# Standards Change Request

## MSL Keyword Approval SCR3-1153.v1

#### Provenance:

Date: 2009-07-08

Author(s): John M Diehl (Imaging Node) (with edits by E. Rye)

Working Group: E. Rye (lead), J. Diehl, S. Slavney, B. Sword (suggested)

#### Problem:

The following seven (7) keywords were proposed for and used by the MER mission, but still have a STATUS\_TYPE of PENDING: ROVER\_MOTION\_COUNTER, ROVER\_MOTION\_COUNTER\_NAME, SEQUENCE\_ID, SEQUENCE\_VERSION\_ID, APPLICATION\_PROCESS\_ID, APPLICATION\_PROCESS\_NAME and TELEMETRY\_SOURCE\_NAME. The MSL project would like to use these and would like to have their status updated to APPROVED. Also, because SEQUENCE\_ID replaces the older SEQ\_ID keyword, this SCR proposed to change the STATUS\_TYPE of that keyword to “OBSOLETE”.

#### Current Urgency:

MSL is schedule to launch in 2012. The current schedule for approval of the archive SIS is October 1, 2009.

#### Proposed Solution:

Update the status of the following keywords to “APPROVED”. Note that their CHANGE\_DATE and LABEL\_REVISION\_NOTE values have been updated as well.

ROVER\_MOTION\_COUNTER

ROVER\_MOTION\_COUNTER\_NAME

SEQUENCE\_ID

SEQUENCE\_VERSION\_ID

APPLICATION\_PROCESS\_ID

APPICATION\_PROCESS\_NAME

TELEMETRY\_SOURCE\_NAME

Update the status of the following keyword to “OBSOLETE”. Note that the CHANGE\_DATE and LABEL\_REVISION\_NOTE values for this keywords have also been updated.

SEQ\_ID

#### Impact Assessment:

PDS Standards Reference – No impact.

Archive Preparation Guide – No impact.

Proposer’s Archive Guide – No impact.

Planetary Science Data Dictionary – Change to the keyword status and date values for the affected keyword.

PDS tools – No impact.

#### Additional Information:

None.

#### Requested Changes:

Changes are in RED. Data and time values to be determined by PDS.

#### ROVER\_MOTION\_COUNTER

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission;

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "rover\_motion\_counter"

BL\_NAME = "rovr\_mot\_cnt"

DESCRIPTION = "

The ROVER\_MOTION\_COUNTER element provides a set of integers which describe

a (potentially) unique location (position/orientation) for a rover. Each

time an event occurs that moves, or could potentially move, the rover, a

new motion counter value is created. This includes intentional motion due

to drive commands, as well as potential motion due to other articulating

devices, such as arms or antennae. This motion counter (or part of it) is

used as a reference to define instances coordinate systems which can move

such as SITE or ROVER frames. The motion counter is defined in a mission-

specific manner. Although the original intent was to have incrementing

indices (e.g., MER), the motion counter could also contain any integer

values which conform to the above definition, such as time or spacecraft

clock values.

Note: For MER, the motion counter consists of five values. In order, they

are Site, Drive, IDD, PMA, and HGA. The Site value increments whenever a

new major Site frame is declared. The Drive value increments any time

intentional driving is done. Each of those resets all later indices to 0

when they increment. The IDD, PMA, and HGA increment whenever the

corresponding articulation device moves. It is TBD whether IDD, PMA, and

HGA are independent of each other, or reset the others to 0 in a

hierarchical manner when they are incremented. Conceptually, a sixth value

could be added by ground processing to indicate unintentional slippage

(e.g., the wind blew the rover off a rock). This sixth value will never

occur in telemetry but might occur in certain RDR's. (Implementation of

this is TBD)."

GENERAL\_DATA\_TYPE = "INTEGER”

MAXIMUM = "UNK"

MINIMUM = "0"

MAXIMUM\_LENGTH = "N/A"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "RANGE"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "N"

TEXT\_FLAG = "N"

TERSE\_NAME = "rovr\_mot\_cnt"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### ROVER\_MOTION\_COUNTER\_NAME

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission;

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "rover\_motion\_counter\_name"

BL\_NAME = "rv\_mo\_cnt\_nm"

DESCRIPTION = "

The ROVER\_MOTION\_COUNTER\_NAME element is an

array of values that provides the formal names

identifiying each integer in ROVER\_MOTION\_COUNTER."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "N/A"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "SUGGESTED"

STANDARD\_VALUE\_SET\_DESC = "NULL"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "DRIVE"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "HGA"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "IDD"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "PMA"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "SITE"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08”

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "Y"

TEXT\_FLAG = "N"

TERSE\_NAME = "rv\_mo\_cnt\_nm"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT”

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### SEQUENCE\_ID

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission;

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "sequence\_id"

BL\_NAME = "sequence\_id"

DESCRIPTION = "

The SEQUENCE\_ID element provides an identification of the spacecraft

sequence associated with the given product. This element may replace

the older SEQ\_ID element."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "30"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "SUGGESTED"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "N"

TEXT\_FLAG = "N"

TERSE\_NAME = "sequence\_id"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### SEQUENCE\_VERSION\_ID

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "sequence\_version\_id"

BL\_NAME = "seq\_versn\_id"

DESCRIPTION = "

The SEQUENCE\_VERSION\_ID element specifies the version identifier

for a particular sequence used during planning or data processing."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "30"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "SUGGESTED"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "Y"

TEXT\_FLAG = "N"

TERSE\_NAME = "seq\_versn\_id"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### APPLICATION\_PROCESS\_ID

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "application\_process\_id"

BL\_NAME = "app\_proc\_id"

DESCRIPTION = "

The APPLICATION\_PROCESS\_ID identifies the

process, or source, which created the data."

