# Universal Multiple-Octet Coded Character Set International Organization for Standardization Organisation internationale de normalisation Международная организация по стандартизации 

Doc Type: Working Group Document<br>Title: Resolving chart and collation order for the Duployan script<br>Source: Van Anderson and Michael Everson<br>Status: Individual Contribution<br>Action: For consideration by JTC1/SC2/WG2 and UTC<br>Date: 2012-05-30<br>Replaces: N3908, N3922, N3931

Ongoing discussion has led to a compromise proposal for Duployan which appears to put to rest the concerns expressed in N3908, N3922, and N3931.

1. Organization of the code chart. The code chart in N3895 is based on a usage scenario in which common characters are listed first and then language-specific characters are listed afterwards. In a 10-by16 chart, this has the effect of placing similar-looking characters alongside one another in a horizontal orientation. This organization was controversial, because as shown in N3931, this arrangement is lost when the number of rows and columns in a chart are changed. The chart in N3931 proposed to arrange the characters in a vertical orientation based on the collation order given in N3895. This organization was controversial, because it appeared to split up the related variants unnecessarily. So where N3895 presented short lines together ( $\mid \mathrm{P},-\mathrm{T}, \backslash \mathrm{F}, / \mathrm{K}, / \mathrm{L}$ ), N3931 separated them because medium and long lines were interspersed (। P, | B, | $\mathrm{PN},-\mathrm{T},-\mathrm{TH},-\mathrm{DH}^{\mathrm{SLOAN}},-\mathrm{D},-\mathrm{DH},-\mathrm{DS}, \backslash \mathrm{F}, \backslash \mathrm{V}, \backslash \mathrm{FN}, / \mathrm{K}, 4 \mathrm{KK}, / \mathrm{G}$, \% JLLOAN, / K M, / L) according to the shape-based ordering.

The compromise offered here keeps the related variants together while also organizing the code chart along the vertical axis.
2. Collation order. In order to stave off the potential difficulties of having a collation order differing from the code chart, the following collation is proposed:

Primary collation: Initial vowel cluster $<\cdot \mathrm{H}<$ ' $\mathrm{X}<1 \mathrm{P}<-\mathrm{T}<$ F $<$ " $\mathrm{K}<$ " $\mathrm{L}<\mid \mathrm{B}<-\mathrm{D}<$
 - $\mathrm{DH}<\% \mathrm{KK}<\%$ SLOAN $\mathrm{J}<\% \mathrm{HL}<\% \mathrm{LH}<\% \mathrm{RH}<(\mathrm{M}<) \mathrm{N}<\cap \mathrm{J}<\cup \mathrm{S}<$ ( $\mathrm{MN}<$子 $\mathrm{NM}<\curvearrowleft \mathrm{JM}<\psi \mathrm{SJ}<(\mathrm{M}$ WITH DOT < $)$ N WITH DOT $<\curvearrowright$ J WITH DOT < $\curvearrowright$ J WITH DOTS INSIDE AND ABOVE $<\smile \mathrm{S}$ WITH DOT $<\bigcup \mathrm{S}$ WITH DOT BELOW <


 <medial/final vowel cluster.

 $\supset \mathrm{UN}<$ ，LONG U＜ 0 ROMANIAN $\mathrm{U}<0 \mathrm{UH}<0$ SLOAN U $<\mathrm{O}^{\circ} \mathrm{OOH}<\odot \mathrm{OW}<0 \mathrm{OU}<$
 ＂NASAL A＜» PERNIN AN＜＂PERNIN AM＜＂SLOAN EN＜، SLOAN AN＜$\quad$ SLOAN ON＜ VOCALIC M；Secondary collation：No marks＜DT THICK LETTER SELECTOR $<\%$ DOUBLE MARK＜diacritics．

Affix order：－LEFT HORIZONTAL SECANT＜－MID HORIZONTAL SECANT＜ －RIGHT HORIZONTAL SECANT＜$\cdots$ LOW VERTICAL SECANT＜$\downarrow$ MID VERTICAL SECANT＜ ｜．．．HIGH VERTICAL SECANT $<\cdots$ ATTACHED SECANT＜－ATTACHED LEFT－TO－RIGHT SECANT $<\cdots+$ ATTACHED TANGENT $<\boldsymbol{〕}$ ATTACHED TAIL＜幺 ATTACHED E HOOK＜ ¿ ATTACHED I HOOK＜¿ ATTACHED TANGENT HOOK＜’ HIGH ACUTE ARC＜ $\therefore$ HIGH TIGHT ACUTE＜＇HIGH GRAVE ARC＜${ }^{`}$ HIGH LONG GRAVE＜${ }^{\circ}$ HIGH DOT＜ ${ }^{\circ}$ HIGH CIRCLE $<{ }^{-}$HIGH LINE＜＂HIGH WAVE＜＂HIGH VERTICAL＜，LOW ACUTE ARC＜ $\cdots$ LOW TIGHT ACUTE＜，LOW GRAVE ARC＜，LOW LONG GRAVE＜．LOW DOT＜。LOW CIRCLE＜＿LOW LINE＜« LOW WAVE＜＂LOW VERTICAL＜，LOW ARROW＜ $\oplus$ O WITH CROSS＜word／affix signs from outside the Duployan block：less than，greater than， multiplication，plus sign，etc．

