
Subject: BUG: Serious problem with Core/CharSet
Posted by [kov_serg](#) on Thu, 03 Jun 2010 22:22:23 GMT
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Upp2361/WinXP

Testing code shows "error 128=31"

```
#include <Core/Core.h>
```

```
using namespace Upp;
CONSOLE_APP_MAIN {
    wchar_t w[]={0x0410,0}; // must be converted to 0x80,0 see definition of CHRTAB_CP866
    String r=FromUnicode(w,CHARSET_CP866);
    int rc=r[0]&255;
    Cout()<<((rc==0x80)?"ok ":"error 128=")<<rc<<"\n";
}
```

CHARSET_CP866 has code 62 but if we use 60 instead 62 it will works.

The bug hides here:

Core\CharSet.cpp:2252

```
...
byte ResolveCharset(byte charset)
{
    return charset ? charset : DefaultCharset;
}

inline
static CharSetData& s_cset(byte charset)
{
    return s_map()[ResolveCharset(charset)]; // <<<< why charset code used here instead of real
    index String("CP866") ???
}
```

s_map() returns ArrayMap<String, CharSetData>& and shuld be indexed by string "CP866" not by charset code 62. Because it real index is 60.

Look at Core\CharSet.cpp:2206

```
int q = s_map().GetCount();
```

And try to ASSERT(q==systemcharset); and this assert fail almost always.

May be at beginig charset codes was equal to s_map item index, but now this is not true. And this

is a problem function FromUnicode works wrong.

Subject: Re: BUG: Serious problem with Core/CharSet

Posted by [tojocky](#) on Fri, 04 Jun 2010 05:28:41 GMT

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kov_serg wrote on Fri, 04 June 2010 01:22Upp2361/WinXP

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And try to ASSERT(q==systemcharset); and this assert fail almost always.

May be at beginig charset codes was equal to s_map item index, but now this is not true. And this is a problem function FromUnicode works wrong.

Some days ago I had problems with charset. but the problem was not with u++. u++ works perfectly. the chars tables and conversions are perfectly.

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [Mindtraveller](#) on Fri, 04 Jun 2010 06:02:10 GMT
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There is definitely something wrong with charset conversion:

```
CONSOLE_APP_MAIN
{
    Cout() << "\n";

    for (int i=0; i<s.GetLength(); ++i)
        Cout() << Format("%02X ", s[i]);
}
```

gives output:

```
1F 1F 1F 1F 20 1F 1F 1F 1F 1F 1F 21
```

which means no Russian characters are actually converted.

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [kov_serg](#) on Fri, 04 Jun 2010 06:33:59 GMT
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The poblem exist! Just belive me and try to test yourself.
Cheking code:

```
#include <Core/Core.h>
using namespace Upp;
CONSOLE_APP_MAIN {
    for(int i=0;i<256;++i) {
        String name=CharsetName(i);
        if (name.GetLength()) {
            while(name.GetLength()<18) name+=" ";
            Cout()<<"#define CHARSET_"<<name<<"\t"<<i<<"\n";
        }
    }
}
```

