



Society of Petroleum Engineers

**Early Registration Discount
Deadline – 19 March 2010**

WORKSHOP

13-14 April 2010 | Moody Gardens Hotel and Convention Center | Galveston, TX

Committee Members

Chairman

Michael Edwards
BP

Walt Aldred
Schlumberger

Bill Ambrose
Transocean

Tony Beebe
ExxonMobil

John de Wardt
DE WARDT & COMPANY

Jarle Dyrdal
TTS Sense

Tom Geehan
M-I Swaco

David Moran
Smith

Jeff Moss
ExxonMobil

Dimitrios Pirovolou
Schlumberger

David Reid
National Oilwell Varco

Abe Steinginga
Shell

Drilling Automation

The state of automation in our industry has progressed with many independent drilling systems, both surface and subsurface. This two-day workshop will focus on building a sustainable platform for growth of drilling and completion automation that will deliver business value to all parties involved.

KEY FOCUS AREAS

- **Reliability** – what it will take to gain confidence in automated drilling systems
- **Common Language** – a necessary bridge to understanding how to develop the systems
- **Business Value** – understanding the value of opportunities from drilling automation
- **Road Map** – insight to developing these components and systems successfully

FORMAT

This interactive workshop will focus on working sessions in groups designed to deliver results to the industry. Presentations to set the scene will be followed by brief Q&A, structured work-groups and focused feedback for workshop output. Participants will also have opportunities to network with speakers, session chairs, and other attendees during coffee breaks, meals and receptions.

WHO SHOULD ATTEND

- Large and Small Oil Company Drilling Managers
- Asset (Business Unit) Managers
- Drilling Engineers
- Completion Engineers
- Drilling Contractor Managers and Engineers
- Rig Manufacturer Managers and Designers
- Service Company Managers and Engineers
- Academia
- Consultants
- Industry Experts

Sponsors



Schlumberger

www.spe.org/meetings

Sponsorships

Workshops offer sponsors unique access to a focused group of key decision makers in the oil and gas industry.

While SPE prohibits any type of commercialism within the workshop itself, it recognizes that sponsoring companies offer valuable information to attendees.

Sponsorships help offset the cost of producing workshops and allow SPE to keep the workshop fee as low as possible for the target audience.

Benefits

- Company logo visibility
- Website recognition with link to company's URL
- Recognition in all workshop printed materials
- Onsite signage

Based on the sponsorship selected, sponsoring companies could also receive:

- Attendee giveaways with company logo
- Half-page, full-color ad in workshop technical program
- 1-2 complimentary workshop registrations

Categories

Sponsorships are offered on a first come basis. Please contact SPE to verify the availability of a particular sponsorship.

- Breakfast
- Coffee Break
- Lunch
- Reception
- Audio/Visual
- Materials

For More Information

For a detailed list of available sponsorships, including benefits and pricing, contact Susan Wooten at swooten@spe.org.

Monday, 12 April 2010

6:00-7:30 pm **Welcome Reception and Early Check-In**

Tuesday, 13 April 2010

7:00-8:00 am **Registration** Materials sponsored by **Schlumberger**

Continental Breakfast

8:00-8:15 am **Chairman's Welcome**
Michael Edwards, BP

8:15-9:00 am **Keynote Address**

9:00-10:30 am **SESSION I: DELIVERING RELIABLE INTEGRATED DRILLING SYSTEMS (SUBSURFACE AND DOWNHOLE)**

Chairmen: Tony Beebe, ExxonMobil

John de Wardt, DE WARDT & COMPANY

Reliability, both real and perceived, is a key driver of new technology uptake. Reliability combined with operating efficiency delivers overall performance contribution of the machine or system. A survey taken at the IADC Advanced Rig Technology Conference in September 2009 clearly showed that reliability is the number one characteristic in greatest need of development for both downhole and rig floor equipment. This session will provide an overview of the scale of reliability issues and insights to some methods to improve the current state. Work groups will be tasked to develop the basis for guidelines and best practices which can provide a foundation for consistent reliability for drilling automation across the industry.

10:30-10:45 am **Coffee Break**

10:45 am-12:15 pm **RELIABILITY Discussion Groups**

Topics to be discussed:

1. Failure Mode and Effects Analysis
 - Is this a solution to initial and continuing reliability?
 - If yes, how?
 - If no, what is the alternative process to ensure reliability?
2. Commissioning
 - Is it sufficient today or does it need increasing/improving?
 - If it is not sufficient, what needs improving, and how does it need increasing?
 - If it is not sufficient, who pays?
3. Standardization vs. Customization
 - Will increased standardization lead to improved reliability?
 - If yes, define how this can be achieved?
 - If no, what steps must be taken to improve reliability of customized automated drilling products and systems?