Tertiary collation：No format＜Variation Selectors＜SP／NBSP＜ZWNJ＜ZWJ；＜shorthand formats $\rightarrow$ LETTER OVERLAP＜$\rightarrow$ CONTINUING OVERLAP＜DOWN＜$\uparrow$ UP；＜following ZWSP $<\mathrm{HSP}<6 / \mathrm{MSP}<\mathrm{THSP}<4 / \mathrm{MSP}<3 / \mathrm{MSP}<\mathrm{NSP}<\mathrm{MSP}$ ．

|  | 1BC0 | 1BC1 | 1BC2 | 1BC3 | 1BC4 | 1BC5 | 1BC6 | 1BC7 | 1BC8 | BC9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | $1 \mathrm{BC} 00$ | $1 /$ $1 \mathrm{BC} 10$ | $\Psi$ <br> 1BC20 | $\int_{1 B C 30}$ | $1$ | $\begin{gathered} \boldsymbol{\xi} \\ 1 \mathrm{BC} 50 \end{gathered}$ | $\theta$ <br> 1BC60 | $\begin{gathered} \vdots \vdots \\ 1 B C 70 \end{gathered}$ | $1 \mathrm{BC} 80$ | 1BC90 |
| 1 | $\begin{gathered} 4 \\ 1 \mathrm{BC} 01 \end{gathered}$ | $\begin{gathered} \text { - } \\ 1 \mathrm{BC} 11 \end{gathered}$ | $e_{1 B C 21}$ | $\bigcap_{1 B C 31}$ | $\begin{gathered} \overrightarrow{\mathbf{0}} \\ 1 \mathrm{BC} 41 \end{gathered}$ | 1BC51 | 1BC61 | $\begin{gathered} \dot{\vdots} \\ 1 B C 71 \end{gathered}$ | $\begin{gathered} \ldots . . \\ 1 B C 81 \end{gathered}$ | 1BC91 |
| 2 | $\begin{gathered} 1 \\ 1 B C 02 \\ \hline \end{gathered}$ | $1 \mathrm{BC} 12$ | $\underbrace{}_{1 \mathrm{BC} 22}$ | $\underset{1 B C 32}{*}$ | $\begin{gathered} \overline{\mathbf{0}} \\ 1 \mathrm{BC} 42 \end{gathered}$ | $1 \mathrm{BC} 52$ | $\begin{gathered} \mathrm{J}, \\ \text { 1BC62 } \end{gathered}$ | $\begin{gathered} \dot{\vdots} \\ 18 C 72 \end{gathered}$ | $1 \mathrm{BC} 82$ | 1BC92 |
| 3 | $1 \mathrm{BC} 03$ | $\begin{gathered} - \\ 1 \mathrm{BC} 13 \end{gathered}$ | $\xlongequal{1 \mathrm{BC} 23}$ | $\downarrow$ $1 \mathrm{BC} 33$ | $\begin{gathered} \mathrm{O} \\ 1 \mathrm{BC} 43 \end{gathered}$ | $\begin{gathered} \text { と } \\ \text { 1BC53 } \end{gathered}$ | $\begin{gathered} \mathbf{v}^{2} \\ \text { 1BC63 } \end{gathered}$ | $\underset{1 B C 73}{\ldots}$ | $1 \mathrm{BC} 83$ | $\underset{1 B C 93}{\llcorner }$ |
| 4 | $\begin{gathered} \backslash \\ 1 \mathrm{BC} 04 \end{gathered}$ | $\begin{gathered} 4 \\ 1 \mathrm{BC} 14 \end{gathered}$ |  | 1BC34 | $\bigcirc$ <br> 1BC44 | $\begin{gathered} \bigcirc \\ \text { 1BC54 } \end{gathered}$ | $\begin{gathered} \text { "r } \\ \text { 1BC64 } \end{gathered}$ | .... <br> 1BC74 | $1 \mathrm{BC} 84$ | $18 \text { C94 }$ |
| 5 | $\begin{gathered} 4 \\ 1 B C 05 \\ \hline \end{gathered}$ | $\begin{gathered} \% \\ 1 \mathrm{BCC} 15 \end{gathered}$ | $\underbrace{}_{1 B C 25}$ | $\begin{gathered} 18 \mathrm{r} \\ \hline 185 \end{gathered}$ | O <br> 1BC45 | $\bigcup_{1 \mathrm{BC} 55}$ | 1BC65 | $\begin{gathered} \ldots . . \\ 18 C 75 \end{gathered}$ | $\begin{gathered} 0 \\ 1 B C 85 \end{gathered}$ | $\stackrel{\bigcirc}{\text { 1BC95 }}$ |
