

# International Association of Drilling Contractors



**ART Drilling Control Systems  
Subcommittee Meeting  
1 May 2014  
IADC  
10370 Richmond Ave., Suite 760  
Houston, TX 77042**

## Attendance

Name		Company Name
Martin	Cavanaugh	<b>Cavanaugh Consulting</b>
Silvia	Gonzalez	<b>GE OIL &amp; GAS, DRILLING SYSTEMS</b>
Steve	Ronan	<b>GE OIL &amp; GAS, DRILLING SYSTEMS</b>
Scott	Maddox	<b>IADC</b>
Chris	Goetz	<b>Kingston Systems</b>
Kent	Hulick	<b>NATIONAL OILWELL VARCO</b>
Randy	Kirkland	<b>Rockwell Automation</b>
Siv Hilde	Houmb	<b>SECURE-NOK AS</b>
Drew	McPhail	<b>TESCO CORPORATION</b>
Trenton	Martin	<b>TRANSOCEAN</b>
Jim	Miller	<b>WRES, INC</b>

## Minutes

1. Reviewed the IADC antitrust guidelines ;  
<http://www.iadc.org/antitrust/IADC%20Antitrust%20Guidelines%20Rev%206%20.pdf>
2. Review and approval of Jan 2014 Meeting minutes. Summary of status on actions below
  - a. **ACTION:** IADC to determine if the raw data from the Stavanger ART Conference poll is still available for this effort. **STATUS:** Raw data is currently no longer available. Next pole at ART conference we will make an effort to maintain the raw data for future. **CLOSED**
  - b. **ACTION:** IADC to provide KSA's point of contact information. **STATUS:** The KSA workgroup has not met their target release data for Version 1. Once this is complete IADC will put the DCS group in contact with them. **OPEN**
  - c. **ACTION:** DCS ART to contact Dave Dartford (IADC ART BOP controls) to determine if the BOP control committee will also be reviewing the KSAs. **STATUS:** Have contacted Dave, waiting on reply. **OPEN**
  - d. **ACTION :** Fred Florence to contact Clinton with SPE to come in and review the current details of the 'Drill A Stand' process flow.. **STATUS:** Martin Cavanaugh attended today's meeting to provide a status on 'Drill A Stand' with SPE. **CLOSED**

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3. The attendees ratified the three (3) proposed work group tasks as summarized from the meeting in January this year as well the poll from the Stavanger ART meeting in 2013. Work group leads were identified and provisional dates for the status updated of the respective work groups.

<b>WORKGROUP 1</b>	KSA (knowledge skills and ability)
<b>TASK</b>	The IADC ART DCS subcommittee will support the IADC KSA initiative by evaluating and providing feedback on Version 1 of the KSA to be incorporated into Version 2, specific to relevant roles that interact with the Drilling Control Systems
<b>Start Date</b>	1 June 2014 (target of KSA V1 release)
<b>Work Group Team Lead</b>	Manny LaBella ( <a href="mailto:Emanuele.LaBella@deepwater.com">Emanuele.LaBella@deepwater.com</a> )
<b>First Deliverable</b>	Status update NLT 15 Sept (prior to ART14)

<b>WORKGROUP 2</b>	Review of SPE DSATS 'Drill-A-Stand' sequence
<b>TASK</b>	IADC ART DCS subcommittee will provide feedback to SPE DSATS group identifying if any of the steps of 'build a stand' are not to be automated.
<b>Start Date</b>	1 May 2014
<b>Work Group Team Lead</b>	Kent Hulick ( <a href="mailto:Kent.hulick@nov.com">Kent.hulick@nov.com</a> )
<b>First Deliverable</b>	Status update NLT 15 Sept (prior to ART14)

<b>WORKGROUP 3</b>	Drilling Control System CybSec
<b>TASK</b>	IADC ART DCS subcommittee will initiate a work group to develop Digital Security Guidelines for drilling control systems. This will build upon existing industry standards and best practices.
<b>Start Date</b>	1 May 2014
<b>Work Group Team Lead</b>	Siv Hilde Houmb ( <a href="mailto:sivhoumb@securenok.com">sivhoumb@securenok.com</a> )
<b>First Deliverable</b>	Workshop Q4 (After ART14), Status update NLT 15 Sept (prior to ART14)

The above Workgroups were agreed to by those present and ratified as tasks for the IADC DCS ART Subcommittee.

