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2012 User Meeting
28–29 March 2012, Our Dynamic Earth, Edinburgh, Scotland

Registration is open for our 2012 Move User Meeting which takes place in Edinburgh, Scotland on 28th and 29th March.

The meeting will introduce our current and prospective client base to the latest software development in the move to Move project, where the standard 2DMove and 3DMove products are being re-engineered into the Move Application and the Kinematic Modelling Modules.

The first chance to use these modules is in the recent 2012 release and the 2012 User Meeting in Edinburgh is the best opportunity to see how the introduction of these changes will increase 2D and 3D structural modelling functionality going forward and is of importance to 2DMove and 3DMove users.

The meeting registration is GBP£250 for commercial attendees and GBP£150 for academic attendees + VAT and includes:

- Attendance at both days of the meeting,
- Lunch and refreshments on both meeting days,
- An open office slot on Friday 30th March (subject to availability),
- Conference dinner at the Whisky Experience,
- Field Trip to Arthur’s Seat.

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Programme Overview

**Wednesday 28th March - Day 1 (morning)**
- Delivering Move 2012 - a new generation
- Overview of the new features and functionality in Move 2012
- Cross Section Construction and 3D Model Building in Move
- Building folds from surface and borehole data—dip isogon application in 2D and 3D

**Wednesday 28th March - Day 1 (afternoon)**
- Kinematic Restoration—bringing 2DMove and 3DMove together within Move
- Streamlining the workflow through improvements in Geomechanical Modelling, Fracture Modelling and Sediment Modelling

Case Studies:
- Salt restoration techniques
- Developing Workflows for Modelling Fractures in Intrusive Rocks
- Applying Move to Surface Mining and Production of Industrial Minerals
- Applying Move in Middle Eastern fractured reservoirs
- Building 3D models from field data and implications for improving best practice mapping—Mt Lykaion
- Structural Modelling for Exploration in Frontier Areas - North African Case Study

**Thursday 29th March - Day 2 (morning)**
Future Software Development
Case Studies of Innovative Use and Highlights from our Academic Software Initiative (ASI)
The future of field work - an Introduction to Digital Field Mapping using FieldMove

**Thursday 29th March - Day 2 (afternoon)**
**Field Trip - Digital Field Mapping Arthur’s Seat with FieldMove**
At Arthur’s Seat we will split up into groups, each led by a Midland Valley Structural Geologist with a tablet PC using FieldMove. The aim will be to demonstrate the functionality of the software and its practicality as a digital mapping application.

**Friday 30th March (morning and afternoon sessions)**
**Structural Surgery**
We invite all attendees at the Edinburgh meeting to our office in Glasgow to spend a couple of hours, either in the morning or afternoon, for a one-to-one with a Midland Valley Structural Geologist looking at your projects, workflows and data. These slots will be allocated on a first come basis.

Further information on the meeting can be found at [http://www.mve.com/](http://www.mve.com/) or by emailing events@mve.com.
move 2012: Released to Maintained Clients

Our Structural Modelling and Analysis Software, Move, has now been released to all maintained commercial clients and academic clients with an Academic Support Package. The software, documentation and new tutorials can also be downloaded from the client section of our website, www.mve.com/clients (access is restricted to maintained clients).

Release highlights include:

- **Move Application:** increased 2D and 3D model building capabilities with analysis, and the base product for the workflow modules in the Move Suite.
- **2DMove Kinematic Modelling Module:** kinematic restoration functionality on a 2D model based on the Standard 2DMove product.
- **3DMove Kinematic Modelling Module:** kinematic restoration functionality on 3D models based on the Standard 3DMove product.

Full Release Notes can be found on the release DVD or in the Release Notes Documentation in the client section of the website.

2012 MDSG Winter Meeting

Midland Valley was a corporate sponsor of the 2012 winter meeting of the Mineral Deposits Studies Group which took place at Cardiff University on 3rd - 6th January.

**Jenny Ellis, MSc** presented “Structural Modelling and Analysis in Mineral Resource Development” using an example of a known structural controls of a linked fault system in the southern uplands as an analogue for Pb-Zn mineralisation in the Leadhills basin.

