ADtoHT

COLLABORATORS			

	TITLE : ADtoHT		
ACTION	*NAME*	*DATE*	*SIGNATURE*
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REVISION HISTORY			

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

ADtoHT

1.1 The secret node!

Wow... you found the secret node!

You really like pressing buttons, don't you? Even if you don't know
what they do? You're lucky that your harddrive didn't get formatted...

1.2 ADtoHT Release 2

```
        ADtoHT Release 2
          Version 2.0
         (Feb 15, 1995)

   A program to convert autodocs and C header files to AmigaGuide
        © 1993-1995 Christian Stieber
```

```
 What does it do?
 The legal garbage
 How do I use it?
```

```
     *** commercial break --- stay tuned, we'll be right back ***
```

ADtoHT is *the* ultimate solution for all problems you have with your
hardware, software, bank, buisness or (girl|boy)friend. It even is *the*
ultimate solution for all other problems, whether you have them or not.

ADtoHT will show your customers that you're up-to-date, and they will
never go anywhere else again (unless that other person is using a newer
version of ADtoHT, of course). If you don't use ADtoHT, why did you get
a computer in the first place?

Try ADtoHT *now*, and you'll never want to miss it again. Insist on
getting the best available software -- insist on ADtoHT. Don't buy
a computer without it, and don't leave your house without a copy of
ADtoHT -- it could save your life.

If your computer system offers cut-and-paste, be sure to copy this
text and pass it to your friends. Or, even better, give them a copy
of ADtoHT. They'll love it, and you'll all be happy.

Jean Luc Picard:
  Starfleet thought we could get along without ADtoHT. You know what
  happened to the USS Enterprise NCC-1707D, don't you?

Unknown person:
  That program is stupid, it
        (Sorry, we are having technical problems)
        (Sound will be back in a second)

        *** now, back to the movie ***

 Things to know
 About the conversion
 Program history
 Author information

 Release 3 preview

1.3   What does it do?

ADtoHT is a program to convert your autodoc files to hypertext.
Currently, only AmigaGuide output is provided, but I expect this to
change with ADtoHT Release 3.

So, what is the difference compared to the Commodore utility AD2HT?

  * ADtoHT is smarter
  * ADtoHT makes hypertext versions of the include files
  * ADtoHT converted files look better

  * I'm thinking about ADtoHT Release 3 -:)

Also, I'm alive. That means that you have somebody to send bug-reports
to! Of course, you can also send other things to me. :)

1.4   Legal garbage

There is no warranty of any kind.
I won't feel responsible if it does something awful --- use at your own risk.

This program is FREEWARE. This means I keep all my rights, but you don't
have to pay for the program. If you did pay something, it's your problem;
I didn't get a cent from what you paid.
You also get the source. You can look at it, print it and use it as
wallpaper, compress it and use it as white noise or other things. You may
not use my source for your programs, unless you get my permission first.
You will not get that permission if you plan to make money, unless I make

some money, too :)
Don't worry: the source doesn't have anything worth incorporating into
your code. The AVL stuff is cool, though :)

Also, I ask that you don't distribute modified versions of ADtoHT;
please ask me first. Make sure that your changes can be easily
identified, both in the source and mentioned in the docs.
The best thing to do is: send your version to me. If I like it, I
might include them into the official distribution.
This includes bug fixes as well. There are probably some bugs left
(hm.. the marketing department will probably censor this sentence),
but every now and then squashing a bug means introducing another bug
somewhere else. And, usually, I know more about the internal workings
of ADtoHT than you do.

Patents: I'm not a lawyer. I probably violated about a million patents
with my code. So, if you want me to stop distributing this program,
all you have to do is look for a patent. Pretty simple.
There is *no* XOR in my program, and I'm *not* using GIF. There is no
backing storage, and no cut&paste between windows. Look somewhere else.

Copyrights: I'm not a lawyer. I'm pretty sure that somebody out there
has copyrighted the userinterface that I'm using.
I am also using terms like "This file was created automatically...".
I have seen this line in many other programs as well, so somebody
probably has a copyright on it.

