specific code and a number of good suggestions for improving the generic code are due to Walter Underwood. Robert Brazile (brazile@diamond.bbn.com) originally supplied the ULTRIX code. Al Dosser (dosser@src.dec.com) and Regis Cridlig (Regis.Cridlig@cl.cam.ac.uk) subsequently provided updates and information on variation between ULTRIX systems. Parag Patel (parag@netcom.com) supplied the A/UX code. Jesper Peterson(jep@mtiame.mtia.oz.au), Michel Schinz, and Martin Tauchmann (martintauchmann@bigfoot.com) supplied the Amiga port. Thomas Funke (thf@zelator.in-berlin.de(?)) and Brian D. Carlstrom (bdc@clark.lcs.mit.edu) supplied the NeXT ports. Douglas Steel (doug@wg.icl.co.uk) provided ICL DRS6000 code. Bill Janssen (janssen@parc.xerox.com) supplied the SunOS dynamic loader specific code. Manuel Serrano (serrano@cornas.inria.fr) supplied linux and Sony News specific code. Al Dosser provided Alpha/OSF/1 code. He and Dave Detlefs(detlefs@src.dec.com) also provided several generic bug fixes. Alistair G. Crooks(agg@uts.amdahl.com) supplied the NetBSD and 386BSD ports. Jeffrey Hsu (hsu@soda.berkeley.edu) provided the FreeBSD port. Brent Benson (brent@jade.ssd.csd.harris.com) ported the collector to a Motorola 88K processor running CX/UX (Harris NightHawk). Ari Huttunen (Ari.Huttunen@hut.fi) generalized the OS/2 port to nonIBM development environments (a nontrivial task).

Patrick Beard (beard@cs.ucdavis.edu) provided the initial MacOS port.
David Chase, then at Olivetti Research, suggested several improvements.
Scott Schwartz (schwartz@groucho.cse.psu.edu) supplied some of the
code to save and print call stacks for leak detection on a SPARC.
Jesse Hull and John Ellis supplied the C++ interface code.
Zhong Shao performed much of the experimentation that led to the
current typed allocation facility. (His dynamic type inference code hasn't
made it into the released version of the collector, yet.)

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--- end ---

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
```

```
<title>&lt;no title&gt; &#8212; Boost.HigherOrderFunctions 0.6 documentation</title>
```

```
<link rel="stylesheet" href="_static/boostbook.css" type="text/css" />
```

```
<link rel="stylesheet" href="_static/pygments.css" type="text/css" />
```

```
<script type="text/javascript">
```

```
var DOCUMENTATION_OPTIONS = {
```

```
    URL_ROOT:  './',
```

```
    VERSION:   '0.6',
```

```
    COLLAPSE_INDEX: false,
```

```
    FILE_SUFFIX: '.html',
```

```
    HAS_SOURCE: true,
```

```
    SOURCELINK_SUFFIX: '.txt'
```

```
};
```

```
</script>
```

```
<script type="text/javascript" src="_static/jquery.js"></script>
```

```
<script type="text/javascript" src="_static/underscore.js"></script>
```

```
<script type="text/javascript" src="_static/doctools.js"></script>
```

```
<link rel="index" title="Index" href="genindex.html" />
```

```
<link rel="search" title="Search" href="search.html" />
```

```
</head>
```

```
<body role="document">
```

```
<table cellpadding="2" width="100%"><tr>
```

```
<td valign="top"></td>
```

```
</tr></table>
```

```
<div class="spirit-nav">
```

```
<a accesskey="p" ></a>
```

```
<a accesskey="u" href="doc/index.html"></a>
```

```
<a accesskey="h" href="doc/index.html"></a>
```

```
<a accesskey="n" ></a>
```

```
</div>
```

```
<div class="document">
```

```
<div class="chapter">
```

<div class="body" role="main">

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</div>

</div>

<div class="clearer"></div>

</div>

<div class="footer" role="contentinfo">

<table xmlns:rev="http://www.cs.rpi.edu/~gregod/boost/tools/doc/revision" width="100%"><tr>

<td align="left"></td>

<td align="right"><div class="copyright-footer">

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target="_top">http://www.boost.org/LICENSE_1_0.txt)

</p>

</div></td>

</tr></table>

</div>

</body>

</html>

```

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-->
<!-- boost-no-inspect -->
<!-- HTML header for doxygen 1.8.9.1-->
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/xhtml;charset=UTF-8"/>
<meta http-equiv="X-UA-Compatible" content="IE=9"/>
<meta name="generator" content="Doxygen 1.8.11"/>
<title>Boost.Hana: Boost.MPL adapters</title>
<link href="tabs.css" rel="stylesheet" type="text/css"/>
<script type="text/javascript" src="jquery.js"></script>
<script type="text/javascript" src="dynsections.js"></script>
<link href="navtree.css" rel="stylesheet" type="text/css"/>
<script type="text/javascript" src="resize.js"></script>
<script type="text/javascript" src="navtreedata.js"></script>
<script type="text/javascript" src="navtree.js"></script>
<script type="text/javascript">
$(document).ready(initResizable);
$(window).load(resizeHeight);
</script>
<link href="search/search.css" rel="stylesheet" type="text/css"/>
<script type="text/javascript" src="search/searchdata.js"></script>
<script type="text/javascript" src="search/search.js"></script>
<script type="text/javascript">
$(document).ready(function() { init_search(); });
</script>
<script type="text/x-mathjax-config">
MathJax.Hub.Config({
  extensions: ["tex2jax.js"],
  jax: ["input/TeX","output/HTML-CSS"],
});
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MathJax.Hub.Config({
  "HTML-CSS": {
    linebreaks: {
      automatic: true,
      width: "75% container"
    }
  }
});

```

```

</script><script type="text/javascript" src="https://cdn.mathjax.org/mathjax/latest/MathJax.js"></script>
<link href="doxygen.css" rel="stylesheet" type="text/css" />
<!-- Additional javascript for drawing charts. -->
<script type="text/javascript" src="highcharts.js"></script>
<script type="text/javascript" src="highcharts-data.js"></script>
<script type="text/javascript" src="highcharts-exporting.js"></script>
<script type="text/javascript" src="chart.js"></script>
<script type="text/javascript" src="hana.js"></script>
</head>
<body>
<div id="top"><!-- do not remove this div, it is closed by doxygen! -->
<div id="titlearea">
<table cellpadding="0" cellspacing="0">
<tbody>
<tr style="height: 56px;">
<td id="projectlogo"></td>
<td style="padding-left: 0.5em;">
<div id="projectname">Boost.Hana
&#160;<span id="projectnumber">1.5.0</span>
</div>
<div id="projectbrief">Your standard library for metaprogramming</div>
</td>
<td>
<div id="MSearchBox" class="MSearchBoxInactive">
<span class="left">

<input type="text" id="MSearchField" value="Search" accesskey="S"
onfocus="searchBox.OnSearchFieldFocus(true)"
onblur="searchBox.OnSearchFieldFocus(false)"
onkeyup="searchBox.OnSearchFieldChange(event)"/>
</span><span class="right">
<a id="MSearchClose" href="javascript:searchBox.CloseResultsWindow()"></a>
</span>
</div>
</td>
</tr>
</tbody>
</table>
</div>
<!-- end header part -->
<!-- Generated by Doxygen 1.8.11 -->
<script type="text/javascript">
var searchBox = new SearchBox("searchBox", "search",false,'Search');
</script>
</div><!-- top -->

```

```

<div id="side-nav" class="ui-resizable side-nav-resizable">
  <div id="nav-tree">
    <div id="nav-tree-contents">
      <div id="nav-sync" class="sync"></div>
    </div>
  </div>
  <div id="splitbar" style="-moz-user-select:none;"
    class="ui-resizable-handle">
  </div>
</div>
<script type="text/javascript">
$(document).ready(function(){initNavTree('group__group-ext-mpl.html','');});
</script>
<div id="doc-content">
<!-- window showing the filter options -->
<div id="MSearchSelectWindow"
  onmouseover="return searchBox.OnSearchSelectShow()"
  onmouseout="return searchBox.OnSearchSelectHide()"
  onkeydown="return searchBox.OnSearchSelectKey(event)">
</div>

<!-- iframe showing the search results (closed by default) -->
<div id="MSearchResultsWindow">
<iframe src="javascript:void(0)" frameborder="0"
  name="MSearchResults" id="MSearchResults">
</iframe>
</div>

<div class="header">
  <div class="summary">
<a href="#nested-classes">Classes</a> </div>
  <div class="headertitle">
<div class="title">Boost.MPL adapters<div class="ingroups"><a class="el" href="group__group-
ext.html">External adapters</a></div></div> </div>
</div><!--header-->
  <div class="contents">
<a name="details" id="details"></a><h2 class="groupheader">Description</h2>
<p>Adapters for Boost.MPL containers. </p>
<table class="memberdecls">
<tr class="heading"><td colspan="2"><h2 class="groupheader"><a name="nested-classes"></a>
Classes</h2></td></tr>
<tr class="memitem:"><td class="memItemLeft" align="right" valign="top">struct &#160;</td><td
class="memItemRight" valign="bottom"><a class="el"
href="structboost_1_1mpl_1_1integral__c.html">boost::mpl::integral_c<&lt; T, v &gt;></a></td></tr>
<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for IntegralConstants
from the Boost.MPL. <a href="structboost_1_1mpl_1_1integral__c.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
<tr class="memitem:"><td class="memItemLeft" align="right" valign="top">struct &#160;</td><td

```



