

ISO/IEC JTC1/SC2/WG2 N3308  
L2/07-292  
2007-09-01

Universal Multiple-Octet Coded Character Set  
International Organization for Standardization  
Organisation Internationale de Normalisation

Doc Type: Working Group Document  
Title: Towards a default deterministic ordering for  
Egyptian Hieroglyphs  
Source: Michael Everson  
Status: Individual Contribution  
Action: For consideration by JTC1/SC2/WG2 and UTC  
Date: 2007-08-31



















In N3237 it was demonstrated that a binary sort of Egyptian Hieroglyphs would yield unexpected and impractical results for Egyptologists. While a dictionary sort is lexical and based on transcription, not transliteration, a default ordering for Egyptian Hieroglyphs can be devised using the typical transliteration which most of the Hieroglyphs have. Then determinatives without any phonetic reading can be left in binary order in such a scheme; typically these appear towards the end of a string so their significance is less than that of other characters.













This document presents a draft of Hieroglyphs with uniliteral, biliteral, and triliteral readings, ordered according to the Egyptian alphabet. Some characters have more than one reading, and there are some phonetic-determinatives and abbreviations which also have readings. Work is ongoing to compare a number of sources to settle on a "default" reading for polyvalent characters.









Here is listed the Egyptian alphabetical in its alphabetical order.  
Gardiner's transcription is used.

ʒ < i < y < c < w < b < p < f < m < n < r < h < ḥ < ḥ < ḥ < z < s <  
š < k < k < g < t < t < d < d
















































Here is listed the Egyptian alphabetical order showing  
Hieroglyphs and UCS code points (as given in PDAM5):

ʒ  13140 < i  131CC < y  131CD << y  133E5 < c   
1309D < w  13172 << w  133EA < b  130C0 < p  132AB <  
f  13192 < m  13154 < n  13217 < r  1308B < h   
13255 < ḥ  1339A < ḥ  13405 < ḥ  13122 < z  13284 < s   
132F3 < š  1321A < k  1320F < k  133A0 < g  133BB <  
t  133CE < t  1337E < d  130A7 < d  13194
















































Here is listed the Egyptian alphabetical order with uniliteral, biliteral, and triliteral contractions. The contractions are sorted as though spelled out, so for instance iw  130BB is sorted as though written i  131CC + w  13172. The less-than sign “<” indicates that a word is separated from other words at a second level. So while  and  and  all sort as iw, they do so separately, like a < b < c: first all the s, then all the s and then all the s. Two less-than signs “<<” however show that a word is sorted together with what precedes it; while  and  sort like iw , they are intermixed (although the first precedes the second to break ties if the words are otherwise the same).

ʒ  13140 <  
ʒ  13141  
ʒw  1312C  
ʒb  1334A (also mr)  
ʒh  1315D < ʒh  131C8  
i  131CC < i  13000


iy 𓂏 131CE  
iw 𓂏 130BB < iw 𓂏 130DB  
iwn 𓂏 1327B (also in)  
ib 𓂏 130D9 << ib 𓂏 130DA  
imꜣ 𓂏 131AE (also im)  
im 𓂏 133EE < im 𓂏 13413 (also m) << im 𓂏 13414 << im  
𓂏 13415  
in 𓂏 1301F < in 𓂏 1319C < in 𓂏 133CD  
ir 𓂏 13039 < ir 𓂏 13079  
iz 𓂏 131EA  
is 𓂏 1313A (also ws)  
isw 𓂏 13130  
ik 𓂏 13017  
y 𓂏 131CD << y 𓂏 133E5 <  
c 𓂏 1309D <  
cꜣ 𓂏 1327C  
cwt 𓂏 132FE  
cb 𓂏 130C1 < cb 𓂏 13110  
cpr 𓂏 1341A  
cnh 𓂏 132F8  
ch 𓂏 13323 (also ih)  
chꜥ 𓂏 132A3 << chꜥ 𓂏 132A4  
čšꜣ 𓂏 13189  
ck 𓂏 13168  
cd 𓂏 1319E < cd 𓂏 13398 (also cd) << cd 𓂏 13399  
w 𓂏 13172 << w 𓂏 133EA  
wꜣ 𓂏 1336E  
wꜣh 𓂏 1339C (also sk)  
wꜣs 𓂏 132FF  
wꜣd 𓂏 131C6 (also wꜣd) << wꜣd 𓂏 131C7  
wꜥ 𓂏 13175 < wꜥ 𓂏 13320  
ww 𓂏 13174  
wbn 𓂏 131F7  
wp 𓂏 1310C << wp 𓂏 1310D

wn  130F9 << wn  130FA < wn  131ED  
wr  13169  
wh<sub>3</sub>  13406 (also hsb)  
wh<sup>c</sup>  132A1  
whm  1311A  
ws  132AA  
wsr  1310B  
wsh  132DE  
wš<sub>3</sub>  13171  
wd  13396 (also wd) << wd  13397  
wd<sup>c</sup>  1341B  
wdb  13205 (also wdb)  
b  130C0 <  
b<sub>3</sub>  13162 > b<sub>3</sub>  133BA  
b<sub>3</sub>s  133AF  
bh  13112 (also hw)  
p  132AB <  
p<sub>3</sub>  1316F < p<sub>3</sub>  13170  
p<sub>3</sub>k  13181 (also wšm, also m<sub>3</sub><sup>c</sup>) < p<sub>3</sub>k  13182  
pr  13251  
ph  13117  
psd  131F8  
pd  132BE (also rd)  
pd  13311 (also pd)  
f  13192 <  
m  13154 <  
m<sub>3</sub>  13142 < m<sub>3</sub>  13332 << m<sub>3</sub>  13333 < m<sub>3</sub>  13334  
m<sub>3</sub><sup>c</sup>  13335 << m<sub>3</sub><sup>c</sup>  13336 < m<sub>3</sub><sup>c</sup>  13411 << m<sub>3</sub><sup>c</sup>   
13412  
m<sub>3</sub>w  13177  
m<sub>i</sub>  1309F < m<sub>i</sub>  13157 < m<sub>i</sub>  133C6  
mw  13218  
mwt  13151 (also nr)  
mm  13155

