Egyptian Hieroglyph Overlays from Hieroglyphica

First Draft, Bob Richmond, 2019-09-11

Introduction

What follows is a list of hieroglyphs from Hieroglyphica (2nd Edition, 2000) that are possible candidates for encoding using the EGYPTIAN HIEROGLYPH OVERLAY MIDDLE format control. This list is not intended to be complete, checked or definitive in any sense.

I'm making this rough draft available to stimulate discussion but the eventual goal is to link check data like this to the Unikemet2 database as well as provide guidance and test data for font developers working on format control implementation.

In general, the candidates for consideration should be 2-character combinations of characters already encoded in Unicode and whose overlay can be considered as "middle". This notion needs to be clarified. I've included some examples of some hieroglyphs that aren't suitable for reasons such as one or both components are not currently in Unicode.
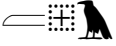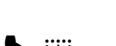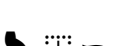
It is important to note that sequence order is crucial for EGYPTIAN HIEROGLYPH OVERLAY MIDDLE. A+B is different to B+A. The data here will contain errors, especially where the order is not clear from the pictures of signs in Hieroglyphica.
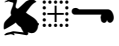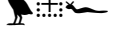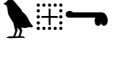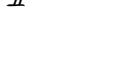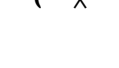
Overlays

	A137	A28+D36		.+ʿ	
	A370	A28+V31		.+k	
	A371	A28+D21		.+r	
	A403	A131+I9			HG.A131 unencoded.
	A404	A121C+I9			HG.A121C unencoded
	A514	A28+F18		.+bḥ/ḥw	
	D74	D2+D21		ḥ+r	Position?
	D151	D21+S29		r+s	
	D151A	S29+D21		s+r	
	D170A	D28+D52		kꜣ+mt	
	D205	D36+T31		ỉ+sšm	
	D206	D36+V1		ỉ+w	

![D208]	D208	D41+S34		nỉ+ʿnḫ	
	D213	R8+D39		nṯr+.	
	D270	R8+D46		nṯr+d	
	D302	D58+F16		b+db	
	D304	D58+F32		b+ḫ	
	D305	D58+Z7		b+w	
	D307	D58+D21		b+r	
	D308	D58+F18		b+bḥ/ḥw	
	D310	D58+N37A			HG.N37A is not N037A. The fact it looks correct here is an Aegyptus/HG incompatibility.
	D312	D58+D46		b+d	
	D313	D58+V31		b+k	
	D314	D58+V13		b+ṯ	
	D315	D58+V15		b+.	
	D348	D58+O34		b+z	
	D350	D39+Aa56		.+.	HG.Aa56 is Unicode F045A
	D407	H6+D39		šw+.	
	D409	D58+D46		b+.	
	D410	S29+D53		s+.	
	D410A	S29+D52A			D52A not encoded
	E294				
	F29A	F28+T11		sꜣb+zwn	
	F29B	F28+T80B			HG.T80B not encoded
	F50A	F46A+S29		.+s	
	F64	F18+F10		bḥ/ḥw+.	?HG sign component is variant of F10!?
	F65	F10+V31		.+k	

	F72	F12+D21		wsr+r	
	F72A	F12A+D21			HG.F12A not encoded
	F75	F12+I9		wsr+f	
	F75A	F12A+I9			F12A not encoded
	F76	F12+O34		wsr+z	
	F76A	F12A+O34			HG.F12A not encoded
	F77	F12+D40		wsr+.	
	F77A	F12A+D40			HG.F12A not encoded
	F110	F16+Aa56		ꜥb+ỉdt	HG.Aa56 is Unicode F045A
	F129	R8+F32		nṯr+ẖ	
	F134	U15+F35		tm+nfr	
	F135	AA15+F36			biliteral+uniliteral
	F136	F36+I9		smꜣ+f	triliteral+uniliteral
	F137	F36+D52		smꜣ+mt	triliteral+biliteral
	F149	U2+F36		mꜣ+ꜣ	
	F152	F31+F32		ms+ẖ	
	F156	N18+F36		.+zmꜣ	
	F163	D36+F12		ꜥ+wsr	
	F163A	D36+F12A			F12A not encoded
	F165	F4+F12		wsr+ḥꜣt	
	F165A	F4+F12A			F12A not encoded
	F184	F59+D37		.+dỉ	HG.F59 is F053 (head of ram)
	G3A	U2?+G1			HG.U2? (reversed) not encoded and not in HG
	G20A	G17A+D36			HG.G17A unencoded
	G20B	G17B+D36			HG.G17B unencoded

