Subject: Re: A terminal emulator widget for U++
Posted by Oblivion on Sat, 04 Jul 2026 20:40:23 GMT
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Hi,

I just wrapped up the SIMD optimizations for the terminal parser and wanted to share the results.

- Pure ASCII Text: Hit ~50 GB/s (roughly 73x faster) on Ryzen 5600g.
- Everyday Shell Use: Real-world mixed workloads are about 35-40% faster across the board.
- Large Payloads: Big data dumps (like 64MB DCS streams) are pushing nearly 3 GB/s.

How it works (In case you are wondering):

The trick was using a two-stage SIMD scanner: A 64-byte fast-forward loop to chew through plain text, dropping into a 16-byte loop to pinpoint control characters without stalling the CPU.
TerminalCtrl also started batching up the chars (unicode/ascii) to cut down on allocation overhead.
The best part is that it passed 100% of the fuzzing and edge-case tests with zero bugs, so it's a completely safe drop-in replacement for the old scalar code.
The parsing side of things is looking pretty solid now!

Best regards,
Oblivion