原 Media Player Classic - HC 源代码分析 5：关于对话框 （CAboutDlg）

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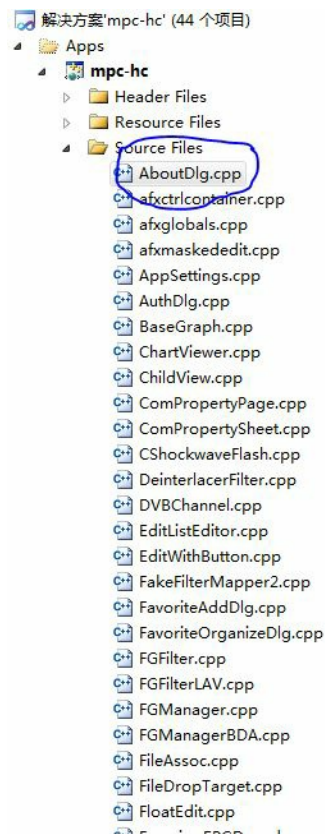

前几篇文章分析了Media Player Classic - HC（mpc-hc）的核心类（CMainFrame）：

Media Player Classic - HC 源代码分析 2：核心类 （CMainFrame） （1）

Media Player Classic - HC 源代码分析 3：核心类 （CMainFrame） （2）

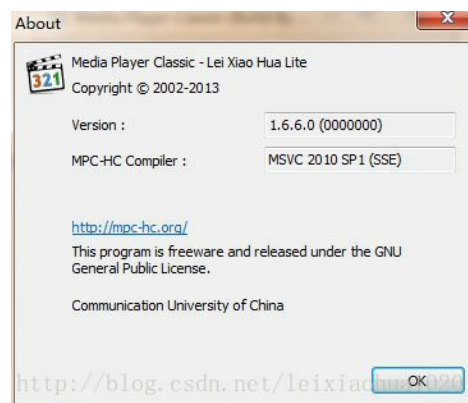Media Player Classic - HC 源代码分析 4：核心类 （CMainFrame） （3）

核心类已经分析的差不多了，现在可以看一看其他类的定义了。可是如此多的类，看看什么好呢？本着由易到难的原则，应该先看看"关于"对话框的代码。"关于"对话框作为mpc-hc系统的一部分，比较有代表性，而且代码相对来说十分简单，因而适合刚入门的人进行学习。

如图所示，"关于"对话框类的定义和实现都在最前面（因为开头是'A'......= =）。类的名字叫做CAboutDlg，定义位于AboutDlg.h，实现位于AboutDlg.cpp。

先看看"关于"对话框是什么样子的吧：

其实相比于其他的"关于"对话框来说，这个还算是一个相对比较复杂的。包含了编译器信息，版本等等信息。

CAboutDlg定义如下所示：

```cpp
1.   /*
2.    * (C) 2012 see Authors.txt
3.    *
4.    * This file is part of MPC-HC.
5.    *
6.    * MPC-HC is free software; you can redistribute it and/or modify
7.    * it under the terms of the GNU General Public License as published by
8.    * the Free Software Foundation; either version 3 of the License, or
9.    * (at your option) any later version.
10.   *
11.   * MPC-HC is distributed in the hope that it will be useful,
12.   * but WITHOUT ANY WARRANTY; without even the implied warranty of
13.   * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
14.   * GNU General Public License for more details.
15.   *
16.   * You should have received a copy of the GNU General Public License
17.   * along with this program.  If not, see <http://www.gnu.org/licenses/>.
18.   *
19.   */
20.
21.  #pragma once
22.
23.  #include <afxwin.h>
24.  #include "resource.h"
25.
26.  class CAboutDlg : public CDialog
27.  {
28.      CStatic m_icon;
29.
30.      CString m_appname;
31.      CString m_strBuildNumber;
32.      CString m_MPCCompiler;
33.  #ifndef MPCHC_LITE
34.      CString m_FFmpegCompiler;
35.  #endif
36.      CString m_credits;
37.      CString m_AuthorsPath;
38.
39.  public:
40.      CAboutDlg();
41.
42.      virtual BOOL OnInitDialog();
43.
44.      afx_msg void OnHomepage(NMHDR* pNMHDR, LRESULT* pResult);
45.      afx_msg void OnAuthors(NMHDR* pNMHDR, LRESULT* pResult);
46.
47.      // Dialog Data
48.      //{{AFX_DATA(CAboutDlg)
49.      enum { IDD = IDD_ABOUTBOX };
50.      //}}AFX_DATA
51.
52.      // ClassWizard generated virtual function overrides
53.      //{{AFX_VIRTUAL(CAboutDlg)
54.  protected:
55.      virtual void DoDataExchange(CDataExchange* pDX);    // DDX/DDV support
56.      //}}AFX_VIRTUAL
57.
58.      // Implementation
59.  protected:
60.      //{{AFX_MSG(CAboutDlg)
61.      // No message handlers
62.      //}}AFX_MSG
63.      DECLARE_MESSAGE_MAP()
64.  };
```

