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BIRD ID#:          114.1
ISSUE TITLE:       IBIS-AMI Definition Clarifications
REQUESTER:         Arpad Muranyi, Mentor Graphics, Inc.
DATE SUBMITTED:    August 24, 2010
DATE REVISED:      September 8, 2010
DATE ACCEPTED BY IBIS OPEN FORUM:
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STATEMENT OF THE ISSUE:

Section 6c of the IBIS v5.0 specification does not define several items
which leaves the parser developer, EDA vendor and model maker with
unanswered questions.

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STATEMENT OF THE RESOLVED SPECIFICATIONS:

Remove the following text from the beginning of the "DEFINITIONS" section
on pg. 140:

| DEFINITIONS:
|
| The following 'Usage, Type Format and Default definitions are used
| throughout the following sections.

Add to the beginning of the "DEFINITIONS" section the following text on
pg. 140:

| DEFINITIONS and RULES:
|
| The information provided in this section is applicable to the content of
| the parameter definition file (.ami).   Note that the rules described
| below deviate from the rules for .ibs files.
|
| The content of the parameter definition file (.ami) is case sensitive.
|
| Only the pipe ("|") character is acceptable as a comment character
| regardless of what the calling IBIS file uses for the comment character.
|
| The line length of the parameter definition file (.ami) is not limited
| to a specific number of characters. The Description string may span
| multiple lines. It is recommended that the text contained in the
| Description string should not exceed 120 characters per line.
|
| The first token in the file may contain an arbitrary string and does not
| need to match the file name.
|
| A white space in the parameter definition file (.ami) may be one or more
| space, tab, and/or line termination characters.
|
| Integers are numbers which are written without a fractional or decimal
| component, and fall within -2147483648 and 2147483647. For example, 65,
| 7, and -756, 123e3 are integers, 1.6, 123e99 are not integers.
|
| Float numbers are in general represented by a floating point number that
| may be scaled using a decimal exponent. A floating point number is

represented by the significant digits, and optionally a sign and decimal
point. For example, -1.23e-3, 123e-3, 1.23, 1 are all of type float.

String is a sequence of characters enclosed in double quotes (").   No
double quotes are allowed inside the string literals.

Scaling factors or suffixes, such as p, n, etc... are not permitted in
the parameter definition file (.ami).   Scientific and floating point
notation is permitted.

On pg. 141 remove:

                                                        ...The entire
line has to be limited to IBIS line length specification. String
literals begin and end with a double quote (") and no double quotes are
allowed inside the string literals.

On the top of pg. 141 replace:

                    (Rx_Clock_PDF
                      (Usage Info)
                      (Type Float)
                      (Format Table
                        (Labels Row_No Time_UI Density)

with:

                    (Rx_Clock_PDF
                      (Usage Info)
                      (Type Float)
                      (Format Table
*   (Labels "Row_No" "Time_UI" "Density")

On pg. 146 replace:

                (Tx_Jitter (Usage Info)(Type Float)
                        (Format Table
                          (Labels Row_No Time Probability)

with:

                (Tx_Jitter (Usage Info)(Type Float)
                        (Format Table
*   (Labels "Row_No" "Time" "Probability")

On pg. 147 replace:

                (Rx_Clock_PDF (Usage Info)(Type Float)
                        (Format Table
                          (Labels Row_No Time Probability)

with:

                (Rx_Clock_PDF (Usage Info)(Type Float)
                        (Format Table
*   (Labels "Row_No" "Time" "Probability")

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ANALYSIS PATH/DATA THAT LED TO SPECIFICATION

Most of these questions were raised by the IBIS v5.0 parser's developer
during the development of the parser, but other discussions in the IBIS-ATM
Task Group revealed additional questions and issues. The solutions were
defined during the IBIS v5.0 parser developement project and in subsequent
IBIS-ATM meetings.

BIRD 114.1 was issued becuase it was noted that the specification had
several examples which included "Labels" where the strings were not
enclosed in double quotes. These examples became inconsistent with the
definitions regarding strings in BIRD 114. BIRD 114.1 corrects this by
putting double quotes around these strings.

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ANY OTHER BACKGROUND INFORMATION:

An Adobe PDF version is available at:

http://www.eda.org/ibis/birds/bird114.1/bird114.1.pdf

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