
Subject: Core chat... (reference counted pointers etc.)

Posted by [mirek](#) on Tue, 23 Oct 2007 21:48:56 GMT

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EDIT: by fudadmin - This topic is a pure gem and one day should go into documentation. I am making it sticky.

mdelfede wrote on Tue, 23 October 2007 15:47luzr wrote on Tue, 23 October 2007 19:45

Well, I think At is extremely effective way how to solve many problems. And similar issue existis even in the plain C

```
a[i++] = a[i];
```

it is simply something you have to care about...

Well, in your example, you can see that you're doing it wrong.

In theide bug, you can't.... or, at least, you can't if you don't know upp vector internals, what's normally the matter.

Wait a moment - this issue is quite rigirously documented. There is precisely defined which container methods invalidate references.

Quote:

Usually people see Vector<> as a blackbox, they don't know (at least, I didn't know) about invalid references caused by At().

[http://www.ultimatepp.org/src\\$Core\\$Vector\\$en-us.html](http://www.ultimatepp.org/src$Core$Vector$en-us.html)

Anyway, as long as you know what At does, I guess this is quite obvious - but I agree that it is a potential source of bugs. There are several gotachas in U++ like this; I guess we should have some document created...

Quote:

BTW, I still think that c++ standard is missing many useful constructs, one of the most useful ot them is the 'property' one, which borland introduced as a language extension in their compilers. An object-oriented language without properties is an empty wine glass, I think

Just an example of it :

```
class C
{
    private:

    int iVal;

    void set_iVal(int _i) { i = _iVal; }
```

```
int get_iVal(void) { return iVal; }
```

```
public:
```

```
__property i = { read = getIval, write = setIval };
```

```
};
```

```
C c ;
```

```
c.i = 5; // calls set_iVal(5)
```

```
int a = c.i; // calls a = get_iVal()
```

That's what I call 'clean object-oriented language'.

I am still not quite sure why people insist on such verbose syntactic sugar (it is really nothing else).

IME/IMO, there is usually much more properties to set than get and setting properties is much more convenient U++/C++ way...

Mirek