从代码上来看。该对话框类和普通的MFC对话框类没有什么区别。不过这个"高端"的"关于"对话框确实包含了不少信息：mpc-hc版本，ffmpeg版本，编译器版本等等。这里就不再多说了，看看它类的实现部分的代码：

```cpp
1.   /*
2.    * (C) 2012-2013 see Authors.txt
3.    *
4.    * This file is part of MPC-HC.
5.    *
6.    * MPC-HC is free software; you can redistribute it and/or modify
7.    * it under the terms of the GNU General Public License as published by
8.    * the Free Software Foundation; either version 3 of the License, or
9.    * (at your option) any later version.
10.   *
11.   * MPC-HC is distributed in the hope that it will be useful,
12.   * but WITHOUT ANY WARRANTY; without even the implied warranty of
13.   * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
14.   * GNU General Public License for more details.
15.   *
16.   * You should have received a copy of the GNU General Public License
17.   * along with this program.  If not, see <http://www.gnu.org/licenses/>.
18.   *
```

```cpp
 19.   */
 20.
 21.  #include "stdafx.h"
 22.  #include "AboutDlg.h"
 23.  #include "mpc-hc_config.h"
 24.  #ifndef MPCHC_LITE
 25.  #include "FGFilterLAV.h"
 26.  #endif
 27.  #include "mplayerc.h"
 28.  #include "version.h"
 29.  #include "SysVersion.h"
 30.  #include "WinAPIUtils.h"
 31.
 32.  //////////////////////////////////////////////////////////////////////
 33.  // CAboutDlg dialog used for App About
 34.
 35.  CAboutDlg::CAboutDlg() : CDialog(CAboutDlg::IDD)
 36.      , m_appname(_T(""))
 37.      , m_strBuildNumber(_T(""))
 38.      , m_MPCCompiler(_T(""))
 39.  #ifndef MPCHC_LITE
 40.      , m_LAVFiltersVersion(_T(""))
 41.  #endif
 42.  {
 43.      //{{AFX_DATA_INIT(CAboutDlg)
 44.      //}}AFX_DATA_INIT
 45.  }
 46.  //初始化
 47.  BOOL CAboutDlg::OnInitDialog()
 48.  {
 49.      // Get the default text before it is overwritten by the call to __super::OnInitDialog()
 50.      GetDlgItem(IDC_STATIC1)->GetWindowText(m_appname);
 51.      GetDlgItem(IDC_AUTHORS_LINK)->GetWindowText(m_credits);
 52.  #ifndef MPCHC_LITE
 53.      GetDlgItem(IDC_LAVFILTERS_VERSION)->GetWindowText(m_LAVFiltersVersion);
 54.  #endif
 55.
 56.      __super::OnInitDialog();
 57.
 58.      // Because we set LR_SHARED, there is no need to explicitly destroy the icon
 59.      m_icon.SetIcon((HICON)LoadImage(AfxGetInstanceHandle(), MAKEINTRESOURCE(IDR_MAINFRAME), IMAGE_ICON, 48, 48, LR_SHARED));
 60.
 61.  #if MPC_BETA_RELEASE || _WIN64
 62.      m_appname += _T(" (");
 63.  #endif
 64.
 65.  #if MPC_BETA_RELEASE
 66.      m_appname += MPC_VERSION_BETA;
 67.  #endif
 68.
 69.  #if MPC_BETA_RELEASE && _WIN64
 70.      m_appname += _T(", ");
 71.  #endif
 72.
 73.  #ifdef _WIN64
 74.      m_appname += _T("64-bit");
 75.  #endif
 76.
 77.  #if MPC_BETA_RELEASE || _WIN64
 78.      m_appname += _T(")");
 79.  #endif
 80.
 81.  #ifdef MPCHC_LITE
 82.      m_appname += _T(" Lite");
 83.  #endif
 84.
 85.      // Build the path to Authors.txt
 86.      m_AuthorsPath = GetProgramPath() + _T("Authors.txt");
 87.      // Check if the file exists
 88.      if (FileExists(m_AuthorsPath)) {
 89.          // If it does, we make the filename clickable
 90.          m_credits.Replace(_T("Authors.txt"), _T("<a>Authors.txt</a>"));
 91.      }
 92.
 93.      m_homepage.Format(_T("<a>%s</a>"), WEBSITE_URL);
 94.
 95.      m_strBuildNumber = MPC_VERSION_STR_FULL;
