

FVS MIS-MATCH
(see DS00_FVSMisMatch.pdf)

There are two opinions on how to determine the position of a glyph before/after the NNBSM/MVS. The first method as written up in the earliest documentation (MGWBM/TR170) seems to hold to the idea that anything between the first letter and the last letter of a Mongolian word is in the medial position. If there is a NNBSM or a MVS control character in the middle of the word, the letters adjacent to the NNBSM/MVS are still considered to be in the medial position. The second method as implemented by font developers (at least those in our forum) is to consider the letters pre/post NNBSM/MVS as final/initial. In other words, the letter before an NNBSM/MVS (assuming that the string of letters preceding the NNBSM/MVS has more than one letter) is considered to be in the final position. A letter following an NNBSM/MVS is considered to be in the initial position (assuming that the string of letters following the NNBSM/MVS has more than one letter). The Microsoft Universal Shaping Engine (aka Uniscribe) and the Google Harfbuzz rendering engine both follow the second method. This has created a “disconnect” between those holding to the first method and those holding to the second method. There are several cases where we can see that a font has placed the FVS assignment in two locations, thus following both methods rather than holding to one opinion.

Proposal: Leave the fonts as they are (in running text implementation). Glyph shaping in running text displays fine. It is the FVS specification where we find variation and duplication. Change the FVS specification to match the actual positions as determined by the font rendering engines. Given such a specification, the individual font developers will know how to change their FVS implementations in their individual fonts.

form	Q	USVL	NP	MB	FZ	NSM	MWc	BS	MS
isolate									
is+fvs1									
initial									
in+fvs1			n/s						
medial									
m+fvs1									
m+fvs2									
final									
f+fvs1									

- U+1820-A (post-NNBSM) by the MGWBM, TR170, and current Chinese Standard: **Medial**
ZWJ+1820+FVS2+ZWJ *Third Medial Form*
- U+1820-A (post-NNBSM) by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Initial**
- Proposed

1820+FVS1+ZWJ

↑ (xx_) *Second Initial Form*

form	Q	USVL	NP	MB	FZ	NSM	MWc	BS	MS
isolate	↗		↗	↗	↗	↗	↗	↗	↗
initial	↗		↗	↗	↗	↗	↗	↗	↗
i+fvs1	→	→	→	→	→	→	→	→	→
medial	↖		↖	↖	↖	↖	↖	↖	↖
m+fvs1	↖	↖	↖	↖	↖	↖	↖	↖	↖
m+fvs2	↘	↘	↘	↘	↘	↘	↘	↘	↘
m+fvs3	↘	↘	↘	↘	↘	↘	↘	↘	↘
final	↘		↘	↘	↘	↘	↘	↘	↘
f+fvs1			n/s	↘	↘	↘	↘	↘	↘

- U+1828-N (pre-MVS) by the MGWBM, TR170, and current Chinese Standard: **Medial**
 ZWJ+1828+FVS2+ZWJ ↓ (x_) *Third Medial Form*

- U+1828-N (pre-MVS) by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
 ZWJ+1828+FVS1 ↓ (x_) *Second Final Form*

m+fvs2	↘	↘	↘	↘ » ↘	↘	↘	↘	↘	↘
m+fvs3	↘	↘	↘	↘ » ↘	↘	↘	↘	↘	↘
final			n/s	↘	↘	↘	↘	↘	↘
f+fvs1			n/s	↘	↘	↘	↘	↘	↘

- U+182C-Q (pre-MVS) #1 by the MGWBM, TR170, and current Chinese Standard: **Medial**
 ZWJ+182C+FVS2+ZWJ ↓ (x_) *Third Medial Form*

- U+182C-Q (pre-MVS) #1 by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
 ZWJ+182C+FVS1 ↓ (x_) *Second Final Form*

- U+182C-Q (pre-MVS) #2 by the MGWBM, TR170, and current Chinese Standard: **Medial**
ZWJ+182C+FVS3+ZWJ ㄩ (x_) *Fourth Medial Form*

- U+182C-Q (pre-MVS) #2 by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
ZWJ+182C ㄩ (x_) *First Final Form*

m+fvs2	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
m+fvs3	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
final	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
f+fvs1		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
f+fvs2	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
f+fvs3			n/s	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ

- U+182D-G (pre-MVS) by the MGWBM, TR170, and current Chinese Standard: **Medial**
ZWJ+182D+FVS2+ZWJ ㄩ (x_) *Third Medial Form*

- U+182D-G (pre-MVS) by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
ZWJ+182D+FVS3 ㄩ (x_) *Fourth Final Form*

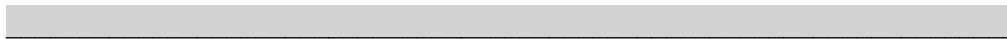
form	Q	USVL	NP	MB	FZ	NSM	MWc	BS	MS
isolate	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
initial	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
medial	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
m+fvs1	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
final	ㄩ		ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ
f+fvs1			n/s	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ	ㄩ

- U+1835-J (pre-MVS) by the MGWBM, TR170, and current Chinese Standard: **Medial**

ZWJ+1835+FVS1+ZWJ ㄣ (x_) *Second Medial Form*

- U+1835-J (pre-MVS) by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
 ZWJ+1835+FVS1 ㄣ (x_) *Second Final Form*



form	Q	USVL	NP	MB	FZ	NSM	MWc	BS	MS
isolate	ㄣ		ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ
initial	ㄣ		ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ
i+fvs1	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ
medial	ㄣ		ㄣ	ㄠ >> ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄠ
m+fvs1	ㄠ	ㄣ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄠ	ㄣ
m+fvs2	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ
final			n/s	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ	ㄣ

- U+1836-Y (pre-MVS) by the MGWBM, TR170, and current Chinese Standard: **Medial**

ZWJ+1836+FVS2+ZWJ ㄣ (x_) *Third Medial Form*

- U+1836-Y (pre-MVS) by the Universal Shaping Engine (Uniscribe) / Harfbuzz: **Final**

- Proposed
 ZWJ+1836 ㄣ (x_) *Final Form*