```

class="memItemRight" valign="bottom"><a class="el"
href="structboost_1_1mpl_1_1list.html">boost::mpl::list< T &gt;</a></td></tr>
<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for Boost.MPL lists.
<a href="structboost_1_1mpl_1_1list.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
<tr class="memitem:"><td class="memItemLeft" align="right" valign="top">struct &#160;</td><td
class="memItemRight" valign="bottom"><a class="el"
href="structboost_1_1mpl_1_1vector.html">boost::mpl::vector< T &gt;</a></td></tr>
<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for Boost.MPL
vectors. <a href="structboost_1_1mpl_1_1vector.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
</table>
</div><!-- contents -->
</div><!-- doc-content -->
<!--
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-->
<!-- boost-no-inspect -->
<!-- HTML footer for doxygen 1.8.9.1-->
<!-- start footer part -->
<div id="nav-path" class="navpath"><!-- id is needed for treeview function! -->
<ul>
</ul>
</div>
</body>
</html>
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```

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=====

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```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE article PUBLIC "-//Boost//DTD BoostBook XML V1.0//EN"
"http://www.boost.org/tools/boostbook/dtd/boostbook.dtd">
<article id="copyright_test" last-revision="DEBUG MODE Date: 2000/12/20 12:00:00 $"
xmlns:xi="http://www.w3.org/2001/XInclude">
  <title>Copyright Test</title>
  <articleinfo>
    <copyright>
      <year>1963</year> <year>1964</year> <year>1965</year> <holder>Jane Doe</holder>
    </copyright>
    <copyright>
      <year>2018</year> <holder>Joe Blow, John Coe</holder>
    </copyright>
    <copyright>
      <year>1977</year> <year>1985</year> <holder>Someone else</holder>
    </copyright>
  </articleinfo>
</article>
http_parser.c is based on src/http/nginx_http_parse.c from NGINX copyright
Igor Sysoev.
```

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```
#include <boost/mpl/fold.hpp>
```

```
#include <boost/mpl/push_back.hpp>
```

```
#include <boost/mpl/quote.hpp>
```

```
#include <boost/mpl/vector.hpp>
```

```
template <typename State, typename X>
```

```
struct f { using type = X; };
```

```
struct state { };
```

```
template <int i>
```

```
struct t { };
```

```
using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;
```

```
using result = boost::mpl::fold<vector, state, boost::mpl::quote2<f>>::type;
```

```
int main() { }
```

```
////
```

```
Copyright 2017 Peter Dimov
```

```
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```
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```

```
http://www.boost.org/LICENSE\_1\_0.txt
```

```
////
```

```
 [#mpl]
```

```
# MPL Support, <boost/mp11/mpl.hpp>
```

```
:toc:
```

```
:toc-title:
```

```
:idprefix:
```

The header `<boost/mp11/mpl.hpp>`, when included, defines the necessary support infrastructure for `mp_list` and `std::tuple` to be valid link:../../../../libs/mpl[MPL] sequences.

NOTE: `mpl.hpp` is not included by `<boost/mp11.hpp>`.

```
/*
```

```
*
```

```
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```

```
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```

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```

```
* LICENSE_1_0.txt or copy at http://www.boost.org/LICENSE\_1\_0.txt)
```

```
*
```

```
*/
```

```
#include "licence_info.hpp"
```

```
#include "bcp_imp.hpp"
```

```
#include "fileview.hpp"
```

```
#include <fstream>
```

```
#include <iomanip>
```

```
#include <cstring>
```

```
#include <stdexcept>
```

```
#include <boost/lexical_cast.hpp>
```

```
#include <boost/filesystem/operations.hpp>
```

```
#include <boost/throw_exception.hpp>
```

```
//
```

```
// split_path is a small helper for outputting a path name,
```

```
// complete with a link to that path:
```

```
//
```

```

struct split_path
{
    const fs::path& root;
    const fs::path& file;
    split_path(const fs::path& r, const fs::path& f)
        : root(r), file(f){}
private:
    split_path& operator=(const split_path&);
};

std::ostream& operator << (std::ostream& os, const split_path& p)
{
    os << "<a href=\"\" << (p.root / p.file).string() << \">\" << p.file.string() << "</a>";
    return os;
}

std::string make_link_target(const std::string& s)
{
    // convert an arbitrary string into something suitable
    // for an <a> name:
    std::string result;
    for(unsigned i = 0; i < s.size(); ++i)
    {
        result.append(1, static_cast<std::string::value_type>(std::isalnum(s[i]) ? s[i] : '_'));
    }
    return result;
}

void bcp_implementation::output_license_info()
{
    std::pair<const license_info*, int> licenses = get_licenses();

    std::map<int, license_data>::const_iterator i, j;
    i = m_license_data.begin();
    j = m_license_data.end();

    std::ofstream os(m_dest_path.string().c_str());
    if(!os)
    {
        std::string msg("Error opening ");
        msg += m_dest_path.string();
        msg += " for output.";
        std::runtime_error e(msg);
        boost::throw_exception(e);
    }
    os <<
        "<!DOCTYPE HTML PUBLIC \"-//W3C//DTD HTML 4.0 Transitional//EN\">\n"

```

```

"<html>\n"
"<head>\n"
"<title>Boost Licence Dependency Information";
if(m_module_list.size() == 1)
{
os << " for " << *(m_module_list.begin());
}
os <<
"</title>\n"
"</head>\n"
"<body>\n"
"<H1>Boost Licence Dependency Information";
if(m_module_list.size() == 1)
{
os << " for " << *(m_module_list.begin());
}
os <<
"</H1>\n"
"<H2>Contents</h2>\n"
"<pre><a href=\"#input\">Input Information</a>\n";
if(!m_bsl_summary_mode)
os << "<a href=\"#summary\">Licence Summary</a>\n";
os << "<a href=\"#details\">Licence Details</a>\n";

while(i != j)
{
// title:
os << " <A href=\"#\" << make_link_target(licenses.first[i->first].license_name)
<< "\>" << licenses.first[i->first].license_name << "</a>\n";
++i;
}

os << "<a href=\"#files\">Files with no recognised license</a>\n"
"<a href=\"#authors\">Files with no recognised copyright holder</a>\n";
if(!m_bsl_summary_mode)
{
os <<
"Moving to the Boost Software License...\n"
" <a href=\"#bsl-converted\">Files that can be automatically converted to the Boost Software License</a>\n"
" <a href=\"#to-bsl\">Files that can be manually converted to the Boost Software License</a>\n"
" <a href=\"#not-to-bsl\">Files that can <b>NOT</b> be moved to the Boost Software License</a>\n"
" <a href=\"#need-bsl-authors\">Authors we need to move to the Boost Software License</a>\n"
"<a href=\"#copyright\">Copyright Holder Information</a>\n";
}
os <<
"<a href=\"#depend\">File Dependency Information</a>\n"
"</pre>";

```

```

//
// input Information:
//
os << "<a name=\"input\"></a><h2>Input Information</h2>\n";
if(m_scan_mode)
    os << "<P>The following files were scanned for boost dependencies:<BR>";
else
    os << "<P>The following Boost modules were checked:<BR>";

std::list<std::string>::const_iterator si = m_module_list.begin();
std::list<std::string>::const_iterator sj = m_module_list.end();
while(si != sj)
{
    os << *si << "<BR>";
    ++si;
}
os << "</p><p>The Boost path was: <code>" << m_boost_path.string() << "</code></P>";
//
// extract the boost version number from the boost directory tree,
// not from this app (which may have been built from a previous
// version):
//
fileview version_file(m_boost_path / "boost/version.hpp");
static const boost::regex version_regex(
    "^[:,blank:]*#[:,blank:]*define[:,blank:]+BOOST_VERSION[:,blank:]+(\\d+)");
boost::cmatch what;
if(boost::regex_search(version_file.begin(), version_file.end(), what, version_regex))
{
    int version = boost::lexical_cast<int>(what.str(1));
    os << "<p>The Boost version is: " << version / 100000 << "." << version / 100 % 1000 << "." << version % 100
<< "</P>\n";
}

//
// output each license:
//
i = m_license_data.begin();
j = m_license_data.end();
if(!m_bsl_summary_mode)
{
    //
    // start with the summary:
    //
    os << "<a name=\"summary\"></a><h2>Licence Summary</h2>\n";
    while(i != j)
    {
        // title:
        os <<

```

```

    "<H3>" << licenses.first[i->first].license_name << "</H3>\n";
// license text:
os << "<BLOCKQUOTE>" << licenses.first[i->first].license_text << "</BLOCKQUOTE>";
// Copyright holders:
os << "<P>This license is used by " << i->second.authors.size()
    << " authors and " << i->second.files.size()
    << " files <a href=\"#" << make_link_target(licenses.first[i->first].license_name) << "\">(see details)</a>";
os << "</P></BLOCKQUOTE>\n";
++i;
}
}
//
// and now the details:
//
i = m_license_data.begin();
j = m_license_data.end();
int license_index = 0;
os << "<a name=\"details\"></a><h2>Licence Details</h2>\n";
while(i != j)
{
    // title:
    os <<
        "<H3><A name=\"" << make_link_target(licenses.first[i->first].license_name)
        << "\"></a>" << licenses.first[i->first].license_name << "</H3>\n";
    // license text:
    os << "<BLOCKQUOTE>" << licenses.first[i->first].license_text << "</BLOCKQUOTE>";
    if(!m_bsl_summary_mode || (license_index >= 3))
    {
        // Copyright holders:
        os << "<P>This license is used by the following " << i->second.authors.size() << " copyright
holders:</P>\n<BLOCKQUOTE><P>";
        std::set<std::string>::const_iterator x, y;
        x = i->second.authors.begin();
        y = i->second.authors.end();
        while(x != y)
        {
            os << *x << "<BR>\n";
            ++x;
        }
        os << "</P></BLOCKQUOTE>\n";
        // Files using this license:
        os << "<P>This license applies to the following " << i->second.files.size() << "
files:</P>\n<BLOCKQUOTE><P>";
        std::set<fs::path, path_less>::const_iterator m, n;
        m = i->second.files.begin();
        n = i->second.files.end();
        while(m != n)
        {

```



