

APL Working Group, Meeting 22, Berlin, 2000

The twenty second meeting of the APL working group ISO-IEC / JTC1 / SC22 / WG3 (APL) was opened 2000-07-23 at 13:00 in the computer Science building of the Technical University of Berlin, prior to the Conference APL Berlin 2000.

(1) Roll Call

Attendees were Lee Dickey, Phil Chastney, Eke van Batenburg, Michel Dumnotier, David Liebttag, Leigh Clayton, Philip Benkard, William A Rutiser, and Morten Kromberg.

The meeting was hosted by Martin Barghorn of the Technical University of Berlin.

(2) Report of the convenor

The Convenor reported on progress during the past year. There is progress on two projects with three project numbers.

(2.1) DIS, IS 13751, Programming Language Extended APL. (Project JTC 1.22.24.01)
In December, 1999, the document DIS 13751 was circulated for re-registration as DIS 13751-2. All comments from the previous registration had been resolved.

During the first half of the year 2000, the technical work and editing work, in consultation with Geneva, for IS 13751, Programming Language Extended APL, was completed.

We applaud the excellent work of Leigh Clayton of Soliton Associates Limited.

(2.2) APL Character Repertoire (Projects JTC 1.22.09.02 and JTC 1.22.24.02)
The first Committee Draft for this project was submitted and approved for registration early in the year 2000. See JTC1/SC22/N3067 or JTC1/SC22/N3082.

The second working draft of the table for this document has been created. It reflects three changes:

- There is a new position the character Quad, now at U+2395.
- Graphic images of the elements in the APL Character Repertoire were adopted, and in some instances adapted, from the work supplied by the Unicode consortium. Our task was made considerably easier, thanks to their generosity.
- The entries in the table have been re-arranged to reflect the ordering implicit in the numbers used in the Universal Character Set (UCS).

There are two project numbers, and possibly, in the end, two nearly identical documents that will contain the same table. It is this table that is the main focus of this work of the APL Character Repertoire project(s). It is intended that the same table accompany the two standards ISO 8485:1995 (APL) and ISO-IEC 13751:2000 (APL Extended), according to this table that links project numbers and standards.

Project number	Standard	
JTC1/SC22/N3067	IS 8485	APL
JTC1/SC22/N3082	IS 13751	APL Extended

(3) The status of DIS 13751-2

At the time of WG3 Meeting 22, the final results of the voting on 13751-2 had not been announced, even though the voting period had been scheduled for closure well before the date of the meeting.

It was expected that this the final draft would go to press within a month.

(4) APL Character Repertoire

The major portion of the meeting time was spend on this topic.

The APL Character Repertoire has 131 entries. Of these 131, there are 9 entries where a tack symbol appears, either by itself or in combination with some other symbol, two with a jot, and one each with an underbar, an overbar, and a diaeresis.

There was much discussion about the naming of the nine TACK characters. There was no discussion about any of the other 122 characters, or of their naming. The nine TACK characters are shown and listed shown in this table. Each row of the table show the glyph, the UCS-2 Identifier (U-xxxx), the APL Name, and the name given in UCS-2.

The Nine APL Tack Symbols			
Symbol	UCS-2 Identifier	APL Name	UCS Name
	U+22A2	Right Tack	RIGHT TACK
	U+22A3	Left Tack	LEFT TACK
	U+22A4	Down Tack	DOWN TACK
	U+22A5	Up Tack	UP TACK
	U+234A	Up Tack Underbar	A.F.S. DOWN TACK UNDERBAR
	U+234E	Up Tack Jot	A.F.S. DOWN TACK JOT
	U+2351	Down Tack Overbar	A.F.S. UP TACK OVERBAR
	U+2355	Down Tack Jot	A.F.S. UP TACK JOT
	U+2361	Down Tack Diaeresis	A.F.S. UP TACK DIAERESIS

Table 1. The Nine Tack Characters
"A.F.S." means "APL FUNCTION SYMBOL"

Table 1 is extracted from the Table for Working Draft 2 of APL Character Repertoire. That Table is based on the public work of Unicode, which we presume to agree with that of IS 10640.

The problem that concerns WG3 is easily seen in the last five entries in the right-most column. There is an internal inconsistency in the naming of the characters known variously as Unicode, and via ISO 10646, UCS-2, and UCS-4.

