

Title:	<b>Information technology -- Programming languages, their environments and system software interfaces -- JEFF file format</b>		
Document:	<a href="#">ISO/IEC DIS 20970</a>	Committee:	<b>JTC 1/SC 22</b>
Start date (CET):	2001-05-09	End date (CET):	2001-11-09
ISO/CS ballot closing date (CET):	2001-11-19	Voting phase:	Enquiry
Status:	CLOSED	Version:	1
Vienna Agreement:	FT		



**RESULT OF VOTING**


P-Members voting: 14 in favour out of 16 = 87.5 % (requirement >= 66.66%)

*(P-members having abstained are not counted in the vote)*

Member bodies voting: 2 negative votes out of 19 = 10.53 % (requirement <= 25%)

**APPROVED**

	<a href="#">Country</a>	<a href="#">Member</a>	<a href="#">Participation</a>	<a href="#">Voted</a>	<a href="#">Comments file</a>
	Australia	SAI	P	Abstention	
	Belgium	IBN	P	Abstention	
	Brazil	ABNT	P	Abstention	
	Canada	SCC	P	Approval	
	China	CSBTS	P	Approval	
	Czech Republic	CSNI	P	Approval	
	Denmark	DS	P	Approval	
	Egypt	EOS	O	Approval	
	Finland	SFS	P	Approval	
	France	AFNOR	P	Approval	
	Germany	DIN	P	Approval	
	Ireland	NSAI	P	Approval	
	Italy	UNI	P		
	Japan	JISC	P	Disapproval	<a href="#">ISO/IEC DIS 20970 JISC</a>
	Korea, Dem. P. Rep. of	CSK	P		
	Korea, Republic of	KATS	P	Approval	
	Netherlands	NEN	P	Approval	
	New Zealand	SNZ	P	Approval	
	Norway	NSF	P	Approval	
	Portugal	IPQ	P	Abstention	
	Russian Federation	GOST R	O	Approval	
	Slovenia	SIST	P		
	South Africa	SABS	P	Abstention	
	Sweden	SIS	P	Disapproval	<a href="#">ISO/IEC DIS 20970 SIS</a>

Switzerland	SNV	P	Abstention	
Ukraine	DSTU	O	Approval	
United Kingdom	BSI	P	Approval	
 USA	ANSI	S	Approval with comments	<a href="#">ISO/IEC DIS 20970 ANSI</a>

Member body	Clause/ subclause	Paragraph/ Figure/ Table	Type of comment (ge / te / ed) <sup>1</sup>	Comment	Proposed change	Observations of the secretariat on each comment submitted
Japan (JISC)	All document		Ge	Clarify the relationship with Sun Microsystems Inc.'s Java specifications. In the overview, both the Java VM and Java Language Specifications are referred as "to fully understand this specification, the reading ... is recommended."		
Japan (JISC)	All document		Ge	Describe the contents clearly and understandable. Define terms precisely.		
Japan (JISC)	All document		Ge	Provide the precise information as an International Standards.		
Japan (JISC)	All document		Ge	Follow the ISO/ICE JTC 1 standard format so that the necessary information will be presented precisely.		
Japan (JISC)	All document		Ge	The meta-syntax of structure notation is poorly specified and is hardly understandable. Though it is mentioned as "C-like," there are apparent differences with the C structure. For example, unlike C, item offsets within the structure are not constant (see 3.2.3). Offsets depend on the position of each structure instance.  Some items are "optional" in some structures. This means that these items are, at times, completely removed from the structure. So far we looked through the specification, nothing is apparent from the structure notations, whether the item is optional or not.		
Japan (JISC)	p2-2.2 Definition of <VMConstUTF8> of <Language Types>		Te	This has different syntax from the rest of the specification. So far we guess -- see comments on "p8-3.2.1 <Notations>" -- array size had better be explicitly specified.	"TU1 nStringValue[];" ==> "TU1 nStringValue[nStringLength];"	
Japan (JISC)	p4-2.3.2		Te	Using "optional" in these explanations		

