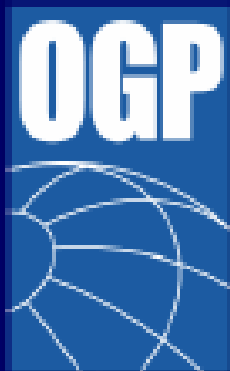


OGP Surveying and Positioning Committee

The OGP goals and directions



International
Association
of Oil & Gas
Producers

APSG Fall Meeting 2007

Houston

September, 20th 2007

by Jack Verouden, OGP S&P chairman
[Chief Surveyor, Shell International E & P]

OGP Profile



- Formed in 1974 to develop effective communications between the upstream industry and international regulators
- Members
 - Publicly traded, private & state oil & gas companies
 - National & regional associations
 - Major service companies
- Members produce more than half of the world's oil and about one third of its gas
- Offices in London and Brussels

OGP Best practices



- Benchmarking, *e.g.* safety, environmental and health performance databases
- Sharing and learning from best practices, *e.g.* through workshops, publications, committees, task forces, *etc*
- Leveraging OGP practices in discussions with authorities
- Networking with industry peers



How OGP works

- Network of committees, subcommittees, task forces and work groups. Headed by Management Committee
- Twice yearly general meetings for members. Additionally, many workshops organised
- Secretariat of 15 people



Why from EPSG to OGP S&P (February 2005)



- 10 of current EPSG membership (of 13) are OGP members
- Objectives of OGP and EPSG aligned
- Vehicle for EPSG/OGP to grow into 'global' Survey authority for Oil and Gas industry (potentially more influential than either EPSG or UKOOA)
- OGP provides legal foundation and access to funding and admin. Support
- Guidelines and Data Exchange Formats adopted by broader selection of OGP member organisations including National Oil Co's => general raising of standards



OGP S&P Committee Meeting Structure

S&P Committee: Two meetings during the year (one in April , one in October). The Secretary of OGP will attend.

In principle, one meeting will be held at OGP London office and the other at the invitation of one of the member companies.

S&P Geodetic Working Group: Monthly telephone conferences will be held. In addition, two face2face meetings will be held. The Secretary of OGP will not attend.



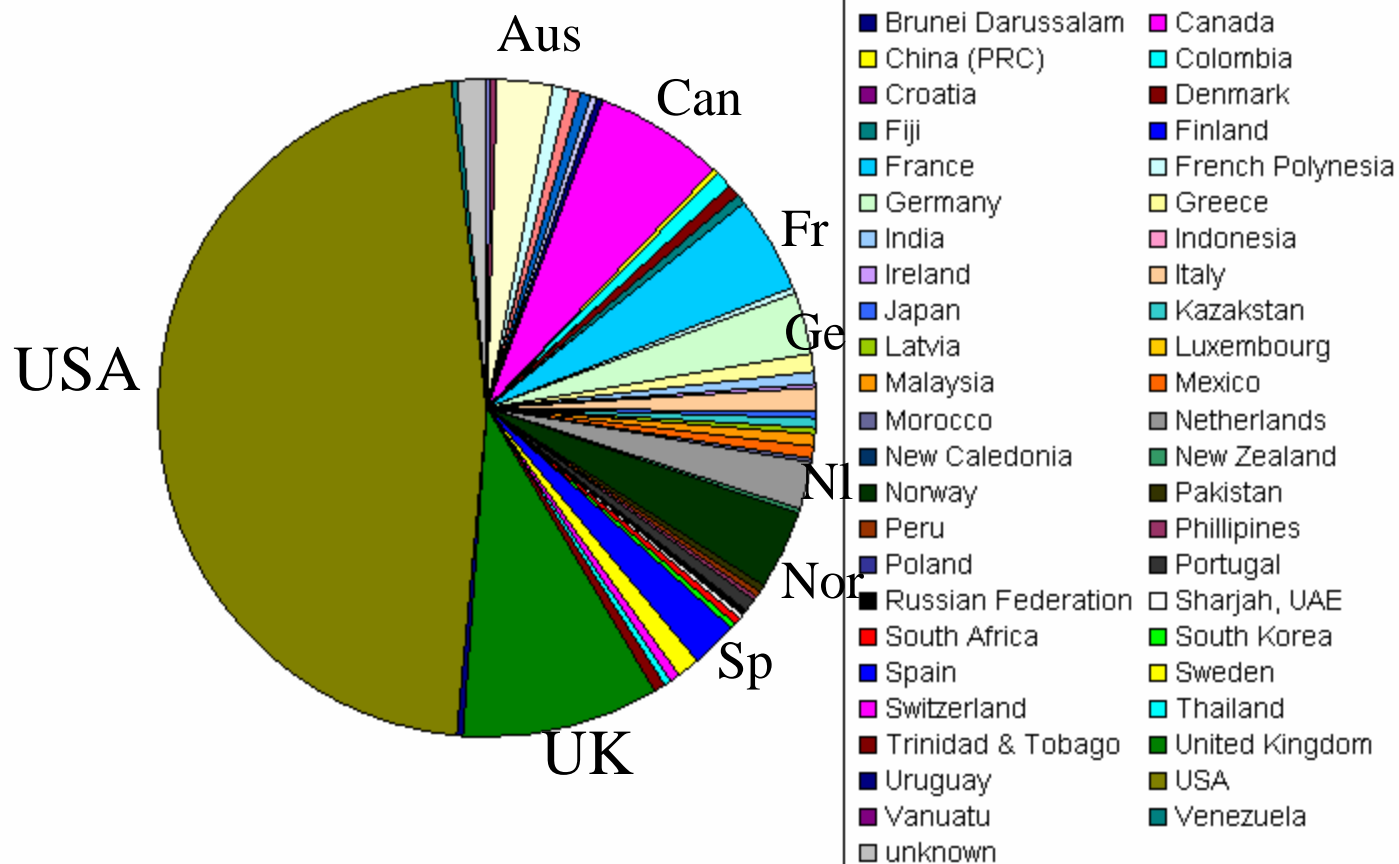
S&P Committee and Geodetic Working Group 'Silver Ware'