| 6 | $\begin{gathered} \text { そ } \\ \text { 1BC06 } \end{gathered}$ | $\begin{gathered} Y_{1} \\ \text { 1BC16 } \end{gathered}$ | $\underbrace{}_{\substack{1 B C 26}}$ | $\begin{array}{r} 7 \\ 18 C 36 \\ \hline \end{array}$ | $\begin{gathered} c \\ 1 \mathrm{BC} 46 \end{gathered}$ | $\underset{\text { BC56 }}{\mathbf{G}}$ | $\begin{gathered} { }^{\prime} \mathrm{r} \\ \text { 1BC66 } \end{gathered}$ | $\begin{gathered} \cdots \% \\ 1 B C 76 \end{gathered}$ | $18 C 86$ | $1 \mathrm{BC} 96$ |
| 7 | $\left.\right\|_{1 B C 07}$ | $\begin{gathered} \% \\ 1 \mathrm{BC} 17 \end{gathered}$ | $\overbrace{18 \mathrm{C} 27}$ | $\begin{array}{r} 7 \\ 1 B C 37 \end{array}$ | $1 \mathrm{BC} 47$ | $\underset{1 B C 57}{ }$ | 18С67 | $\underset{1 B C 77}{\vdots}$ | $1 \mathrm{BC} 87$ | 1BC97 |
| 8 | $1 \mathrm{BC} 08$ | $\%$ | $\sum_{1 B C 28}$ | $\begin{gathered} \sqrt{1} \\ 1 \mathrm{BC} 38 \\ \hline \end{gathered}$ | $\begin{gathered} \text { C } \\ 1 \mathrm{BC} 48 \end{gathered}$ | $\odot$ <br> 1BC58 | $\begin{gathered} \wedge \\ 18 C 68 \end{gathered}$ | $\begin{aligned} & \cdots .1 \\ & 18 C 78 \end{aligned}$ | $\begin{gathered} 1 t \\ 18 C 88 \end{gathered}$ | $\begin{gathered} 14 \\ 1 B C 98 \\ \hline \end{gathered}$ |
| 9 | $\underset{18 C 09}{\searrow}$ | $C_{1 \mathrm{BC} 19}$ | $\underbrace{}_{1 \mathrm{BC} 29}$ | $\underset{1 B C 39}{r}$ | $\begin{gathered} \supset \\ 1 \mathrm{BC} 49 \end{gathered}$ | $0^{\circ}$ | 1BC69 | $\begin{gathered} 7 \\ 1 B C 79 \end{gathered}$ |  | 7 18 C 99 |
| A | $\begin{gathered} 1 / 2 \\ 1 \mathrm{BCOA} \\ \hline \end{gathered}$ | $\sum_{1 \mathrm{BC} 1 \mathrm{~A}}$ | $\qquad$ |  | $\begin{gathered} n \\ 1 B C 4 A \end{gathered}$ | $\odot$ <br> 1BC5A |  |  |  |  |
| B | $\begin{gathered} \text { Y } \\ 1 \mathrm{BCOB} \\ \hline \end{gathered}$ | 1BC1B | $f_{1 B C 2 B}$ | $\begin{gathered} y \\ 1 \mathrm{BC} 3 \mathrm{~B} \\ \hline \end{gathered}$ | 1BC4B | $\begin{gathered} 0 \\ 1 \mathrm{BC} 5 \mathrm{~B} \\ \hline \end{gathered}$ |  | $\begin{gathered} \vdots \\ \vdots \\ 1 B C 7 B \\ \hline \end{gathered}$ |  |  |
| C | $\left.\right\|_{1 B C O C}$ |  | $\mathcal{F}_{1 B C 2 C}$ | $\underset{18 \mathrm{BC} 3 \mathrm{C}}{2}$ | 1BC4C | $\theta$ <br> 1BC5C |  |  |  | $1 \mathrm{BC} 9 \mathrm{C}$ |
| D | - | $f_{1 B C 1 D}$ | $\overbrace{1 B C 2 D}^{\infty}$ | $\begin{gathered} 7 \\ 1 B C 3 D \end{gathered}$ | $\begin{gathered} y \\ 1 B C 4 D \end{gathered}$ | $\underset{1 \mathrm{BC} 5 \mathrm{D}}{\mathrm{O}}$ |  |  |  | $\begin{array}{\|c\|} \hline \text { r-- } \\ \hline \text { DT } \\ \text { LS } \\ \text { 1BC9D } \\ \hline \end{array}$ |
| E |  | $\mathcal{F}_{1 \mathrm{BC} 1 \mathrm{E}}$ | $\underbrace{}_{1 B C 2 E}$ | $\begin{array}{r} 7 \\ 18 C 3 E \end{array}$ | $\begin{gathered} \underline{\iota} \\ 1 \mathrm{BC} 4 \mathrm{E} \end{gathered}$ | $O$ <br> 1BC5E |  |  |  | $\%$ <br> 1BC9E |
| F | $\int_{1 B C O F}^{1}$ | (BC1F |  | $\underset{1 B C 3 F}{ }$ | $\begin{gathered} j \\ \text { 1BC4F } \end{gathered}$ | (1) <br> 1BC5F |  |  |  | $\begin{gathered} = \\ 1 \mathrm{BC9F} \end{gathered}$ |