<sup>1</sup> ge = general - te = technical - ed = editorial  
FORM (ISO)  
2000-07-01

Member body	Clause/ subclause	Paragraph/ Figure/ Table	Type of comment (general/ technical/ editorial)	Comment	Proposed change	Observations of the secretariat on each comment submitted
Member body	Clause/ subclause	Paragraph/ Figure/ Table	Type of comment (ge / te / ed) <sup>1</sup>	Comment	Proposed change	Observations of the secretariat on each comment submitted
	<Dimension Value> of <Type Descriptor> p5-2.3.2(cont'd) <Class Index> of <Type Descriptor>			<p>makes following statements, which too have problems, difficult to understand or even to guess their meanings:</p> <p>p18-3.3.2.6(cont'd) &lt;nTypeDimension&gt;</p> <p>p27-3.3.5.2 &lt;nDataTypeDimension&gt; of &lt;Descriptor&gt;</p> <p>p32-4.2.6 &lt;translated structure&gt; of &lt;The multinewarray Opcode&gt;</p> <p>In what sense are these items are "optional"?</p> <p>It seems that "optional"s are not used in the same meaning as the "Attribute Section is optional". Describe the conditions of these items' existence/absence using the clarified structure notations.</p>		
Japan (JISC)	p7-3.1.3 <Internal Classes and External Classes>, and p7-3.1.4 <Fields and Methods>		Te	<p>The name sorting order specified as "following the crescent lexicographic order" is ambiguous.</p> <p>Even if it is assumed that no correlation table is required, above statement can still be interpreted as:</p> <p>a) by 16-bit Java char code comparison,</p> <p>b) by 32-bit Unicode character code comparison, or</p> <p>c) by UTF8 byte code comparison.</p> <p>Which is correct?</p> <p>In the latest case, it is also required that the UTF8 strings stored in the file structure are canonicalized.</p>		
Japan (JISC)	p7-3.1.4 <Fields and Methods>		Te	<p>"All the symbolic names representing the internal class fields are stored at the beginning of the table." Above statement conflicts with the deduction that follows the statement.</p>		
Japan (JISC)	p9-3.2.3 <Alignment		Te	<p>&lt;VMPINDEX&gt; is defined in 2.3, but not in this table.</p>		

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	and Padding>					
Japan (JISC)	p9-3.3 table of <The File Structure>		Te	It is not clear what are optional, and how optional in "Optional Attribute Section" and "list of optional attributes."		
Japan (JISC)	p13-3.3.2.1 <aAccessFlag > of <Class Header>		Te	These are said to be "values." They should be "bit-vector contents."		
Japan (JISC)	p17-3.3.2.5 <ofCode> of <Internal Method Table>		Te	This implies each <ofCode> must have different <nNativeReference> offsets AND EVERY <nNativeReference> MUST HAVE UNIQUE VALUES.  Is the latter restriction really necessary? Isn't it too much restrictive?		
Japan (JISC)	p18- 3.3.2.6(cont'd) <tFieldType>		Te	"... retrieve in the operand stack the reference of the object instance (for an instance field)."  This just does not make sense.		
Japan (JISC)	p19-3.3.2.8 <ncMaxLocals > of <Bytecode Block Structure>		Te	Are "cell" and "word" the same or not?		
Japan (JISC)	p19-3.3.2.8 <bytecode> of <Bytecode Block Structure>		Te	Are "address" and "offset" the same or not?		
Japan (JISC)	p27-3.3.6 <File Signature> (or <Digital Signature>?)		Te	"The VMFileSignature structure is not defined." Does this mean that, in this version of specification, <File Sinature> must not be used and the offset value must be zero?  Or, does this mean that suppliers may define their own structure?		
Japan (JISC)	p32- 4.2.6(cont'd) <nDimensions		Te	Explain should be put precisely. Is this item necessary?? There is <nArrayDimensions> item that also		

