

Revision	Comment
0.1	Initial version
0.2	Added issues 75-88; added status for issues 1-6 from 3/16 IBIS Interconnect Task Group meeting
0.3	Added issues 89-100; added status for issues 16,21,22,28,46,81 from 3/23 IBIS Interconnect Task Group meeting
0.4	Added issues 101-104; updated status for all issues from meetings through 4/26; added disposition column and version 1.1 entries for all but issue 104

Number	Author	Comment	Classification	Status	Fixed in
1	(Intel)	Conditional netlists:(.IF, .ELSEIF, .ELSE, .ENDIF) need to be supported in IBIS-ISS. To make this truly useful, section 5.3 "String parameters" should expand to allow instantiation of string parameters in conditional statements. This requires definition of the semantics of relational operators applied to strings. Pattern matching would be useful in the semantics.	Feature Request	a) deferred possibly until a later version	(closed)
2	(Intel)	Quote characters: Section 4.2 "Statements and Arguments" lists these as not allowed in parameters or node names: () = " ' ' " Table 3: "IBIS-ISS Special Characters" in section 4.3 "Special Characters" allows " Double-quotes, and ' ' Single quotes To be consistent, the "double quotes" entry should have to "open quote" / "close quote" pair: " " Quoting of strings throughout the document is inconsistent (examples: section 5.2: ".PARAM x='y+3' ", section 5.4: " str('string') ", and Section 6: ".INCLUDE 'file_path file_name' ") However - To simplify syntax and reduce confusion, only quotation marks ("), ASCII 0x22 should be used in the specification, unless there is some syntax that will distinguish between quotation marks and apostrophes ('), ASCII 0x27. The "open quote" and "open apostrophe" (no ASCII designation) should not be allowed. As a weak alternative (the "committee weasel"), all four characters could be allowed, but use of anything but quotation marks should be deprecated.	Editorial	Revise document to use "directionless" quotes; specify ASCII characters that are allowed and prohibited; specify that "directional" quotes are prohibited; scrub document for usage of both	1.1
3	(Intel)	Section 5.1, Table 7, ".PARAM Statement Syntax and Examples": Please clarify the difference between a "User-defined Function" and a "Predefined Analysis Function", as the syntax only indicates a difference in quoting.	Technical	<i>further research required</i>	1.1
4	Radek Biernacki, Agilent	Pages 1-13, Section 4.3, and many other places (p. 16, Section 4.8, second bullet, and all Elements – Section 11) – please unify the guidelines/requirements regarding names and the use of special characters in the names. (For example, the text “Subsequent characters in a parameter name shall each be either a digit, or one of the following characters: ...” contradicts the phrase “..., followed by up to 1023 alphanumeric characters”. If (see Page 16) only “! # % [] _ “ are listed it should be clear whether it is just a recommendation (then Table 3 should contain a phrase “avoid usage” for all other symbols) or a requirement (then Table 3 should contain a note “illegal”).	Technical	<i>further research required & document scrub for consistency</i>	1.1
5	Radek Biernacki, Agilent	Page 8 – move the second paragraph of Section 4.2 to the end of Section 4.1 where it belongs.	Editorial	approved	1.1
6	Radek Biernacki, Agilent	Page 8, Section 4.2 – add “Statements may occupy more than one line, provided a line continuation character or sequence (defined later) is used. No more than one statement may appear in any single line.”	Editorial	approved	1.1
7	Radek Biernacki, Agilent	Page 9, second bullet – should “non-alphanumeric” read “non-blank”?	Technical	<i>research required; whitespace may be intent</i>	1.1
8	Radek Biernacki, Agilent	Page 9, last bullet – please remove the requirement “part of” if it is not needed.	Editorial		1.1
9	Radek Biernacki, Agilent	Page 10 – perhaps “Remarks” should be used instead of “Comments” for the title of the last column.	Editorial		1.1
10	Radek Biernacki, Agilent	Page 13 – last row of Table 3 – the content of the column “Node Name” is confusing and seems to be out of place.	Editorial		1.1
11	Radek Biernacki, Agilent	Page 4.4, first sentence of Section 4.4 – should “first character” read “first non-blank character”?	Editorial		1.1
12	Radek Biernacki, Agilent	Page 15, row “V” of Table 5 – remove the right parenthesis.	Editorial		1.1

