Mongolian keyboard drivers and Pain of software developers

Ochirkhuyag.L @ SATO Lab
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So, what is "keyboard driver" ?

Keyboard driver software translates hardware event to character code.

Keyboard Driver Software

10101010 : **Character Codes** : 01010101

And, how
"character codes" are displayed?

Fonts decide which figure to show for given character code.

Example code sequence : 65,66,67,68

Verdana : **ABCD**

Arial : ABCD

Atlas : **ABCD**

Webdings :

First generation(circa 90) Mongolian keyboard drivers

First drivers were for MS DOS, Windows 3.1 and 95.

-moslast(DOS)

Latin A -> Cyrillic A,

Latin S -> Cyrillic C

-monwin(Windows 3.1)

layout is different from moslast

Problem was driver software maker decides the cyrillic keyboard layout and cyrillic character codes.

Next generation(circa 98) Mongolian keyboard drivers

Next drivers were for Windows 98, ME, XP.

-monkey (developed by university)

-parawin (extended russian software)

... and almost all software companies wrote their keyboard drivers.

Good point is that their drivers were using same keyboard layout. But shows correct letter only with their **specific** fonts.

Because character codes were still different.

Problems of Document portability

Everybody can view their documents on **their** computer and exchange with no problem if they used **same keyboard driver**.

But if I receive document from anybody who uses different keyboard driver than mine, I will shown up some crypted text like this:

ñàéí áàéíà óó

Software developers should write an application that run with all that **different** character codes. Also need a **conversion** between them!

Cause of
The character code problem

Before Unicode became available, Mongolian policy makers made a decision to use **win-1251** coding standard. But it doesn't include 2 mongolian characters(**"ө"** and **"ү"**) properly. So people started to writing their keyboard drivers to add these missing characters. :(

Whose mistake ?

Microsoft's or Mongolian government's ?

Benefit of
The unicode standard

Now Unicode includes all Mongolian characters correctly and, our government regulated to use unicode in all official documents.

So no matter what keyboard driver is used, if the character code is uncode, it is no problem to exchange them.

And no matter what OS you use. Windows, Linux, Mac, ... *It is standardization.*

Thank you Unicode!

Thank you standardization!

And thank you for listening!

Q/A

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end