Subject: C++ Parser
Posted by unodgs on Wed, 28 Sep 2011 12:03:46 GMT
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Qt developers wrote today (http://labs.qt.nokia.com/2011/09/28/qt-creator-editor-news/) that they're experimenting with clang as a parser for intellisense. It seems to be a good idea because clang supports "fuzzy parsing". Maybe we should follow the same way?

Subject: Re: C++ Parser
Posted by unodgs on Wed, 28 Sep 2011 12:11:32 GMT
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Here is a plugin for vim that uses clang for autocompletion
https://github.com/Rip-Rip/clang_complete

Subject: Re: C++ Parser
Posted by unodgs on Wed, 28 Sep 2011 12:16:25 GMT
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This vim plugin seems to be very accurate:
http://zwiener.org/vimautocomplete.html

Subject: Re: C++ Parser
Posted by mirek on Wed, 28 Sep 2011 21:14:58 GMT
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Is it as fast as we need too?

Subject: Re: C++ Parser
Posted by unodgs on Wed, 28 Sep 2011 21:27:51 GMT
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mirek wrote on Wed, 28 September 2011 17:14Is it as fast as we need too?
I'm gonna find out (just built the newest version..)

Subject: Re: C++ Parser
Posted by Novo on Thu, 29 Sep 2011 14:30:10 GMT
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unodgs wrote on Wed, 28 September 2011 08:11Here is a plugin for vim that uses clang for

autocompletion
https://github.com/Rip-Rip/clang_complete

Thanks for a hint.

Subject: Re: C++ Parser
Posted by unodgs on Tue, 25 Oct 2011 12:27:29 GMT
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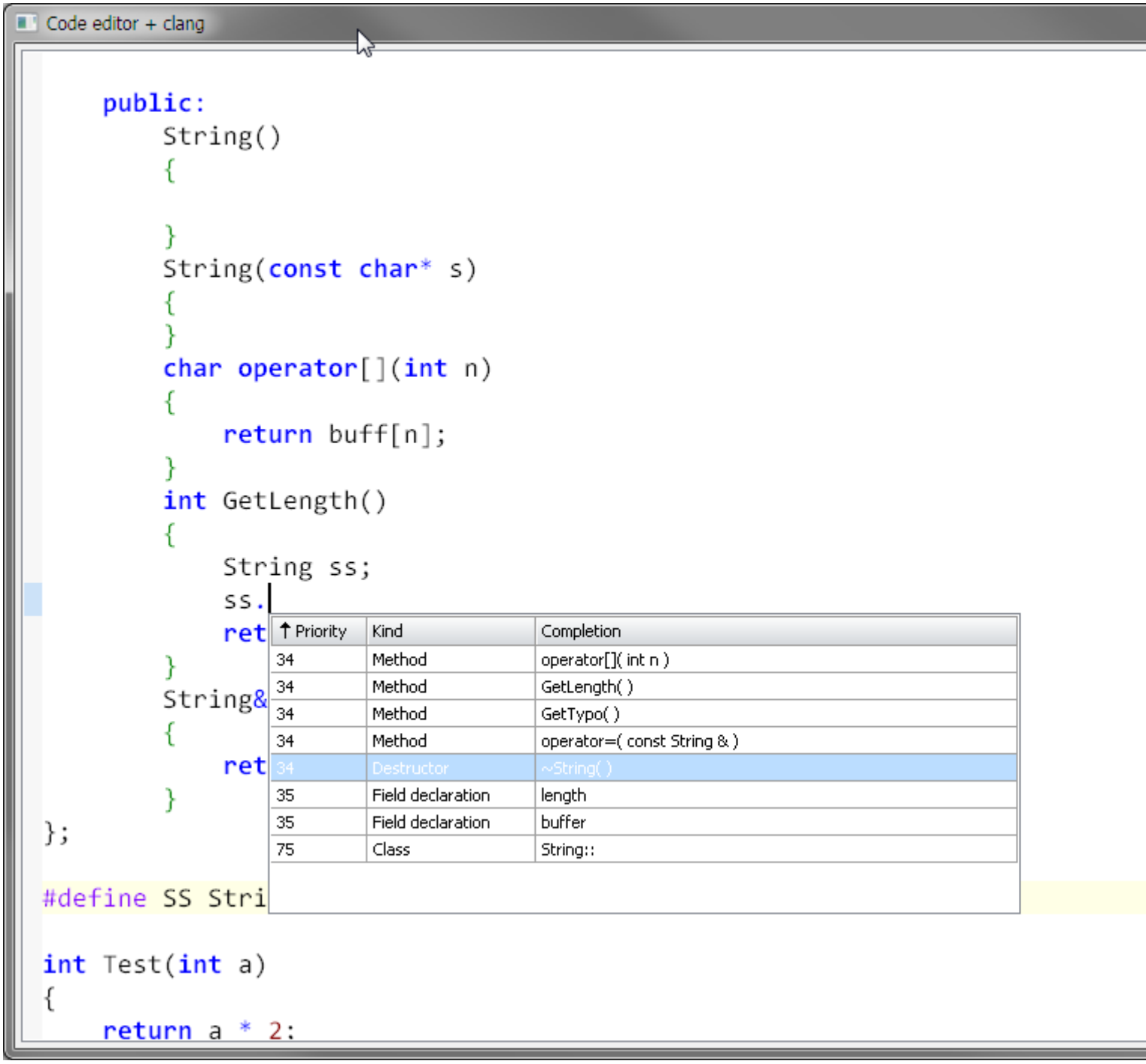
I did some further work on integration of clang and code editor. Here's the result