4. Martin Cavanaugh on behalf of SPE- DSATS (Drilling Systems Automation Technical Session) presented a summary of the 'Drill-A-Stand' which WORKGROUP 2 will be focusing on reviewing. This can be found in APPENDIX B below.
5. Other items that were discussed
  - a. There was interest in identifying Industry mechanisms to better improve on requirements gathering. The intent is to ensure the system suppliers have sufficiently captured the use cases for the various products. It was mentioned there appears to be a gap for certain products between the designs and what the equipment is being asked to do.  
**ACTION:** IADC ART DCS to evaluate if a topic on this can be developed.

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## APPENDIX A: DCS Summary Slides from meeting

# IADC Advanced Rig Technology Drilling Controls Committee Meeting 1 May 2014 8:30A.M. – 10:30 A.M.



## Agenda

8:30 – 3:50	<b>Welcome and Introductions</b> Trent Martin – Chairman – Transocean <b>Review of Antitrust Guidelines and Facility Orientation</b> Scott Maddox – IADC
8:50 – 8:55	<b>Review and Approval of 1Q 2014 Committee Meeting Minutes</b> Scott Maddox – IADC
8:55 – 9:10	<b>Review of the identified 4 tasks</b>
9:10 – 9:20	<b>Ratify Task 1: KSA</b> The IADC ART DCS subcommittee will support the IADC KSA initiative by evaluating and providing feedback on Version 1 of the KSA to be incorporated into Version 2, specific to relevant roles that interact with the Drilling Control Systems.
9:20 – 9:30	<b>Ratify Task 2: Steps to Build a well</b> IADC ART DCS subcommittee will provide feedback to SPE DSATS group identifying if any of the steps of 'build a stand' are not to be automated.
9:30 – 9:40	<b>Ratify Task 3: Cyber security</b> IADC ART DCS subcommittee will initiate a work group to develop Digital Security Guidelines for drilling control systems. This will build upon existing industry standards and best practices.
9:40 – 9:50	<b>Other Business</b> Trent Martin – Chairman – Transocean



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## Workgroup Task 1: KSA

- The IADC ART DCS subcommittee will support the IADC KSA initiative by evaluating and providing feedback on Version 1 of the KSA to be incorporated into Version 2, specific to relevant roles that interact with the Drilling Control Systems.
  - Start Date: June 1, 2014
  - Target Date: September 2014
  - Workgroup Team: Manny Labella, Chris Goetz
  - Deliverable: Status update at RT 14 in Galveston, Tx.



## Workgroup Task 2: Build A Well

- IADC ART DCS subcommittee will provide feedback to SPE DSATS group identifying if any of the steps of 'build a stand' are not to be automated.
  - Start Date: May 1, 2014
  - Target Date: September 2014
  - Workgroup Team: Kent Hulick, Drew McPhail, Marty Cavanaugh
  - Deliverable: Status update at RT 14



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## Workgroup Task 2: Build A Well

- IADC ART DCS subcommittee will provide feedback to SPE DSATS group identifying if any of the steps of 'build a stand' are not to be automated.

- Start Date: May 1, 2014
- Target Date: September 2014
- Workgroup Team: Kent Hulick, Drew McPhail, Marty Cavanaugh
- Deliverable: Status update at RT 14



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APPENDIX B: SPE DSATS- Drill-A-Stand Slides presented by Martin Cavanaugh

## SPE DSA-TS Comms Committee Activities

- OPC UA for device comms
- Security and threat model
- Rig Information Model
- Drill-A-Stand

Society of Petroleum Engineers  
Drilling Automation Systems Technical Section

Martin Cavanaugh

1 May 2014



## Drill-A-Stand

- Mechanizing Tasks
- Have Autodrillers
- Define tasks surround autodriller
  - List of tasks
  - Data interactions
- Psuedocode algorithms

Society of Petroleum Engineers  
Drilling Automation Systems Technical Section

Martin Cavanaugh

1 May 2014



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## Drill-A-Stand Use Cases

- Initialize (Slips Out)
- Break Gel
- Pumps On
- Stabilize Pumping
- Rotation On
- Tag Bottom
- Autodriller On
- Off Bottom
- Rotation Off
- Pumps Off
- Slips In
- Emergency Stop
- Fail-Safe Control

Society of Petroleum Engineers  
Drilling Automation Systems Technical Section

Martin Cavanaugh

1 May 2013



All meetings must have a written agenda that is circulated prior to the meeting. Attendees must strictly follow the agenda. Topics not on the agenda must be deferred until a later meeting.

Meeting minutes will be posted on the Committee's website following endorsement by Committee leadership and meeting attendees. Attendees should be aware that: 1. IADC staff shall audio record meetings for purposes of facilitating capture of meeting minutes; and 2. The final published minutes will include a record of who attended the meeting. The audio recording shall be destroyed immediately following endorsement of the minutes.

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