	Code	Composition		Transliteration	Notes
	G56	G1+D36		ꜣ+ꜥ	
	G57	G1+I9		ꜣ+f	
	G58	AA15+G1		m+ꜣ	
	G58A	AA15?+G1			HG.AA15? (reversed) not encoded and not in HG
	G59	G1+F32		m+ẖ	
	G60	G1+V31		m+k	
	G60A	V31A+G1		k+ꜣ	
	G61	G1+D46		ꜣ+d	
	G62	G1+D40		ꜣ+.	
	G86	G2+D46		mm+ꜥ	
	G87	G17+D40		m+.	
	G87A	G17A+D40			HG.G17A unencoded
	G88	G17+I9		m+ꜥ	
	G89	G17+D52		m+mt	
	G90A	G17A+D21			HG.G17A unencoded
	G91	AA15+G17		m+mꜣ	
	G92	U1+G17		m+r	
	G93	G17+F4		m+ḥꜣt	
	G94	G17+V31		m+k	
	G95	G17+D46		m+d	
	G96	G17+T?			T? is unencoded and missing from HG.
	G96A	G17A+T?			G17A is unencoded. T? is unencoded and missing from HG.
	G96B	G17C+T30B			G17C and T30B are unencoded
	G97	G17+T30?			T30? Is unencoded
	G98	G17+D38		m+mꜣ	

	G209	G21+D40		nḥ+.	
	G231	G47+D52		ꜣ+mt	
	G240	G43+I9		w+f	
	G241	G43+D52		w+mt	
	G242	G43+D21		w+r	
	G243	G43+N37A			HG.N37A is not N037A. The fact it looks correct here is an Aegyptus/HG incompatibility.
	G244	G43+V31		w+k	
	G245	G43+D47		w+.	
	G246	G43+D46		w+d	
	G248	G43+D40		w+.	
	G257	U2+G64			HG.G64 not encoded
	G259	G1+N5		ꜣ+n	
	G261	G43+D41		w+nỉ	
	G268	N1+G17		.+m	
	G313	F23+G17		.+m	
	H43	N17+H6		tꜣ+šw	
	H47	F16A+H2			HG.F16A not encoded
	I34	D58+I10		b+ḏ	
	I36	I10+V28		ḏ+ḥ	
	I37	F36?+I10			F36? Not encoded or in HG
	I38	?+I10			? not encoded nor in HG
	I39				Three components
	I100	I10+V24		ḏ+wḏ	
	I102	S43+I10		mḏ+ḏ	
	I111	I64+F32			HG.I64 not encoded
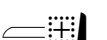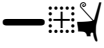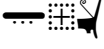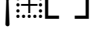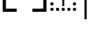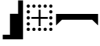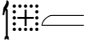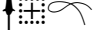
	Code	Composition	Glyph	Transliteration	Notes
	I132	F32+I12		ẖ+.	
	L20	F10+L19			HG.L19 not encoded
	L21	F10+L7?			horizonal variant of L7 is not encoded nor in HG
	L22	F12A+L19			HG.F12A, HG.L19 not encoded
	L22A	F12+L19			HG.L19 not encoded
	L24	S42+L19			HG.L19 not encoded
	L25	?+L19			? Not encoded
	L26				HG.L19 not encoded. Three components
	L27	?+L19			? Not encoded
	L28	?+L19?			HG.L19? not encoded or in HG
	M14A	I10+M13A			HG.M13A not encoded
	M46A	M46+M3			HG.M46 not encoded
	M78	M?+H27			HG.H27 not encoded
	M98	M12+V1		ẖꜣ+.	
	M98A	M12+V1?			Mirrored V1 not in HG
	M98B	M12B+V1			HG.M12B not encoded
	M98C	M12B+?			HG.M12B not encoded
	M100	M12+D36		ẖꜣ+ꜥ	
	M100A	M12B+D36			HG.M12B not encoded
	M120	M13+D21		wꜣḏ	
	M128	M127+I9			HG.M127 not encoded
	M143	M17+D36		ỉ+ꜥ	
	M144	M17+I9		ỉ+f	
	M145	Aa15+M17		m+ỉ	
	M146	M17+D21		ỉ+r	