When I fix some bugs I will upload binaries here so everybody could see how it works.
I'm also trying to parse all the upp project functions/methods. When it's ready I'll publish the results about accuracy and speed of parsing. Anyway for now clang seems to be quite promising.

File Attachments

1) clangeditor.png, downloaded 1393 times



Subject: Re: C++ Parser
Posted by mirek on Tue, 25 Oct 2011 15:36:29 GMT
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unodgs wrote on Tue, 25 October 2011 08:27I did some further work on integration of clang and code editor. Here's the result

When I fix some bugs I will upload binaries here so everybody could see how it works.

I'm also trying to parse all the upp project functions/methods. When it's ready I'll publish the results about accuracy and speed of parsing. Anyway for now clang seems to be quite promising.

I believe that the real trouble is not C++ parser alone, working on single file, but how to make all files work together (with all macros and headers and such).

E.g. for Alt+J (jump to definition) to work, you need to keep track of all files...

Is this somehow solved in clang?

Mirek

Subject: Re: C++ Parser
Posted by fudadmin on Tue, 25 Oct 2011 15:46:22 GMT
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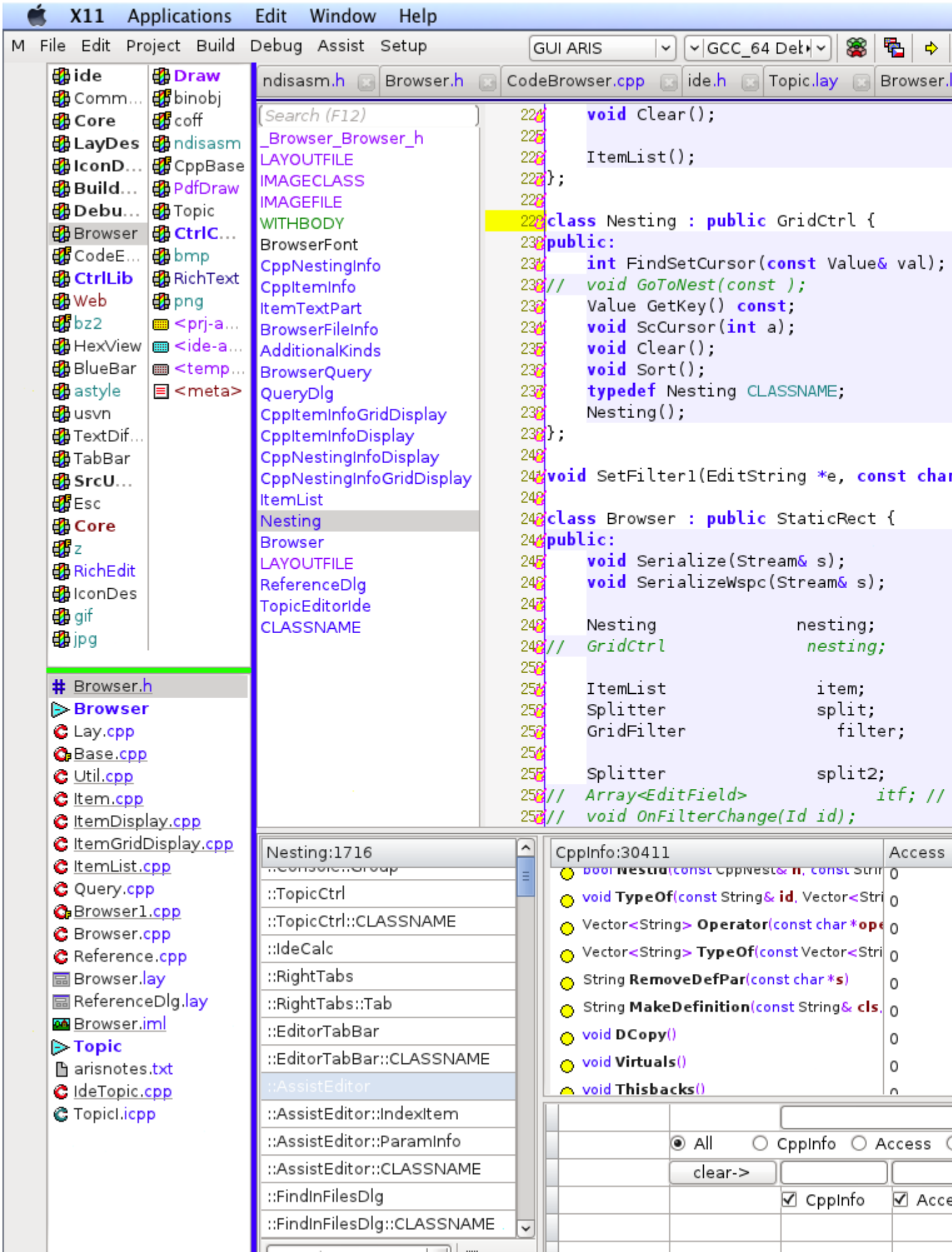
I have been also working on the ide upp Cpp code parsing and browsing improvement alternative and also using GridCtrl . I tried to use clang for compiling upp on mac but it didnt work. Are you able to compile upp with clang?