I'm not using any undocumented AmigaOS features, so the Macrosoft
(that's just a typo, really) vs. Stac decision probably won't hurt me.
I have only disassembled and traced my own code.

1.5 How to use ADtoHT

Being a simple converter for developers, ADtoHT does not feature
a GUI. It must be started from a shell (also known as CLI).

Being a true shell program, ADtoHT understands a bunch of command
line options. If you don't know what that is, ask yourself whether
you really want to develop programs.

ADtoHT 2.0 understands the following command line options:

Required directory arguments:

DOC/A   The directory with your autodoc files. Autodoc files are
           expected to have filenames matching "#?.doc".

HDOC/A   The directory where the converted autodoc files will be
           put into. This directory must exist; any subdirectories
           are created.

INC/A   The directory with your C header files. These files must
           be plain ASCII, i.e. no "compacted" files, no precompiled

```
                  files etc. Header files are expected to have filenames
                  matching "#?.h".

HINC/A            The directory where the converted header files will be
                  put into. This directory must exist; any subdirectories
                  are created.
```

Optional files:

```
MASTER            The filename of the global table of contents. If no name
                  is given, no such table will be created.

XREF              The filename for the crossreference file. If no name is
                  given, no such file will be created.
                  Note: compared to AmigaGuide as a whole, the crossreference
                  system is even worse. Therefore the varargs versions of
                  the functions won't show up in the crossreference table.
                  Also, the table is *very* large, so it won't be useful.
                  You probably want to run a filter on it to extract the
                  items you are really interested in before using it.
```

Options controlling the appearance of the created documents:

```
VERSION/N         The version of AmigaGuide that will be used to display
                  the documents. Currently, ADtoHT only checks whether the
                  version is <39 or >=39.
                  If no version is given, ADtoHT will try to use one of
                  the following as default, in the order given:
                    - version of amigaguide.library
                    - version of Workbench
                    - version of exec.library (this cannot fail)

WIDTH/N           The width of the amigaguide documents, in characters.
                  Must be at least 40. Default is 78.
                  Note: this only affects the tables of contents. Autodoc
                  and header files are not reformatted.
```

Other options:

```
FULLPATH/S        When creating links to other files, specify the full path.
                  Basically, this means that you don't need the "HDOC" and
                  "HINC" directories in your AmigaGuide path.
                  If you use this option, "HDOC" and "HINC" must point to
                  the directories where the files will really end up, i.e.
                  you can't move them afterwards.
                  Usage of this option is recommended.

PARENTHESES/S     This tells ADtoHT to append "()" to nodenames referring
                  to functions. Normally you should not specify this
                  option since it makes the crossreference list even less
                  usable. This option was added because some of the
```

AmigaGuide files available to developers use such node
names.

1.6 Things you should know

1) AmigaOS version and I/O-speed

If you have the choice, use AmigaOS 3.1 (V40) or later. ADtoHT uses
the buffered stream functions provided by dos, and the default buffer
is rather small. Until V40, that buffer was fixed and could not be
changed. Starting with V40, dos lets you change the buffer size, which
results in less disk I/O, therefore speeding up the program.

2) Header files

You only want to convert the AmigaOS header files, not the ANSI
compliant headers that came with your compiler. The easiest way
to do this is by creating a directory with softlinks to the AmigaOS
header file directories, like this:

```
datatypes -> man:Programming/include/datatypes
devices -> man:Programming/include/devices
diskfont -> man:Programming/include/diskfont
dos -> man:Programming/include/dos
exec -> man:Programming/include/exec
gadgets -> man:Programming/include/gadgets
graphics -> man:Programming/include/graphics
hardware -> man:Programming/include/hardware
intuition -> man:Programming/include/intuition
libraries -> man:Programming/include/libraries
prefs -> man:Programming/include/prefs
resources -> man:Programming/include/resources
rexx -> man:Programming/include/rexx
utility -> man:Programming/include/utility
workbench -> man:Programming/include/workbench
```

Then, use this directory as the INC argument.