1. EPSG Geodesy Database, the de-facto standard in the Oil and Gas industry and beyond for geodetic parameters worldwide.
2. Guidance Notes (10) published on OGP website (free download).
3. Owner of UKOAA Positioning Standards (5). Published on OGP website (free download)
4. Active Survey and Positioning Committee.
5. Active Geodetic Working Group

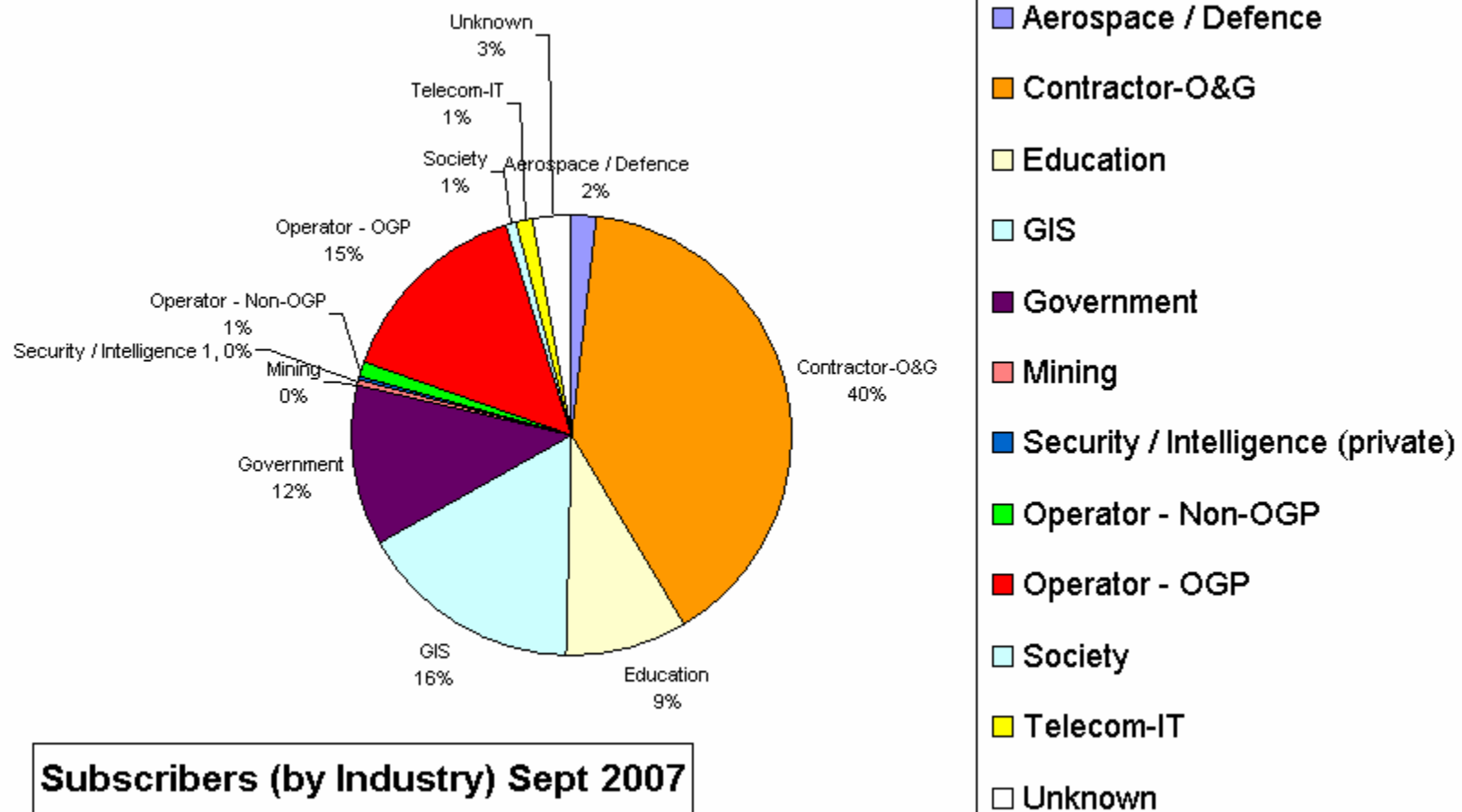
EPSG database usage by COUNTRY 2007



EPSG Subscribers 2007 by Country



EPSG database usage by BUSINESS 2007



total subscribers 644

OGP Guidance Notes

Surveying & Positioning

Guidance Notes

Last updated 04 January 2007

Number Title

| | |
|----|--|
| 1 | Geodetic awareness guidance note |
| 2 | Use of Bin Grids and Coordinate Reference Systems in Workstations |
| 3 | Contract Area Definition |
| 4 | Use of the International Terrestrial Reference Frame (I.T.R.F) as Reference Geodetic System for Surveying and Real-time Positioning |
| 5 | Coordinate Reference System Definition |
| 7 | <ul style="list-style-type: none"> • Part 1: Use of the EPSG Geodetic Parameter Dataset . This document includes annexes covering Data Naming Conventions and Rules for Deprecation and previously issued as Guidance Notes 9 and 12 (both of which have now been recalled) as well as some information previously included within the EPSG dataset README file. • Part 2: Coordinate Conversions and Transformations including Formulas |
| 10 | Geodetic Transformations Offshore Norway |
| 13 | Advisory Note on Datum Transformaton Evaluation and Use |
| 14 | Coordinates Reference Systems in Reserves Unitisation Agreements |
| 16 | Quality Control of Proposed Well Co-ordinates |

Additional guidance

Number Title

| | |
|------------------------|---|
| 1065 | Guidance notes on the use of co-ordinate systems in data management on the UKCS |
| OPS13A | Conduct of mobile drilling rig site surveys, volume 1, issue 1.2 |
| OPS13B | Conduct of mobile drilling rig site surveys, volume 2, issue 1 |
| OPS13C | Conduct of mobile drilling rig site investigations in deep water, Version 1 |

Ex-UKOOA Digital Data Exchange Formats



Surveying & Positioning

Digital Data Exchange Formats

| Number | Title |
|--------|-------|
