**BUFFER ISSUE RESOLUTION DOCUMENT (BIRD)**

**BIRD NUMBER:** 192.1

**ISSUE TITLE:** Clarification of List Default Rules

**REQUESTOR:**  Michael Mirmak, Intel Corp.

**DATE SUBMITTED:** August 22, 2017

**DATE REVISED:** August 23, 2017

**DATE ACCEPTED:** September 15, 2017

**DEFINITION OF THE ISSUE:**

The rules for the AMI parameter Format List are ambiguous as to whether the initial value of the List must be duplicated vs. other values given. In addition, while Default is optional for Format List, the order of precedence between the initial List value and Default is also ambiguous. This increases the risk that different tools will interpret the same AMI information differently.

**SOLUTION REQUIREMENTS:**

The IBIS specification must meet these requirements:

Table 1: Solution Requirements

|  |  |
| --- | --- |
| Requirement | Notes |
| 1. Clarify whether Format List uses a duplicated or unique initial value |  |
| 1. Clarify whether Default does or does not override the first value for Format List |  |

**SUMMARY OF PROPOSED CHANGES:**

For review purposes, the proposed changes are summarized as follows:

Table 2: IBIS Keywords, Subparameters, AMI Reserved\_Parameters, and AMI functions Affected

|  |  |  |
| --- | --- | --- |
| Specification Item | New/Modified/Other | Notes |
| Definition of Format List | Modified | The definition of Format List is modified to clarify the relationship of the first given value in the list and the remaining values: the first value is part of the List and only coincidentally the default.  The definition is also clarified to specify the relationship to Default: if present, the Default argument will override the assumption of the first value in the List as default. |

**PROPOSED CHANGES:**

**In Section 10.3, page 196, of IBIS 6.1, replace the text below:**

List <default value> <value> <value> <value> ... <value>  
This defines a discrete set of values from which the user may select one value

**with:**

List <value> <value> <value> <value> ... <value>  
This defines a discrete set of values from which the user may select one value. Duplicate values are permitted. The first value shall be assumed to be the default, if the optional selection Default is not present. If the optional selection Default is used with List, the argument to Default must be an explicit member of the List and will override the use of the first List value as default (for example, (List 0 1 2 3 4) implies that the default value for the List is 0, while (List 0 1 2 3 4) (Default 2) means that the default value for the List is 2, not 0).

**BACKGROUND INFORMATION/HISTORY:**

This changes in this BIRD are constructed in such a way as to leave the existing examples and other parameters (e.g., List\_Tip) completely unaffected. IBISCHK parser changes should be limited to checking whether the argument to Default is already an explicit member of the List.

BIRD 192.1 is issued to clarify that the first value in the List is only coincidentally the default value, in the absence of the Default parameter. The revised text also more explicitly permits duplicated values within the List. Rules defining “<default value>” as a separate item from the rest of the List have been removed.