13	Radek Biernacki, Agilent	Page 17, the first word of Section 4.11 – replace “Input” by “Statements”.	Editorial		1.1
14	Radek Biernacki, Agilent	Page 17, the last line – add “as the first non-blank character in the continuation line.	Technical	See number 7	1.1
15	Radek Biernacki, Agilent	Page 18, first bullet – add “as the last two characters in the line to be continued”	Technical	research required on	1.1
16	Radek Biernacki, Agilent	Pages 17 and 18 – the three bullets do not address the following questions: a. is the whitespace allowed only in the quoted strings b. can leading whitespaces be present at the beginning of the continuation line and if so, what is their impact?	Technical	research required	1.1
17	Radek Biernacki, Agilent	Page 19, first paragraph – remove “or that are calculated based on circuit solution values” since it refers to post-processing and is not applicable to IBIS-ISS.	Technical	approved	1.1
18	Radek Biernacki, Agilent	Page 20, third paragraph and Page 27, first paragraph – perhaps a phrase like “tail-truncated” would be more precise than “ordered”.	Editorial		1.1
19	Radek Biernacki, Agilent	Page 21, second bullet – perhaps “expressions” is a better word than “algebra”	Editorial		1.1
20	Radek Biernacki, Agilent	Page 21, second paragraph – it does not belong here; also it needs to be stated whether any whitespace that precedes the double backslash becomes a legitimate character in the string.	Technical	research required; remove section	1.1
21	Radek Biernacki, Agilent	Page 22, the first three rows – remove “(radians)”.	Technical	confirmed; remove (radians)	1.1
22	Radek Biernacki, Agilent	Page 24, Table 10 – it does not belong to Section 5.2, please move it to Section 5.1; suggested title of the table: “IBIS-ISS Reserved Parameter Names”; please also add the following: “Parameters with the following/above names shall not be defined anywhere in IBIS-ISS. Their usage should be avoided.”	Technical	prohibit redefinition of these special names; do not assume they are used or present	1.1
23	Radek Biernacki, Agilent	Page 26, second paragraph – “is be” should read “is”; also, please remove “an instance of” – parameters are not instantiated; also, please add a note that the quotes are not used in the call <code>str(parameter_name)</code> .	Technical	approved	1.1
24	Radek Biernacki, Agilent	Page 26, first paragraph in Section 5.4 – suggested improvement: say “the subcircuit within which it is defined” instead of “that subcircuit”.	Editorial		1.1
25	Radek Biernacki, Agilent	Page 26, Section 5.4 example – please change “.param x=3” to “.param x=4” and provide explanation regarding actual instantiation of the resistor “r1”.	Editorial		1.1
26	Radek Biernacki, Agilent	Page 27, first row of Table 11 – the second paragraph in the Description column should be a general comment made outside of the table.	Editorial		1.1
27	Radek Biernacki, Agilent	Page 28, first paragraph – should “the first character” read “the first non-blank character”?	Editorial		1.1
28	Radek Biernacki, Agilent	Page 28, example – an explanation is needed why the dollar sign in “1w\$comment” and in “1k\$comment” is treated as the comment character.	Technical	remove a=1w example but note that k and other suffixes are valid numeric expressions	1.1
29	Radek Biernacki, Agilent	Page 29 – please remove two sentences: “They can be ...” and “Note that .MODEL ...” – they both offer some confusing interpretation.	Editorial		1.1
30	Radek Biernacki, Agilent	Page 30, Syntax –the “.subckt” definition statement can optionally include parameter definition(s) – this should be shown; also, assuming that “n1” is required, please correct the example on Page 26.	Technical	approved; remove italics on []; is a nodeless subcircuit allowed? Correct p. 26	1.1
31	Radek Biernacki, Agilent	Page 32, second paragraph of Section 1.1 – remove an extra “. ”.	Editorial		1.1
32	Radek Biernacki, Agilent	Page 32, Syntax – remove the line break in the syntax definition.	Editorial		1.1
33	Radek Biernacki, Agilent	Page 32, Table 12 – please unify definition of the node arguments in Tables 12, 13, 14 and 15.	Editorial	approved	1.1
34	Radek Biernacki, Agilent	Page 32, Table 12 – in the last row “an integer” should read “a positive integer”. Similar corrections are needed in several other places.	Technical	research required? Fractionals allowed for subcircuits? Allowed for elements?	1.1