**TSG 2012: Keynote Talk and Discussion Session**

Midland Valley attended the 2012 meeting of the Tectonic Studies Group taking place on 4th - 6th January 2012 at Our Dynamic Earth, Edinburgh.

**Support Geologist Andrea Moccia, Level II MSc** presented “3D structural model-building and fold construction using a digital dip isogon construction method: The Mt. Lykaion (Greece) Sanctuary of Zeus case study” in the poster session. The work was completed as part of his Masters dissertation while working as an Intern at Midland Valley. The project involved building 3D models of the Mt. Lyakion structure in Greece using maps and data provided by Professor George H. Davis from the University of Arizona (and Professor Davis’ colleagues involved in the bigger project).

Andrea used the new dip isogon construction tool that has been released in Move 2012 and his project provided the development team with detailed testing of pre-release software.

**PhD Research Associate Euan Macrae** also presented in the poster session: “Quantification of uncertainty in geoscience interpretation: revealing the factors that affect interpretational ability” based on his PhD research which compares the results of seismic interpretations from different experts. As usual Euan’s work prompted much lively discussion.

**Founding Director Dr Alan Gibbs** was an invited keynote speaker and presented a paper on “A Balancing Act - A Thirty Year Perspective” which outlined the challenges over the last 30 years in developing balancing technologies to address uncertainty in geological analysis and to address industry problems.

Read their abstracts in the Resources section of our website.

February Public Training Course - Fully Booked

Our February Public Training Course, Structural Modelling and Analysis using Move, is fully booked however spaces are available for our May course which also includes a day for digital field mapping using FieldMove.

Alternatively, anyone wishing to find out more about the workflows and functionality of Move 2012 should attend the 2012 Move User Meeting, taking place on 28th and 29th March.
Geo Team Vacancies

We are recruiting Structural Geologists at all levels to be based in our Glasgow office. All positions offer a salary commensurate with experience and will require regular international travel.

Head of Research - Applied Structural Geology

Midland Valley is seeking an experienced structural geologist with an international reputation to help lead and direct our research in applied structural geology.

This is an exciting opportunity to work with high quality datasets to solve real-world problems across all industry sectors where structural geology is applied. The successful candidate will be expected to provide sound technical expertise to all aspects of our business, and will help steer software development for our market leading software Move.

This opportunity offers international exposure and the opportunity to broaden their experience in applied structural geology research as well as business development.

Previous industry experience is desirable but not essential.

Applicants must have:

- A Ph.D. in structural geology;
- A strong academic or industry research record and recent publications in international earth science journals;
- Worked in a range of structural styles and scales in a variety of tectonic settings;
- Familiarity with geometric and geomechanical restoration techniques and software tools;
- Excellent written and oral communication skills and the ability to communicate effectively with fellow geoscientists and software engineers;
- A desire to help grow others as well as themselves.

Senior Structural Geologists

Midland Valley is recruiting experienced structural geologists to join our team of consulting structural geologists.

Applicants should be experienced in working in a range of structural styles and scales (from regional exploration projects through to oil field or mine development), and be seeking a challenging and varied career in applied structural geology.

This position involves contributing to the generative side of the consulting section in Midland Valley and to growing the business, mentoring our Structural Geologists and working with our Software Development Team to develop and improve functionality in our Move Software Suite.

Applicants must have:

- A Ph.D. with a strong emphasis on structural geology (or an MSc with a strong emphasis on structural geology and applied experience);
- Approximately 5 years experience working in a range of structural styles and scales in a variety of tectonic settings or a strong academic background looking for a step-change into industry;
- Applied knowledge of geometric and geomechanical restoration techniques and software tools.

Structural Geologists

Midland Valley is growing our team of consulting structural geologists.

Applicants should have familiarity with geometric restoration techniques and tools, and good communication skills. Industry experience is advantageous but is not essential.

Applicants must have:

- A Ph.D. with a strong emphasis on structural geology or an MSc with a strong emphasis on structural geology and applied experience;
- Familiarity with geometric and geomechanical restoration techniques and software tools;
- Commitment to business development and growing our client network.