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	> of <translated structure> of <The multianewarra y Opcode>			specifies array dimension.		
Japan (JISC)	p34-4.2.10 <nIndex> of <The wide <opcode> Opcodes>		Te	None explained. Or, should we refer the description of original instruction?		
Japan (JISC)	p35-4.2.11 <nIndex> and <nConstant> of <The wide iinc Opcode>		Te	None explained. Or, should we refer the description of original instruction?		
Japan (JISC)	p3-2.3.1 <Meaning> of <ACC_PUBLI C> of <Class> of <Access Flags>  <Meaning> of <ACC_PUBLI C> of <Field> of <Access Flags>  <Meaning> of <ACC_PUBLI C> of <Method> of <Access Flags>		Ed	"... from outside its package."	"... from outside of its package."	
Japan (JISC)	p5-2.3.2 <Class Index> of <Type Descriptor>		Ed	"... array of class, ..."	"... array of a class, ..."	
Japan (JISC)	p5-2.3.3		Ed	"... Depending of where ..."	"... Depending on where ..."	

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	<Offsets> 2nd paragraph					
Japan (JISC)	p8-3.1.5 (cont'd) 3rd bullet		Ed	"... Depends of the ..."	"... Depends on the ..."	
Japan (JISC)	p.11- 3.1.1(cont'd) <nByteOrder>		Ed	"the term "integer value" designs ..." "... two-, four- and height-bytes ..."	"the term "integer value" defines ..." "... two-, four- and eight-bytes ..."	
Japan (JISC)	p17- 3.3.2.5(cont'd) <nMethodCount> of <Internal Method Table>		Ed	"... number of method ..."	"... number of methods ..."	
Japan (JISC)	p19-3.3.2.8 <ncMaxStack> of <Bytecode Block Structure>		Ed	"... during execution of ..."	"... during the execution of ..."	
Japan (JISC)	p20-3.3.2.9 <nCatchCount > of <Caught Exception Table>		Ed	"... number of element ..."	"... number of elements ..."	
Japan (JISC)	p20-3.3.2.10 <Constant Data Section>		Ed	"... They are always referred through an offset. ..."	"... They are always referred through offsets. ..."	
Japan (JISC)	p23- 3.3.3(cont'd) <dofClassAttributes> of <Attribute Section>		Ed	"... value iszero if ..."	"value is zero if ..."	
Japan (JISC)	p26-3.3.5.1 <nDescriptorCount> of <Constant Data Pool Section>		Ed	"... take in account the ... descriptors."	"... take the ... descriptors into account."	
Japan (JISC)	p27-3.3.5.3		Ed	"... 0 for a method without argument."	"... Zero for methods without	

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	<nArgCount> of <Method Descriptor>				arguments."	
Japan (JISC)	p28-4 <Bytecodes>		Ed	"... instruction without argument. ..."	"... instruction without arguments. ..."	
Japan (JISC)	p29-4.2.1 <The tableswitch Opcode>		Ed	"... converted in 16-bit signed value, ..."	"... converted into 16-bit signed values, ..."	
Japan (JISC)	p29-4.2.2 <The lookupswitch Opcode>		Ed	"TU4 nPairs" "... singed 32-bit values: nDefault, nPairs, ..."	"TS4 nPairs" "... singed 32-bit value nDefault, unsigned 32-bit value nPairs, ..."	
Japan (JISC)	p31- 4.2.4(cont'd) <ofClassIndex > of <Opcodes With Class Arguments>		Ed	"... a class or an array of classes."	"... a class or an array of a class."	
Japan (JISC)	p32- 4.2.6(cont'd) <ofClassIndex > of <The mulitanewarra y Opcode>		Ed	"... a class or an array of classes."	"... a class or an array of a class."	
Japan (JISC)	p36-4.2.14 <original instruction> of <The sipush Opcode>		Ed	"TU1 nByte1"	"TS1 nByte1"	
Japan (JISC)	p36-4.2.15 <The newconstarray Opcode>		Ed	"... depends of ..." "TU1 nByte1"	"... depends on ..." "TS1 nByte1"	
Japan (JISC)	p43-5		Ed	"Restriction"	"Restrictions"	