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## Non-joining consonants

1BC00 • DUPLOYAN LETTER H

- Chinook, Pernin, Sloan, Perrault

1BC01 : DUPLOYAN LETTER X

- Salishan


## Line consonants

1BC02 । DUPLOYAN LETTER P

- Chinook number 1

1BC03 - DUPLOYAN LETTER T

- Chinook number 2

1BC04 , DUPLOYAN LETTER F

- Chinook number 3

1BC05 " DUPLOYAN LETTER K

- Chinook number 4
- written down and to the left

1BC06 " DUPLOYAN LETTER L

- written up and to the right
= Pernin letter R
1BC07 | DUPLOYAN LETTER B
$\rightarrow 1 \mathrm{BC} 73$ †* duployan affix low vertical secant
$\rightarrow 1 \mathrm{BC} 74+$ duployan affix mid vertical secant
$\rightarrow$ 1BC75 + duployan affix high vertical secant
1 BC08 - DUPLOYAN LETTER D
$\rightarrow 1 \mathrm{BC70}$ - duployan affix left horizontal secant
$\rightarrow 1 \mathrm{BC71}$ - duployan affix mid horizontal secant
$\rightarrow 1 \mathrm{BC} 72 \div$ duployan affix right horizontal secant
1 BC09 \ DUPLOYAN LETTER V
1BCOA / DUPLOYAN LETTER G
- written down and to the left

1BC0B / DUPLOYAN LETTER R

- Chinook number 5
- French number milliards
- written up and to the right
= Pernin letter L
$=$ Pernin Reporters' word repeat sign
1BCOC | DUPLOYAN LETTER P N
= Sloan B B
$\rightarrow$ 1BC02 । duployan letter $p$
$\rightarrow$ 1BC1A ) duployan letter $n$
1BCOD - DUPLOYAN LETTER D S
= Sloan D D
$\rightarrow$ 1BC08 - duployan letter d
$\rightarrow$ 1BC1C $\cup$ duployan letter $s$
DUPLOYAN LETTER F N
= Sloan V V
$\rightarrow$ 1BC04 \ duployan letter f
$\rightarrow$ 1BC1A) duployan letter $n$
1BCOF / DUPLOYAN LETTER K M
- written down and to the left
= Sloan G G
$\rightarrow$ 1BC05» duployan letter k
$\rightarrow$ 1BC19 (duployan letter m
1BC10 / DUPLOYAN LETTER R S
- written up and to the right
= Sloan R R
$\rightarrow$ 1BCOB / duployan letter $r$
$\rightarrow$ 1BC1C $\smile$ duployan letter $s$

1BC11 - DUPLOYAN LETTER TH

- Chinook, Sloan, Pernin, Perrault

1 BC12 - DUPLOYAN LETTER SLOAN DH
1 BC 13 - DUPLOYAN LETTER DH

- Chinook
$\rightarrow$ 1BC08 - duployan letter d
1BC14 * DUPLOYAN LETTER KK
- Chinook
- written down and to the left

1BC15 \% DUPLOYAN LETTER SLOAN J

- written down and to the left

1BC16 " DUPLOYAN LETTER HL

- Chinook
- written up and to the right

1BC17 * DUPLOYAN LETTER LH

- Chinook
- written up and to the right

1 BC18 \% DUPLOYAN LETTER RH

- Chinook
- written up and to the right


## Arc consonants

1BC19 ( DUPLOYAN LETTER M

- Chinook number 6

1BC1A ) DUPLOYAN LETTER N

- Chinook number 7

1BC1B $\frown$ DUPLOYAN LETTER J

- Chinook number 8
= Chinook letter sh
$=$ Pernin letter sh
1BC1C $\smile$ DUPLOYAN LETTER S
- Chinook number 9
- French hundreds

