
Subject: String improvements

Posted by [hojtsy](#) on Sat, 25 Feb 2006 17:12:23 GMT

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I added a feature to `String::Find` and `String::ReverseFind` that position could be also given relative to the end of the String, with -1 being equal to the length.

```
s.Find('R', -3) == s.Find('R', s.GetCount()+1-3);
s.ReverseFind('R', -3) == s.ReverseFind('R', s.GetCount()+1-3);
```

```
Implementation is below:
template <class T, class S>
int AString<T, S>::Find(int chr, int from) const
{
    ASSERT(from >= -GetLength()-1 && from <= GetLength());
    if(from < 0)
        from += GetLength()+1;
    const T *e = End();
    for(const T *s = ptr + from; s < e; s++)
        if(*s == chr)
            return s - ptr;
    return -1;
}
```

```
template <class T, class S>
int AString<T, S>::ReverseFind(int chr, int from) const
{
    ASSERT(from >= -GetLength()-1 && from <= GetLength());
    if(from < 0)
        from += GetLength()+1;
    const T *s = ptr + from;
    while(--s >= ptr)
        if(*s == chr)
            return s - ptr;
    return -1;
}
```

This makes the `AString::ReverseFind(int chr)` unnecessary, because the `ReverseFind(int chr, int from)` could have -1 as default value for "from". Could you please add this improvement to uppsrc?

There is one trick, but it comes from the old implementation. If you invoke `Find('R', x)` it will find 'R' if it is present at pos x, but `ReverseFind('R', x)` only starts to check at position x-1. So to start reverse checking from the last char you can use `ReverseFind('R', -1)`, but to start forward checking from the last char you need to use `Find('R', -2)`. Even though I find this unintuitive this is the existing behaviour of `Find` and `ReverseFind` for positive numbers too and changing it would break existing implementations. What is your opinion about changing this behaviour so that `ReverseFind('R', x)` starts checking at position x, and not x-1?

By the way, why is the `chr` parameter `int`? Shouldn't it rather be `T`?