	M147	M17+V31		ỉ+k
	M158	M23+D21		sw+r
	M159	M23+D36		sw+ʿ
	M161	M156+D36		HG.M156 not encoded
	M166	M?+D36		First component, a variant of M26, not available in HG
	M205	M32+V31		.+k
	M207	M162+D36		HG.M162 not encoded
	M?+D21	M?+D21		HG.M? not in HG or encoded
	M212	M22+D21		nḫb+r
	M213	D36+M4		ʿ+rnp
	M214	M23+N17		sw+.
	M216	M1+F18		ỉm+bḥ/ḥw
	M218	D36+M1		ỉ+ỉm
	M219	H27+M1C		HG.M1C not encoded
	M220	M131+I9		HG.M131 not encoded
	M227	M77A+H27		HG.M77A and HG.H27 not encoded
	M234	M17+T30A		HG.T30A not encoded
	M241	M167+D36		HG.M167 not encoded
	M241A	M?+D36		HG.M? not in HG
	M242	M26A+D36		M26A not encoded
	M243	M16A+D40		HG.M16A not encoded
	M245	M22+D36		nḫb+ʿ
	N66	R8+N17		
	N67	N17+S1		
	N67A	N16+S48		HG.S48 is S002A

	N68	M162+N17			HG.M162 not encoded
	N69	M140+N17			HG.M140 not encoded
	N70	N17+S3			
	N70A	N16+S50			HG.S50 is S006A
	N80	R76+I9			HG.R76 not encoded
	N84	G43+N26		w+ḏw	
	N128	N1+S29		.+s	
	O2A	T3+O1		ḥḏ+pr	
	O9F	O6?+V30			O006? Not encoded or in HG
	O78	O1+O30		pr+.	
	O89	O6?+I9			O? not in HG or encoded
	O90	O6?+O29			O? not in HG or encoded
	O90A	O6+O29		.+ꜥ	
	O90B	O6?+O29			O? not in HG or encoded
	O91	O6?+D36			O? not in HG or encoded
	O93	O6+V30		.+nb	
	O100				
	O101				
	O149	O18+D36		.+ꜥ	
	O204				
	O205				
	O221				
	O236	O44+I9		.f	
	O246				
	O247				

	Code	Components			Notes
	O247A				
	O247B	R8+O1			
	O261	O36+I9		.+f	
	O261A	O36C+I9			O36C not encoded
	O288				
	O289	O6+I10			
	O321				
	O331	O21D+O29			O21D not encoded
	P7A	P5+D36		.+ʿ	
	P7B	P76A+D36			P76A not encoded
	P79				3 components
	P81	P6+K3		ʿḥʿ+ḏ	
	P82	P6+I9		ʿḥʿ+f	
	P84	V31+P6		k+ʿḥʿ	
	P85	Aa15+P8		m+ḫrw	
	P103	P5+I9		.+f	
	Q9	Q1+N1		st+.	
	R57	R56?+I9			HG.R56? (tall) not encoded or in HG
	R66	H31+R14			HG.H31 not encoded
	R66A	H31+R104?			HG.H31, R104? (feather mirrored) not encoded
	R67	R14?+D41			HG.R14? (mirrored) not encoded
	R67A	R104+D36			HG.R104 not encoded
	R73	R15A+D36			HG.R15A not encoded
	R75	R15+I9			
	R77	R15+H31			HG.H31 not encoded

	R78	R15+D36		
	R79	R15A+V31		HG.H31 not encoded
	R87	R24+I64		HG.I64 not encoded
	R94	I10+R?		HG.R? not in HG or encoded.
	R106			
	R110			
	R111	R15A+D4		
	S14C			
	S15B			
	S28A			
	S30A			Mirrored S29 is missing from HG.
	S120A			
	S121			
	S122A			Horizontal line?
	S123			
	S123A			
	S126			
	S127	G1+S32		
	S144			
	S145			
	S145A			
	S147	S38+I9		
	S148	S40+Aa15		w3s+m
	S149	S40+D21		w3s+r
	S156	S42+V12		

	S158	S42+Aa15			Position?
	S159	S42+D40		ꜥb₃+.	
	S160	S42+D36		ꜥb₃+ꜥ	
	S161	S42+D41			
	S162	S43+I9			
	S169	S42+I9			
	S170	S42+D43			
	S172	S42+D339			
	S175	D40+S41			
	S178	S42+D229A			HG.D229A not encoded
	S192				Position
	S201				Position
	S202	S42+I10			
	T37	T3+H27			Using HG.H27 = V012A
	T38	T3+?			? Not in HG
	T39	U2+T3			
	T40	T3+T?			HG.T40 uses mirrored T11
	T42	T3+I9			
	T69	T14+D36		.+ꜥ	
	T71	T14+V1			
	T72	T?+V1			?Encoding needed for triple T14?
	T77	T76B+I9			HG.T76B not encoded
	T81	T22D+D36			HG.T22D not encoded
	T96				
	T97				