```

        os << split_path(m_boost_path, *m) << "<br>\n";
        ++m;
    }
    os << "</P></BLOCKQUOTE>\n";
}
else
{
    os << "<P>This license is used by " << i->second.authors.size() << " authors (list omitted for brevity).</P>\n";
    os << "<P>This license applies to " << i->second.files.size() << " files (list omitted for brevity).</P>\n";
}
++license_index;
++i;
}
//
// Output list of files not found to be under license control:
//
os << "<h2><a name=\"files\"></a>Files With No Recognisable Licence</h2>\n"
    "<P>The following " << m_unknown_licenses.size() << " files had no recognisable license
information:</P></BLOCKQUOTE><P>\n";
std::set<fs::path, path_less>::const_iterator i2, j2;
i2 = m_unknown_licenses.begin();
j2 = m_unknown_licenses.end();
while(i2 != j2)
{
    os << split_path(m_boost_path, *i2) << "<br>\n";
    ++i2;
}
os << "</p></BLOCKQUOTE>";
//
// Output list of files with no found copyright holder:
//
os << "<h2><a name=\"authors\"></a>Files With No Recognisable Copyright Holder</h2>\n"
    "<P>The following " << m_unknown_authors.size() << " files had no recognisable copyright
holder:</P>\n</BLOCKQUOTE><P>";
i2 = m_unknown_authors.begin();
j2 = m_unknown_authors.end();
while(i2 != j2)
{
    os << split_path(m_boost_path, *i2) << "<br>\n";
    ++i2;
}
os << "</p></BLOCKQUOTE>";
if(!m_bsl_summary_mode)
{
    //
    // Output list of files that have been moved over to the Boost
    // Software License, along with enough information for human
    // verification.

```

```

//
os << "<h2><a name=\"bsl-converted\"></a>Files that can be automatically converted to the Boost Software
License</h2>\n"
    << "<P>The following " << m_converted_to_bsl.size() << " files can be automatically converted to the Boost
Software License, but require manual verification before they can be committed to CVS:</P>\n";
if (!m_converted_to_bsl.empty())
{
    typedef std::map<fs::path, std::pair<std::string, std::string>, path_less>
        ::const_iterator conv_iterator;
    conv_iterator i = m_converted_to_bsl.begin(),
        ie = m_converted_to_bsl.end();
    int file_num = 1;
    while (i != ie)
    {
        os << "<P>[" << file_num << "] File: <tt>" << split_path(m_boost_path, i->first)
            << "</tt><br>\n<table border=\"1\">\n <tr>\n <td><pre>"
            << i->second.first << "</pre></td>\n <td><pre>"
            << i->second.second << "</pre></td>\n </tr>\n</table>\n";
        ++i;
        ++file_num;
    }
}
//
// Output list of files that could be moved over to the Boost Software License
//
os << "<h2><a name=\"to-bsl\"></a>Files that could be converted to the Boost Software License</h2>\n"
    "<P>The following " << m_can_migrate_to_bsl.size() << " files could be manually converted to the Boost
Software License, but have not yet been:</P>\n<BLOCKQUOTE><P>";
i2 = m_can_migrate_to_bsl.begin();
j2 = m_can_migrate_to_bsl.end();
while(i2 != j2)
{
    os << split_path(m_boost_path, *i2) << "<br>\n";
    ++i2;
}
os << "</p></BLOCKQUOTE>";
//
// Output list of files that can not be moved over to the Boost Software License
//
os << "<h2><a name=\"not-to-bsl\"></a>Files that can NOT be converted to the Boost Software
License</h2>\n"
    "<P>The following " << m_cannot_migrate_to_bsl.size() << " files cannot be converted to the Boost Software
License because we need the permission of more authors:</P>\n<BLOCKQUOTE><P>";
i2 = m_cannot_migrate_to_bsl.begin();
j2 = m_cannot_migrate_to_bsl.end();
while(i2 != j2)
{
    os << split_path(m_boost_path, *i2) << "<br>\n";
}

```

```

    ++i2;
}
os << "</p></BLOCKQUOTE>";
//
// Output list of authors that we need permission for to move to the BSL
//
os << "<h2><a name=\"need-bsl-authors\"></a>Authors we need for the BSL</h2>\n"
    "<P>Permission of the following authors is needed before we can convert to the Boost Software License. The
list of authors that have given their permission is contained in <code>more/blanket-
permission.txt</code>.</P>\n<BLOCKQUOTE><P>";
    std::copy(m_authors_for_bsl_migration.begin(), m_authors_for_bsl_migration.end(),
        std::ostream_iterator<std::string>(os, "<br>\n"));
os << "</p></BLOCKQUOTE>";
//
// output a table of copyright information:
//
os << "<H2><a name=\"copyright\"></a>Copyright Holder Information</H2><table border=\"1\">\n";
std::map<std::string, std::set<fs::path, path_less> >::const_iterator ad, ead;
ad = m_author_data.begin();
ead = m_author_data.end();
while(ad != ead)
{
    os << "<tr><td>" << ad->first << "</td><td>";
    std::set<fs::path, path_less>::const_iterator fi, efi;
    fi = ad->second.begin();
    efi = ad->second.end();
    while(fi != efi)
    {
        os << split_path(m_boost_path, *fi) << " ";
        ++fi;
    }
    os << "</td></tr>\n";
    ++ad;
}
os << "</table>\n";
}

//
// output file dependency information:
//
os << "<H2><a name=\"depend\"></a>File Dependency Information</H2><BLOCKQUOTE><pre>\n";
std::map<fs::path, fs::path, path_less>::const_iterator dep, last_dep;
std::set<fs::path, path_less>::const_iterator fi, efi;
fi = m_copy_paths.begin();
efi = m_copy_paths.end();
// if in summary mode, just figure out the "bad" files and print those only:
std::set<fs::path, path_less> bad_paths;
if(m_bsl_summary_mode)

```

```

{
    bad_paths.insert(m_unknown_licenses.begin(), m_unknown_licenses.end());
    bad_paths.insert(m_unknown_authors.begin(), m_unknown_authors.end());
    bad_paths.insert(m_can_migrate_to_bsl.begin(), m_can_migrate_to_bsl.end());
    bad_paths.insert(m_cannot_migrate_to_bsl.begin(), m_cannot_migrate_to_bsl.end());
    typedef std::map<fs::path, std::pair<std::string, std::string>, path_less>
        ::const_iterator conv_iterator;
    conv_iterator i = m_converted_to_bsl.begin(),
        ie = m_converted_to_bsl.end();
    while(i != ie)
    {
        bad_paths.insert(i->first);
        ++i;
    }
    fi = bad_paths.begin();
    efi = bad_paths.end();
    os << "<P>For brevity, only files not under the BSL are shown</P>\n";
}
while(fi != efi)
{
    os << split_path(m_boost_path, *fi);
    dep = m_dependencies.find(*fi);
    last_dep = m_dependencies.end();
    std::set<fs::path, path_less> seen_deps;
    if (dep != last_dep)
        while(true)
        {
            os << " -> ";
            if(fs::exists(m_boost_path / dep->second))
                os << split_path(m_boost_path, dep->second);
            else if(fs::exists(dep->second))
                os << split_path(fs::path(), dep->second);
            else
                os << dep->second.string();
            if(seen_deps.find(dep->second) != seen_deps.end())
            {
                os << " <I>(Circular dependency!)</I>";
                break; // circular dependency!!!
            }
            seen_deps.insert(dep->second);
            last_dep = dep;
            dep = m_dependencies.find(dep->second);
            if((dep == m_dependencies.end()) || (0 == compare_paths(dep->second, last_dep->second)))
                break;
        }
    os << "\n";
    ++fi;
}

```

```
os << "</pre></BLOCKQUOTE>\n";
```

```
os << "</body></html>\n";
```

```
if(!os)
{
    std::string msg("Error writing to ");
    msg += m_dest_path.string();
    msg += ".";
    std::runtime_error e(msg);
    boost::throw_exception(e);
}
```

```
}
```

```
[/=====]
```

Boost.Geometry (aka GGL, Generic Geometry Library)

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```
=====]
```

1.9 minizip 1.01

1.9.1 Available under license :

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1.10 libxml2 2.9.4+dfsg1-7+deb10u1

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1.11 openssl 1.1.1d-0+deb10u4+rpt1

1.11.1 Available under license :

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=====

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```

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1.16 font-awesome 4.7.0

1.16.1 Available under license :

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1.17 json-c 0.12.1+ds-2+deb10u1

1.17.1 Available under license :

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1.18 tiny-xml 2.6.2

1.18.1 Available under license :

/*

www.sourceforge.net/projects/tinyxml

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*/

1.19 ngx-translate-core 11.0.1

1.20 zlib 1.2.11

1.20.1 Available under license :

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1.21 angular 8.0.1

1.21.1 Available under license :

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```
import { HttpClientTestingModule, HttpTestingController } from '@angular/common/http/testing';
import { Injector } from '@angular/core';
import { TestBed } from '@angular/core/testing';
```

```
import { ContributorService } from './contributor.service';
import { ContributorGroup } from './contributors.model';
```

```
describe('ContributorService', () => {
```

```
  let injector: Injector;
  let contribService: ContributorService;
  let httpMock: HttpTestingController;
```

```
  beforeEach(() => {
    injector = TestBed.configureTestingModule({
      imports: [HttpClientTestingModule],
      providers: [
        ContributorService
      ]
    });
```

```
    contribService = injector.get<ContributorService>(ContributorService);
    httpMock = injector.get(HttpTestingController);
  });
```

```
  afterEach(() => httpMock.verify());
```

```
  it('should make a single connection to the server', () => {
    const req = httpMock.expectOne({});
    expect(req.request.url).toBe('generated/contributors.json');
  });
```