## Template for comments and secretariat observations

Date: 2001-10-25

Document: **ISO/IEC 20970**

### Comments on "JEFF file format", accompanying a **NEGATIVE** vote.

If all the comments marked "MAJOR" below, are accepted and handled in an appropriate manner for the first edition (not delayed until a future edition) our vote may be changed to a yes vote.

1	2	(3)	4	5	(6)	(7)
MB <sup>1</sup>	Clause No./ Subclause No./ Annex/Figure/Table (e.g. 3.1, Table 2)	Paragraph/ List item/ Note (e.g. Note 2)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
SE	1. MAJOR clause 2.2		te	JCHAR: Change "16-bit Unicode char" to "UTF-16 code unit"; change "Unicode max." to "0xFFFF". Note that the code point space in Unicode ranges from U+0000 to U+10FFFF, while the largest UTF-16 code unit is 0xFFFF. To represent characters in the supplementary planes (plane 01 to 10) in UTF-16, two UTF-16 code units are used per encoded supplementary character.		
SE	2A MAJOR clause 2.2		te	The byte (octet, see below) order of a JEFF file must be fixed to so-called network octet order, i.e. big-endian. Having endianness depend on bits in a header makes JEFF directly <b>unsuitable</b> as a direct-execution format		
SE	2B MAJOR clause 2.2		te	Further, there is reference to a "global byte order", but no such byte order is defined. Instead there is byte order meddling per datatype (except for characters...) in the JEFF specifications, using bits in a header that is not needed for a properly defined program file format.		
SE	3 MAJOR clause 2.2		te	Strings in Java are sequences of UTF-16 code units (called char in Java). They must be (logically) strings of UTF-16 code units also during runtime, so it seems needlessly cumbersome, and highly inefficient, to actually represent strings in UTF-8 during runtime. (UTF-8 is spelled so, NOT "Utf8".)		
SE	4 MAJOR clause 2.2		te	The UTF-8 format is defined by ISO/IEC 10646-1 (not yet fully up to date) and Unicode 3.1 (further, Unicode 3.2 is likely to make the irregular cases		

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<sup>2</sup> **\*\*** = ISO/CS editing unit

<sup>2</sup> **Type of comment:** ge = general te = technical ed = editorial

**NB** Columns 1, 2, 4, 5 are compulsory.

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<b>MB<sup>1</sup></b>	<b>Clause No./ Subclause No./ Annex/Figure/Table</b> (e.g. 3.1, Table 2)	<b>Paragraph/ List item/ Note</b> (e.g. Note 2)	<b>Type of com- ment<sup>2</sup></b>	<b>Comment (justification for change) by the MB</b>	<b>Proposed change by the MB</b>	<b>Secretariat observations on each comment submitted</b>
				illegal). It's NOT defined by the Java Virtual Machine Specification.		
SE	5 MAJOR clause 3.1.1 and 3.1.2		te	The encoding for names is not given, which it should be. Is it UTF-16? Or (proper) UTF-8?		
SE	6 clause 3.1.1		te	Change "Unicode 0x002F" to "U+002F, SOLIDUS".		
SE	7 clause 3.1.2		te	Change "Unicode 0x002F" to "U+0020, SPACE".		
SE	8 MAJOR		ge	use the term 'octet' instead of 'byte' since 'byte' is sometimes used in a looser sense.		
SE	9 MAJOR clause 3.2.2 and 3.3.1		te	always use so-called network octet order, i.e big-endian. (That implies that that header fields in JEFF is not needed.)		
SE	10 MAJOR clause 3.3.1		te	the VM_USE_UNICODE bit shall always be set (i.e the bit is not needed in the file format...).		
SE	11 MAJOR		ge	replace "bytecode" with "octet" and replace "bytecodes" with "directly executable instructions".		
SE	12 MAJOR clause 3.3.2.10		te	Utf8; see above		
SE	13 MAJOR		te	byte order; see above		

