



International
Association
of Oil & Gas
Producers

Geomatics Committee

An Introduction

By **Walter Jardine, BP**
Geomatics Committee Chair

Industry Day
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IOGP - Standing Committees

The backbone of IOGP is a network of committees and subcommittees, with dynamic task forces and work groups, each working in their own specialist area



Arctic

The world needs more oil and gas. The Arctic has the potential to provide

Geomatics

Dedicated to identifying and spreading good surveying, geodesy, cartography and coordinate data management practice



Communications

IOGP needs a clear, consistent and compelling voice to foster understanding of the upstream industry's operations and objectives



Health

Working to improve health standards and performance throughout the oil and gas sector



Decommissioning

Addressing the challenges to be faced as any offshore structures come to the end of their operational lives

Legal

Dealing with questions of law and understanding how developments in regulations may impact operations



Environment

Dedicated to identifying and spreading good environmental practice wherever the upstream industry operates



Metocean

Providing insights into applied oceanography and meteorology



EU

Helping safeguard current and future production and ensure that Europe remains open to oil and gas imports from other producing areas

Safety

Promoting the integration of safety into every aspect of daily operations



Security

Providing good security risk management guidance



Subsea installation

Dedicated to improving the safety performance of subsea operations



Standards

Promoting consistent, efficient and effective upstream industry standards the world over

Wells

Dedicated to improving the safety performance of wells throughout their full life-cycle



The Geomatics Committee – objectives and activities

Providing global guidance. Publish & maintain :

- EPSG Geodetic Parameter Dataset – the de-facto global standard for CRS and geodetic parameters
- Surveying and Positioning guidance notes
- Industry standard position data exchange formats
- GIS data models – SSDM, LSDM
- Geospatial Integrity of Geoscience Software, test guidance and data

Liaison with industry standards organisations :

- IMCA, SEG, ISO, OGC, Energistics, CAPP

Advocacy with Regulators, Data Repositories

Forum for exchange of experience and knowledge :

- Biannual committee meetings
- Industry Days
- Active sub-committees and task forces
- Initialisation and support of industry initiatives – eg IOGP / IPIECA Oil Spill Response (Common Operating Picture), OGEO Portal

Geomatics C. Subcommittees

- Geodesy
- Geo-Information
- Earth Observation
- Surveying & Positioning
- Geophysical Operations



Current Geomatics C. Task Forces

P-Format updates

- Well Bore Survey Data (P7)
- 3D Seismic Bin Grid (P6)

Data Models

- Seabed Survey Data Model
- Land Survey Data Model

GIGS (working group)

Drilling Hazard Site Survey



IOGP Geomatics Committee

Existing Publications

| Number | Title | Number | Title |
|--|---|---|---|
| Geodesy Sub-committee | | Geo Information Sub-committee | |
| - | EPSG Registry | - | SSDM V2 - Seabed Survey Data Model (GIS) |
| 373-07-1 | Using the the EPSG geodetic parameter dataset | 462-01 | Guidelines for the use of the Seabed Survey Data Model |
| 373-07-2 | Coordinate conversions and transformations including formulae | 462-02 | Guidelines for the Delivery of the Seabed Survey Data Model |
| 373-07-3 | EPSG geodetic parameter registry - developer's guide | 462-03 | Interface between Pipeline Data Models and the IOGP Seabed Survey Data Model |
| 373-07-4 | EPSG geodetic parameter relational database - developers' guide | - | Shell standard mapping symbology legend - green and red options (courtesy of Shell) |
| | | Geophysical Operations Sub-committee | |
| 373-01 | Geodetic Awareness | 373-18-1 | Guidelines for the Conduct of Offshore Drilling Hazard Site Surveys |
| 373-02 | Use of bin grids and coordinate reference systems in workstations | 373-18-2 | Conduct of Offshore Drilling Hazard Site Surveys - Technical Notes |
| 373-03 | Contract Area Definition | 483-1 | P1/11 (v1.1) Geophysical Position data exchange format (final data) |
| 373-04 | Use of the ITRF as the reference geodetic system for surveying | 483-1u | P1/11 (v1.0) Geophysical Position data exchange format – User Guide |
| 373-05 | Coordinate Reference System Definition - recommended practice | 483-2 | P2/11 (v1.1) Geophysical Position data exchange format (raw data) |
| 373-10 | Coordinate Transformations Offshore Norway | 483-6 | P6/11 (v1.0) Seismic bin grid data exchange format |
| 373-13 | Coordinate Transformation Evaluation & Use | - | P6/11 GIS Data Model |
| 373-14 | Coordinate Reference Systems in Reserves Unitisation Agreements | 483-6g | P6/11 Guidelines for the use of the OGP P6/11 bin grid GIS data model |
| 373-16 | Guidelines for the Quality Control of Proposed Well Coordinates | - | Custodians of a number of legacy P-formats (UKOOA, SEG etc) |
| 373-17 | Coordinate Transformations in the Gulf of Mexico | Survey & Positioning Sub-committee | |
| 373-20 | Coordinate Reference Systems for the Arctic | 373-19 | Guidelines for GNSS Positioning in the Oil and Gas Industry |
| 373-21 | Grid Convergence | - | P5/94 Data Exchange Format – Pipeline Position Data (legacy) |
| 373-22 | Geodetic Referencing in Iraq | - | P7/2000 Data Exchange Format for Well Deviation Data (legacy) |
| 373-23 | Web Mercator | Geospatial Integrity of Geoscience Software (GIGS) | |
| - | Guidance on the use of Coordinate Systems in Data Management on the UKCS (legacy) | 430-1 | Part 1 – Guideline Describing the GIGS Process. |
| Earth Observation Sub-committee | | 430-2 | Part 2 – Software Review Checklist to Enable Structured Testing of Geoscience Software. |
| - | Oil & Gas Earth Observation Portal - JV (http://www.ogeo-portal.eu) | 430-3 | Part 3 – User Guide for the GIGS Test Dataset |

2016 Highlights

- Ongoing updates to EPSG registry – regular sub-committee meetings
- Published guideline on Web Mercator Coordinate Reference System
- Input to SEG updates SEG D v3.1 and SEG Y v2.0 – seismic data exchange formats (positioning / CRS elements)
- Regulatory advice on Drilling Hazard Site Survey Guidelines - US, Trinidad, Egypt, UK
- Webinar on DHSS Guidelines and updated Seismic P-formats
- Contract Boundary geodetic awareness session with IOGP Legal Committee
- Joint IOGP, IMCA, THiS Industry Day (Aberdeen)
- Progressed SSDM V2 and V1.1 of P6/11 and P-format User Guides

2017 Workscope

- Publish Guidance Note on Vertical CRSs (draft out for comment) and revision of Guidance Note 4 (Use of ITRF)
- Revision of Guidance Note 19 (GNSS Positioning) – joint with IMCA
- SSDM V2 (published)
- LSDM V1 (nearing completion)
- P6/11 V1.1 (draft out for comment)
- P1/11 User Guide update and P6/11 User Guide (drafts nearing completion)
- P7 position data standard update (started)
- Participate in NDR Conference – Geomatics Standards breakout session, Stavanger (June)
- Geomatics Industry Day, Stavanger (this event)
- EPSG database updates (ongoing)

IOGP Geomatics Committee

- Guidance Notes, Guidelines, data models, data exchange formats and Geodetic Parameter Dataset available from:
 - <http://www.epsg.org>
 - <http://www.iogp.org/bookstore>
 - <http://www.iogp.org/Geomatics>



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