Workshop Format

Workshops maximize the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices.

Many of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and members of the press are not invited to attend.

Documentation

Following the workshop, a URL containing released copies of the workshop presentations will be available to attendees. A summary report containing the highlights of the workshop sessions and discussions will also be made available. The copyright of the report will belong to SPE.

Commercialism

In remaining consistent with workshop objectives and SPE guidelines, commercialism in presentations will not be permitted. Company logos should be used only to indicate the affiliation of the presenter(s).

Continuing Education Units (CEUs)

Attendees will receive 1.6 CEUs.

One CEU equals 10 contact hours of participation. CEUs will be awarded through SPE Professional Development for participation and completion of SPE workshop. A permanent record of a participant's involvement and awarding of CEUs will be maintained by SPE.

Not an SPE Member?

Join SPE today and receive member registration rates for this workshop and future SPE events.

www.spe.org/joinspe

12:15-1:30 pm

Lunch

sponsored by



1:30-3:00 pm

SESSION II: COMMON LANGUAGE AND TERMINOLOGY

Chairmen: Jarle Dyrdal, TTS Sense

David Moran, Smith

Dimitrios Pirovolou, Schlumberger

Drilling automation will require a concerted effort by all parties involved: operator, drilling contractor, and service companies. As such, it is paramount to establish a common language, a set of terms that have the same meaning for all parties involved. The purpose of this session is to build on previous efforts to establish such a common set of terms. Some commonly used terms (e.g. automation, mechanization, etc.) will need to be defined clearly. Moreover, automated systems vary from simpler advisor systems, to systems that make decisions and take actions. What is simple, yet comprehensive classification of automated drilling systems? To what level should the user stay involved? And finally, how many rig tasks, if any, can be done remotely?

3:00-3:30 pm

Coffee Break

3:30-5:00 pm

COMMON LANGUAGE AND TERMINOLOGY Discussion Groups

Topics to be discussed include:

1. How can an automated drilling operation be described? Review the current proposals, and combine the best ideas to come up with a format that is comprehensive, but compact and easy to understand.
2. Autonomy and Complexity: Automated systems can vary from simple systems that offer advice or perform a repetitive task to more complete systems that analyze data, make decisions, and control equipment. What level of autonomy is needed for the various operations, and what is the right way to introduce these technologies?
3. Integration of surface and downhole systems: Define it, and discuss the key technical and business issues to be addressed.
4. Remote Operations and Automation: Identify the tasks that are candidates to be done remotely and possibly automatically. Discuss the associated terminology: monitoring, control, and alarms. Debate on who does what, including the interaction between rig personnel and in-town team.

5:00-6:30 pm

Reception

Wednesday, 14 April 2010

7:00-8:00 am

Registration

Materials sponsored by 

Continental Breakfast

8:00-9:30 am

SESSION III: BUSINESS VALUE

Chairmen: Walt Aldred, Schlumberger

Bill Ambrose, Transocean

Jeff Moss, ExxonMobil

Different perspectives of the value of automation will be presented by an operator, drilling contractor, and service company in order to identify and then discuss the hurdles that must be overcome to make automation attractive for the industry. It is expected that automation will create the need for a sizable capital investment and training effort, which must generate a payoff for all parties involved in the initiative. This session will stimulate conversation about how value can collectively be achieved amongst all participants to enable a path forward.

9:30-10:00 am

Coffee Break

10:00-11:30 am

BUSINESS VALUE Discussion Groups

Key discussion questions/points:

- Many of the technologies are here to automate, but what are the business needs that will drive them?
 - Can automated systems access assets that are “undrillable”?
 - Can automated systems develop previously uneconomic assets?
- How does automation affect the value chain: “What’s in it for me?”
- Is the industry sufficiently aligned to make this work?
- Where and what should we automate?
- What are the costs vs. opportunities, equipment, retraining, and software?

11:30 am-1:00 pm

Lunch

sponsored by



1:00-2:30 pm

SESSION IV: AUTOMATION ROADMAP

Chairmen: Tom Geehan, M-I Swaco

David Reid, National Oilwell Varco

Abe Steiginga, Shell

Across the industry, efforts have been made to various degrees to automate the parts and sub-processes used in drilling wells. Companies have differing ideas, methodologies and requirements creating a landscape that seems disconnected, incoherent and difficult to navigate. The purpose of this session is to identify critical activities and current status of application of automated principals. The strict focus will be where we are and what near term opportunities exist to enhance progress along the road in a structured way towards further automation.