Obviously, this approach requires working softlinks. It might not
work with dos V37 (AmigaOS 2.x).

If you use a compiler that supports precompiled or compacted headers,
make sure you don't feed these into ADtoHT!

----

3) What kind of "C" does ADtoHT understand?

ADtoHT only "understands" ANSI/ISO C (ANSI X3.159-1989, ISO 9899).
It doesn't even attempt to parse C++. Some broken C compilers
understand C++ style comments, and some people even use such things
in their C files. If you want to convert a header file that uses
such things, don't complain to me. Complain to the author of the
header file and tell him/her to fix it.

Also, ADtoHT doesn't even "understand" ANSI/ISO C properly. It just
happens to work with the Commodore headers, as well as with the
headers that come with MUI (2.3). It doesn't even attempt to
understand all possible headers, and it will probably break if
you feed it things like the (Net)BSD headers that come with GNU C.

----

4) Autodoc format

ADtoHT makes several assumptions about the structure and formatting
of an autodoc file. I believe that this is the "standard" autodoc
format, since almost all Commodore autodocs fit these assumptions.
However, there are a few exceptions:

  * SAD is not "standard" autodoc at all. Therefore, SAD documents
    don't get bold headlines since I cannot determine which lines
    are headlines and which lines are not. No warnings are output
    for SAD nodes, this is a "silent" workaround.

  * Some functions autodocs have broken indention. ADtoHT attempts
    to repair the indention; I hope it doesn't make things worse.
    The "repair" method is extremely simple, and will fail for some
    lines, but I think it is still better than not repairing it
    at all.
    You will get one warning per node. Usually, the lines following
    the line specified in the warning are broken as well, but I
    didn't want to clutter your screen with useless warnings.

  * MUI autodocs have broken headers. This affects ADtoHTs internal
    algorithms only, it should not cause visible problems since the
    autodoc headers are discarded anyway.
    Therefore no warning is output if such an header is encountered.

  * MUI autodocs use "SEE_ALSO" instead of "SEE ALSO" (see the
    difference?). This will be fixed silently.

I have only tested the Commodore and MUI autodocs. Other autodocs may
have different problems; if you find problems with some autodocs,
send them to me. If I can't make ADtoHT operate correctly on them,
I can at least add a note to the documentation telling other people
how to avoid the problem.

----

5) Autodoc bugs

Yes -- some autodocs have little bugs, usually consisting of
references to non-existing nodes. No attempt is made to spot or
repair these bugs; you simply won't get a link in that place.

ADtoHT contains a workaround for the old narrator.doc "CMD_Read" bug.
You don't have to fix that one.

Note: there are quite a few errors in the "SYNOPSIS" sections of
the autodocs; usually wrong spelling of the functionnames. Since
ADtoHT cannot decide whether a function is just misspelled or whether

it is really another name for that function, it assumes that it is
another name. That means you get quite a few unexpected entries in
your tables of contents.

----

6) Memory usage

ADtoHT requires a lot of memory. I don't know how much, though. My
2.5MB were enough to convert both the Commodore and the MUI autodocs
and headers.

If ADtoHT runs out of memory, it will not just exit. It goes into
a loop, trying to redo the failed operation every 2 seconds. You can
quit the program as usual with CTRL-C.

This approach was used since ADtoHT runs quite some time. It's a very
awful situation to wait... and wait... and wait... just to get an
"not enough memory" error.

Some operations such as setting the file I/O buffer size will just
fail silently if an out-of-memory conditions arises. This doesn't
cause a program abort, it just makes I/O awfully slow for the current
input/output files.

1.7   About the conversion

1) First #define in a header file

ADtoHT attempts to create all possible links. As a special feature,
the first #define in C header files is ignored, since this is
usually used for things like

#ifndef FILE_H
#define FILE_H

/* the file contents */

#endif /* FILE_H */

----

2) Items with more than one definition

Some "things" are defined more than once (CMD_READ in the autodocs,
some types in exec/types.h, or struct MathIEEEResource). In these
cases. a circular link chain is created, which means every definition
has a link to the next definition; the last definition points back to
the first one. I don't really know how to describe it, just check out
CMD_READ.