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	clause 3.3.3.1					
SE	14 clause 3.3.4		te	Utf8; see above		
SE	15 MAJOR clause 5		te	"cannot exceed 64Kb"?? 64 Kelvin-bit? I guess you mean 64 KiB, kilo-binary octets ("kibibyte"). Similarly, Gb (gibabit?) should really be GiB (giga-binary octets, "gibibyte"). And expand "4 Giga" to the appropriate numeric expression.		
SE	16 MAJOR		ge	self-containedness: opcodes are given, but they are not given any semantics, except by vague reference to the class file format (bibl. ref. [1]). This specification is thus NOT self-contained contrary to claims. These claims must thus be removed.		
SE	17 MAJOR		te	self-containedness: opcodes are given, but they are not given any semantics, except by vague reference to the class file format (bibl. ref. [1]). This specification is thus NOT self-contained contrary to claims. These claims must thus be removed.		
SE	18 MAJOR		ge	it is stated that the given format "can be read as grammar"; please give a properly formulated grammar in the conventional style then.		
SE	19 MAJOR		te	Other missing normative specifications are (in a "Normative references" clause that is currently missing): ISO/IEC 10646-1:2000 (defines UTF-8		

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				and UTF-16), and its amendment 1 (2002), as well as future amendments, ISO/IEC 10646-2:2001, and its future amendments, The Unicode Standard, versions, 3.0, 3.1, and 3.2, and future versions (use the definitions of UTF-16 and UTF-8 from this reference, 3.1 in particular, since this maximises interoperability).		
SE	20 MINOR		ge	There are no "Scope" and "Terms and definitions" clauses. The "Overview" should be made into non-normative (and unnumbered) "Introduction" section.		

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# Summary of Comments on jeff\_spec\_1.0.doc

---

## Page: 1

---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:13:26 PM

Type: Note

My comments are attached as Post-It notes such as this.

I'm coming at this not as someone working with or familiar with this subject matter, but as someone who spends a lot of time reading and writing programming language standards.

Rex Jaeschke

Chair NCITS/CT22, US TAG to SC22, August 2001.

rex@RexJaeschke.com

## Page: 5

---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:56:44 PM

Type: Note

I think Frank's name is misspelled.

## Page: 6

---

Sequence number: 1

Author: rex

Date: 8/2/2001 6:58:00 PM

Type: Note

I presume these bytes must be contiguous. If that is the case, you should say so.

Sequence number: 2

Author: rex

Date: 8/2/2001 6:59:39 PM

Type: Note

I suggest replacing the final phrase ``the expression "null value" is synonym of a value of zero."

with

``the expression "null

value" is a synonym for a value of zero of the appropriate type."

Sequence number: 3

Author: rex

Date: 8/2/2001 8:00:06 PM

Type: Note

Change `or' to `and'.

Sequence number: 4

Author: rex

Date: 8/2/2001 7:01:05 PM

Type: Note

I presume these must be integers types. If that is correct, you should say so.

Sequence number: 5

Author: rex

Date: 8/2/2001 7:01:31 PM

Type: Note

Insert `and' before four-byte.

Sequence number: 6

Author: rex

Date: 8/2/2001 7:02:36 PM

Type: Note

I would strike `like int, short or char'. Why call these out? The table has them all.

Sequence number: 7

Author: rex

Date: 8/2/2001 7:03:54 PM

Type: Note

I suggest you set all Java keywords in a constant-width font. That's is far easier on the eyes than making them bold roman.

