

SEG-D, Rev 3.0 - May 2011

Release letter

Changes May 2011 version

Note: Though there are many changes, the format itself is unchanged. The changes are only related to clarification of various issues, and fixing of typos and other minor typographic issues.

- Version number changed to SEG-D Rev 3.0 - May 2011
- Section 2.0, point 1 – Properly refer to Storage Unit Label, field 2
- Section 2.0, point 2 – Change General Header #0 to General Header #1
- Section 2.0, point 7 – Clarify usage of position coordinate systems
- Section 2.0, point 34 – Change wording to reflect that the device information does not yet exist on seg.org.
- Section 3.0, page 18 – Minor correction to max header size calculations (typo fix)
- Section 3.1, page 26-27 – Add leap-second information for 2009 and 2010
- Section 3.2, page 28 – Change Trace Header Extension to Trace Header Extension #1
- Section 3.3 – Clarify some issues regarding holes and continuity of traces in Extended Recording Mode. Also clarify that Extended Recording Mode supports max 4294967295 samples per channel set, not 4294967295 microseconds as stated earlier.
- Section 3.4 – Some clarification regarding the max amount of time available for recording in Extended Recording Mode. (Similar to section 3.3 corrections above).
- Section 4.1, field 4 – Clarification: Binding edition for SEG-D rev 3.0 should be set to 'B2'. This is most compatible with RP66 v2.
- Section 4.1, field 6 – Add reference to Appendix C.
- Section 4.2.1, field 11 – License id of 'survey area'. Typo in initial version.
- Section 5.1 – Clarify usage of table, and remove duplicate definition for General Trailer Description block. Add clarification of block ordering in General Header. Add description of how to order different type of source information to properly refer to the correct Source Description.
- Section 5.5 – Correct wrong byte reference (typo fix)
- Section 5.6 – Correct first numbered list, align with information below.
- Section 5.6.5 – Clarify the range of block type values for User-defined block
- Section 6.0 – Clarify that the Trace Header Extension #1 block is required as part of a trace.
- Section 6.2 – Clarify issue of “sample value is measured value in millivolt”. Describe how to handle situations where “millivolts at system inputs” are not relevant (e.g. for aux channels).
- Section 7.6 – Use correct label for CI in table.
- Section 7.17, 8.18 – Use correct label for Trace Header Extension #1

- Section 7.18, 8.19 and other places – Changed name of Sensor Info Trace Header Extension to Sensor Info Header Extension as it is allowed to use it as part of general Header.
- Section 7.23 – Measurement block is updated according to discussions with Energistics, however agreement with Energistics has still not been reached, so do not use until further notice. Added minimum and maximum allowed value for the measurement.
- Section 8.0 – Added clarification of the usage of extended fields
- Section 8.0 – Added clarification of an unset value for location indexes.
- Section 8.1, byte 27 – Clarify usage of record length in relationship to Extended Recording Mode. Allow a value of 0.0 for indeterminate record length.
- Section 8.1, byte 28 – Allow 0 as number of scan sets (to support meta data only records). Typo in initial version,
- Section 8.1, byte 29 - Allow 0 as number of channel sets (to support meta data only records). Typo in initial version. Correct byte reference and remove reference to outdated example.
- Section 8.2, bytes 6,7,8 – Minor correction of maximum Extended header size
- Section 8.2, bytes 13-16 – Minor correction of maximum trailer size
- Section 8.2, bytes 17-20 – Clarify usage of record length in relationship to Extended Recording Mode. Allow a value of 0.0 for indetermined record length.
- Section 8.2, bytes 25-27 – Clarify description of Dominant sampling rate. Allow a value of 0.0 if indeterminate (e.g. in case of metadata only records).
- Section 8.2, bytes 28-30 – Minor correction to maximum External Header size.
- Section 8.3, bytes 1-8 – Clarify definition of Time zero. Also clarify relationship to Extended Recording mode and absolute timing recording (usage of Timestamp header blocks).
- Section 8.3, bytes 9-16 – Fix typo in undefined value for General trailer size.
- Section 8.9 – Clarify usage of Expanded File Number in Source description Blocks.
- Section 8.9 –Section 8.9 – Refer to correct example.
- The following applies to all Source Description blocks (section 8.9.x):
 - a. Bytes 4-6 – Clarify description of Source Description block.
 - b. Byte 22 – Add 0 as undefined value for group index.
 - c. Byte 24-25, 26-27 and 30-31 – Add -32768 (0x8000) as undefined value for offset.
 - d. Add definitions of 0 value for various fields in the source blocks (source size, source depth, etc.)
- Section 8.9.3 and 8.9.4 – Clarify definition of air pressure unit.
- Section 8.10, byte 32 – Fix typo – use correct block number.
- Section 8.11 – Clarify undefined value for aux channel reference
- Section 8.12 – Clarify how multiple stanzas are written into the header.
- Section 8.13, bytes 57-58 and 89-90 – Allow 0 as value of Location Stanza ID (in case it is unknown/the position tuple is not filled in.)
- Section 8.13, bytes 60 and 92 – Fix typo, tables were not ordered the same way.
- Section 8.14 – Add description is left justified and space padded.
- Section 8.15 – Fix typo, max number of channel sets is 65535, not 99.
- Section 8-15 – Add two channel types to list in byte 4.
- Section 8.16, byte 1 – Clarify the value is BCD
- Section 8.16, byte 2-3 – Refer to Extended number of channel sets.