 96.
 97.  #if defined(__INTEL_COMPILER)
 98.  #if (__INTEL_COMPILER >= 1210)
 99.      m_MPCCompiler = _T("ICL ") MAKE_STR(__INTEL_COMPILER) _T(" Build ") MAKE_STR(__INTEL_COMPILER_BUILD_DATE);
100.  #else
101.  #error Compiler is not supported!
102.  #endif
103.  #elif defined(_MSC_VER)
104.  #if (_MSC_VER == 1700) // 2012
105.  #if (_MSC_FULL_VER == 170060610)
106.      m_MPCCompiler = _T("MSVC 2012 Update 3");
107.  #elif (_MSC_FULL_VER == 170060315)  // MSVC 2012 Update 2
108.  #error VS2012 Update 2 is not supported because the binaries will not run on XP. Install Update 3 instead.
109.  #elif (_MSC_FULL_VER == 170051106)
```

```cpp
110.         m_MPCCompiler = _T("MSVC 2012 Update 1");
111.     #elif (_MSC_FULL_VER < 170050727)   // MSVC 2012
112.     #error Please install the latest Update for VS2012.
113.     #else
114.         m_MPCCompiler = _T("MSVC 2012");
115.     #endif
116.     #elif (_MSC_VER == 1600) // 2010
117.     #if (_MSC_FULL_VER >= 160040219)
118.         m_MPCCompiler = _T("MSVC 2010 SP1");
119.     #else
120.         m_MPCCompiler = _T("MSVC 2010");
121.     #endif
122.     #elif (_MSC_VER < 1600)
123.     #error Compiler is not supported!
124.     #endif
125.     #else
126.     #error Please add support for your compiler
127.     #endif
128.
129.     #if (__AVX__)
130.         m_MPCCompiler += _T(" (AVX)");
131.     #elif (__SSSE3__)
132.         m_MPCCompiler += _T(" (SSSE3)");
133.     #elif (__SSE3__)
134.         m_MPCCompiler += _T(" (SSE3)");
135.     #elif !defined(_M_X64) && defined(_M_IX86_FP)
136.     #if (_M_IX86_FP == 2)   // /arch:SSE2 was used
137.         m_MPCCompiler += _T(" (SSE2)");
138.     #elif (_M_IX86_FP == 1) // /arch:SSE was used
139.         m_MPCCompiler += _T(" (SSE)");
140.     #endif
141.     #endif
142.
143.     #ifdef _DEBUG
144.         m_MPCCompiler += _T(" Debug");
145.     #endif
146.
147.     #ifndef MPCHC_LITE
148.         //版本
149.         CString LAVFiltersVersion = CFGFilterLAV::GetVersion();
150.         if (!LAVFiltersVersion.IsEmpty()) {
151.             m_LAVFiltersVersion = LAVFiltersVersion;
152.         }
153.     #endif
154.
155.         m_buildDate = _T(__DATE__) _T(" ") _T(__TIME__);
156.
157.         OSVERSIONINFOEX osVersion = SysVersion::GetFullVersion();
158.         m_OSName.Format(_T("Windows NT %lu.%lu (build %u)"),
159.                         osVersion.dwMajorVersion, osVersion.dwMinorVersion, osVersion.dwBuildNumber);
160.         if (osVersion.szCSDVersion[0]) {
161.             m_OSName.AppendFormat(_T(", %s)"), osVersion.szCSDVersion);
162.         } else {
163.             m_OSName += _T(")");
164.         }
165.         m_OSVersion.Format(_T("%lu.%lu"), osVersion.dwMajorVersion, osVersion.dwMinorVersion);
166.         if (SysVersion::Is64Bit()) {
167.             m_OSVersion += _T(" (64-bit)");
168.         }
169.
170.         UpdateData(FALSE);
171.
172.         GetDlgItem(IDOK)->SetFocus();
173.
174.         return FALSE;
175.     }
176.
177.     void CAboutDlg::DoDataExchange(CDataExchange* pDX)
178.     {
179.         CDialog::DoDataExchange(pDX);
180.         //{{AFX_DATA_MAP(CAboutDlg)
181.         //}}AFX_DATA_MAP
182.         DDX_Control(pDX, IDR_MAINFRAME, m_icon);