```
  describe('#contributors', () => {
```

```
    let contribs: ContributorGroup[];
    let testData: any;
```

```
    beforeEach(() => {
      testData = getTestContribs();
      httpMock.expectOne({}).flush(testData);
      contribService.contributors.subscribe(results => contribs = results);
    });
```

```
    it('contributors observable should complete', () => {
      let completed = false;
      contribService.contributors.subscribe(undefined, undefined, () => completed = true);
```

```

    expect(completed).toBe(true, 'observable completed');
  });

  it('should reshape the contributor json to expected result', () => {
    const groupNames = contribs.map(g => g.name).join(',');
    expect(groupNames).toEqual('Angular,Collaborators,GDE');
  });

  it('should have expected "GDE" contribs in order', () => {
    const gde = contribs[2];
    const actualAngularNames = gde.contributors.map(l => l.name).join(',');
    const expectedAngularNames = [testData.gkalpak, testData.kapunahelewong].map(l => l.name).join(',');
    expect(actualAngularNames).toEqual(expectedAngularNames);
  });

  it('should support including a contributor in multiple groups', () => {
    const contributor = testData.gkalpak;
    const matchedGroups = contribs
      .filter(group => group.contributors.includes(contributor))
      .map(group => group.name);

    expect(matchedGroups).toEqual(['Collaborators', 'GDE']);
  });
});

it('should do WHAT(?) if the request fails');
});

function getTestContribs() {
  return {
    kapunahelewong: {
      name: 'Kapunahele Wong',
      picture: 'kapunahelewong.jpg',
      website: 'https://github.com/kapunahelewong',
      twitter: 'kapunahele',
      bio: 'Kapunahele is a front-end developer and contributor to angular.io',
      groups: ['GDE']
    },
    misko: {
      name: 'Miko Hevery',
      picture: 'misko.jpg',
      twitter: 'mhevery',
      website: 'http://misko.hevery.com',
      bio: 'Miko Hevery is the creator of AngularJS framework.',
      groups: ['Angular']
    },
    igor: {
      name: 'Igor Minar',

```

```

    picture: 'igor-minar.jpg',
    twitter: 'IgorMinar',
    website: 'https://google.com/+IgorMinar',
    bio: 'Igor is a software engineer at Angular.',
    groups: ['Angular']
  },
  kara: {
    name: 'Kara Erickson',
    picture: 'kara-erickson.jpg',
    twitter: 'karaforthewin',
    website: 'https://github.com/kara',
    bio: 'Kara is a software engineer on the Angular team at Angular and a co-organizer of the Angular-SF Meetup. ',
    groups: ['Angular']
  },
  jeffcross: {
    name: 'Jeff Cross',
    picture: 'jeff-cross.jpg',
    twitter: 'jeffbcross',
    website: 'https://twitter.com/jeffbcross',
    bio: 'Jeff was one of the earliest core team members on AngularJS.',
    groups: ['Collaborators']
  },
  naomi: {
    name: 'Naomi Black',
    picture: 'naomi.jpg',
    twitter: 'naomitraveller',
    website: 'http://google.com/+NaomiBlack',
    bio: 'Naomi is Angular\'s TPM generalist and jack-of-all-trades.',
    groups: ['Angular']
  },
  gkalpak: {
    name: 'George Kalpakas',
    picture: 'gkalpak.jpg',
    twitter: 'gkalpakas',
    bio: 'George wrote this test, so he gets to have his name included here.',
    groups: ['GDE', 'Collaborators'],
  }
};
}

import { Injectable } from '@angular/core';
import { HttpClient } from '@angular/common/http';

import { ConnectableObservable, Observable } from 'rxjs';
import { map, publishLast } from 'rxjs/operators';

import { Contributor, ContributorGroup } from './contributors.model';

// TODO(andrewjs): Look into changing this so that we don't import the service just to get the const

```



```

import { CONTENT_URL_PREFIX } from 'app/documents/document.service';

const contributorsPath = CONTENT_URL_PREFIX + 'contributors.json';
const knownGroups = ['Angular', 'Collaborators', 'GDE'];

@Injectable()
export class ContributorService {
  contributors: Observable<ContributorGroup[]>;

  constructor(private http: HttpClient) {
    this.contributors = this.getContributors();
  }

  private getContributors() {
    const contributors = this.http.get<{[key: string]: Contributor}>(contributorsPath).pipe(
      // Create group map
      map(contribs => {
        const contribMap: { [name: string]: Contributor[] } = {};
        Object.keys(contribs).forEach(key => {
          const contributor = contribs[key];
          contributor.groups.forEach(group => {
            const contribGroup = contribMap[group] || (contribMap[group] = []);
            contribGroup.push(contributor);
          });
        });

        return contribMap;
      }),

      // Flatten group map into sorted group array of sorted contributors
      map(cmap => {
        return Object.keys(cmap).map(key => {
          const order = knownGroups.indexOf(key);
          return {
            name: key,
            order: order === -1 ? knownGroups.length : order,
            contributors: cmap[key].sort(compareContributors)
          } as ContributorGroup;
        })
        .sort(compareGroups);
      }),

      publishLast(),
    );

    (contributors as ConnectableObservable<ContributorGroup[]>).connect();
    return contributors;
  }
}

```

```

}

function compareContributors(l: Contributor, r: Contributor) {
return l.name.toUpperCase() > r.name.toUpperCase() ? 1 : -1;
}

function compareGroups(l: ContributorGroup, r: ContributorGroup) {
return l.order === r.order ?
  (l.name > r.name ? 1 : -1) :
  l.order > r.order ? 1 : -1;
}
import { Component, Input } from '@angular/core';

import { Contributor } from './contributors.model';
import { CONTENT_URL_PREFIX } from 'app/documents/document.service';

@Component({
  selector: 'aio-contributor',
  template: `
    <div [ngClass]="{ 'flipped': person.isFlipped }" class="contributor-card">

      <div class="card-front" (click)="flipCard(person)">
        <h3>{{ person.name }}</h3>

        <div class="contributor-image" [style.background-image]="url('+pictureBase+(person.picture ||
noPicture)+')">
          <div class="contributor-info">
            <a *ngIf="person.bio" mat-button class="info-item">
              View Bio
            </a>
            <a *ngIf="person.twitter" mat-icon-button class="info-item icon"
              href="https://twitter.com/{{ person.twitter }}" target="_blank" (click)="$event.stopPropagation()">
              <mat-icon svgIcon="logos:twitter"></mat-icon>
            </a>
            <a *ngIf="person.website" mat-icon-button class="info-item icon"
              href="{{ person.website }}" target="_blank" (click)="$event.stopPropagation()">
              <mat-icon class="link-icon">link</mat-icon>
            </a>
          </div>
        </div>
      </div>

      <div class="card-back" *ngIf="person.isFlipped" (click)="flipCard(person)">
        <h3>{{ person.name }}</h3>
        <p class="contributor-bio">{{ person.bio }}</p>
      </div>
    </div>
  `
})

```

```

    })
    export class ContributorComponent {
      @Input() person: Contributor;
      noPicture = '_no-one.png';
      pictureBase = CONTENT_URL_PREFIX + 'images/bios/';

      flipCard(person: Contributor) {
        person.isFlipped = !person.isFlipped;
      }
    }
  }
  import { ReflectiveInjector } from '@angular/core';

  import { of } from 'rxjs';

  import { ContributorGroup } from './contributors.model';
  import { ContributorListComponent } from './contributor-list.component';
  import { ContributorService } from './contributor.service';
  import { LocationService } from 'app/shared/location.service';

  // Testing the component class behaviors, independent of its template
  // Let e2e tests verify how it displays.
  describe('ContributorListComponent', () => {

    let component: ContributorListComponent;
    let injector: ReflectiveInjector;
    let contributorService: TestContributorService;
    let locationService: TestLocationService;
    let contributorGroups: ContributorGroup[];

    beforeEach(() => {
      injector = ReflectiveInjector.resolveAndCreate([
        ContributorListComponent,
        { provide: ContributorService, useClass: TestContributorService },
        { provide: LocationService, useClass: TestLocationService }
      ]);

      locationService = injector.get(LocationService);
      contributorService = injector.get(ContributorService);
      contributorGroups = contributorService.testContributors;
    });

    it('should select the first group when no query string', () => {
      component = getComponent();
      expect(component.selectedGroup).toBe(contributorGroups[0]);
    });

    it('should select the first group when query string w/o "group" property', () => {
      locationService.searchResult = { foo: 'GDE' };
    });
  });

```

```

    component = getComponent();
    expect(component.selectedGroup).toBe(contributorGroups[0]);
  });

  it('should select the first group when query group not found', () => {
    locationService.searchResult = { group: 'foo' };
    component = getComponent();
    expect(component.selectedGroup).toBe(contributorGroups[0]);
  });

  it('should select the GDE group when query group is "GDE"', () => {
    locationService.searchResult = { group: 'GDE' };
    component = getComponent();
    expect(component.selectedGroup).toBe(contributorGroups[1]);
  });

  it('should select the GDE group when query group is "gde" (case insensitive)', () => {
    locationService.searchResult = { group: 'gde' };
    component = getComponent();
    expect(component.selectedGroup).toBe(contributorGroups[1]);
  });

  it('should set the query to the "GDE" group when user selects "GDE"', () => {
    component = getComponent();
    component.selectGroup('GDE');
    expect(locationService.searchResult['group']).toBe('GDE');
  });

  it('should set the query to the first group when user selects unknown name', () => {
    component = getComponent();
    component.selectGroup('GDE'); // a legit group that isn't the first

    component.selectGroup('foo'); // not a legit group name
    expect(locationService.searchResult['group']).toBe('Angular');
  });

  /// Test Helpers ///
  function getComponent(): ContributorListComponent {
    const comp = injector.get(ContributorListComponent);
    comp.ngOnInit();
    return comp;
  }

  interface SearchResult { [index: string]: string; }

  class TestLocationService {
    searchResult: SearchResult = {};
    search = jasmine.createSpy('search').and.callFake(() => this.searchResult);
  }

```