GENERAL\_DATA\_TYPE = "INTEGER"

MAXIMUM = "N/A"

MINIMUM = "0"

MAXIMUM\_LENGTH = "N/A"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "RANGE"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "N"

TEXT\_FLAG = "N"

TERSE\_NAME = "app\_proc\_id"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### APPLICATION\_PROCESS\_NAME

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-06-10 IMG:RXA Initial Submission

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "application\_process\_name"

BL\_NAME = "app\_proc\_nam"

DESCRIPTION = "

The APPLICATION\_PROCESS\_NAME element provides the name

associated with the source or process which created the data."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "256"

MINIMUM\_LENGTH = "1"

STANDARD\_VALUE\_TYPE = "SUGGESTED"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "MER"

FORMATION\_RULE\_DESC = "N/A"

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "APXS"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "DESCENT IMAGER"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "HAZCAM LEFT FRONT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "HAZCAM LEFT REAR”

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "HAZCAM RIGHT FRONT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "HAZCAM RIGHT REAR"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "MB"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "MI"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "MINITES"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "NAVCAM LEFT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "NAVCAM RIGHT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "PANCAM LEFT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "PANCAM RIGHT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

OBJECT = ELEMENT\_STANDARD\_VALUE

COLUMN\_VALUE = "RAT"

COLUMN\_VALUE\_TYPE = "A"

COLUMN\_VALUE\_NODE\_ID = "U"

OUTPUT\_FLAG = "Y"

END\_OBJECT = ELEMENT\_STANDARD\_VALUE

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED"

STANDARD\_VALUE\_OUTPUT\_FLAG = "Y"

TEXT\_FLAG = "N"

TERSE\_NAME = "app\_proc\_nam"

SQL\_FORMAT = "CHAR(20)"

BL\_SQL\_FORMAT = "char(20)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### TELEMETRY\_SOURCE\_NAME

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2004-12-23, BJS (CN);

2009-07-08 IMG:JMD Revised Submission"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "telemetry\_source\_name"

BL\_NAME = "tlm\_src\_name"

DESCRIPTION = "

The TELEMETRY\_SOURCE NAME element identifies the telemetry

source used in creation of a data set."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "60"

MINIMUM\_LENGTH = "1"

STANDARD\_VALUE\_TYPE = "DYNAMIC"

STANDARD\_VALUE\_SET\_DESC = "N/A"

KEYWORD\_DEFAULT\_VALUE = "N/A"

UNIT\_ID = "N/A"

SOURCE\_NAME = "PDS CN/B.SWORD"

FORMATION\_RULE\_DESC = "N/A"

SYSTEM\_CLASSIFICATION\_ID = "PDS\_MER\_OPS"

GENERAL\_CLASSIFICATION\_TYPE = "MISSION"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "APPROVED "

STANDARD\_VALUE\_OUTPUT\_FLAG = "N"

TEXT\_FLAG = "N"

TERSE\_NAME = "tlm\_src\_name"

SQL\_FORMAT = "CHAR(60)"

BL\_SQL\_FORMAT = "char(60)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = "N"

END\_OBJECT = ELEMENT\_DEFINITION

END

#### SEQ\_ID

PDS\_VERSION\_ID = PDS3

LABEL\_REVISION\_NOTE = "2009-07-08 IMG:JMD Superseded by SEQUENCE\_ID"

OBJECT = ELEMENT\_DEFINITION

ELEMENT\_NAME = "seq\_id"

BL\_NAME = "seqid"

DESCRIPTION = "

The seq\_id element provides an identification of the

spacecraft sequence associated with the given product.

Note: This keyword was used for the Mars Exploration Rovers mission and has been superseded by the SEQUNCE\_ID element; it should no longer be used."

GENERAL\_DATA\_TYPE = "CHARACTER"

MAXIMUM = "N/A"

MINIMUM = "N/A"

MAXIMUM\_LENGTH = "30"

MINIMUM\_LENGTH = "N/A"

STANDARD\_VALUE\_TYPE = "SUGGESTED"

STANDARD\_VALUE\_SET\_DESC = ""

KEYWORD\_DEFAULT\_VALUE = ""

UNIT\_ID = "none"

SOURCE\_NAME = ""

FORMATION\_RULE\_DESC = ""

SYSTEM\_CLASSIFICATION\_ID = "JPL\_AMMOS\_SPECIFIC"

GENERAL\_CLASSIFICATION\_TYPE = "SYSTEM"

CHANGE\_DATE = "2009-07-08"

STATUS\_TYPE = "OBSOLETE"

STANDARD\_VALUE\_OUTPUT\_FLAG = "N"

TEXT\_FLAG = "N"

TERSE\_NAME = ""

SQL\_FORMAT = "CHAR(30)"

BL\_SQL\_FORMAT = "char(30)"

DISPLAY\_FORMAT = "JUSTLEFT"

AVAILABLE\_VALUE\_TYPE = ""

END\_OBJECT = ELEMENT\_DEFINITION

END