2:30-3:00 pm

Coffee Break

3:00-4:30 pm

AUTOMATION ROADMAP Discussion Groups

Workgroups of 8 to 10 people, split into application specialties (rig floor operations, downhole, supply chain optimization, etc.) will discuss the populating sections of the process road map relative to their expertise. The goal would be to produce the current state of their given process and identify technology gaps. Each table will produce a basic map which should identify the state of current automation across the drilling process and provide a simple diagrammatic representation of technology gaps and opportunities. Following the workshop, those who have been involved will be provided with a holistic map of where we are in drilling automation today.

4:30-5:00 pm

Closing Comments

Moody Gardens Hotel and Convention Center, Galveston, TX

Seven Hope Boulevard., Galveston, TX 77554, USA; +1.409.741.8484; Canada/United States Toll Free: 1.888.388.8484

Space is Limited – Register Early

First Name/Forename: _____ Middle Name: _____ Last/Family Name: _____

SPE Member? Yes No Member No.: _____ Job Title: _____

Company/Organization: _____ Street or PO Box Number: _____

City: _____ State/Province: _____ Zip/Postal Code: _____ Country: _____

Telephone: _____ Facsimile: _____ Email (required): _____

Do you wish to allow your email address and phone number to be included in the Attendee Listing? Yes No

Please indicate if you wish to attend the receptions: Monday, 12 April 2010 Tuesday, 13 April 2010

Answering the following optional questions will assist the technical program committee in planning workshop and discussion groups to best benefit all attendees.

Company Classification

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> Major Oil Company | <input type="checkbox"/> Consultant | <input type="checkbox"/> Government | <input type="checkbox"/> Independent Oil Company |
| <input type="checkbox"/> Offshore Drilling Contractor | <input type="checkbox"/> Land Drilling Contractor | <input type="checkbox"/> Major Service Company | <input type="checkbox"/> Specialist Service Company |
| <input type="checkbox"/> Manufacturer | <input type="checkbox"/> Investment Company | <input type="checkbox"/> Academia | <input type="checkbox"/> Other |

Job Classification

- | | | | |
|--|-----------------------------------|-------------------------------------|--|
| <input type="checkbox"/> Executive | <input type="checkbox"/> Manager | <input type="checkbox"/> Engineer | <input type="checkbox"/> Geologist or Geophysicist |
| <input type="checkbox"/> Superintendent or Foreman | <input type="checkbox"/> Educator | <input type="checkbox"/> Consultant | <input type="checkbox"/> Student |
| <input type="checkbox"/> Research and Development | <input type="checkbox"/> Other | | |

Key Experience with Drilling Automation

- | | | | |
|-----------------------------------|--|---------------------------------------|-----------------------------------|
| <input type="checkbox"/> Customer | <input type="checkbox"/> Operator of Equipment | <input type="checkbox"/> Manufacturer | <input type="checkbox"/> Investor |
| <input type="checkbox"/> Designer | <input type="checkbox"/> None | | |

Please provide brief information to describe your current position, current/past job experiences, and additional qualifications _____

- Workshop Fee:** *Before 19 March 2010* USD 725 for SPE Members USD 825 for Nonmembers
After 19 March 2010 USD 825 for SPE Members USD 925 for Nonmembers
 Spouse Only Fee USD 50 (Spouse may attend both receptions for the fee of USD 50)

Workshop fee includes technical session, materials, summary report, continental breakfasts, lunches, coffee breaks, and receptions. **Accommodations are NOT included in the workshop registration fee.** Contact Moody Gardens Hotel directly at +1.409.741.8484 or 1.888.388.8484 to reserve your room for the nights of 12–13 April at the negotiated rate of USD 149 + taxes per night. Rates are offered three (3) days before and after the workshop, based on availability. You MUST identify yourself as an SPE Workshop attendee. After 19 March 2010, hotel reservations will be subject to availability at the prevailing rates.

Mail, fax, or email completed Registration Form with payment or credit card information to:

Registrar, SPE Applied Technology Workshop
 Society of Petroleum Engineers
 Telephone: 1.972.952.9393
 Fax: 1.972.852.9292
 PO Box 833836, Richardson, Texas
 75083-3836, USA
 Email: registration@spe.org
Submit registration online (secured by VeriSign) at www.spe.org

Credit Card (Check One): American Express MasterCard Visa **Total Amount:** _____

Cancellation Policy: Cancellations and requests for refunds must be received by SPE in writing on or before **19 March 2010** for refund of registration fees, less USD 75 administration fee. **NO REFUNDS WILL BE ISSUED AFTER 19 MARCH 2010.**

Card Number (will be billed through Society of Petroleum Engineers) _____ **Expiration Date** (mm/yy) _____ **Security Code** _____

Name of Credit Card Holder: (printed) _____

Signature: (required) _____ Date: _____

Please inform us of mobility or special dietary needs: _____

Registration form will not be processed without payment unless authorized by workshop manager.

For questions or additional information, contact Mona Hudson at mhudson@spe.org.