To apply, email your CV to jobs@mve.com
FAO Dr John Grocott and Dr Roddy Muir.
Software Development Team Vacancies

We are looking for exceptional individuals in software development at intern, graduate, and senior seasoned professional levels to contribute to writing a next generation product as well as exploring new avenues in platform, data management, and GUI developments.

The successful candidates will play a key role in the development of our current and future core technology and will be expected to interact closely with geology specialists in our company to help develop new algorithms and workflows to solve problems in Oil and Gas, Mineral Exploration, Geo-Survey, and Sequestration sectors. They must be able to work independently and efficiently and will be expected to take an active role in the company and a flexible approach to working within a multi-disciplinary and multinational team.

Senior Software Engineer
We are looking for classically trained professionals who are abreast with current software development techniques and standards.

Required skills/experience:

- At least 5 years of C/C++ programming ability – a must!
- Qt exposure and GUI skills very advantageous
- Geological or Geophysical software development advantageous.
- GIS API toolkit experience (GDAL, ESRI SDK) advantageous
- 3D Geometrical data structures and mathematical approaches
- Experience of algorithm design and implementation to solve problems

Any of the following a bonus:

- OpenGL and/or OpenSceneGraph and/or Open Inventor
- Oracle Spatial, POSTGIS, ARCGIS database links/APIs.
- Developing on Windows AND Linux
- iPad iOS SDK, or Android SDK skills.

Software Engineers
Recently graduated or have a few years of experience? We have an opportunity to learn new skills as part of a dynamic team.

Required skills/experience:

- At least 2 years of C/C++ programming ability – a must!
- Qt exposure and GUI skills very advantageous
- Experience of algorithm design and implementation to solve problems

Any of the following a bonus:

- GIS API toolkit experience (GDAL, ESRI SDK) advantageous
- 3D Geometrical data structures and mathematical approaches
- Geological or Geophysical software development experience.
- OpenGL and/or OpenSceneGraph and/or Open Inventor
- Oracle Spatial, POSTGIS, ARCGIS database links/APIs.
- Developing on Windows AND Linux
- iPad iOS SDK, or Android SDK skills.

Software Engineer Interns
Do you want an opportunity to work in a commercial setting and contribute to our GeoTechnical application suite?

Required skills/experience:

- Java or C#, or C/C++, or JavaScript programming ability – a must!
- Qt exposure and skills advantageous but not mandatory

Any of the following a bonus:

- OpenGL and/or OpenSceneGraph and/or Open Inventor
- Developing on Windows AND Linux
- iPad iOS SDK, or Android SDK skills.

We can promise you an incredible experience working amongst a talented team that are working on exciting software engineering to solve geological problems. We will consider 3, 6 and 12 month applications that could be either in one block, or split up in across an agreed period to suit course commitments.

If you are interested in any of these positions please email your CV and covering letter FAO Colin Dunlop: jobs@mve.com
Move Monthly Feature:
2D and 3D Model Building and Kinematic Restoration using Move and the Kinematic Modelling Modules

Released in Move 2012 are the new 2DMove and 3DMove Kinematic Modelling Modules. The new Modules contain functionality previously only found in the 2DMove and 3DMove Standard Products. Users of 2DMove and 3DMove can now construct cross-sections and 3D models in the multi-view environment of the Move Application and then access the 2D and 3D kinematic restoration algorithms in the ‘Workflows’ tab, directly within Move (if licenses have been purchased and are available).

The 2D and 3D restoration algorithms are both accessed in the Kinematic Modelling Module and are context sensitive to the ‘View’ that is being worked in.

Current 2DMove and 3DMove maintained clients can upgrade free to a 2012 licence to try out the migrated functionality in new modules. Feedback of their impressions of the new modules is welcomed.

**2D Kinematic Modelling**

To perform a **2D restoration**, 2DMove Kinematic Modelling must be ‘ticked on’ before Move is launched from the Launcher. This will make the decompaction, unfolding and move on fault **algorithms available when working in section view in Move**.

**3D Kinematic Modelling**

To perform a **3D restoration** 3DMove Kinematic Modelling must be ‘ticked on’ before Move is launched from the Launcher. This will make the decompaction, unfolding and move on fault **algorithms available when working in 3D view in Move**.