	T97A				
	T98				
	T99				
	T100				
	T117				Position
	T118	N17+T3	▬⊞⌡	.+ḫḏ	
	T119	I10+T22D			HG.T22a is not encoded
	T119A	I10+T22A			HG.T22D is not encoded
	T122				
	T127	I10+T80A			HG.T80A is not encoded.
	T129	T3+N37	⌠⊞▬	ḫḏ+š	
	T139				3 components
	U35	I9+U34			**Encoded as U035**
	U35A	I9+U34A			HG.U34A is not encoded.
	U44	U2+?			Knife orientation?
	U44A	U2+?			Knife orientation?
	U45	U2+	⌐⊞⌡	mꜣ+.	
	U60	U15+G17	⊸⊞🦅	tm+m	
	U66	T14+U21	⌡⊞⌐	.+stp	
	U67	V28+U21	⌇⊞⌐	ḥ+stp	
	U68	U21+			
	U70	I9+U24E			HG.U24E not encoded
	U73	U24rev+Aa15			U24rev not in HG
	U76				
	U77				

	U81	H27+U39		.+ḏꜣ	Using HG.H27 = V012A
	U82	D36+U29		ꜥ+ḏꜣ	
	U83	D21+U29		r+ḏꜣ	
	U84	I9+U29		f+ḏꜣ	
	U85	Aa15+U29		m+ḏꜣ	
	U87	I10+U36		ḏ+.	
	U90	D36+U?			U? not encoded?
	V40	D36+V1		ꜥ+?	Grapheme?
	V41	D37+V1		.+.	Grapheme?
	V42	D40+V1		.+.	Grapheme?
	V67	V22+M23		mḥ+ḥ	
	V68	V28+V23A		mḥ+ḥ	
	V69	H27+V25		.+wd/wḏ	Using HG.H27 = V012A
	V69A				Unusual position and orientation
	V70				3 components
	V72				3 components
	V73	H31+V28			H31 not encoded
	V74	D40+V28		.+ḥ	
	V75	I9+V28		f+ḥ	
	V76	N35+V28		n+ḥ	
	V77	D21+V28		r+ḥ	
	V78	V28+U2		ḥ+mꜣ	
	V79	D53+V28		.+ḥ	
	V80	U15+V28		tm+ḥ	
	V81	V31+V28		k+ḥ	

	Code	Composition		Transliteration	Notes
	V85	D40+V84			HG.V84 not encoded
	V86	D36+V84			HG.V84 not encoded
	V87	V31+V84			HG.V84 not encoded
	V90	V31+V29		k+sk/wꜣḥ	
	V92	D40+V91			HG.V91 not encoded
	V93	I9+V91			HG.V91 not encoded
	V99	V98+D52			HG.V98 not encoded
	V100	V98+?			HG.V98 not encoded
	V101	V?+N37			V? not encoded or in HG
	V116	V31+V91			HG.V91 not encoded
	V118	V29+D21		sk+r	
	V138	V29+V12		sk/wꜣḥ+.	
	V139	V29+T30		sk/wꜣḥ+.	
	W44	W14+U7		ḥz/ḥs+mr	
	W49	D36+W19		ꜥ+mr/mꜣ	
	W102	D46+W19		d+mr/mꜣ	
	W103	D6+W14		.+ḥz/ḥs	
	W108	W14+I9		ḥz/ḥs+f	
	Y19	Aa15+Y8			HG.Y18 is not encoded
	Y20	Y18+F32			HG.Y18 is not encoded
	Y26	Y8+F32		sḫm+ḫ	
	Z13	Z11+I9		ꜣm+f	
	Z21	Z20+I9			HG.Z20 is not encoded
	Aa35	Aa15+Aa56		m+ꜣdt	HG.Aa56 is Unicode F045A
	Aa36	Aa20+D36		ꜥpr+ꜥ	

	Aa37	Aa20+D21		ꜥpr+r	
	Aa44	Aa27D+D36			HG.Aa27D is not encoded
	Aa45	Aa27D+I9			HG.Aa27D is not encoded
	Aa46	Aa27D+I10			HG.Aa27D is not encoded
	Aa47	Aa27D+H27			HG.Aa27D is not encoded
	Aa49	Aa27D+D40			HG.Aa27D is not encoded
	Aa49A	D40+Aa27		.+nḏ	
	Aa57	Aa56+D36		ꞽdt+ꜥ	HG.Aa56 is Unicode F045A
	Aa58	Aa56+D52		ꞽdt+mt	HG.Aa56 is Unicode F045A
	Aa59	Aa56+I10		ꞽdt+ḏ	HG.Aa56 is Unicode F045A
	Aa60	U2+Aa56		mꜣ+ꞽdt	HG.Aa56 is Unicode F045A
	Aa68	I9+Aa56		+ꞽdt	HG.Aa56 is Unicode F045A
	Aa77	D40+Aa56		.+ꞽdt	HG.Aa56 is Unicode F045A