```

setSearch = jasmine.createSpy('setSearch')
  .and.callFake((label: string, result: SearchResult) => {
    this.searchResult = result;
  });
}

class TestContributorService {
  testContributors = getTestData();
  contributors = of(this.testContributors);
}

function getTestData(): ContributorGroup[] {
  return [
    // Not interested in the contributors data in these tests
    { name: 'Angular', order: 0, contributors: [] },
    { name: 'GDE', order: 1, contributors: [] },
  ];
}

{
  "mhevery": {
    "name": "Miko Hevery",
    "picture": "misko.jpg",
    "twitter": "mhevery",
    "website": "http://misko.hevery.com",
    "bio": "Miko Hevery is the creator of AngularJS framework. He has passion for making complex things simple. He currently works at Google, but has previously worked at Adobe, Sun Microsystems, Intel, and Xerox, where he became an expert in building web applications in web related technologies such as Java, JavaScript, Flex and ActionScript.",
    "groups": ["Angular"],
    "lead": "kara"
  },
  "igorminar": {
    "name": "Igor Minar",
    "picture": "igor-minar.jpg",
    "twitter": "IgorMinar",
    "website": "https://google.com/+IgorMinar",
    "bio": "Igor is a software engineer at Google. He is a lead on the Angular project, practitioner of test driven development, open source enthusiast, hacker. In his free time, Igor enjoys spending time with his wife and two kids, doing outdoor activities (including but not limited to sports, gardening and building retaining walls).",
    "groups": ["Angular"],
    "lead": "bradlygreen"
  },
  "bradlygreen": {
    "name": "Brad Green",
    "picture": "brad-green.jpg",
    "twitter": "bradlygreen",
    "website": "https://plus.google.com/+BradGreen",

```

"bio": "Brad Green works at Google as an engineering director. Brad manages the Google Sales Platform suite of projects as well as the AngularJS framework. Prior to Google, Brad worked on the early mobile web at AvantGo, founded and sold startups, and spent a few hard years toiling as a caterer. Brad's first job out of school was as lackey to Steve Jobs at NeXT Computer writing demo software and designing his slide presentations. Brad enjoys throwing dinner parties with his wife Heather and putting on plays with his children.",

"groups": ["Angular"]

},

"jelbourn": {

"name": "Jeremy Elbourn",

"picture": "jelbourn.jpg",

"twitter": "jelbourn",

"website": "https://plus.google.com/+JeremyElbourn/",

"bio": "Angular Material Team Lead. FE Engineer @ Google specializing in AngularJS, component design, and the cleanest of code.",

"groups": ["Angular"],

"lead": "igorminar"

},

"petebacondarwin": {

"name": "Pete Bacon Darwin",

"picture": "pete.jpg",

"twitter": "petebd",

"website": "http://www.bacondarwin.com",

"bio": "AngularJS for JS Team Lead. Pete has been working on the core team since 2012 and became the team lead for the AngularJS for JS branch in November 2014. He has co-authored a book on AngularJS and regularly talks about and teaches Angular.",

"groups": ["Angular"],

"lead": "igorminar"

},

"stephenfluin": {

"name": "Stephen Fluin",

"picture": "stephenfluin.jpg",

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"website": "https://plus.google.com/+stephenfluin",

"bio": "Stephen is a Developer Advocate working on the Angular team. Before joining Google, he was a Google Expert. Stephen loves to help enterprises use technology more effectively.",

"groups": ["Angular"],

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"twitter": "robwormald",

"website": "http://github.com/robwormald",

"bio": "Rob is a Developer Advocate on the Angular team at Google. He's the Angular team's resident reactive programming geek and founded the Reactive Extensions for Angular project, ngrx.",

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  "twitter": "radokirov",
  "website": "https://plus.sandbox.google.com/+RadoslavKirov",
  "bio": "Rado has been on the Angular Core team since Summer 2014. Before Angular, he worked on the AdSense serving stack, responsible for serving billions of ads daily. Being passionate about open source, he made contributions to Angular as a Google-20% project, before making the fulltime jump. He is a recovering academic; ask him about error-correcting codes from algebraic curves (or don't).",
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  "name": "Alex Eagle",
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  "twitter": "jakeherringbone",
  "website": "http://google.com/+alxeagle",
  "bio": "Alex works on language tooling for JavaScript and TypeScript. Previously Alex spent five years in Google's developer testing tools. He has developed systems including Google's continuous integration service, capturing build&test failures, and explaining them to developers. Before Google, Alex worked at startups including Opower, and consulted for large government IT. In his 20% time, he created the Error-Prone static analysis tool, which detects common Java programming mistakes and reports them as compile errors.",
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    "website": "http://probst.io",
    "bio": "Martin is a software engineer at Google in the AngularJS team. He holds a MSc in Software Engineering from HPI in Potsdam, Germany. Before joining the AngularJS team at Google, he worked at a database startup in the Netherlands, at EMC, at SAP, and as a freelancer. In his free time, he likes to cook and sail, not necessarily at the same time.",
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    "bio": "Core team member working to optimize the Angular platform for the next generation of applications, including mobile. Before joining the Angular team, Alex worked in the Google sales organization where he helped build the first large Angular application within Google.",
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    "website": "http://yearofmoo.com",
    "bio": "Matias Niemela is a fullstack web developer who has been programming & building websites for over 10 years, and a core team member of AngularJS for two years. In the spring of 2015 Matias joined Angular full time at Google. In his free time Matias loves to build complex things and is always up for public speaking, travelling and tweaking his current Vim setup.",
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    "name": "Hans Larsen",
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    "twitter": "hanslatwork",
    "website": "http://www.codingatwork.com/",
    "bio": "Hans is a software engineer at Google on the Angular team and was previously at Slack. He works everyday to help make it easier for everyone to create beautiful, consistent web applications using Angular, using Material Design components and the CLI tool.",
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  "bio": "Kara is a software engineer on the Angular team at Google and a co-organizer of the Angular-SF Meetup. Prior to Google, she helped build UI components in Angular for guest management systems at OpenTable. She enjoys snacking indiscriminately and probably other things too.",
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  "bio": "Vikram is a Software Engineer on the Angular team focused on Engineering Productivity. That means he makes sure people on the team can move fast and not break things. Vikram enjoys doing Yoga and going on walks with his daughter.",
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  "name": "Pawel Kozlowski",
  "picture": "pawel.jpg",
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  "bio": "Open source hacker, AngularJS book author, AngularUI lead developer. Pawel is an software-development addict who believes in free, open source software. He is a core contributor to the AngularJS framework, AngularUI, Karma-runner and several other projects. He is the co-author of the \"Mastering Web Application Development with AngularJS\" book. When not coding, Pawel can be spotted speaking at various software development conferences.",
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  "name": "Paul Gschwendtner",
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  "twitter": "DevVersion",
  "website": "https://github.com/DevVersion",
  "bio": "Paul is a 17-year-old developer living in Germany. While he attends school, Paul works as a core team member on Angular Material. Paul focuses on tooling and building components for Angular.",
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  "website": "https://github.com/EladBezalel",
  "bio": "Elad is a fullstack developer with a very strong love for design. Since 8 years old, he's been designing in

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Photoshop and later on fell in love with programing. This strong bond between design and computer programming gave birth to a new kind of love. And he is currently doing the combination of both, as a core member of the ngMaterial project.",

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  "bio": "Marc is a manager at Amadeus where he leads the team in charge of developing and recommending UI frameworks for the company. He is also an open source developer and a contributor to Angular.",
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  "website": "https://github.com/wardbell",
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  "bio": "Ward is an all-around developer with JavaScript, Node.js, and .net chops. He's a frequent conference speaker and podcaster, trainer, Google Developer Expert for Angular, Microsoft MVP, and PluralSight author. He is also president of IdeaBlade, an enterprise software consulting firm and the makers of breeze.js. He would like to get more sleep and spend more time in the mountains.",
  "groups": ["GDE"]
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  "twitter": "Narretz",
  "bio": "Martin is an English major turned web developer who loves frontend stuff. He's been part of the AngularJS team since 2014. If you can't find him roaming the Github issue queues, he's probably out with his camera somewhere.",
  "groups": ["Angular"],
  "lead": "petebacondarwin"
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  "name": "Filipe Silva",
  "picture": "filipe-silva.jpg",
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  "website": "http://github.com/filipesilva",
  "bio": "Filipe is a passion-driven developer that always strives for the most elegant solution for each problem. He is currently an author for Angular.io, a core contributor for Angular-CLI and senior front end engineer at KonnectAgain. When not busy going through PRs, you can find him scouring reddit for new dinner recipes to cook or enjoying a craft beer in Dublin.",
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  "bio": "George is a Software Engineer with a passion for chess, robotics and automating stuff. He has a strong need to know how things work (so if you already know, he'd love to have a talk with you). He has been a member of the AngularJS team since 2014. When not doing geeky stuff, he is probably trying to convince his wife and kids to apply programming principles in real life. (Or is it the other way around?)",
