



TBITS 03: Coded Character Set for Information Interchange - Implementation Criteria

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d'information - Critères d'applicabilité

TBITS 03: Coded Character Set for Information Interchange - Implementation Criteria

1. Reference

1.1 Name

- Coded character set for information interchange

1.2 Identifier

- TBITS-3

1.3 Category

- Standard

1.4 Effective date

- June 1, 1992

1.5 Approving authority

- Treasury Board of Canada

1.6 Maintenance agency

- Information Technology Management
- Treasury Board Secretariat (TBS)

1.7 Cross index

- CAN/CSA-Z243.4-87, 7-bit and 8-bit Coded Character Sets for Information Processing and Interchange
- ISO 8859-1:1987, Information processing C 8-bit single byte coded graphic character sets, Part I: Latin alphabet no. 1
- TBITS-5, Canadian government keyboard standard for information technology equipment

2. Purpose

The purpose of this standard is to provide a complete set of characters necessary to support current and future information interchange requirements in the English and French languages. Use of this standard will achieve a consistent implementation of the code tables used to interchange information throughout the federal government.

In addition to its use as a communications standard, the Latin alphabet no. 1 character set specified by this standard provides the preferred basis for implementation of the keyboard specified in TBITS-5, Canadian government keyboard standard for information technology equipment.

3. Application

This standard is applicable to the acquisition and use by the federal government of information technology hardware and software that may be required to interchange character coded information in English or French.

4. Qualifications

"Latin alphabet no. 1", when unqualified, refers to the entire 8-bit code table specified in Figure 5 of CAN/CSA-Z243.4-87. Refer to Appendix A of this document.

"Communicate" means to send and receive via telecommunications, disk, tape, and other means commonly used for the transfer of information between computer systems and applications. This does not require that the computer system use Latin alphabet no. 1 as its internal character set, although this is preferable. However, if there is a translation process between the internal character set and the Latin alphabet no. 1 character set, then the loss of character representations must be minimized, and at least the 13 lowercase accented characters commonly used in French (à â ç é ê ë ì õ ù û ü) should be preserved.

This standard is intended primarily for the interchange of information between computer systems having dissimilar coded character environments, or between applications on the same computer having dissimilar coded character environments, using an 8-bit

encoding. Therefore, it does not mean that existing implementations using other coded character sets (for example, EBCDIC or American Library Association) need to be modified if all they do is communicate in an homogeneous environment, or an environment where there is an existing communications exchange protocol that provides the necessary facilities to handle accented characters used in French (for example, a shift-in/shift-out mechanism). Similarly, new equipment acquired to expand such systems need not comply with this standard; however, conversion of such systems to comply with this standard is encouraged where feasible, and particularly when a system is being redeveloped.

Note that the general requirements for supporting the English and French languages on computer systems acquired by the Government of Canada are contained in Appendix A of the Management of Information Technology policy, Information Management volume, *Treasury Board Manual*.

While this standard does not specify the internal coding structure of any given computer, suppliers of computer equipment are encouraged to implement Latin alphabet no. 1 as a native character set to allow proper interchange of data in English and French between various devices such as computers, printers, disks, tapes, etc. Departments are encouraged to acquire equipment that provides Latin alphabet no. 1 as a native character set.

Unless otherwise specified, every reference to a standard shall be taken to be a reference to the most recent version of that standard, whether published before or after this standard.

5. Implementation

All computer systems that are used to interchange information in English and French and that are acquired after the effective date should have the ability to communicate the primary control set (clause 9.2C clause and figure references are to CAN/CSA-Z243.4-87, 7-bit and 8-bit Coded Character Sets for Information Processing and Interchange) as the C0 set (positions 0-31, 00h-1Fh), the primary graphic set clause 10.2.1) as the G0 set (positions 32-127, 20h-7Fh), and the Latin alphabet no. 1 supplementary graphic set (clause 11.3) as the G1 set (positions 160-255, A0h-FFh). The C1 set (positions 128-159, 80h-9Fh) must either be empty or contain the supplementary control set (clause 9.3).