35	Radek Biernacki, Agilent	Page 34, Table 15 – add “DC” to the description of the DC argument.	Editorial		1.1
36	Radek Biernacki, Agilent	Page 35, Table 16 – improve the description of the K argument to read “This is a non-zero unitless number”	Editorial		1.1
37	Radek Biernacki, Agilent	Page 35, Section 11.7 – make “[” and “]” non-italic.	Editorial		1.1
38	Radek Biernacki, Agilent	Page 36, Table 18 – make “l” lower case in “ln” (for consistency with the syntax).	Editorial		1.1
39	Radek Biernacki, Agilent	Page 37, first paragraph – remove it.	Editorial		1.1
40	Radek Biernacki, Agilent	Page 37, Syntax – either RLGCMODEL or TABLEMODEL shall be specified – remove “[” and “]”.	Technical	curly brackets? One or the other is required; add to document conventions	1.1

41	Radek Biernacki, Agilent	Page 37, Table 19 – “non-zero” should read “positive”; also search for similar usage of “non-zero”.	Technical	non-zero, positive	1.1
42	Radek Biernacki, Agilent	Page 37, Table 19 – rows 3 and 5 – change “terminal” to “terminals”.	Editorial		1.1
43	Radek Biernacki, Agilent	Page 38, third bullet – remove this item since it is not supported (unless the argument RLGCfile is added).	Technical	remove Format 1 sub-bullets and use 'specified in a .MODEL statement' twice	1.1
44	Radek Biernacki, Agilent	Page 38, second paragraph – does “interspersed” imply any order? If so, I do not believe it.	Technical	Synopsys plans to remove documentation mentioning interspersed nodes and parameters; remove	1.1
45	Radek Biernacki, Agilent	Page 38, Format 1 – remove/improve the second and the fourth bullet items.	Technical	use only first bullet and combine with sentence	1.1
46	Radek Biernacki, Agilent	Page 38, Syntax – move “]” to the end.	Technical	brackets around each element, from Ro through Lgnd; research required on parameter interaction	1.1
47	Radek Biernacki, Agilent	Page 39, Table 20 – arguments L and C should read Lo and Co .	Editorial		1.1
48	Radek Biernacki, Agilent	Page 39, Table 20 – align the units.	Editorial		1.1
49	Radek Biernacki, Agilent	Page 39, Table 20 – “grounds” should read “ground”.	Editorial		1.1
50	Radek Biernacki, Agilent	Page 41, third paragraph – this should only be a recommendation.	Technical	research required; "should include" as an alternative; CORRECTION: listed requirements are indeed requirements. Parsing will fail without them.	1.1
51	Radek Biernacki, Agilent	Page 42 – remove the text from “An alternative value ...” to the end of the section. The parameter fgd should be added to appropriate table and syntax.	Technical	Move text; Add fgd to parameter table; specify precedence for model and device cards; remove INCLUDEGDIMAG, assume non-tabular uses linear equations	1.1
52	Radek Biernacki, Agilent	Page 44 – make a comment that “ <i>npts</i> ” is not an argument (it is the first value under the DATA argument).	Editorial	approved; as part of DATA= <i>data</i>	1.1
53	Radek Biernacki, Agilent	Page 44 – “ <i>filename</i> ” in “ DATA= ” should read “ <i>data</i> ”.	Editorial	approved	1.1
54	Radek Biernacki, Agilent	Page 45, Table 22 – “ RLMODEL ” should read “ RMODEL ”.	Editorial	approved	1.1
55	Radek Biernacki, Agilent	Page 46, first sentence – please improve it (the S-element is not network data, it is a component).	Editorial	approved	1.1
56	Radek Biernacki, Agilent	Page 46, Table 23 – “With an N reference node” should read “With N reference nodes”.	Editorial		1.1
57	Radek Biernacki, Agilent	Page 47 – remove the text from “All optional ...” to “a higher priority”.	Editorial		1.1
58	Radek Biernacki, Agilent	Page 48 – modify the text according to making the argument N as required.	Editorial		1.1
59	Radek Biernacki, Agilent	Page 49 – remove description related to “ <i>s#p</i> ”.	Technical	matrixes -> matrices; research required - is this an HSPICE filename requirement? "Suggested; be advised that some tools may require it."	1.1
60	Radek Biernacki, Agilent	Page 49 – remove the last sentence.	Editorial	approved	1.1
61	Radek Biernacki, Agilent	Page 50 – Pole-Zero Function syntax – replace all “ <i>a</i> ” by “ <i>α</i> ”.	Editorial		1.1
62	Radek Biernacki, Agilent	Page 50, the last row – remove extra parentheses.	Editorial		1.1
63	Radek Biernacki, Agilent	Page 51, second paragraph – “ <i>Re[pi]</i> ” should read “ <i>Re{p_i}</i> ”; also remove the second sentence.	Editorial		1.1