- Section 8.16, byte 4 – Add two angular measurement types (tilt and angle)
- Section 8.16, bytes 5-8 and 9-12 – Clarify usage of Channel set start and end time in cases of Extended recording mode, and usage of Timestamp header in traces (absolute timing recording).
- Section 8.16, byte 28 – Clarify usage of Number of trace header extensions.
- Section 8.16, byte 62 – Add radians to physical unit.
- Section 8.16, bytes 69-95 – Fix typo for size of field
- Section 8.17 – Add some more clarification regarding numbering of scantypes/channelsets/traces.
- Section 8.17, bytes 7-9 – Add description of data type and remove incorrect reference to base scan interval
- Section 8.17, bytes 10 – Clarify usage of Trace Header Extensions,. At least one is required (has been true since SEG-D Rev 1)
- Section 8.17, bytes 11 - Remove incorrect reference to base scan interval.
- Section 8.18, bytes 25-28 – Clarification regarding number of samples in trace.
- Section 8.18, byte 31 – Fix byte reference typo
- Section 8.19 – Remove superfluous text.
- Section 8.19 bytes 1-8 and 13 – Rename Instrument to Equipment.
- Section 8.20, bytes 1-8 – Clarify calculation of time of first sample of trace.
- Section 8.21 – Fix typo in byte index 25.
- Section 8.22 – Correct data type for Offset Deployment and Retrieval values.
- Section 8.23 – Updated the figure and improved the text to clarify definition of orientation coordinate systems and rotation angles.
- Section 8.24 - Measurement block is updated according to discussions with Energistics, however agreement with Energistics has still not been reached, so do not use until further notice. Added minimum and maximum allowed value for the measurement.
- Section 8.25 – Correct data type for offset values.
- Section 8.26.1, field 5 – Correct header block number typo.
- Section 8.26.1, byte 1 – Align table with information in section 5.6.
- Section 8.26.1, byte 9-24 – Clarify user defined values.
- Appendix A – Add codes for AutoSeis (49) and INOVA Geophysical Inc (50)
- Appendix B – Minor typographic fix, change - to –.
- Appendix C – Change reference to RP66 document.
- Appendix C – Update the Organization code table from the latest Energistics version.
- Appendix D.1.4 – Minor layout changes to tables to make them look nicer.
- Appendix E.1 – Add comment to clarify this has no longer real relevance, but mainly kept to be able to copy older SEG-D formats into Rev 3.0.
- Appendix E.1 – Modified example to reflect removal of base scan interval in SEG-D rev 3.0.
- Appendix E.2 – Add comment to clarify this has no longer real relevance, but mainly kept to be able to copy older SEG-D formats into Rev 3.0.
- Appendix E.2 – Modified example to reflect removal of base scan interval in SEG-D rev 3.0.
- Appendix E.7 – Extended example to include information about how to organize source information in General Header.
- Appendix E.8 – Corrected example to reflect the length of a trace in Extended recording Mode is 4294967295 samples, not 4294967295 microseconds.

- Appendix E.9 – Corrected a couple of typos in the code example. Added timestamp for 1 Jan 2011.
- Appendix E.11 – Added a new, more advanced, Extended Recording Mode example dealing with recording creating traces with holes etc. Also contains some more detailed info regarding handling of independent source and receiver acquisition.
- In addition a few other minor typos and typographic issues have been fixed

Changes November 2009 version

- Initial publication of SEG-D Rev 3.0