1BC1D f DUPLOYAN LETTER M N

- Romanian mai mult, not Romanian mult mai shorthand sign
$\rightarrow$ 1BC19 ( duployan letter m
$\rightarrow$ 1BC1A) duployan letter $n$
1BC1E 子 DUPLOYAN LETTER N M
- not Romanian nu nu shorthand sign
$\rightarrow 1 B C 19$ (duployan letter $m$
$\rightarrow$ 1BC1A ) duployan letter $n$
1BC1F ↔ DUPLOYAN LETTER J M
- not Romanian ceea ce shorthand sign
$\rightarrow$ 1BC1B $\frown$ duployan letter $j$
$\rightarrow$ 1BC19 ( duployan letter m
1BC20 $\Psi$ DUPLOYAN LETTER S J
- not Romanian sa se shorthand sign
$\rightarrow$ 1BC1B $\frown$ duployan letter $j$
$\rightarrow$ 1BC1C $\smile$ duployan letter s
1BC21 ( DUPLOYAN LETTER M WITH DOT
= Romanian sign mijloc
1 BC22 ) DUPLOYAN LETTER N WITH DOT
= Chinook ng
= Romanian sign nici
1 BC23 $\sim$ DUPLOYAN LETTER J WITH DOT
$=$ Chinook, Romanian ch
= Sloan zh
$=$ Chinook, Perrault j


1BC33 ( DUPLOYAN LETTER S T R

- Pernin, Perrault
= Sloan sn
BC34 , DUPLOYAN LETTER S P
- Pernin, Perrault
- written downwards
oan kw
- Pernin, Perrault
- written downwards
= Sloan skw
- written downwards
- Perrault

DUPLOYAN LETTER T R S

- written downwards

Perrault
Sloan sst
an, Perrault, Pernin

- written downwards
takes form of a hook or wave after $k$ and $g$
LETTER WH

DUPLOYAN LETTER W R

- Perrault
= Sloan Sw
written upwards
- Perrault

Ploan SP
written upwards

- Perrault
in ors

Sloan

- written upwards
- Perrault
- written upwards
- Perrault
- written upwards

Perrault, Pernin
Sloants

- written upwards
- Perrault, Pernin
= Sloan ds


## Circle vowels

1 BC41 - DUPLOYAN LETTER A

- Chinook number tens

C42 - DUPLOYAN LETTER SLOAN OW

- reverse circle vowel
= Pernin letter aw
$=$ Perrault letter aw
- DUPLOYAN LETTER O
- Chinook number 0

1BC45 ○ DUPLOYAN LETTER AOU

## Semi-circle vowels

1BC46 • DUPLOYAN LETTER I

- character rotates to match entry angle of preceding consonant
- character has primary orientation (right and up)
$=$ Perrault letter long a, short e (with accents)
$\rightarrow 1 \mathrm{BC} 48$ c duployan letter ie
$\rightarrow 1 \mathrm{BC} 49$, duployan letter short i
$\rightarrow 1 B C 4 B \cup$ duployan letter ee
$\rightarrow$ 1BC4A duployan letter ui
$\rightarrow$ 1BC7B ; duployan affix attached i hook
$\rightarrow$ 1BC7A : duployan affix attached e hook
1 BC47 - DUPLOYAN LETTER E
- character rotates to match entry angle of preceding consonant
- character has secondary orientation (left and down)
$=$ Sloan letter long a
$=$ Perrault letter short i, long e (with dot accent)
$\rightarrow$ 1BC7A : duployan affix attached e hook
1 BC48 c DUPLOYAN LETTER IE
- Duployan shorthand
- used as an invariant vowel and for orienting word abbreviations consisting of only vowels
$\rightarrow 1 \mathrm{BC} 46$ - duployan letter i
$=$ Pernin letter a
1 BC49 , DUPLOYAN LETTER SHORT I
- Pernin, Duployan shorthand
- used as an invariant vowel and for orienting word abbreviations consisting of only vowels
$\rightarrow 1 \mathrm{BC} 46$ • duployan letter i
$=$ Consolidated Duployan letter rtr
1BC4A ~ DUPLOYAN LETTER UI
- Duployan shorthand
- used as an invariant vowel and for orienting word abbreviations consisting of only vowels
$\rightarrow 1 \mathrm{BC} 46$ • duployan letter i
= Pernin letter e
1BC4B • DUPLOYAN LETTER EE
- Pernin, Duployan shorthand
- used as an invariant vowel and for orienting word abbreviations consisting of only vowels
$\rightarrow$ 1BC46 • duployan letter i
1BC4C - DUPLOYAN LETTER SLOAN EH
1BC4D : DUPLOYAN LETTER ROMANIAN I
- character rotates to match entry angle of preceding consonant, with dot maintaining relative position
- secondary orienting (left and down)

