Subject: How does UPP classify keys
Posted by chivstyle on Mon, 17 Aug 2020 05:28:56 GMT
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Hi,

I'm developing our virtual terminal, but I'm confused about the key abstraction. I've read the manual book, still confused.

I tested these codes below, it worked well so far. Can anyone help me please ?

```
bool SerialConnVT::Key(dword key, int)
{
    bool processed = false;
    // split key and flags.
 dword flags = K_CTRL | K_ALT | K_SHIFT;
    dword d_key = key & ~(flags | K_KEYUP); // key with delta
    flags = key & flags;
    //
 if (d_key & K_DELTA) { // can't capture RETURN
     if (key & K_KEYUP) {
         processed = ProcessKeyUp(d_key, flags);
     } else {
         processed = ProcessKeyDown(d_key, flags);
     }
 } else {
     if (key < 0xffff) {
         processed = ProcessChar(d_key);
         ProcessKeyDown(d_key, flags);
     } else if (key & K_KEYUP) {
         // RETURN will reach here
         ProcessKeyUp(d_key, flags);
     }
 }
 if (processed) {
     mScrollToEnd = true;
 }
 return processed;
}
```

Subject: Re: How does UPP classify keys
Posted by Oblivion on Mon, 17 Aug 2020 07:51:07 GMT
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Hello chivstyle,

In short, it is generally better to handle the control keys before stripping the delta on all platforms (MacOS uses "platform independent values" for those keys while windows and linux use ASCII codes, such as 0x0D for K_RETURN. Thus on MacOS, the K_RETURN value is shifted with delta flag, while on Windows and Linux (and others) it is simply ASCII code 0x0d).

P.s. Since you are developing a terminal emulator, there is already a high-end terminal emulator ctrl (widget) for Upp, that can speed up your development. Have you checked it?

Best regards,
Oblivion

Subject: Re: How does UPP classify keys
Posted by chivstyle on Mon, 17 Aug 2020 08:27:02 GMT
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Thanks very much. I've read the VT102's mannual, it taked me lot of time. ECMA48, Xterm, oh, no!

Thanks, you saved me from those heavy documentations.

Subject: Re: How does UPP classify keys
Posted by Oblivion on Mon, 17 Aug 2020 09:06:43 GMT
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Happy to help.

Thanks very much. I've read the VT102's mannual, it taked me lot of time. ECMA48, Xterm, oh, no!

Those documents are just the tip of the iceberg. First doc to read should be the DEC STD 070 document (a.k.a "the bible").
But I am afraid if you need a good and "modern" emulation you have to deal with 60 years of incompatible and "insane" cruft, which is a PITA.

By the way, to my knowledge our Terminal ctrl has very high xterm comaptibility with cross-platform support, and implements some of the "coolest" modern features. So it can save your time a lot. (even reading its code might be helpful. Plus, it has a sapearately available "lexical" ANSI/DEC sequence parser that you can use build your own emulator. Plus it comes with

example code (SSH/PTY connections, tabbed, splitted interfaces, etc.) (Disclaimer: I am advertising it because I am its author:)

If you need any help or have questions on terminal emulation related stuff let me know.

Best regards,
Oblivion.