Then look at defines in CharSet.h

Here is the difference

```
// in Core/CharSet.h           // real case
#define CHARSET_CP853          51 // #define CHARSET_CP853          49
#define CHARSET_CP855          52 // #define CHARSET_CP855          50
#define CHARSET_CP856          53 // #define CHARSET_CP856          51
#define CHARSET_CP857          54 // #define CHARSET_CP857          52
#define CHARSET_CP858          55 // #define CHARSET_CP858          53
#define CHARSET_CP860          56 // #define CHARSET_CP860          54
#define CHARSET_CP861          57 // #define CHARSET_CP861          55
#define CHARSET_CP862          58 // #define CHARSET_CP862          56
#define CHARSET_CP863          59 // #define CHARSET_CP863          57
#define CHARSET_CP864          60 // #define CHARSET_CP864          58
#define CHARSET_CP865          61 // #define CHARSET_CP865          59
#define CHARSET_CP866          62 // #define CHARSET_CP866          60
#define CHARSET_CP869          63 // #define CHARSET_CP869          61
#define CHARSET_CP874          64 // #define CHARSET_CP874          62
#define CHARSET_CP922          65 // #define CHARSET_CP922          63
#define CHARSET_GEORGIAN_ACADEMY 66 // #define CHARSET_Georgian-Academy
64
#define CHARSET_GEORGIAN_PS     67 // #define CHARSET_Georgian-PS     65
#define CHARSET_HP_ROMAN8      68 // #define CHARSET_HP-ROMAN8      66
#define CHARSET_ISO_8859_1     69 // #define CHARSET_iso8859-1      1
#define CHARSET_ISO_8859_10    70 // #define CHARSET_iso8859-10    10
#define CHARSET_ISO_8859_13    71 // #define CHARSET_iso8859-13    11
#define CHARSET_ISO_8859_14    72 // #define CHARSET_iso8859-14    12
#define CHARSET_ISO_8859_15    73 // #define CHARSET_iso8859-15    13
#define CHARSET_ISO_8859_16    74 // #define CHARSET_iso8859-16    14
#define CHARSET_ISO_8859_2     75 // #define CHARSET_iso8859-2     2
#define CHARSET_ISO_8859_3     76 // #define CHARSET_iso8859-3     3
#define CHARSET_ISO_8859_4     77 // #define CHARSET_iso8859-4     4
#define CHARSET_ISO_8859_5     78 // #define CHARSET_iso8859-5     5
#define CHARSET_ISO_8859_6     79 // #define CHARSET_iso8859-6     6
#define CHARSET_ISO_8859_7     80 // #define CHARSET_iso8859-7     7
#define CHARSET_ISO_8859_8     81 // #define CHARSET_iso8859-8     8
#define CHARSET_ISO_8859_9     82 // #define CHARSET_iso8859-9     9
#define CHARSET_JIS_X0201     83 // #define CHARSET_iso8859-10    10
#define CHARSET_KOI8_RU       85 // #define CHARSET_KOI8-RU       67
#define CHARSET_KOI8_T        86 // #define CHARSET_KOI8-T        68
#define CHARSET_KOI8_U        87 // #define CHARSET_KOI8-U        69
#define CHARSET_MACARABIC     88 // #define CHARSET_MacArabic     70
#define CHARSET_MACCENTRALEUROPE 89 // #define CHARSET_MacCentralEurope
71
#define CHARSET_MACCROATIAN    90 // #define CHARSET_MacCroatian    72
#define CHARSET_MACCYRILLIC    91 // #define CHARSET_MacCyrillic    73
#define CHARSET_MACGREEK       92 // #define CHARSET_MacGreek       74
#define CHARSET_MACHEBREW      93 // #define CHARSET_MacHebrew      75
#define CHARSET_MACICELAND     94 // #define CHARSET_MacIceland     76
```

```
#define CHARSET_MACROMAN      95    // #define CHARSET_MacRoman      77
#define CHARSET_MACROMANIA    96    // #define CHARSET_MacRomania    78
#define CHARSET_MACTHAI       97    // #define CHARSET_MacThai       79
#define CHARSET_MACTURKISH     98    // #define CHARSET_MacTurkish    80
#define CHARSET_MACUKRAINE     99    // #define CHARSET_MacUkraine    81
#define CHARSET_MULELAO_1     100   // #define CHARSET_MuleLao-1     82
#define CHARSET_NEXTSTEP      101   // #define CHARSET_NEXTSTEP      83
#define CHARSET_RISCOS_LATIN1  102   // #define CHARSET_RISCOS-LATIN1  84
#define CHARSET_TCVN           103   // #define CHARSET_TCVN           85
#define CHARSET_TIS_620        104   // #define CHARSET_TIS-620        86
#define CHARSET_VISCII         105   // #define CHARSET_VISCII         87
#define CHARSET_TOASCII        253   // ??????
```

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [mirek](#) on Sat, 05 Jun 2010 19:38:04 GMT

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Well, the problem was caused when I have applied a patch adding a lot of charset - but some of them were invalid. So I have removed those invalid, which created "holes" in numbering.

Now it should be fixed (I have filled the holes with charsets from the end of the list).

Mirek

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [kov_serg](#) on Sat, 05 Jun 2010 20:12:04 GMT

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May be ASSERT in "byte AddCharSet(const char *name, const word *table, byte systemcharset)" would help in future

```
...
int q = s_map().GetCount();
ASSERT(q>0 && q==systemcharset);
CharSetData& m = s_map().Add(name);
...
```

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [Mindtraveller](#) on Sun, 06 Jun 2010 10:47:17 GMT

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luzr wrote on Sat, 05 June 2010 23:38 Well, the problem was caused when I have applied a patch

adding a lot of charset - but some of them were invalid. So I have removed those invalid, which created "holes" in numbering.

Now it should be fixed (I have filled the holes with charsets from the end of the list).

Mirek

Looks like my fault. I'll check better next time.

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [Mindtraveller](#) on Mon, 07 Jun 2010 08:24:03 GMT
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Mindtraveller wrote on Fri, 04 June 2010 10:02: There is definitely something wrong with charset conversion:

```
CONSOLE_APP_MAIN
```

```
{  
    Cout() << "\n";  
  
    for (int i=0; i<s.GetLength(); ++i)  
        Cout() << Format("%02X ", s[i]);  
}
```

gives output:

```
1F 1F 1F 1F 20 1F 1F 1F 1F 1F 1F 21
```

which means no Russian characters are actually converted.

The problem is still there.

Subject: Re: BUG: Serious problem with Core/CharSet
Posted by [kov_serg](#) on Mon, 07 Jun 2010 10:27:55 GMT
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This will work.

```
#undef CHARSET_CP866  
#define CHARSET_CP866 60
```

```
CONSOLE_APP_MAIN
```

```
{  
    Cout() << "\n";  
  
    for (int i=0; i<s.GetLength(); ++i)  
        Cout() << Format("%02X ", s[i]&255);  
}
```

```
// outputs: 82 E1 A5 AC 20 AF E0 A8 A2 A5 E2 21
```

Don't panic. I think this problem will be fixed in future releases. Now you can fix defines in your CharSet.h

```
...  
#define CHARSET_CP865      59 // instead of 61  
#define CHARSET_CP866      60 // instead of 62  
#define CHARSET_CP869      61 // instead of 63  
... and so on
```

Subject: Re: BUG: Serious problem with Core/CharSet

Posted by [mirek](#) on Mon, 07 Jun 2010 12:40:14 GMT

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Ops. Well, it proved to be tricky to do it this way -> I have heavily refactored the code to make sure numeric IDs are forced to match correctly.

Please check...

Mirek