Such a circular chain is *not* created for functions that are
described in exec.library (example: AbortIO() is described in several
device autodocs as well as exec.library). If this is the case, the
device-specific function links to the one in exec.library; the

exec.library function terminates the chain. Again, check out some
converted autodocs to get the idea.

If you didn't understand all that garbage, don't worry. I'm not a
writer. I tried to make the links as sensible as possible, so usually
you should get what one would expect.

----

3) V39+ AmigaGuide

In V39+ of AmigaGuide, the buttons are one character larger than
expected. Currently only the table formatting code takes this into
consideration; I might release a new version that tries to remove a
space somewhere else to keep the formatting intact.

----

4) Reformatting

Basically, the input is copied to the output without reformatting it.
There are, however, one or two cases where ADtoHT will change the
formatting a little bit --- adding or removing whitespace or newlines.
I hope that this happens only in the places I want it to happen,
but one never knows. So, if you encounter a "strange" looking node,
you might want to check the original autodoc file to see why it
looks strange. Feel free to send mail in either case --- if the
original file is "strange", I might add a workaround to ADtoHT
to fix the problem. If just the converted text is "strange", you
probably found a bug in ADtoHT.

1.8 Program history

```
1.0
...                    You don't want to know about these, do you?
1.2

1.3    (??.??.??)   Last 1.x release by me.

1.4    (01.03.94)   Some changes made by Disk Nehring. Never found
                    the time to look at them, though. :(

1.5    (07.10.94)   Bugfixed 1.3, not released (you know --- the
                    stupid "your new extension must not be shorter
                    than 4 chars" memory-trashing bug).
                    New option "CATS" added (the 2.0 name is "PARENTHESES",
                    in case you are interested).
```

```
2.0    (15.02.95)   Complete rewrite. Not a single line of code was
                    kept from the 1.5 release. Some of new new features:
                        - make guides from the include files
                        - new format for table of contents (the "MAIN" node)
                        - some minor optical improvements (some keywords
```

```
                        are now displayed bold)
                   -  should be able to correctly distinguish between
                      "functions" and "defined constants" (important for
                      converting the MUI autodocs)
                   -  knows about varargs
                   -  I tried to think about the problem *before* starting
                      to write code, most of the time.
                   -  much much more
```

1.9   Who is responsible for this?

If you have anything to tell me (bugs, suggestions, praise :)), send it
to the following address:

```
      Christian Stieber
            Konradstraße 41
      D-85055 Ingolstadt
      (Germany)

      Phone +49-841-59896
```

Bombs and other unhealthy stuff may be sent to NIL:, /dev/null or whatever
it is called on your system.

Currently I'm a student and can be reached at:

```
      Christian Stieber
                        Seitzstraße 6, Zi. 306
      D-80538 München
      (Germany)

      Phone +49-89-292732
                        EMail Stieber@Informatik.TU-Muenchen.de
                              Stieber@LEO.org
```

The first address should stay valid for quite a long time, while the second
address will go away at some time.

Unless you send EMail or provide an EMail address, don't expect an answer.
Of course, mail with some $$$ will be answered, provided the $$$ cover at
least my expenses. Other than that, $$$ are always welcome (useful things
such as a Rolls-Royce, a jet or some diamonds are welcome as well :)) but
won't buy you anything --- there is no printed manual I could give away,
you already have the source, and I will fix bugs anyway.

1.10   ADtoHT Release 3 preview

Hey! I'm still working on this. You don't want me to waste my time
giving you up-to-date information, do you? But I'll tell you: it's

great. It beats everything, including Doom. I decided to make it the
new standard. The current project name is "Vienna", and the projected
release name is "ADtoHT '96". It will incorporate features found on
ADtoHT NT Release 4, and some of the new elements developed for
ADtoHT NT Release 5. So stay tuned...