In order to understand how this situation came about, some explanation is needed.

The APL Working Group started with Set 68, a set of 94 graphic characters for use with workspace interchange. The tack characters there were named according to the the Bosworth Convention, as shown in Table 2 below.

Two Tack Conventions					
Bosworth Convention			London Convention		
					
	Up			Up	
					
Left		Right	Left		Right
					
	Down			Down	

Table 2. Two Naming conventions

The APL Working Group assisted SC 2 / WG 2 with the preparation Universal Character Set (UCS), ISO 10646. Since the tack symbols were named by the Bosworth convention in an existing standard, The APL Working Group continued to use those names in its submission.

In some way changes were made. The four quad symbols were renamed (by unknown others who were, perhaps, unfamiliar with the Bosworth convention) by reversing the names Up and Down and reversing the names Right and Left. It might not have been so bad if they had also reversed the names of the five derived tack symbols. At least then the UCS would have had internal consistency.

The APL Working Group, seeing the problem, asked for a fix it, and instead of permuting four simple glyphs, UCS left the inconsistency and added 5 footnotes to the derived glyphs.

So now within SC2, UCS is internally inconsistent, there are two different standards that disagree on the names of the four tack characters.

Over time, members of WG3 have recognized that the Bosworth Convention has become less widely accepted, and that most APL users including all of the members of the APL Working Group, were personally using the London Convention. Perhaps this was because of the action of the "unknown others" mentioned above.

In the APL Character Repertoire, the subject of this note, give names that conform to the London Convention, and not the Bosworth Convention. These are seen in the second column of Table 1.

Two Proposed Actions

There are two proposed actions, both of which are necessary to get all relevant matters aligned.

Proposed Action 1

It is proposed that the APL Working Group (SC22/WG3) ask the UCS Working Group (SC2/WG2) to revise the UCS Names of the five compound symbols (named according to the Bosworth Convention) to agree with the names of the four tack symbols (named according to the London Convention). These changes are as follows:

- o U+234A, Up Tack Underbar
 - From "APL FUNCTIONAL SYMBOL DOWN TACK UNDERBAR"
 - To "APL FUNCTIONAL SYMBOL UP TACK UNDERBAR"
- o U+234E, Up Tack Jot
 - From "APL FUNCTIONAL SYMBOL DOWN TACK JOT"
 - To "APL FUNCTIONAL SYMBOL UP TACK JOT"
- o U+2351, Down Tack Overbar
 - From "APL FUNCTIONAL SYMBOL UP TACK OVERBAR"
 - To "APL FUNCTIONAL SYMBOL DOWN TACK OVERBAR"
- o U+2355, Down Tack Jot
 - From "APL FUNCTIONAL SYMBOL UP TACK JOT"
 - To "APL FUNCTIONAL SYMBOL DOWN TACK JOT"
- o U+2361 Down Tack Diaeresis
 - From "APL FUNCTIONAL SYMBOL UP TACK DIAERESIS"
 - To "APL FUNCTIONAL SYMBOL DOWN TACK DIAERESIS"

Proposed Action 2

It is proposed that The APL Working Group request that Registered Set Number 68 (which uses the Bosworth Convention) be revised so that the four tack symbols be renamed to agree with the the current names for the four tacks in UCS-2 (which uses the London Convention).

(5) The APL Working Group Business Plan

The members of the working group were not excited about the business plan, and left this task to the convenor. To say that convenor was happy happy about this would be a misstatement.

(6) Next Meeting

The the setting of the time and place for the next meeting was postponed until the time and place for APL 2001 is known.

References

APL Characters for Workspace Interchange"

Registered Character Set Number 68, under the authority for ISO 2375.

IS 10646

International Standard specifying UCS-2, the Universal Character Set using two octets, and a superset known as UCS-4, the Universal Character Set using four octets.

APL Character Repertoire

A work in progress of JTC1 / SC22 / WG3. The working group has a URL that interested standards workers may see.

<http://www.math.uwaterloo.ca/~ljdickey/apl-rep/tables>

This document

http://www.math.uwaterloo.ca/~ljdickey/apl-rep/tables/berlin_report.html

Note added after meeting

. APL, Extended becomes a standard

IS 13751 has has satisfied all requirements. Document /JTC1/SC22/N3163 is the full text that went for publication.

Prepared 2000/09/02