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  "bio": "Jeff Whelpley is a Google Developer Expert and the CTO of GetHuman. He is the co-organizer of the Angular Boston meetup group, co-creator of Angular Universal, former host of AngularAir and frequent speaker at Angular events.",
  "groups": ["GDE"]
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  "bio": "Deborah is a software developer, author, and Google Developer Expert. She is author of several Pluralsight courses including: 'Angular 2: Getting Started' and Angular Routing",
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},
"ralph": {
  "name": "Ralph Wang",
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  "twitter": "ralph_wang_gde",
  "bio": "Ralph(Zhicheng Wang) is a senior consultant at ThoughtWorks and also a GDE. He is a technology enthusiast and he is a passionate advocate of 'Simplicity, Professionalism and Sharing'. In his eighteen years of R&D career, he worked as tester, R&D engineer, project manager, product manager and CTO. He is immersed in the excitement of the arrival of the baby.",
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  "bio": "Wassim (aka manekineko on Twitter/Github) is a Developer Advocate at SFEIR, in Web technologies (Angular, Polymer, PWA, Web Components...). He is also a Developer Expert in Web technologies nominated by Google. He enjoys writing technical articles, meeting developers at events, speaking at conferences and contributing to open source projects. Wassim loves the Web Platform and works hard to move it forward.",
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  "name": "Christoffer Noring",
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  "twitter": "chris_noring",
  "website": "softchris.github.io",
  "bio": "Chris is a Full Stack Developer at McKinsey. A Google Developer Expert in Web Technologies and Angular. He is also a Nativescript Developer Expert. He is one of the organizers of the Angular conference ngVikings and an author of the book RxJS 5 Ultimate",
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  "website": "https://medium.com/@jorgeucano",
  "bio": "After more than 10 years working in the tech industry, Jorge is a full stack developer with focus on JavaScript technologies. Today, Jorge is working at Hero Devs using Angular / RxJS / Firebase as well as other technologies. He delivered several courses and talks as well as write some tech articles on these subjects. Because of that, he was recognised as a Google Developer Expert in Angular & web technologies and Nativescript Developer Expert.",
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  "bio": "Owner and trainer at Ultimate Angular. Lives in England, UK. Has a love for teaching, OSS and speaking at conferences. Google Developer Expert for Web Technologies and Angular.",
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    "bio": "Michael is a self employed trainer, consultant and developer with the focus on Angular, and located in Vienna, Austria. He gives workshops on Angular, RxJS and Ionic. As Google Developer Expert, founder of Angular-Austria-Association and Angular-Vienna meetup, and speaker he is an active part of the community.",
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    "bio": "Lead for AngularJS Material. Owner and consultant at DevIntent. Ex-Angular GDE. Founder of the Google Developers Group (GDG) community on the Space Coast of Florida, USA.",
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    "bio": "Trainer and Consultant with focus on Angular. Writes for O'Reilly, the German Java Magazine and Heise. Regularly speaks at conferences.",
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    "bio": "Oslo-based web front-end engineer, a Google Developer Expert in Angular, Web technologies and IoT. Active public speaker & trainer for the developer events. Leader of Norways largest meetups dedicated to web front-end and mobile development. Founder of ngVikings and Mobile Era conferences. Progressive Web Apps advocate.",
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    "bio": "Based in Austin Texas, Jeremy is an application architect and homebrewer. He is a Google Developer Expert in Web Technologies and Angular, with a focus on speaking and training and author of Angular in Action and Ionic in Action.",
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of the book 'Switching to Angular', codelyzer, Guess.js, and the Go linter revive. Working for faster and more
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related technologies in his medium blog, and speaks about these topics in conferences and meetup around the world.
Among his interests are reverse engineering, hardware hacking, building 3d-printed robots and games, playing
music and Salsa dancing.",
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"bio": "Based in Mexico, Josue has been web developer since the last 10 years, he is part of the Google Developer
Expert Program, passionate about teaching and building communities",
"groups": ["GDE"]
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"twitter": "esoSanderElias",
"website": "https://sanderelias.nl",
"bio": "Sander is a versed developer with over 4 decades of practice under his belt. He is also an Google
Developer Expert for web, specializing in Angular. Organizer of meetups and conferences. Helping out others
wherever he can. When he is not breathing code, he is fiddling around with IOT, photography, science and anything
that might vaguely is gadget-like! Thinks he a master of the grill, but in reality you probably don't get a food-
poisoning ;) Also, and actually the most important thing to him, he is a father of 4, and has the most patient
girlfriend in the universe.",
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"website": "http://filipbech.github.io/",
"bio": "Filip is a Frontend developer from Denmark. He works at IMPACT, delivering large-scale, high-

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performance e-commerce to international clients - most often build in Angular. He runs the local Angular usergroup - ngAarhus, and gives talks/workshops around and beyond the country of Denmark.",

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  "bio": "Olivier is a passionate front-end engineer who loves interacting with the community by doing open source projects (ocLazyLoad, ngx-translate), being a panelist at Angular-Air, giving talks or just chatting on Twitter and Slack. Hes a member of the Angular Core team and works on i18n.",
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  "twitter": "cionunesdev",
  "bio": "Ciro is the Lead Front-end Engineer of CrossEngage and Google Developer Expert in Web Technologies.",
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  "bio": "Raul works as a CEO and Front-end Architect at Byte Default for companies around the world helping them to build high-performance web apps. In his spare time he's usually working on Videogular, involved in local meetups, speaking at conferences and contributing to open source projects.",
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  "bio": "Developer. Hacker. Community backer. Author and blogger. Console logger.",
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  "website": "https://www.thinktecture.com",
  "bio": "Co-founder and CTO of Thinktecture AG, as well as Google GDE and Microsoft MVP. Since two decades active as an engaged and passionate speaker on several software conferences and events all over the world. Some people call him 'Mr. Cross-Platform'.",
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"bio": "Teaches Angular at HiRez.io the most entertaining online courses on the web. An experienced developer, consultant and speaker also known for his unusual crazy Angular talks such as ng-wat, ng-show, ng-rap, etc. Shai is also the organizer of the largest JavaScript group in Israel and a professional Improv performer.",
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"twitter": "DanWahlin",
"website": "https://codewithdan.com",
"bio": "Dan Wahlin founded Wahlin Consulting which provides consulting and onsite/online training services on Web technologies such as JavaScript, Angular, TypeScript, Node.js, C#, ASP.NET Core, Web API, and Docker. Hes also published many developer courses on Pluralsight.com and Udemy.com. Dan is a Google GDE, Docker Captain, and Microsoft MVP and Regional Director and speaks at conferences and user groups around the world. Dan has written several books on Web technologies, hundreds of technical articles and blog posts (https://blog.codewithdan.com) and runs the 'Code with Dan Web Weekly Newsletter' - a great way to stay up on the latest technologies. Follow Dan on Twitter @DanWahlin.",
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"website": "https://joeeames.me",
"bio": "Joe Eames is a developer and educator. He publishes course on Angular and JavaScript on Pluralsight.com. He is an organizer of ng-conf, a Google Developer Expert in Angular, gives lots of talks & workshops, and loves all things web.",
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"bio": "GDE (Google Developer Expert) Angular and Web Technologies, GDG Salvador organizer, passionate about technology and active in communities with a focus on web development, including Angular, JavaScript, HTML5, CSS3, Workflow, web performance, security and Internet of things. Participates in events organization, speaker at conferences in Brazil and other countries and contributes to several open source projects.",
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    Jecelyn specializes in professional application development with technologies, including Angular, HTML5,
    Typescript, JavaScript, CSS, C#, NodeJs, Cloud and ASP.NET.",
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    "bio": "Director of Experience Technology at SapienRazorfish. Consults various brands on their frontend and
    mobile web architecture. A speaker at various forums and mentor at Launchpad Accelerator and ngGirls India.
    Spends free time playing with Angular, Preact, web-components ",
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    "website": "https://medium.com/@gerard.sans",
    "bio": "Gerard is very excited about the future of the Web and JavaScript. Always happy Computer Science
    Engineer and humble Google Developer Expert. He loves to share his learnings by giving talks, trainings and
    writing about cool technologies. He loves running AngularZone and GraphQL London, mentoring students and
    giving back to the community.",
    "groups": ["GDE"]
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    "name": "Nir Kaufman",
    "picture": "nirkaufman.jpg",
    "twitter": "nirkaufman",
    "website": "http://ngnir.life/",
    "bio": "Nir is a Principal Frontend Consultant & Head of the Angular department at 500Tech, Google Developer
    Expert and community leader. He organizes the largest Angular meetup group in Israel (Angular-IL), talks and
    teaches about front-end technologies around the world. He is also the author of two books about Angular and the
    founder of the 'Frontend Band'.",
    "groups": ["GDE"]
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    "picture": "alainchautard.png",