File Attachments

1) Screen shot 2011-10-25 at 16.25.16.png, downloaded 686 times


X11 Applications Edit Window Help
M File Edit Project Build Debug Assist Setup
GUI ARIS
GCC_64 Deb
ide
Comm...
Core
LayDes
IconD...
Build...
Debu...
Browser
CodeE...
CtrlLib
Web
bz2
HexView
BlueBar
astyle
usvn
TextDif...
TabBar
SrcU...
Esc
Core
z
RichEdit
IconDes
gif
jpg
Draw
binobj
coff
ndisasm
CppBase
PdfDraw
Topic
CtrlC...
bmp
RichText
png
<prj-a...
<ide-a...
<temp...
<meta>
Browser.h
Browser
Lay.cpp
Base.cpp
Util.cpp
Item.cpp
ItemDisplay.cpp
ItemGridDisplay.cpp
ItemList.cpp
Query.cpp
Browser1.cpp
Browser.cpp
Reference.cpp
Browser.lay
ReferenceDlg.lay
Browser.iml
Topic
arisnotes.txt
IdeTopic.cpp
TopicI.icpp
ndisasm.h
Browser.h
CodeBrowser.cpp
ide.h
Topic.lay
Browser.l
Search (F12)
_Browser_Browser_h
LAYOUTFILE
IMAGECLASS
IMAGEFILE
WITHBODY
BrowserFont
CppNestingInfo
CppItemInfo
ItemTextPart
BrowserFileInfo
AdditionalKinds
BrowserQuery
QueryDlg
CppItemInfoGridDisplay
CppItemInfoDisplay
CppNestingInfoDisplay
CppNestingInfoGridDisplay
ItemList
Nesting
Browser
LAYOUTFILE
ReferenceDlg
TopicEditorIde
CLASSNAME
void Clear();
ItemList();
};
class Nesting : public GridCtrl {
public:
int FindSetCursor(const Value& val);
// void GoToNest(const);
Value GetKey() const;
void ScCursor(int a);
void Clear();
void Sort();
typedef Nesting CLASSNAME;
Nesting();
};
void SetFilter1(EditString *e, const char
class Browser : public StaticRect {
public:
void Serialize(Stream& s);
void SerializeWspc(Stream& s);
Nesting nesting;
// GridCtrl nesting;
ItemList item;
Splitter split;
GridFilter filter;
Splitter split2;
// Array<EditField> itf; //
// void OnFilterChange(Id id);
Nesting:1716
::TopicCtrl
::TopicCtrl::CLASSNAME
::IdeCalc
::RightTabs
::RightTabs::Tab
::EditorTabBar
::EditorTabBar::CLASSNAME
::AssistEditor
::AssistEditor::IndexItem
::AssistEditor::ParamInfo
::AssistEditor::CLASSNAME
::FindInFilesDlg
::FindInFilesDlg::CLASSNAME
CppInfo:30411
Access
void TypeOf(const String& id, Vector<Stri
Vector<String> Operator(const char *ope
Vector<String> TypeOf(const Vector<Stri
String RemoveDefPar(const char *s)
String MakeDefinition(const String& cls,
void DCopy()
void Virtuals()
void Thisbacks()
All
CppInfo
Access
clear->
CppInfo

Subject: Re: C++ Parser
Posted by Novo on Tue, 25 Oct 2011 15:53:11 GMT
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mirek wrote on Tue, 25 October 2011 11:36
I believe that the real trouble is not C++ parser alone, working on single file, but how to make all files work together (with all macros and headers and such).

AFAIK, clang is a real compiler, so, it has to parse all included files. The difference with gcc is that internal data structure is more high level and it stores more info for each parsed element. As a result you can use it not just to jump/navigate among files but also to regenerate file back (or to do some refactoring and generate files after that). It is a real parser an you have real type info about each node. The only question is performance. But XCode is based on clang and seems to work fine.

Subject: Re: C++ Parser
Posted by unodgs on Tue, 25 Oct 2011 16:48:07 GMT
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Quote:I believe that the real trouble is not C++ parser alone, working on single file, but how to make all files work together (with all macros and headers and such).
I had also #include <Core/Core.h> in the sample file and the speed was more than acceptable (especially the second time when files were cached by the system I guess). Besides clang supports precompiled headers what should make parsing fast enough even if lots of headers and macros are involved.
Integrating clang with upp is also very easy. It's only one file libclang.dll (4.7 MB) that has to be distributed with the rest of the framework.
Anyway I'll try to finish the demo and add the whole upp library with windows headers and see what the speed will be.

Subject: Re: C++ Parser
Posted by unodgs on Tue, 25 Oct 2011 16:52:11 GMT
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fudadmin wrote on Tue, 25 October 2011 11:46I have been also working on the ide upp Cpp code parsing and browsing improvement alternative and also using GridCtrl .
That's a great news! Could you share your sources?
Quote:I tried to use clang for compiling upp on mac but it didnt work. Are you able to compile upp with clang?
On win64 clang exploded during compilation one of the upp's package (I used svn version not a stable one). But I'll keep on trying