183.         DDX_Text(pDX, IDC_STATIC1, m_appname);
184.         DDX_Text(pDX, IDC_AUTHORS_LINK, m_credits);
185.         DDX_Text(pDX, IDC_HOMEPAGE_LINK, m_homepage);
186.         DDX_Text(pDX, IDC_VERSION, m_strBuildNumber);
187.         DDX_Text(pDX, IDC_MPC_COMPILER, m_MPCCompiler);
188.     #ifndef MPCHC_LITE
189.         DDX_Text(pDX, IDC_LAVFILTERS_VERSION, m_LAVFiltersVersion);
190.     #endif
191.         DDX_Text(pDX, IDC_STATIC2, m_buildDate);
192.         DDX_Text(pDX, IDC_STATIC3, m_OSName);
193.         DDX_Text(pDX, IDC_STATIC4, m_OSVersion);
194.     }
195.
196.     BEGIN_MESSAGE_MAP(CAboutDlg, CDialog)
197.         //{{AFX_MSG_MAP(CAboutDlg)
198.         // No message handlers
199.         //}}AFX_MSG_MAP
200.         ON_NOTIFY(NM_CLICK, IDC_HOMEPAGE_LINK, OnHomepage)
201.         ON_NOTIFY(NM_CLICK, IDC_AUTHORS_LINK, OnAuthors)
```

```
201.    ON_NOTIFY(NM_CLICK, IDC_AUTHORS_LINK, OnAuthors)
202.    ON_BN_CLICKED(IDC_BUTTON1, OnCopyToClipboard)
203.  END_MESSAGE_MAP()
204.
205.  void CAboutDlg::OnHomepage(NMHDR* pNMHDR, LRESULT* pResult)
206.  {
207.      ShellExecute(m_hWnd, _T("open"), WEBSITE_URL, nullptr, nullptr, SW_SHOWDEFAULT);
208.      *pResult = 0;
209.  }
210.
211.  void CAboutDlg::OnAuthors(NMHDR* pNMHDR, LRESULT* pResult)
212.  {
213.      ShellExecute(m_hWnd, _T("open"), m_AuthorsPath, nullptr, nullptr, SW_SHOWDEFAULT);
214.      *pResult = 0;
215.  }
216.  //拷贝到剪切板
217.  void CAboutDlg::OnCopyToClipboard()
218.  {
219.      //把各种信息添加到一个字符串中
220.      CStringW info = m_appname;
221.      info += _T("\n----------------------------------\n\n");
222.      info += _T("Build information:\n");
223.      info += _T("    Version:             ") + m_strBuildNumber + _T("\n");
224.      info += _T("    MPC-HC compiler:     ") + m_MPCCompiler + _T("\n");
225.      info += _T("    Build date:          ") + m_buildDate + _T("\n\n");
226. #ifndef MPCHC_LITE
227.      info += _T("LAV Filters:\n");
228.      info += _T("    LAV Splitter:        ") + CFGFilterLAV::GetVersion(CFGFilterLAV::SPLITTER) + _T("\n");
229.      info += _T("    LAV Video:           ") + CFGFilterLAV::GetVersion(CFGFilterLAV::VIDEO_DECODER) + _T("\n");
230.      info += _T("    LAV Audio:           ") + CFGFilterLAV::GetVersion(CFGFilterLAV::AUDIO_DECODER) + _T("\n\n");
231. #endif
232.      info += _T("Operating system:\n");
233.      info += _T("    Name:                ") + m_OSName + _T("\n");
234.      info += _T("    Version:             ") + m_OSVersion + _T("\n");
235.
236.      COleDataSource* pData = DEBUG_NEW COleDataSource();
237.
238.      int len = info.GetLength() + 1;
239.      HGLOBAL hGlob = GlobalAlloc(GMEM_FIXED, len * sizeof(WCHAR));
240.
241.      if (pData && hGlob) {
242.          wcscpy_s((WCHAR*)hGlob, len, (LPCWSTR)info);
243.
244.          pData->CacheGlobalData(CF_UNICODETEXT, hGlob);
245.
246.          // The system will take care of removing the allocated memory
247.          pData->SetClipboard();
248.      } else if (pData) {
249.          delete pData;
250.      } else if (hGlob) {
251.          GlobalFree(hGlob);
252.      }
253.  }
```

代码整体上通俗易懂，调用的都是很常见的函数，不多解释了。

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个人分类： MPC-HC

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