1BC4E $\simeq$ DUPLOYAN LETTER SLOAN EE

## Diagonal-line vowels

1BC4F ; DUPLOYAN LETTER LONG I

- Pernin
- angles like an " $f$ " when adjacent a k-type consonant
1 BC50 $\because$ DUPLOYAN LETTER YE


## Quarter-circle vowels

1BC51 - DUPLOYAN LETTER U

- character rotates to match entry angle of preceding consonant
- character has primary orientation (right and up)
$=$ Romanian stenographic letter en
$\rightarrow$ 1BC38 $r$ duployan letter w
$\rightarrow 1$ BC56 o duployan letter romanian $u$
$\rightarrow 1 \mathrm{BC} 55$, duployan letter long $u$
1BC52 , DUPLOYÁN LETTER EU
- character rotates to match entry angle of preceding consonant
- character has secondary orientation (left and down)
- in French usage, may be rendered with a dot contextually
$=$ Romanian stenographic letter an
1BC53 : DUPLOYAN LETTER XW
$=$ Perrault uh
- not French eu

1 BC54 ~ DUPLOYAN LETTER U N
$\rightarrow 1 B C 1 A$ ) duployan letter $n$

## Other vowels

1 BC55 , DUPLOYAN LETTER LONG U

- Pernin, Perrault
- this vowel does not rotate to match entry angle of preceding consonant
$\rightarrow$ 1BC51 - duployan letter u
1 BC56 © DUPLOYAN LETTER ROMANIAN U
1 BC57 o DUPLOYAN LETTER UH
- Sloan
$\rightarrow$ 1BC5B o duployan letter ou
1 BC58 © DUPLOYAN LETTER SLOAN U
$\rightarrow$ 1BC5B o duployan letter ou
1BC59 © DUPLOYAN LETTER OOH
- Sloan
$\rightarrow$ 1BC5B o duployan letter ou


## Dotted-circle vowels

1BC5A ○ DUPLOYAN LETTER OW

- should not be used for Romanian u
$\approx<$ medial $>1$ BC56
1BC5B o DUPLOYAN LETTER OU
- should not be used for Perrault ow
$\approx<$ initial, final $>1 B C 5 A \odot$
$=$ Chinook letter oo
$\rightarrow 1$ BC57 o duployan letter uh
$\rightarrow$ 1BC58 $\odot$ duployan letter sloan $u$
$\rightarrow$ 1BC59 $0^{\circ}$ duployan letter ooh


## Compound vowels

1BC5C © DUPLOYAN LETTER WA

- Chinook
- Not Romanian o+a
= Perrault letter oy
- Chinook number hundreds

1BC5D o DUPLOYAN LETTER WO

- Chinook

1BC5E ○ DUPLOYAN LETTER WI

- Chinook

1BC5F ○ DUPLOYAN LETTER WEI

- Salishan

1 BC60 © DUPLOYAN LETTER WOW

- Salishan


## Basic nasal vowels

1BC61 - DUPLOYAN LETTER NASAL U

- character positions diacritically, as an orienting vowel, or as an invariant vowel
- secondary orientation
- invariant direction downwards
- French number 1
$=$ Pernin letter in
$=$ Consolidated Duployan affix int-r-
1BC62 " DUPLOYAN LETTER NASAL O
- character positions diacritically, as an orienting vowel, or as an invariant vowel
- neutral nasal vowel for transcription of an ambiguous secondary orienting nasal vowel
- secondary orientation
- invariant direction upwards
$=$ Pernin letter om
$=$ Perrault letters an, en, in, un (with accents)
= Pernin letter im
$=$ Consolidated Duployan affix int-r-
1BC63 * DUPLOYAN LETTER NASAL I
- character positions diacritically, as an orienting vowel, or as an invariant vowel
- primary orientation
- invariant direction downwards
- Romanian multiplicative number prefix
= Pernin letter im
$=$ Consolidated Duployan affix int-r-
1BC64 r DUPLOYAN LETTER NASAL A
- Perrault vocalic $n$ - an, en, in, un (with accents)
- character positions diacritically, as an orienting vowel, or as an invariant vowel
- neutral nasal vowel for transcription of an ambiguous primary orienting nasal vowel
- primary orientation
- invariant direction upwards
$=$ Pernin letter on
$=$ Romanian stenographic letter yn
Additional nasal vowels
1BC65 ~ DUPLOYAN LETTER PERNIN AN
- written downwards