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In Move, digitize the section. Faults and horizons are ready for restoration.

Fault offsets restored using Move on Fault algorithms in 2D from the Kinematic Modelling Module.

3D modal constructed in Move.

Unfolded using the Unfolding algorithm in 3D from the Kinematic Modelling Module.
Earlier this month

A few lines about Alan Gibbs' visit to a meeting on Geospatial Technologies in Higher Education.

Midland Valley sponsored the afternoon session and Alan presented a paper on “Supporting Digital Teaching of Mapping and 3D Model Building in the 21st century.”

The talk reviewed the ways in which Move is being adopted by universities around the world in support of their teaching and research programs.

Read Alan’s abstract on our website by clicking on the link in the presentation title.

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2011 Student Structure Prize Winners

We have great pleasure in announcing the 2011 Student Structure Prize Winners:

**Best Use of Move:**
Mykhailo Nakapelukh
Ivan Franko University
Balanced cross section of the Syba nappe of the Ukrainian Carpathians (case studies from Sukil river valley).

**Post-Graduate 1st Place:**
Javier Sanchez
University of Texas at Austin.
Integration of structural reconstructions and thermochronologic data of the eastern margin of the Middle Magdalena Valley basin, northern Andes, Colombia.

**Post Graduate 2nd Place:**
Maria Jose Ramon
University of Zaragoza.
Flexural unfolding of horizons using paleomagnetic vectors.

**Under-Graduate 1st Place:**
Ada Castellucio
University of Naples “Federico II”.
New constraints on the tectonic evolution of the Western Carpathians (Poland, Slovakia and Ukraine): cross- sections balancing and sequential restoration integrated with low-T thermochronometry.

**Under-Graduate 2nd Place:**
Verónica Iveth Ramírez Soria
Instituto Politécnico Nacional (IPN)
Balance of a structural section in compression system between the minas viejas, potrero chico and garcia mountains, state of n. l., mex.

Congratulations to all of our winners and thank you to everyone who entered the competition.

In next month’s Newsletter we will provide more details on the winning entries and launch the 2012 prize.

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**Geospatial Technologies in Higher Education**

Earlier this month

Founding Director Dr Alan Gibbs attended the Higher Education Network meeting – “Geospatial Technologies in Higher Education: Saviour or Slideshow” which took place at the Open University.

Midland Valley sponsored the afternoon session and Alan presented a paper on “Supporting Digital Teaching of Mapping and 3D Model Building in the 21st century”.

The talk reviewed the ways in which Move is being adopted by universities around the world in support of their teaching and research programs.

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**Academic Software Initiative (ASI) Members Update**

In November and December we welcomed seven universities onto our Academic Software Initiative:
- École Polytechnique
- Montana State University
- Queen’s University
- Queen’s University Belfast
- Ruhr University
- Texas Christian University
- The College of Wooster

While fifteen members renewed their ASI membership:
- McMaster University
- Tohoku University
- Università di Bologna
- Università di Perugia
- Università di Roma I “La Sapienza”
- Universitat Autonoma de Barcelona
- Universitat de Barcelona
- Université de Pau et des Pays de l'Adour
- University of Aberdeen
- University of Munich
- University of Nebraska-Lincoln
- University of Oregon
- University of Portsmouth
- University of Rio Grande Norte (UFRN)
- University of Tokyo

Any University worldwide can join the ASI* and access our Structural Modelling and Analysis Suite of Software, Move, free for teaching and non-commercial research.

Our Standard Academic Package provides 20 full licenses to install on a network however we can provide more licenses or local licences to suit your requirements.

There are currently over 200 universities worldwide involved in the ASI.

Get involved and see who’s a member on our website.

*Subject to international sanctions.
3D Model Building using Move

Move

- Core application of the Move Suite
- Powerful 2D/3D model building environment
- Integrated section, map, 3D and Google Map™ views
- Data analysis tools including stereo plots and SCAT analysis
- Section slice from 3D model
- Support for 2D and 3D seismic
- Optional advanced modules for structural modelling and kinematic analysis

Windows & Linux: $6000

For evaluation, please contact us at http://www.mve.com/contact
To find out more information on our software, www.mve.com/software or email info@mve.com