Sequence number: 8

Author: rex

Date: 8/2/2001 7:04:42 PM

Type: Note

This designates a US standard. For ISO standards you should make some mention of the corresponding IEC 559 standard.

Sequence number: 9

Author: rex

Date: 8/2/2001 7:05:36 PM

Type: Note

The min and max values for long are simply not accurate or useful as is.

Sequence number: 10

Author: rex

Date: 8/2/2001 7:06:02 PM

Type: Note

Why are there no values here?

Sequence number: 11

Author: rex

Date: 8/2/2001 7:06:24 PM

Type: Note

Is this a secret?

Sequence number: 12

Author: rex

Date: 8/2/2001 7:07:14 PM

Type: Note

Why do you need to call out the fp format? Would it be anything else than this?

Sequence number: 13

Author: rex

Date: 8/2/2001 7:08:56 PM

Type: Note

I suggest you replace `The character strings are stored in the following structure:'  
with

`Character strings are stored according to the following structure:'

## Page: 7

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Sequence number: 1

Author: rex

Date: 8/2/2001 7:09:32 PM

Type: Note

`These' is misspelled.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:15:17 PM

Type: Note

It's not obvious that the three parenthetical notes in the Description column are useful. This table gives the executive summary; the details are available in the sections that follow.

It would be more useful if each description had a section number forward reference, so the reader can read more details about it.

Sequence number: 3

Author: rex

Date: 8/2/2001 7:13:55 PM

Type: Note

In the detail sections that follow this table VMNCELL is missing.

Sequence number: 4

Author: rex

Date: 8/2/2001 7:14:29 PM

Type: Note

Change 'This type is conforming' to 'This type conforms'

Sequence number: 5

Author: rex

Date: 8/2/2001 7:16:44 PM

Type: Note

This meaning doesn't quite sound right.

## Page: 8

---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:18:23 PM

Type: Note

I can't find a definition for VMCINDEX.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:19:34 PM

Type: Note

I suggest you replace 'built with one of the following values:' with  
'whose low nibble contains one of the following values:'

Sequence number: 3

Author: rex

Date: 8/2/2001 7:19:58 PM

Type: Note

Replace 'can be' with 'are'.

Sequence number: 4

Author: rex

Date: 8/2/2001 8:21:38 PM

Type: Note

Replace 'YY is the type size in bytes. The size is: 1 << YY' with 'YY is an encoded representation of the type size in bytes. The actual type size is: 1<< YY'

Sequence number: 5

Author: rex

Date: 8/2/2001 7:22:35 PM

Type: Note

Replace 'XX is just used to differentiate the types having the same size.' with 'XX serves to differentiate types having the same size.'

Sequence number: 6

Author: rex

Date: 8/2/2001 7:22:59 PM

Type: Note

Change 'are also set' to 'may be set'

Sequence number: 7

Author: rex

Date: 8/2/2001 8:23:50 PM

Type: Note

replace 'a n-dim...' with 'an n-dim...' This appears in numerous places throughout the spec.

Sequence number: 8

Author: rex

Date: 8/2/2001 7:25:26 PM

Type: Note

Replace 'This value is optional for a non-array type or for a mono-dimensional array.' with  
'This value is optional for non-array and mono-dimensional array types.'

Sequence number: 9

Author: rex

Date: 8/2/2001 7:26:26 PM

Type: Note

Replace 'is mandatory to know the exact array type.' with 'must be present.'

Sequence number: 10

Author: rex

Date: 8/2/2001 7:27:09 PM

Type: Note

I presume the two occurrences of 'ex:' should be 'e.g.,'

Sequence number: 11

Author: rex

Date: 8/2/2001 7:27:42 PM

Type: Note

I suggest setting all Java language code fragments in a constant-width font.

Sequence number: 12

Author: rex

Date: 8/2/2001 7:29:57 PM

Type: Note

Is a Dimension Value permitted for all array types, include one with a void return type? I ask because the final example in 2.3.2 over the page shows no Dimension Value.