mn ↵ 13306 < mn 𓄠 133DD  
mnh ♯ 13349  
mr 𓄡 13219 ( also mṛ ) < mr 𓄢 13337 << mr 𓄣 13338 << mr 𓄤  
13339 << mr 𓄥 1333A  
mh 𓄦 13393 << mh 𓄧 13394  
ms 𓄨 13120  
mt 𓄩 130B8  
md 𓄪 13302  
mḏ 𓄫 13392  
mḏh 𓄬 132DD  
n 𓄭 13217 < n 𓄮 132D5  
nṛ 𓄯 1309C < nṛ 𓄰 130A2  
nw 𓄱 13346 << nw 𓄲 13347 < nw 𓄳 133CB (also in)  
nb 𓄴 132E0 < nb 𓄵 1339E << nb 𓄶 1339F  
nfr 𓄷 13125  
nm 𓄸 13256 (also mr) << nm 𓄹 13257 < nm 𓄺 1332F << nm 𓄻  
13330  
nn 𓄼 131D3  
nhb 𓄽 131D2  
ns 𓄾 13114  
ntr 𓄿 132BA  
nd 𓅀 13421  
ndm 𓅁 131DC  
r 𓅂 1308B <  
rw 𓅃 130ED  
rwd 𓅄 13316 (also rwd)  
rs 𓅅 13317  
h 𓅆 13255 <  
h 𓅇 1339A <  
h3 𓅈 131CA  
hp 𓅉 13409 (also hṛp)  
hm 𓅊 1335A  
hn 𓅋 131B1 (also is) < hn 𓅌 1333B < hn 𓅍 133A7  
hnw 𓅎 133B9


hr  13077 < hr  13211  
hz  133BE (also hs)  
hk3  132FD  
htp  132B6  
hd  13308 << hd  1330B  
hdd  1330C  
h  13405 <  
h3  131AA << h3  131AB < h3  131BD  
hc  1320E  
hw  130A4  
hpr  131A4  
hm  132CA << hm  132CB  
hnt  13089 < hnt  133C2 << hnt  133C3 << hnt  133C4 << hnt  133C5  
hrw  132A5  
hsf  13358 << hsf  13359  
ht  131B2  
h  13122 <  
h3  1319F  
hn  13099 < hn  1311B  
hnm  133B7  
hr  13327  
z  13284 < z  13285  
z3  1316E  
zwn  13314  
zp  13298  
zm3  13126  
s  132F3 <  
s3  13417 << s3  13418  
s3b  1311D  
s3t  132EC (also st)  
si3  132F6  
sw  131D4  
sw3  133EC (also zw3) << sw3  133ED

sbꜣ ⋆ 131FD (also dwꜣ)  
sp ⚡ 13139 (also hr)  
spr ⤵ 1312E  
sf ⚡ 132F4  
smꜣ ⤵ 132F5  
sn ↓ 13321  
snd ↔ 1317F (also snd)  
shꜣm † 13301 (also cꜣbꜣ)  
ššm ↘ 1332A << ššm ↗ 1332B << ššm ⚡ 1332C << ššm ↗  
1332D << ššm ⚡ 1332E  
st ⚡ 1311E < st ⤵ 132A9 (also ws)  
stp ⤵ 13348 (also stꜣp)  
sdꜣm ⤵ 13115  
stꜣ ⤵ 13426 (also stꜣ)  
š ⤵ 1321A << š ⤵ 1321B << š ⤵ 1321C << š ⤵ 1321D  
šꜣ ⤵ 13187 < šꜣ ⤵ 131B8  
šw ⤵ 13185  
šm ⤵ 1321E  
šmꜣ ⤵ 131D8 << šmꜣ ⤵ 131D9  
šms ⤵ 1331D  
šn ⤵ 13361 < šn ⤵ 13371 << šn ⤵ 13372  
šnꜣ ⤵ 13340 << šnꜣ ⤵ 13341  
šzp ⤵ 13290 (also ššp) << šzp ⤵ 13291  
šs ⤵ 13370 (also šsr)  
šd ⤵ 1311F  
k ⤵ 1320F <  
kn ⤵ 1340E  
ks ⤵ 1331E  
kd ⤵ 13422  
k ⤵ 133A0 << k ⤵ 133A1  
kꜣ ⤵ 13093  
kꜣp ⤵ 132B7 (also kp)  
km ⤵ 1318F  
g ⤵ 133BB <



gb  1316D

gm  1316I

grg  13344 << grg  13345



gs  13416


t  133CE <


t3  131FF < t3  13353


ti  13357 (also t)


tiw  13143


tp  13076 < tp  1330F

tm  13342

t  1337E <

t3  13178

tz  132EE



d  130A7 <


di  1309E < di  133D7 (also d)


dmd  132ED (also dmd)


dšr  13160


d  13194


d3  13350 << d3  13351


dcm  13300

dww  1320C

db  1315A (also db)

db3  13324 (also db3)

dr  131E6

dd  132BE

dd  13196