Subject: U++/Win32 is now using CLANG toolchain
Posted by mirek on Sun, 01 Mar 2020 23:38:36 GMT

I have found this wonderful little project:

https://github.com/mstorsjo/llvm-mingw

which provides CLANG toolchain in windows. This is great match for several reasons:

- it is multichain, single compiler for both 32 and 64 bits, which results in nice small footprint - in fact, I have dropped "without toolchain" windows version, it is now single 140MB .7z file...
- it has good optimal TLS support, unlike gcc in win32
- it is actually able to produce .pdb compatible debug info. That means we can use the same (superior) debugger as for Microsoft C++, including "smart" parts that now display U++ types (!) There are some issues that I plan to gradually fix with workarounds, but overal this seems to work prette well.

Currently it has some downsides too, namely

- targets Windows universal CRT (instead of MSVCRT.dll), which means that for previous versions you need to ship some .dlls with your application. This might or might not be fixed in future...
- being there, it was not possible to have single static linked OpenSSL library for both clang and msvc, so I have gave up and OpenSSL is once again linked dynamically (just as SDL2, MYSQL, PGSQL are)
- there are some issues with weak references, which affected global new/delete overloading)https://github.com/mstorsjo/llvm-mingw/issues/91), but we have workaround for now
- there is also some issue with std::chrono timers, not able to reproduce, but I needed to revert 'msecs' function to older code to fix some weird issues in theide.

Overal, this is a great step forward, next release will be great!