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    "website": "http://www.angulartraining.com",
    "bio": "Alain Chautard is a Google Developer Expert in Web Technologies / Angular. He started working with
Angular JS in 2011. Since then he has worked with all Angular versions on a daily basis, both as a developer and as
a technical trainer. He is the organizer of the Sacramento Angular Meetup group, co-organizer of the Google
Developer Group chapter in Sacramento, California, and published author of the Packt video course 'Getting Started
with Angular'",
    "groups": ["GDE"]
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  "coryrylan": {
    "name": "Cory Rylan",
    "picture": "cory-rylan.jpg",
    "twitter": "coryrylan",
    "website": "https://coryrylan.com",
    "bio": "Cory is a full time front end web developer. He works full time building responsive web applications and
progressive web apps. When not building web apps he is busy teaching Angular and other web technologies in
workshops and conferences. He loves the web and is optimistic of the places it can take us.",
    "groups": ["GDE"]
  },
  "mhartington": {
    "name": "Mike Hartington",
    "picture": "mhartington.png",
    "twitter": "mhartington",
    "website": "https://mhartington.io",
    "bio": "Mike is a Developer Advocate for the Ionic Framework and a GDE in Angular. He spends most of his time
making fast PWAs and exploring emerging web standards. When not behind a keyboard, you'll probably find him
with a guitar and beer.",
    "groups": ["GDE"]
  },
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    "name": "Juri Strumpflohner",
    "picture": "juristr.jpg",
    "twitter": "juristr",
    "website": "https://juristr.com",
    "bio": "Juri is a software engineer and freelance trainer and consultant currently mostly focusing on the frontend
side using JavaScript, TypeScript and Angular. He has a passion for teaching and sharing his knowledge and
experiences with others. This mostly happens by writing tech articles for his personal blog, by creating video
courses for Egghead.io, during on-site workshops at companies or by speaking at conferences. In his free time he
enjoys practicing Yoseikan Budo, a martial art where he currently owns the 3rd DAN black belt.",
    "groups": ["GDE"]
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    "website": "http://imars.info/",
    "bio": "Mashhood is the principal technical consultant at Recurship and a Google Developer Expert. He works

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with different startups in US and EU to help them crawl through the technical maze and quickly build amazing products focused around the problems they are trying to solve. He specializes in using the latest web technologies available to execute the best possible solutions.",

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"groups": ["GDE"]
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  "bio": "Kim is an Angular consultant, developer, speaker, writer, and Google Developer Expert. She is passionate about learning from and sharing knowledge with other developers through blogging, speaking, workshops, and open source.",
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  "bio": "Elana is a Developer Relations intern on the Angular team at Google. She is working on migration paths from AngularJS to Angular and would love to chat about your experience with upgrading.",
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  "website": "https://blog.kevinyang.net/",
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  "bio": "Kevin is a Angular Taiwan, Angular Girls Taiwan community organizer. He loves sharing knowledge with other developers through blogging, speaking, workshops.",
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  "website": "https://sajeetharan.herokuapp.com/",
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  "bio": "Sajeetharan is a Developer, Top contributor on stackoverflow for #Angular, ng-SriLanka organizer. He makes use of his extensive knowledge over the past years to contribute to community to make the world a better place.",
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  "website": "https://lacolaco.net",
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"bio": "Suguru is a community-loving Frontend developer and a lead of Angular Japan User Group. He organizes the largest Angular event in Japan (ng-japan). And he is a contributor to Angular by sending patches, writing, speaking, and localizing resources in Japanese.",

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"groups": ["GDE"]
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  "website": "https://mandarini.github.io/",
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"bio": "Katerina is a front end software engineer, a conference speaker and AngularAthens meetup organizer. She is obsessed with sharing knowledge about things she loves. She is also trying to support diversity in the community. She lives with her cat in Athens.",

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  "website": "https://brianflove.com",
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"bio": "Brian is a software engineer and GDE in Angular with a passion for learning, writing, speaking, teaching and mentoring. Brian has been building web applications for over 20 years and has long been a fanboy of JavaScript. When not in front of his Macbook Pro Brian is in the Rocky Mountains skiing or hiking.",

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  "twitter": "jeffbrcross",
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  "website": "https://nrwl.io/",
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"bio": "Jeff is an Angular Consultant at nrwl.io where he helps enterprise teams succeed with Angular. Prior to founding Nrwl, Jeff was one of the earliest members of the Angular Core Team at Google, and contributed to many of the early state management and performance efforts of AngularJS and Angular.",

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"groups": ["GDE"]
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"keilla": {
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  "name": "Keilla Menezes Fernandes",
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  "twitter": "keillamenezes_",
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"bio": "I am Senior Software Development Consultant in ThoughtWorks and GDE in Angular. Graduated in Computer Science from Federal University of Bahia, I have been worked with software development for more than 11 years. Since 2017, I started with Angular Framework and I went deep into front-end ecosystem and became more specialized in this area. I participate in a computer science community, Campinas Front-end, that promotes events in this area. In the end of 2016, I started to do technical talks. The passion for science is the engine that drives me to seek answers to the problems that computing aims to solve. Besides that, sharing knowledge and experiences is the path I choose to democratize the technology for all.",

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"groups": ["GDE"]
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"mira": {
  "name": "Stanimira Vlaeva",
  "picture": "mira.jpg",
  "twitter": "StanimiraVlaeva",
  "website": "https://github.com/sis0k0",
  "bio": "Software engineer on the NativeScript team at Progress, focused on NativeScript Angular, NativeScript schematics, and integrating webpack in the {N} build system. Co-organizing the Angular Sofia meetup. Speaking about Angular things at conferences here and there.",
  "groups": ["GDE"]
},
"sharondio": {
  "name": "Sharon DiOrio",
  "picture": "sharon.jpg",
  "twitter": "sharondio",
  "website": "https://medium.com/@sharondio",
  "bio": "Sharon is a mother to four teenagers, wife of a USMC veteran/police officer, and lead front-end engineer for an educational non-profit in Boston. In her spare time, she is the \"Head Instigator\" of the Angular-Boston Meetup and an active member of the Boston meetups community. She occasionally speaks on Angular and related topics at technology conferences across the country. She has a Bachelor of Fine Arts from SMU and a Masters with honors from RTFM.",
  "groups": ["GDE"]
},
"leonardoizzamia": {
  "name": "Leonardo Zizzamia",
  "picture": "leonardo.jpg",
  "twitter": "zizzamia",
  "website": "https://medium.com/@zizzamia",
  "bio": "Leonardo is a Senior Software Engineer at Coinbase. He is deeply passionate about web performance and most recently developed Perfume.js to help companies prioritize roadmaps and business, through performance analytics. From 2018, co-organizer of the Angular San Francisco Meetup group and NGRome Conference.",
  "groups": ["GDE"]
},
"tomastrajan": {
  "name": "Tomas Trajan",
  "picture": "tomastrajan.jpg",
  "twitter": "tomastrajan",
  "website": "https://medium.com/@tomastrajan",
  "bio": "Tomas is a Senior Software Engineer with passion for frontend and especially Angular. He always strives to provide lots of value and to empower teams he is working with by sharing know-how, introducing best practices and automating mundane task to enable full focus on creating value for the users! He likes to share his Angular know-how by blogging, speaking and recording video content. He is a co-organizer of Angular Meetup Zurich.",
  "groups": ["GDE"]
},
"samjulien": {
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  "picture": "samjulien.jpg",
  "twitter": "samjulien",
  "website": "http://www.samjulien.com/",

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"bio": "Sam Julien builds software, articles, video courses, and campfires. A developer, speaker, writer, and GDE
in the Pacific Northwest, Sam's favorite thing in the world is changing someone's life by teaching them to code.",
"groups": ["Collaborators", "GDE"],
"mentor": "gkalpak"
},
"JiaLiPassion": {
"name": "JiaLi Passion",
"groups": ["Collaborators"],
"mentor": "mhevery",
"picture": "JiaLiPassion.jpg",
"bio": "A programmer with passion, angular/zone.js guy! Web frontend engineer @sylabs"
},
"cexbrayat": {
"name": "Cdrlic Exbrayat",
"mentor": "petebacondarwin",
"groups": ["Collaborators"],
"picture": "cexbrayat.jpg",
"bio": "Author of `Become a ninja with Angular (2+)` https://books.ninja-squad.com/angular - Angular trainer and
@Ninja-Squad co-founder"
},
"CaerusKaru": {
"name": "Adam Plumer",
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"jbedard": {
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"JoostK": {
"name": "Joost Koehoorn",
"groups": ["Collaborators"],
"mentor": "alxhub",
"picture": "joostk.jpg",
"twitter": "devjoost",
"bio": "Joost is a Software Engineer from the Netherlands with an interest in open source software who likes to
learn something new every day. He works at Blueriq during the day and contributes to Angular in his spare time, by
working on the Angular compiler and runtime. He may review your PR even if you never asked for it ;)"
},
"jschwarty": {
"name": "Justin Schwartzenberger",
"picture": "justinschwartzenberger.jpg",
"twitter": "schwarty",
"website": "https://schwarty.com",
"bio": "Justin (aka Schwarty) is a Google Developer Expert in Web Technologies and Angular, the host and