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Sequence number: 1

Author: rex

Date: 8/2/2001 7:31:43 PM

Type: Note

Saying that 'the class index is useless.' is hardly standards language. I suspect it must NOT be present.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:31:56 PM

Type: Note

Are example normative or non-normative?

Sequence number: 3

Author: rex

Date: 8/2/2001 7:33:50 PM

Type: Note

In all the examples in which the dimension is optional, I don't understand how you can tell if it is present or not.

Sequence number: 4

Author: rex

Date: 8/2/2001 8:34:30 PM

Type: Note

I don't understand this sentence.

Sequence number: 5

Author: rex



Date: 8/2/2001 7:35:18 PM

Type: Note

A forward reference here would be nice.

Sequence number: 6

Author: rex

Date: 8/2/2001 7:35:46 PM

Type: Note

Why not list the 4 index types here like you did for 2.3.3 and offsets?

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Sequence number: 1

Author: rex

Date: 8/2/2001 7:36:46 PM

Type: Note

Either `name` should be plural or the whole intro phrase should be singular.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:37:33 PM

Type: Note

Unless you are talking about a specifical set of classes, packages, fiilds, and methods, I'd strike the 4 definite articles in this list.

Sequence number: 3

Author: rex

Date: 8/2/2001 7:38:11 PM

Type: Note

This slanted text makes it hard to distinguish between a slash and the letter l.

Sequence number: 4

Author: rex

Date: 8/2/2001 7:38:41 PM

Type: Note

Different kind of quotes used here.

Sequence number: 5

Author: rex

Date: 8/2/2001 7:39:24 PM

Type: Note

I suspect this bad line break may be misleading. I swwhite space permitted between these two parts, and if so, how much?

## Page: 11

---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:40:00 PM

Type: Note

It's pretty common in technical writing to set the first use of terms in italics rather than in quotes.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:41:18 PM

Type: Note

Replace `This order defines an index value for each  
package (a VMPINDEX value).`

with

`This order defines an index value (of type VMPINDEX) for each package.

Sequence number: 3

Author: rex

Date: 8/2/2001 7:42:37 PM

Type: Note

Since you say above that the default package has index 0, this list suggests that the default package is part of the internal class range. Is this correct or do internal classes really start at index 1?

Sequence number: 4

Author: rex

Date: 8/2/2001 7:43:29 PM

Type: Note

Change ``class fully" to ``classes' fully"

Sequence number: 5

Author: rex

Date: 8/2/2001 7:45:33 PM

Type: Note

I don't think speedup is one word. Maybe it's hyphenated. (Several places.)

Sequence number: 6

Author: rex

Date: 8/2/2001 7:45:15 PM

Type: Note

Replace `have a' with `allow'

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:47:47 PM

Type: Note

I believe that superclass is one word and subclass has no hyphen.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:48:33 PM

Type: Note

`fields are classed' doesn't sound right.

Sequence number: 3

Author: rex

Date: 8/2/2001 7:49:12 PM

Type: Note

In C, they are called `members' not fields.

Sequence number: 4

Author: rex

Date: 8/2/2001 7:49:37 PM

Type: Note

Do you mean treated differently. I don't think separately is the right word.

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:49:59 PM

Type: Note

Strike `the'.

Sequence number: 2

Author: rex

Date: 8/2/2001 7:50:09 PM

Type: Note

Strike `an'

Sequence number: 3  
Author: rex  
Date: 8/2/2001 7:50:32 PM  
Type: Note  
Insert `requiring' after `without'

Sequence number: 4  
Author: rex  
Date: 8/2/2001 7:50:55 PM  
Type: Note  
Change `a 8-byte' to `an 8-byte.'

Sequence number: 5  
Author: rex  
Date: 8/2/2001 7:51:58 PM  
Type: Note  
This is almost the same name as chapter 3 itself. I think one of them should be somewhat different.