5.1 Interchange default state

The information interchange default state is an 8-bit code with no extensions using Latin alphabet no. 1 with the C1 set empty.

5.2 Conformance to CAN/CSA-Z243.4-87

The implementation requirements of this standard do not conform to a specific conformance level of CAN/CSA-Z243.4-87. It is an initial step to provide a standard facility to interchange information in the English and French languages. It may be extended in accordance with CAN/CSA-Z243.4-87.

6. Specifications

This standard adopts the 8-bit environment and the Latin alphabet no. 1 supplementary graphic set of the Canadian Standards Association standard, 7-bit and 8-bit Coded Character Sets for Information Processing and Interchange (CAN/CSA-Z243.4-87).

By adopting the CAN/CSA Z243.4-87 standard, this standard also adopts the International Organization for Standardization standard, ISO 8859-1:1987, Information processing C 8-bit single byte coded graphic character sets, Part 1: Latin alphabet No. 1.

7. Certification of compliance

At this time there is no procedure established to obtain a certificate of conformance.

8. Government standards working group

Character sets and coding

Ed Hicks (Chairman) TBS

Jean-Yves Fortin CC

Roy Hammond SC

Roy Marsh CC

This standard was also provided to members of the TBITS keyboard working group.

9. Where to obtain copies

Copies of the technical specification may be obtained as follows:

CAN/CSA-Z243.4-87,
7-bit and 8-bit Coded Character Sets for Information Processing and Interchange

Canadian Standards Association
178 Rexdale Blvd.

Rexdale (Toronto), Ontario
M9W 1R3

Telephone: (416) 747-4044
Facsimile: (416) 747-2475

Appendix A - B Latin alphabet no. 1 B ISO 8859-1:1987

	000	016	032	048	064	080	096	112	128	144	160	176	192	208	224	240
0	NUL	DLE	SP	0	@	P	?	p	O	DCS	NBSP	E	À	Đ	à	đ
1	SOH	DC1	!	1	A	Q	a	q	O	PU1	(	"	Á	Ñ	á	ñ
2	STX	DC2	"	2	B	R	b	r	O	PU2	4	5	Â	Ò	â	ò
3	ETX	DC3	#	3	C	S	c	s	O	STS	,	;	Ã	Ó	ã	ó
4	EOT	DC4	\$	4	D	T	d	t	IND	CCH	9	?	Ä	Ô	ä	ô
5	ENQ	NAK	%	5	E	U	e	u	NEL	MW	-	F	Å	Ö	å	ö
6	ACK	SYN	&	6	F	V	f	v	SSA	SPA	|	&	Æ	Ö	æ	ö
7	BEL	ETB	'	7	G	W	g	w	ESA	EPA	'	C	Ç	H	ç)
8	BS	CAN	(	8	H	X	h	x	HTS	O	?	?	È	Ø	è	ø
9	HT	EM	)	9	I	Y	i	y	HTJ	O	8	o	É	Ù	é	ù
10	LF	SUB	*	:	J	Z	j	z	VTS	O	0	1	Ê	Ú	ê	ú
11	VT	ESC	+	;	K	[	k	{	PLD	CSI	*	+	Ë	Û	ë	û
12	FF	FS	,	<	L	\	l	|	PLU	ST	5	3	Ì	Ü	ì	ü
13	CR	GS	-	=	M	]	m	}	RI	OSC	SHY	2	Í	Ý	í	ý
14	LS1	RS	.	>	N	^	n	~	SS2	PM	7	:	Î	Þ	î	þ
15	LS0	US	/	?	O	_	o	DEL	SS3	APC	?	)	Ï	ß	ï	ÿ

Notes:

! Characters 14 (*Locking Shift 1*) and 15 (*Locking Shift 0*) are also referred to, respectively, as *Shift Out* and *Shift In*.

! O indicates spaces reserved for future standardization.

! Characters 0-31 and 128-159 are control codes.