|--------|-------|

| | |
|-------------------------|---|
| P1/90 | Data Exchange Format - Post Plot |
| P2/94 | Data Exchange Format - Raw Marine Positioning Data |
| P5/94 | Data Exchange Format - Pipeline Position Data |
| P6/98 | Data Exchange Format - 3D Seismic Binning Grids (revised in 2000) |
| P7/2000 | Data Exchange Format for Well Deviation Data |
| P-EPG | EPG Coordinate Reference System Description in UKOOA P Formats |



S&P Committee and Geodetic Working Group Achievements 2007

1. Maintenance of the EPSG Geodesy Database. 2 releases made, one more planned. EPSG Geodetic Dataset is now de-facto standard in the Oil and Gas industry for geodetic parameters worldwide.
2. Completed web enabled Geodetic Register (JIP funded \$140k) which allows software to connect directly to the EPSG Geodesy database.
3. Partnered with Society of Exploration Geophysics (SEG) to revise SEGD formats for recording raw seismic field data and navigation data. Hopefully resulting in the release of SEG D V3 later this year.
4. Published new OGP guidance note on Geodetic Awareness.
5. Continued to work with ISO on the development and adoption of standards relating to Coordinate Reference Systems
6. Two committee meetings during 2007; London (held 20 April) and Houston (planned 21 September)



S&P OGP Workplan 2008-part1

1. Continue development and maintenance of the EPSG Geodesy Database.
2. Phase 2 of web enabled Geodetic Register [JIP funded]
3. Set up JIP for Geodetic Integrity of Geoscience Software verification (GIGS)
4. Partner with Society of Exploration Geophysics (SEG) to revise SEG-D formats for recording raw seismic field data and navigation data.
5. Review and revise as appropriate the ex-UKOOA Positioning Formats. Formats in need of revision are P7/2000 Data Exchange Format for Well Deviation Data.



S&P OGP Workplan 2008-part 2

6. Revise ex-UKOOA guidance note: Conduct of mobile drilling rig site surveys, volume 1 and 2; Conduct of mobile drilling rig site investigations in deep water, Version 1.
7. Continue to work with ISO TC211 on the development and adoption of standards relating to Coordinate Reference Systems
8. Create down hole surveying overview



Thank You