Subject: THISBACK and function-overloading
Posted by michael on Fri, 25 Jul 2008 09:29:20 GMT
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I'm using overloaded functions:

```
void ViewHistory()
{
  some code
}

void ViewHistory(String conditions)
{
  some other code
}
```

I'm calling this function by using THISBACK like this:

```
bar.Add("Aufwahlhistorie", ImgMainWnd::history(),
THISBACK(ViewHistory)).Key(K_ALT_A).Help("Aufwahlhistorie").Enable(true);
```

Before i used overloading all went fine, since i'm using this overloaded function i got the following compile-error:

```
K:\Entwicklung\UPP\prohibisZA\prohibisZA.cpp(734) : error C2668: 'Upp::callback' : ambiguous
call to overloaded function
        c:\upp\uppsrc\core\Cbgen.h(229): could be 'Upp::Callback1<P1>
Upp::callback<prohibisZA,prohibisZA,Upp::String>(OBJECT *,void (__th
 iscall prohibisZA::* )(P1))'
        with
        [
            P1=Upp::String,
            OBJECT=prohibisZA
        ]
        c:\upp\uppsrc\core\Cbgen.h(80): or       'Upp::Callback
Upp::callback<prohibisZA,prohibisZA>(OBJECT *,void (__thiscall prohibisZA:
 :* )(void))'
        with
        [
            OBJECT=prohibisZA
        ]
        while trying to match the argument list '(prohibisZA *const , overloaded-function)'
K:\Entwicklung\UPP\prohibisZA\prohibisZA.cpp(734) : error C2228: left of '.Key' must have
class/struct/union
```

K:\Entwicklung\UPP\prohibisZA\prohibisZA.cpp(734) : error C2228: left of '.Help' must have class/struct/union
K:\Entwicklung\UPP\prohibisZA\prohibisZA.cpp(734) : error C2228: left of '.Enable' must have class/struct/union

How do i use THISBACK when using function-overloading?

Subject: Re: THISBACK and function-overloading
Posted by mrjt on Fri, 25 Jul 2008 09:49:24 GMT
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I've had this problem, these are two solutions that I know of:
1) Obvious. Resolve the ambiguity by naming one of you functions something else.
2) Resolve the ambiguity caused by the compiler not being able to determine which version of the callback function to use. You could do this by casting the function pointer correctly, but this would be very ugly.

My prefered solution is to define callback0 somewhere (it's identical to callback, except for the name):

```
template <class OBJECT, class METHOD>
Callback callback0(OBJECT *object, void (METHOD::*method)()) {
 return callback(object, method);
}

template <class OBJECT, class METHOD>
Callback callback0(const OBJECT *object, void (METHOD::*method)() const) {
 return callback(object, method);
}

inline Callback callback0(void (*fn)()) {
 return callback(fn);
}
#define THISBACK0(x)              callback0(this, &CLASSNAME::x)
```

And then it is available to use for resolving this sort of ambiguity.
Perhaps there is a better solution available that I haven't thought of?