64	Radek Biernacki, Agilent	Page 51, after the second paragraph – apparently an example is missing, to which the last paragraph refers.	Editorial		1.1
65	Radek Biernacki, Agilent	Page 53 – the purpose of Note is not clear.	Technical	approved	1.1
66	Radek Biernacki, Agilent	Pages 53 and 54, Elements F and G – the direction of the source current needs to be specified.	Technical	approved	1.1
67	Radek Biernacki, Agilent	Pages 53 and 57, Elements F and H , Tables 26 and 28 – add a comment about the direction of the probed current (in a V-element).	Technical	approved	1.1

68	Radek Biernacki, Agilent	Page 53, last row – “Names” should read “Name”.	Editorial		1.1
69	Radek Biernacki, Agilent	Page 54 – similar to Comment 61.	Editorial		1.1
70	Radek Biernacki, Agilent	Page 54, second paragraph – “Table VCCS Parameters” should read “Table 27: G-element Arguments”.	Editorial		1.1
71	Radek Biernacki, Agilent	Page 56 – similar to Comment 65.	Technical	approved	1.1
72	Radek Biernacki, Agilent	Page 57 – similar to Comment 68; also, remove the second sentence.	Editorial		1.1
73	Radek Biernacki, Agilent	Page 58 – see Comment 4.	Technical	approved	1.1
74	Radek Biernacki, Agilent	Pages 59 and 60 – several corrections are needed if Section 13 stays.	Technical	Equation numbering should contain chapter/section and renumber with section; scrub for consistency with wp, etc.	1.1
75	Radek Biernacki, Agilent	Page 61 – fix the references to follow IEEE styles; make sure that the titles are all included; remove any references not needed anymore; add a reference to HSPICE manuals.	Editorial		1.1
76	Radek Biernacki, Agilent	Page 12, the “Period” special symbol – if used within instance or parameter names it may conflict with subcircuit hierarchy – please make it illegal.	Technical	Not "included only" - should be illegal	1.1
77	Radek Biernacki, Agilent	Page 20, Table 8 – the first column corresponds to “.OPTION PARHIER GLOBAL” which is not supported by IBIS-ISS and should be removed. Furthermore, the content of the second column is not clear. Perhaps a text description of the parameter passing precedence, similar to the text above Table 8, would be a better choice. Furthermore, any description here needs to be consistent with Sections 5.4 and 11.1.	Technical	Headers missing; left hand side is irrelevant to us. Move to text description.	1.1
78	Radek Biernacki, Agilent	Page 26, Section 5.3 – please clarify whether the construct str() is required – examples, e.g., page 40, are inconsistent with the rules of Section 5.3.	Technical	deferred	1.1
79	Radek Biernacki, Agilent	Page 27, Syntax – the syntax definition seems to be incorrect: it suggests a whitespace separating the path and the file names; also, any restrictions on the path should be specified (e.g., no absolute path, relative path, but relative to what).	Technical	file_path is optional; slash or backslash should be present; absolute or relative paths? Relative paths strongly suggested. Are spaces allowed in file_name?	1.1
80	Radek Biernacki, Agilent	Page 32, Table 12 – please remove the text “, but is overridden by a value set in a .PARAM statement” – it contradicts the parameter passing concept.	Technical	<i>research required</i>	1.1
81	Radek Biernacki, Agilent	Pages 38, 39 – please remove the wp (Wp) parameter (argument) from the syntax description and Table 20 for the W-element static model. Also remove Section 13. It seems that the presence of the parameter wp by itself is ignored. It requires another parameter (INCLUDEGDIMAG=yes) to take effect. However, that parameter is not included. Another argument against keeping wp is that it cannot be simply added to an existing static W-element data to fix non-causality: GD data is simply not reusable (even the units are different). Furthermore, for the purpose of generating causal models the tabular, not static, W-element data has been used in recent years. Thus, the need for this parameter is doubtful, as there may be very few, if any, models for which both this parameter and the data is consistently defined.	Technical	Remove wp; add note at end	1.1
82	Radek Biernacki, Agilent	Page 43, Table 21, SP model arguments – please remove MATRIX – the only type needed for the W-element is “SYMMETRIC” (the lower triangle of the matrix is specified) which is the default.	Technical	<i>approved; Reorder vs. W-element tabular definition; remove support of independent, non-W-element SP?</i>	1.1