Sequence number: 6  
Author: rex  
Date: 8/2/2001 7:52:36 PM  
Type: Note  
You say ordered, but you don't say. Perhaps the same as the entries in the table?

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---

Sequence number: 1  
Author: rex  
Date: 8/2/2001 7:53:09 PM  
Type: Note  
Chaneg `sections content' to ``sections' contents'

Sequence number: 2  
Author: rex  
Date: 8/2/2001 8:53:53 PM  
Type: Note  
Is this parenthetic list necessary here? Are these examples are is this the complete list? Should there be an e.g., there somewhere?

Sequence number: 3  
Author: rex  
Date: 8/2/2001 7:54:47 PM  
Type: Note  
Replace `In this area are stored' with `This section contains' just like the other sections here.

Sequence number: 4  
Author: rex  
Date: 8/2/2001 7:55:14 PM  
Type: Note  
Ascii should be all caps

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---

Sequence number: 1  
Author: rex  
Date: 8/2/2001 7:55:39 PM  
Type: Note  
This is a very vague sentence.

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:56:11 PM

Type: Note

Section 3.3 calls this the Class Section.

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 7:59:13 PM

Type: Note

Is it the number of elements in this array that is undefined or each element's contents, or both?

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:59:40 PM

Type: Note

3.3.2 calls this Bytecode Area List

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:00:03 PM

Type: Note

3.3.2 calls this Exception table List

Sequence number: 2

Author: rex

Date: 8/2/2001 8:00:39 PM

Type: Note

Change two occurrences of 'referred' to 'referred to'

Sequence number: 3

Author: rex

Date: 8/2/2001 8:01:14 PM

Type: Note

Isn't UTF spelled in all caps in regular verbage?

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:01:37 PM

Type: Note

3.3 calls this Attributes Section

## Page: 29

---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:03:04 PM

Type: Note

I think you adequately defined the term simple class name earlier. In any event you don;t want to qualify each usage of that term with a perenthetical comment as is done here and below, and over the page.

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:04:34 PM

Type: Note

Replace `The number of argument. 0 for a method without argument.'  
with

`The number of arguments, which for a method without any arguments is zero.'

Sequence number: 2

Author: rex

Date: 8/2/2001 8:04:49 PM

Type: Note

3.3 calls this Digital Signature

Sequence number: 3

Author: rex

Date: 8/2/2001 8:05:22 PM

Type: Note

That's it? You say nothing at all about it!

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:06:40 PM

Type: Note

Do instructions take arguments, or do they take operands? I don't know, I'm just asking.

Sequence number: 2

Author: rex

Date: 8/2/2001 8:06:53 PM

Type: Note

functionality

Sequence number: 3

Author: rex

Date: 8/2/2001 8:07:21 PM

Type: Note

close quote looks strange.

Sequence number: 4

Author: rex

Date: 8/2/2001 8:08:01 PM

Type: Note

In the 4.2.x examples an underscore is used instead of a hyphen. Should this be "jeff\_" instead?

Sequence number: 5

Author: rex

Date: 8/2/2001 8:08:35 PM

Type: Note

You say normatively here. Is the other stuff non-normative? I don't understand the use of this word here.

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---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:09:24 PM

Type: Note

Shouldn't jeff be JEFF in table column headers?

## Page: 47

---

Sequence number: 1

Author: rex

Date: 8/2/2001 8:10:17 PM

Type: Note

Change Kb and Gb to KB and GB, respectively.

Sequence number: 2

Author: rex

Date: 8/2/2001 8:10:44 PM

Type: Note

Giga really isn't a standard term. perhasp you can say  $2^{32}$ .

Sequence number: 3

Author: rex

Date: 8/2/2001 8:11:00 PM

Type: Note

Change `boundaries' to `limits'

Sequence number: 4

Author: rex

Date: 8/2/2001 8:11:21 PM

Type: Note

A cross-reference index would be helpful.