1BC66 " DUPLOYAN LETTER PERNIN AM

- written downwards

1 BC67 - DUPLOYAN LETTER SLOAN EN
1 BC68 - DUPLOYAN LETTER SLOAN AN
1BC69 r DUPLOYAN LETTER SLOAN ON
1BC6A ; DUPLOYAN LETTER VOCALIC M

- primary orienting vowel
= Perrault letters am, em, im, um (with accents)


## Attached affixes

1 BC70 - DUPLOYAN AFFIX LEFT HORIZONTAL SECANT
= Pernin Reporters' extra-

- dots show position on base glyph and are not rendered
$\rightarrow 1 \mathrm{BC} 08$ - duployan letter d
- DUPLOYAN AFFIX MID HORIZONTAL SECANT = Pernin Reporters' inter-
- dots show position on base glyph and are not rendered
$\rightarrow$ 1BC08 - duployan letter d
1 BC72 - DUPLOYAN AFFIX RIGHT HORIZONTAL SECANT
= Pernin Reporters' contra-
- dots show position on base glyph and are not rendered
$\rightarrow$ 1BC08 - duployan letter d
1BC73 † $\dagger$ DUPLOYAN AFFIX LOW VERTICAL SECANT
= Pernin Reporters' sub-
- dots show position on base glyph and are not rendered
$\rightarrow$ 1BC07। duployan letter $b$
†. DUPLOYAN AFFIX MID VERTICAL SECANT = Pernin Reporters' trans-
- dots show position on base glyph and are not rendered
$\rightarrow$ 1BC07| duployan letter $b$
.. DUPLOYAN AFFIX HIGH VERTICAL SECANT
= Pernin Reporters' super-
- dots show position on base glyph and are not rendered
$\rightarrow$ 1BC07। duployan letter $b$
$\cdots$ DUPLOYAN AFFIX ATTACHED SECANT
- dots show position on and relative orientation to base glyph and are not rendered
- as a prefix, takes opposite relative position to following glyph
- generally crosses adjacent character at perpendicular, but has a bias towards SW/NE angle to contrast 1 BC 77 -
- default neutral secant affix
$=$ French suffix -anse
$=$ Pernin prefix pre-
= Sloan affix ax-/-ext
1 BC77 - DUPLOYAN AFFIX ATTACHED LEFT-TO-RIGHT SECANT
- dots show position on and relative orientation to base glyph and are not rendered
- generally crosses adjacent character at perpendicular, but has a bias towards NW/SE angle to contrast 1BC76 $\cdots$
- as a suffix, takes opposite relative position to following glyph
$=$ Pernin prefix per-
1 BC78 $\cdots$ DUPLOYAN AFFIX ATTACHED TANGENT
- dots show position on and relative orientation to base glyph and are not rendered
- as a prefix, takes opposite relative position to following glyph
$=$ French suffix -tan
$=$ Romanian shorthand letter str-/-str
) DUPLOYAN AFFIX ATTACHED TAIL
- orienting character
$=$ French suffix -sionaire

1BC7A : DUPLOYAN AFFIX ATTACHED E HOOK

- glyph is retrograde and opens up or down, dependent on preceding letter
- dots show position of preceding glyph and are not rendered
$\rightarrow$ 1BC47- duployan letter e
$=$ French suffix -te
1BC7B ; DUPLOYAN AFFIX ATTACHED I HOOK
- glyph is retrograde and opens left or right, dependent on preceding letter
- dots show position of preceding glyph and are not rendered
$\rightarrow$ 1BC46 • duployan letter i
$=$ French suffix -tou
= Sloan affix irre-/-ary
1BC7C DUPLOYAN AFFIX ATTACHED TANGENT HOOK
- attached affix
- dots show position on and relative orientation to base glyph and are not rendered
= Romanian affix ist--ism
$=$ Consolidated Duployan prefix t-r-


## High affixes

1BC80 , DUPLOYAN AFFIX HIGH ACUTE
$=$ French suffix -ment
$=$ Romanian suffix -mant
$=$ Pernin sub-
$=$ Pernin Reporters' suffix pro-
$\rightarrow$ 02CA' modifier letter acute accent
1BC81 … DUPLOYAN AFFIX HIGH TIGHT ACUTE
= Pernin Pro-