83	Radek Biernacki, Agilent	Page 43, Table 21, SP model arguments – please remove other than “REAL” as available values for the VALTYPE argument since the W-element does not use complex matrices. The parameter has to stay though, since in HSPICE the default value is “CARTESIAN”.	Technical	<i>approved; Reorder vs. W-element tabular definition; check with Synopsis for W-elements; note that other types may be supported in other tools</i>	1.1
84	Radek Biernacki, Agilent	Page 44 – the default for the INTERPOLATION argument is very unfortunate – perhaps the “LINEAR” selection should be left as the only choice or the one that is strongly recommended.	Technical	add as note, strongly recommended, for portability	1.1
85	Radek Biernacki, Agilent	Page 45 – please remove the FITGC argument from the W model syntax and Table 22 – this is a simulator control parameter.	Technical	approved; remove FITGC	1.1

86	Radek Biernacki, Agilent	Pages 46, 47, 48 and 49 – please remove the FBASE and FMAX arguments – they are simulation control parameters.	Technical	approved; remove both	1.1
87	Radek Biernacki, Agilent	Page 48, S-Element Model Syntax – please make the arguments N and TSTONEFILE as required.	Technical	approved	1.1
88	Radek Biernacki, Agilent	Pages 51 and 55 – description of the FOSTER type of the E-element and the G-element is not sufficient – the meaning of individual parameters is required. Examples are good but they can only illustrate the specification.	Technical	G-element equation may be used for E-element, but equation needs checking with Synopsys, particularly in the simplification of 0.0008->0.0004; Radek may be able to supply a clarification	
89	Bob Ross, Teraspeed Consulting Group	Page 42 - "used used" should be simply "used"	Editorial	approved	1.1
90	Bob Ross, Teraspeed Consulting Group	Page 46 - formatting issue in Table 23	Editorial	missing lines; odd line breaks; approved	1.1
91	Michael Mirmak, Intel	Page 5 erroneously refers to netlists	Editorial	approved	1.1
92	Michael Mirmak, Intel	Page 6 erroneously states that independent sources are not supported	Editorial	"limited independent sources"	1.1
93	Michael Mirmak, Intel	Page 7 contains an unclear description of where italics are used	Editorial	"other than the italics shown"	1.1
94	Michael Mirmak, Intel	Page 8 uses "dot" in place of the more appropriate "period"	Editorial		1.1
95	Michael Mirmak, Intel	Page 9 refers to quoted filenames; this should be clarified to mention paths as well	Editorial	see above	1.1
96	Michael Mirmak, Intel	Page 13 should clarify the differences between "lines" and "line-termination sequences"	Editorial		1.1
97	Michael Mirmak, Intel	Page 15 and 16, Table 6 uses inconsistent capitalization	Editorial	"Tera", "Femto", "Atto"	1.1
98	Michael Mirmak, Intel	Page 17, Section 4.9 uses inconsistent fonts	Editorial	Also Tables 5 & 6; symbol or character "0" and "or"	1.1
99	Michael Mirmak, Intel	Page 25 forces tool support of transient and AC analyses, plus temperature parameters. Was this intended?	Technical	see above	1.1
100	Michael Mirmak, Intel	A section 4.12 should be added to state that "IBIS-ISS files shall include at least one subcircuit at the top level, aside from any included files." The section should clarify the structural requirements of IBIS-ISS files.	Technical	Clarification: may contain calls to subcircuits, but any IBIS-ISS file shall contain at least one subcircuit definition; may an IBIS-ISS file consist of a single include statement? List kinds of covered files.	1.1
101	Arpad Muranyi, Mentor Graphics	P. 48, third bullet; "For 2n terminals, the S-element assumes signal nodes and n reference nodes. Each pair of nodes is a signal and a reference node." should read "assumes n signal nodes"	Editorial	approved	1.1
102	Radek Biernacki, Agilent	P.48 - definition/usage of ports, terminals and dimension is inconsistent; first bullet is incorrect	Editorial	change N's reference from "dimension" to ports as appropriate; clarify thorough definitions of port, node and terminal (note that port may have multiple terminals); refer to Table 23 and note no *local* reference node in node list	1.1
103	Michael Mirmak, Intel	POI vs. NONUNIFORM - which is the correct syntax (string literal entry) for SPACING?	Technical	Answer: both	1.1
104	Michael Mirmak, Intel	List of built-in function output units?	Editorial		