

International Association of Oil & Gas Producers

IOGP Geomatics Committee: P-format Standards for Positional Integrity

P1/11

Exchange of processed position data:

- Pre-plot data
- Define survey outlines / perimeters
- Record final source / receiver etc position records and attributes
- Record source / receiver relational data

OGP P1/11 Geophysical position data exchange format

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P2/11

Exchange of raw positioning data:

- Line definitions
- Environmental data (magnetics, tidal, speed of sound)
- Acquisition & survey network definitions
- Raw measurement & position observations
- Raw GNSS recording

P6/11

Exchange of bin grid position data:

- Define bin grid geometry & perimeters
- Record bin node position records and attributes
- Capture bin grid transformations throughout life cycle
- Retain position integrity after merge / reprocessing / 4D
- Record provenance of multisurvey merged volumes

P6 Bin Grid Configuration



OGP P2/11 Positioning data exchange format

OGP P6/11 Seismic bin grid data exchange format

Sample P1/11 Common Header



Towed streamer spread constructed from P1/11 Common Header

COS – CFG (125m)

Applicability

Benefits

- Comma delimited & variable record length fully extensible, can add information/data
- Full geodetic support & full value precision EPSG compliant
- Common header structure
- Mandatory and optional entries flexibility
- Increased potential spatial integrity QC throughout life of seismic dataset
- Lower overhead for Data Manager improved provenance for spatial elements of seismic data
- CSV format improves parsing for human readability

Modern techniques and metadata exceed previous position formats, which were inhibited by:

- Rigid structure & length e.g. limits imposed on object counts • Limited geodetic identity, and do not follow the EPSG model • Limited precision due to fixed field widths

- Overlapping formats and format revisions resulting in "standard" variations

Common Header

Common to all Px/11 formats. For exchange of survey metadata including:

- Survey summary
- Reference Systems geodesy, / CRSs, units of measure, time Survey configuration and production systems
- Position object definition including sources and receivers
- Format definition to interpret position and attribute records

Collaboration with SEG

- of SEG-Y support Common Header CRS definition the next version of SPS. SEG P1 handed over to IOGP and now deprecated as P1/11 is a better alternative.
- Latest version of SEG-D (field tape format) and next revision • IOGP Geomatics Committee and SEG TSC collaborating on

• 2D, 3D, 4D, Multi-component, EMGS, Site & Clearance Surveys • Marine Tow, OBC / OBN, Transition Zone, Land

P1 & P2 revision performed in liaison with SEG and SPS work group. P1/11 V1.1 tested and can fully replace current SPS version.