- as a suffix, placed above and to the right of the following letter
1BC82 - DUPLOYAN AFFIX HIGH GRAVE
= French suffix -ien
$=$ Pernin suffix con-
$\rightarrow$ 02CB ` modifier letter grave accent
1 BC83 ~ DUPLOYAN AFFIX HIGH LONG GRAVE
= Pernin contra-
1BC84 • DUPLOYAN AFFIX HIGH DOT
- not Romanian hundreds - use $\mathrm{U}+0307 \dot{\mathrm{O}}$ combining dot above and $\mathrm{U}+0308 \ddot{\circ}$ combining diaeresis
- French number thousands
$=$ French suffix -eur
= Romanian shorthand affix trans-/-lui
$\rightarrow$ 02D9 ${ }^{\circ}$ dot above
1 BC85 - DUPLOYAN AFFIX HIGH CIRCLE
- not Romanian number grade or percent suffix
- French ordinal number
= French suffix -euse
$\rightarrow$ 00B0 ${ }^{\circ}$ degree sign
$\rightarrow$ 02DA ${ }^{\circ}$ ring above
1 BC86 - DUPLOYAN AFFIX HIGH LINE
= French suffix -iste
$=$ Romanian shorthand affix -tor
$=$ Pernin affix dis-
$\rightarrow 02 \mathrm{C} 9^{-}$modifier letter macron
1 BC87 ~ DUPLOYAN AFFIX HIGH WAVE
$=$ French suffix -ificatif
$\rightarrow$ 02DC ${ }^{\sim}$ small tilde

1BC88 " DUPLOYAN AFFIX HIGH VERTICAL

- also functions as attached affix vertical up with ZWJ
- this affix is about half as long as Duployan letter p
- as a prefix, has falling stroke direction
= Pernin ZWJ + -ime
= Sloan tele-
$\rightarrow$ 1BC02। duployan letter $p$


## Low affixes

1BC90, DUPLOYAN AFFIX LOW ACUTE
$=$ French suffix -cion
$=$ Pernin prefix ex-
$\rightarrow$ 02CF , modifier letter low acute accent
1BC91 .... DUPLOYAN AFFIX LOW TIGHT ACUTE
= Pernin suf-, sug-

- as a suffix, placed under and to the right of the following letter
1 BC92 DUPLOYAN AFFIX LOW GRAVE
$=$ French suffix -ion
- French number millions
$\rightarrow$ 02CE , modifier letter low grave accent
$=$ Pernin extra-
DUPLOYAN AFFIX LOW DOT
= French suffix -ie
- French iterative number
= Romanian shorthand affix inter-
- not Romanian millions - see $\mathrm{U}+0323$ ? combining dot below and $\mathrm{U}+0324$. combining diaeresis below
1 BC95 。 DUPLOYAN AFFIX LOW CIRCLE
$=$ French suffix -iere
- French percent
$\rightarrow 02 F 3$ 。 modifier letter low ring
DUPLOYAN AFFIX LOW LINE
= French suffix -isme
$=$ Pernin affix mis-
$\rightarrow$ 02D7 - modifier letter minus sign
1BC97 ~ DUPLOYAN AFFIX LOW WAVE
$=$ French suffix -ification
$\rightarrow$ 02F7 ~ modifier letter low tilde DUPLOYAN AFFIX LOW VERTICAL
- functions as attached affix vertical down with ZWJ
- this affix is about half as long as Duployan the letter p
- as a prefix, has rising stroke direction
= Pernin ZWJ + -ine
$\rightarrow 1 \mathrm{BC} 02$ । duployan letter $p$
DUPLOYAN AFFIX LOW ARROW
= Romanian prefix sub-
- low affix


## Chinook sign

1BC9C $\oplus$ DUPLOYAN SIGN O WITH CROSS

- Chinook Likalisti


## Sloan R-form selector

1BC9D [Dit DUPLOYAN THICK LETTER SELECTOR

- commonly abbreviated DTLS
- Sloan r-flavored letters
- Shape shown is arbitrary and is not visibly rendered
- Causes previous Duployan character to be rendered bold


## Shorthand double mark

1BC9E + DUPLOYAN DOUBLE MARK

- Dots show position on and relative orientation to base glyph and are not rendered
- Romanian, Sloan shorthands
- Should be used with $m, n, j$, and $s$ for the Romanian word signs mai mult, nu nu, ceea ce, and sa se
- Can be doubled and tripled


## Chinook punctuation

1 BC9F $=$ DUPLOYAN PUNCTUATION CHINOOK FULL STOP


## Shorthand format controls

1BCA0 $\rightarrow$ SHORTHAND FORMAT LETTER OVERLAP

- shape shown is arbitrary and is not visibly rendered
1BCA1 SHORTHAND FORMAT CONTINUING OVERLAP
- shape shown is arbitrary and is not visibly rendered
1BCA2 $\downarrow$ SHORTHAND FORMAT DOWN STEP
= Romanian shorthand affix -tsion-
= Sloan contracted ending oo/o + ZWSP
- shape shown is arbitrary and is not visibly rendered
1BCA3 THORTHAND FORMAT UP STEP
= Sloan contracted ending uh/au/aui + ZWSP
- shape shown is arbitrary and is not visibly rendered