```

maintainer of the weekly AngularAir live video broadcast, educator, writer and content creator. He has Angular courses available on LinkedIn Learning and Pluralsight and loves passing on years of full stack development knowledge to help empower others to find their inner awesomeness!",

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  "name": "Brandon Roberts",
  "picture": "brandonroberts.jpg",
  "twitter": "brandontroberts",
  "website": "https://brandonroberts.dev",
  "bio": "Brandon is a developer and technical writer working on guides, tutorials, application development, and infrastructure for the Angular docs. He is also a maintainer of the NgRx project, building reactive libraries for Angular.",
  "groups": ["Angular"],
  "lead": "dennispbrown"
},
"chembu": {
  "name": "Sreevani Sreejith",
  "picture": "sreevani.jpg",
  "bio": "Sreevani is a tech writer with prior programming experience. She writes documentation for the Angular framework team. Outside of work, she likes practicing yoga, honing her skills on classical dance forms, and baking cakes.",
  "groups": ["Angular"],
  "lead": "dennispbrown"
},
"dennispbrown": {
  "name": "Denny Brown",
  "picture": "denny.jpg",
  "bio": "Denny is founder of Expert Support, a professional services firm specializing in technical communication, and leads the Angular technical writing team. His lifelong passion has been to reduce the time and effort required to understand complex technical information. Early on, he was Associate Chairman of the Computer Science Department at Stanford, where he taught introductory courses in programming. He also plays old-timers baseball in local leagues and national tournaments.",
  "groups": ["Angular"],
  "lead": "bradlygreen"
},
"jbogarthye": {
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  "picture": "judy.png",
  "groups": ["Angular"],
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},
"jenniferfell": {
  "name": "Jennifer Fell",
  "picture": "jennifer.jpg",
  "website": "http://silverpath.org",
  "bio": "Jennifer is a technical content strategist, architect, designer, and writer. As lead of the Angular docs team, she's always interested in learning more about how developers learn and use Angular. Her offline persona is a
```



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horsewoman in Idaho.",
  "groups": ["Angular"],
  "lead": "dennispbrown"
},
"kapunahewong": {
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  "twitter": "kapunahale",
  "bio": "Kapunahale is a developer and Angular fan who works on the Angular docs writing guides and developing example apps. She also enjoys Native Hawaiian practices, textile arts, and marveling at little, inconspicuous plants growing in forgotten places outdoors.",
  "groups": ["Angular"],
  "lead": "dennispbrown"
},
"luixaviles": {
  "name": "Luis Aviles",
  "picture": "luixaviles.jpg",
  "twitter": "luixaviles",
  "website": "https://luixaviles.com",
  "bio": "Luis is an enthusiast of Open Source software and communities, as well as being a public speaker, a technology trainer and an author of courses and technical articles. He is the organizer of the Angular Bolivia community and NG Bolivia conference. When he's not coding, Luis is reading about Astronomy or nerding about outer space, photography or even doing Astrophotography.",
  "groups": ["GDE"]
},
"siddajmera": {
  "name": "Siddharth Ajmera",
  "picture": "sidd-ajmera.jpg",
  "twitter": "SiddAjmera",
  "website": "https://webstackup.com/",
  "bio": "Siddharth is a Full Stack JavaScript Developer and a GDE in Angular. He's passionate about sharing his knowledge on Angular, Firebase and the Web in general. He's the organizer of WebStack, a local community of developers focused on Web, Mobile, Voice and Server related technologies in general. WebStack hosts free monthly meetups every 2nd or 3rd Saturday of the month. Siddharth is also an avid photographer and loves traveling. Find him anywhere on the Web with `SiddAjmera`.",
  "groups": ["GDE"]
},
"bbrennan": {
  "name": "Bonnie Brennan",
  "twitter": "bonnster75",
  "groups": ["GDE"],
  "picture": "bonnie.jpg",
  "bio": "Bonnie has been specializing in Angular since 2013. She is the founder of ngHouston Angular Meetup and a regular panelist on Angular Air. She is also the very proud parent component of @thelittlestdev!"
},
"globegitter": {
  "name": "Markus Padourek",
  "groups": ["Collaborators"],

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  "ahsanayaz": {
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    "picture": "ahsanayaz.jpg",
    "twitter": "ahsan_ayz",
    "website": "https://medium.com/@ahsan.ayaz",
    "bio": "Muhammad Ahsan Ayaz is Software Architect at Modus Create. He is absolutely passionate about Angular and Web Technologies. Uses Angular daily and talks about it everywhere. Runs NodeSchool Karachi and is a co-organizer of NgPakistan",
    "groups": ["GDE"]
  },
  "andrewkushnir": {
    "name": "Andrew Kushnir",
    "picture": "andrew-kushnir.jpg",
    "bio": "Andrew is a software engineer at Google on the Angular Core team.",
    "groups": ["Angular"],
    "lead": "kara"
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  "kamilmysliwec": {
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    "picture": "kamilmysliwec.jpg",
    "twitter": "kammysliwec",
    "website": "https://github.com/kamilmysliwec",
    "bio": "Kamil Mysliwec is a software engineer truly passionate about Web Technologies. Creator of NestJS, Co-Founder of Trilon.io, speaker, and trainer.",
    "groups": ["GDE"]
  }
}

import { NgModule, Type } from '@angular/core';
import { CommonModule } from '@angular/common';
import { MatIconModule } from '@angular/material/icon';
import { ContributorListComponent } from './contributor-list.component';
import { ContributorService } from './contributor.service';
import { ContributorComponent } from './contributor.component';
import { WithCustomElementComponent } from './element-registry';

@NgModule({
  imports: [ CommonModule, MatIconModule ],
  declarations: [ ContributorListComponent, ContributorComponent ],
  entryComponents: [ ContributorListComponent ],
  providers: [ ContributorService ]
})
export class ContributorListModule implements WithCustomElementComponent {
  customElementComponent: Type<any> = ContributorListComponent;
}

```

```

#!/usr/bin/env node

// Imports
const {existsSync, readFileSync} = require('fs');
const {join, resolve} = require('path');

// Constants
const CONTENT_DIR = resolve(__dirname, '.././content');
const IMAGES_DIR = join(CONTENT_DIR, 'images/bios');
const CONTRIBUTORS_PATH = join(CONTENT_DIR, 'marketing/contributors.json');

// Run
_main();

// Functions - Definitions
function _main() {
  const contributors = JSON.parse(readFileSync(CONTRIBUTORS_PATH, 'utf8'));
  const expectedImages = Object.keys(contributors)
    .filter(key => !!contributors[key].picture)
    .map(key => join(IMAGES_DIR, contributors[key].picture));
  const missingImages = expectedImages.filter(path => !existsSync(path));

  if (missingImages.length > 0) {
    throw new Error(
      'The following pictures are referenced in \'contributors.json\' but do not exist:' +
      missingImages.map(path => `\n - ${path}`).join(""));
  }
}

```

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*

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*/

'use strict';

// THIS CHECK SHOULD BE THE FIRST THING IN THIS FILE

// This is to ensure that we catch env issues before we error while requiring other dependencies.

const engines = require('./package.json').engines;

require('./tools/check-environment')({


```

requiredNodeVersion: engines.node,
requiredNpmVersion: engines.npm,
requiredYarnVersion: engines.yarn
});

const gulp = require('gulp');

// See `tools/gulp-tasks/README.md` for information about task loading.
function loadTask(fileName, taskName) {
  const taskModule = require('./tools/gulp-tasks/' + fileName);
  const task = taskName ? taskModule[taskName] : taskModule;
  return task(gulp);
}

// Check source code for formatting errors in all source files.
gulp.task('format:enforce', loadTask('format', 'enforce'));

// Format all source files.
gulp.task('format:all', loadTask('format', 'format'));

// Format only untracked source code files.
gulp.task('format:untracked', loadTask('format', 'format-untracked'));

// Format only the changed, tracked source code files.
gulp.task('format:diff', loadTask('format', 'format-diff'));

// Format only changed lines based on the diff from the provided --branch
// argument (or `master` by default).
gulp.task('format:changed', ['format:untracked', 'format:diff']);

// Alias for `format:changed` that formerly formatted all files.
gulp.task('format', ['format:changed']);

gulp.task('lint', ['format:enforce', 'validate-commit-messages', 'tslint']);
gulp.task('tslint', ['tools:build'], loadTask('lint'));
gulp.task('validate-commit-messages', loadTask('validate-commit-message'));
gulp.task('source-map-test', loadTask('source-map-test'));
gulp.task('tools:build', loadTask('tools-build'));
gulp.task('check-cycle', loadTask('check-cycle'));
gulp.task('serve', loadTask('serve', 'default'));
gulp.task('changelog', loadTask('changelog'));
gulp.task('check-env', () => { /* this is a noop because the env test ran already above */ });
gulp.task('cldr:extract', loadTask('cldr', 'extract'));
gulp.task('cldr:download', loadTask('cldr', 'download'));
gulp.task('cldr:gen-closure-locale', loadTask('cldr', 'closure'));
import { Component, OnInit } from '@angular/core';
import { ContributorGroup } from './contributors.model';
import { ContributorService } from './contributor.service';

```

```

import { LocationService } from 'app/shared/location.service';

@Component({
  selector: `aio-contributor-list`,
  template: `
<div class="flex-center group-buttons">
  <a *ngFor="let name of groupNames"
    [class.selected]="name == selectedGroup.name"
    class="button mat-button filter-button"
    (click)="selectGroup(name)">{{ name }}</a>
</div>
<section *ngIf="selectedGroup" class="grid-fluid">
  <div class="contributor-group">
    <aio-contributor *ngFor="let person of selectedGroup.contributors" [person]="person"></aio-contributor>
  </div>
</section>`
})
export class ContributorListComponent implements OnInit {
  private groups: ContributorGroup[];
  groupNames: string[];
  selectedGroup: ContributorGroup;

  constructor(
    private contributorService: ContributorService,
    private locationService: LocationService) { }

  ngOnInit() {
    const groupName = this.locationService.search()['group'] || '';
    // no need to unsubscribe because `contributors` completes
    this.contributorService.contributors
      .subscribe(grps => {
        this.groups = grps;
        this.groupNames = grps.map(g => g.name);
        this.selectGroup(groupName);
      });
  }

  selectGroup(name: string) {
    name = name.toLowerCase();
    this.selectedGroup = this.groups.find(g => g.name.toLowerCase() === name) || this.groups[0];
    this.locationService.setSearch("", { group: this.selectedGroup.name });
  }
}
/**
 * @license Angular v0.0.0-PLACEHOLDER
 * (c) 2010-2019 Google LLC. https://angular.io/
 * License: MIT
 */

```

```

export interface ContributorGroup {
  name: string;
  order: number;
  contributors: Contributor[];
}

export interface Contributor {
  groups: string[];
  name: string;
  picture?: string;
  website?: string;
  twitter?: string;
  bio?: string;
  isFlipped?: boolean;
}

# Produces a GraphViz Dot file from the data in the contributors.json file.
# Documentation for this syntax at https://stedolan.github.io/jq/manual
to_entries
| map(select(
  (.value.groups | index("Angular")) or
  (.value.groups | index("Collaborators"))))
| map(.value |= {
  name: .name,
  lead: (.lead // .mentor // ""),
  fillcolor: (if .groups | index("Collaborators") then "aquamarine" else "beige" end),
})
| map(
  "\(.key|tojson) [ label=\(.value.name|tojson) fillcolor=\(.value.fillcolor|tojson) style=filled ] ",
  (if .value.lead != "" then "\(.key|tojson) -> \(.value.lead|tojson)" else "" end)
)
[]

```

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1.22 libmicrohttpd 0.9.62

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@subheading END OF TERMS AND CONDITIONS

@page

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@smallexample

@var{one line to give the library's name and an idea of what it does.}

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 * http://sam.zoy.org/wtfpl/
 *
 * Date: Thu May 05 14:23:00 2011 -0600
 */
```

Found in path(s):

```
* /opt/cola/permits/1150274371_1617961412.76/0/arctext-master-zip/Arctext-master/js/jquery.arctext.js
```

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