STDFv3-Specific Records

Site-Specific Hardware Bin Record (SHB)

Function

Stores a count of the parts tested at one test site that are physically placed in a particular bin after testing.

The SHB stores site-specific information, that is, information generated at one site of the tester. It is therefore a subset of the Hardware Bin Record (HBR), which collects information from all the sites of a tester.

The STDF specification also supports a Site-specific Software Bin Record (SSB), for logical binning categories. The part is actually placed in a hardware bin after testing. A part can be logically associated with a software bin during or after testing.

Data Fields

Field Name	Data Type	Field Description	Missing/Invalid Data Flag
REC_LEN	U*2	Bytes of data following header	
REC_TYP	U*1	Record type (25)	
REC_SUB	U*1	Record sub-type (10)	
HEAD_NUM	U*1	Test head number	
SITE_NUM	U*1	Test site number	
HBIN_NUM	U*2	Hardware bin number	
HBIN_CNT	U*4	Number of parts in bin	
HBIN_NAM	C*n	Name of hardware bin	length byte = 0

Notes on Specific Fields

HBIN_NUM Has legal values in the range 0 to 32767.

Possible Use

Site-specific Summary Sheet

Frequency

For each site summarized, one per hardware bin used.

May be included to name unused bins.

Location

Anywhere in the data stream after the MIR.

When data is being recorded in real time, this record usually appears near the end of the data stream.

Site-Specific Software Bin Record (SSB)

Function

Stores a count of the parts tested at one test site that are associated with a particular logical bin after testing.

The SSB stores site-specific information, that is, information generated at one site of the tester. It is therefore a subset of the Software Bin Record (SBR), which collects information from all the sites of a tester.

The STDF specification also supports a Site-specific Hardware Bin Record (SHB), for physical binning categories. The part is actually placed in a hardware bin after testing. A part can be logically associated with a software bin during or after testing.

Data Fields

Field Name	Data Type	Field Description	Missing/Invalid Data Flag
REC_LEN	**U*2**	Bytes of data following header	
REC_TYP	**U*1**	Record type (25)	
REC_SUB	**U*1**	Record sub-type (20)	
HEAD_NUM	**U*1**	Test head number	
SITE_NUM	**U*1**	Test site number	
SBIN_NUM	**U*2**	Software bin number	
SBIN_CNT	**U*4**	Number of parts in bin	
SBIN_NAM	**C*n**	Name of software bin	length byte = 0

Notes on Specific Fields

SBIN_NUM Has legal values in the range 0 to 32767.

Possible Use

Site-specific Summary Sheet

Frequency

For each site summarized, one per software bin used.

May be included to name unused bins.

Location

Anywhere in the data stream after the MIR.

When data is being recorded in real time, this record usually appears near the end of the data stream.

Site-Specific Test Synopsis Record (STS)

Function

Contains the test execution and failure counts at one test site for one parametric or functional test in the test plan. The STS stores site-specific information, that is, information generated at one site of the tester. It is therefore a subset of the Test Synopsis Record (TSR), which collects information from all the sites of a tester.

Data Fields

Field Name	Data Type	Field Description	Missing/Invalid Data Flag
REC_LEN	**U*2**	Bytes of data following header	
REC_TYP	**U*1**	Record type (25)	
REC_SUB	**U*1**	Record sub-type (30)	
HEAD_NUM	**U*1**	Test head number	
SITE_NUM	**U*1**	Test site number	
TEST_NUM	**U*4**	Test number	
EXEC_CNT	**I*4**	Number of test executions	-1
FAIL_CNT	**I*4**	Number of test failures	-1
ALRM_CNT	**I*4**	Number of alarmed tests	-1
OPT_FLAG	**B*1**	Optional Data Flag	See note
PAD_BYTE	**B*1**	Reserved for future use	See note
TEST_MIN	**R*4**	Lowest test result value	**OPT_FLAG** bit 0 = 1
TEST_MAX	**R*4**	Highest test result value	**OPT_FLAG** bit 1 = 1
TST_MEAN	**R*4**	Mean of test result values	**OPT_FLAG** bit 2 = 1
TST_SDEV	**R*4**	Standard Deviation of test values	**OPT_FLAG** bit 3 = 1
TST_SUMS	**R*4**	Sum of test result values	**OPT_FLAG** bit 4 = 1
TST_SQRS	**R*4**	Sum of Squares of test result values	**OPT_FLAG** bit 5 = 1
TEST_NAM	**C*n**	Test Name length	length byte = 0
SEQ_NAME	**C*n**	Sequencer (program segment) name	length byte = 0
TEST_LBL	**C*n**	Test text or label	length byte = 0

Notes on Specific Fields

EXEC_CNT, **FAIL_CNT**, **ALRM_CNT** — Are optional, but are strongly recommended because they are needed to compute values for complete site summary sheets. (The value -1 marks each field as invalid.)

OPT_FLAG — Is the Optional Data Flag, and contains the following bits:

bit 0 set = **TEST_MIN** data is invalid
bit 1 set = **TEST_MAX** data is invalid
bit 2 set = **TST_MEAN** data is invalid
bit 3 set = **TST_SDEV** data is invalid
bit 4 set = **TST_SUMS** data is invalid
bit 5 set = **TST_SQRS** data is invalid
Bits 6 - 7 are reserved for future use and must be 0

PAD_BYTE — Causes alignment of the following fields. It is reserved for future use and must be 0.

OPT_FLAG, **PAD_BYTE** — Are optional only by leaving them off the end of the record. If any of the following fields exists, they must also be present.

TST MEAN, **TST_SDEV** — Are the test mean and standard deviation, and are calculated after excluding alarmed tests.

TST_SUMS, **TST_SQRS** — Are useful in calculating the mean and standard deviation when combining test data from multiple lots.

TEST_NAM, **SEQ_NAME** — Are the test name and sequencer name, and should be included, if they exist, so that they can be printed on site-specific summary sheets using this record.

Possible Use

Site-specific Summary Sheet

Frequency

For each site summarized, one for each test executed in the test plan.

Location

Anywhere in the data stream after the corresponding PDR or FDR (if one exists).

Usually occurs after the last datalogged result for that test if datalogging is enabled.

Site-Specific Part Count Record (SCR)

Function

Contains part count totals for parts tested at a single test site.

The SCR stores site-specific information, that is, information generated at one site of the tester. It is therefore a subset of the Master Results Record (MRR), which collects information from all the sites of a tester.

Data Fields

Field Name	Data Type	Field Description	Missing/Invalid Data Flag
REC_LEN	U*2	Bytes of data following header	
REC_TYP	U*1	Record type (25)	
REC_SUB	U*1	Record sub-type (40)	
HEAD_NUM	U*1	Test head number	
SITE_NUM	U*1	Test site number	
FINISH_T	U*4	Date/time last part tested at site	binary 0
PART_CNT	U*4	Number of parts tested	
RTST_CNT	I*4	Number of parts retested	-1
ABRT_CNT	I*4	Number of aborts during testing	-1
GOOD_CNT	I*4	Number of good (passed) parts tested	-1
FUNC_CNT	I*4	Number of functional parts tested	-1

Possible Use

Site-specific Summary Sheet

Frequency

One for each test site summarized.

Location

May be located anywhere between the MIR and MRR.

This record will usually be found near the end of the file after all parts have been tested.