

Session Name: New Session 9-16-2014 9-24 AM

Date Created: 9/16/2014 7:47:05 AM

Active Participants: 154 of 154

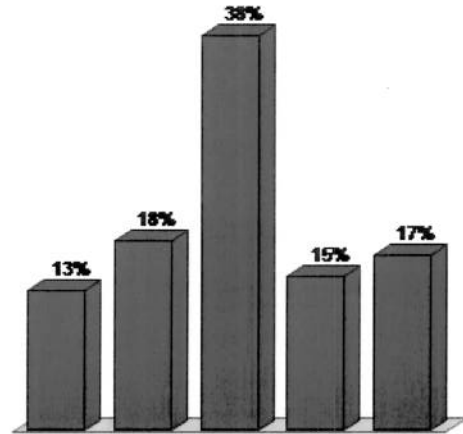
Average Score: 0.00%

Questions: 16

Results by Question

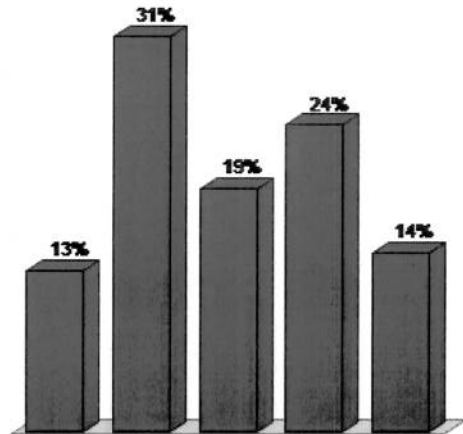
1. What is your Industry Segment? (Multiple Choice)

Responses		
	Percent	Count
Operator	13.19%	19
Drilling Contractor	18.06%	26
Equipment Manufacturer	37.5%	54
Service Company	14.58%	21
Other	16.67%	24
Totals	100%	144



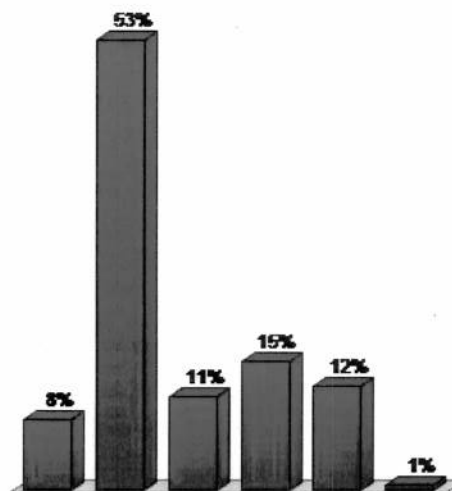
2. How old are you? (Multiple Choice)

Responses		
	Percent	Count
Under 30	12.59%	18
31 – 41	30.77%	44
41 – 50	18.88%	27
51 – 60	23.78%	34
Above 60	13.99%	20
Totals	100%	143



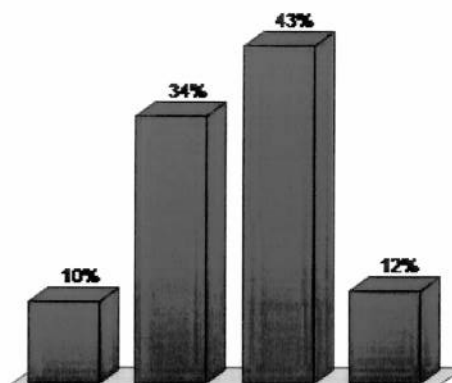
**3. What will accelerate the adoption of modern technology applications commonly used in other industries?
(Multiple Choice)**

	Responses	
	Percent	Count
The Great Crew Change	8.22%	12
A better understanding of the business case and value	52.74%	77
Someone "just doing it" and natural following factors	10.96%	16
Oil company investment in more R & D	15.07%	22
Cost pressures forcing further improvement	12.33%	18
It is already going too fast for us to keep up	0.68%	1
Totals	100%	146



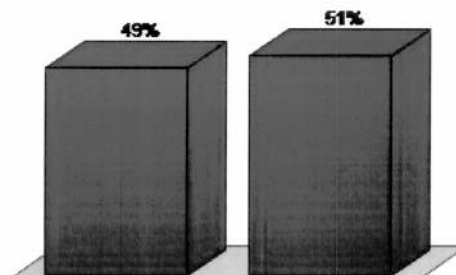
4. Of the following, which represents the Most Desirable deliverable from Drilling Automation? (Multiple Choice)

Responses	
Percent	Count
Lower rig headcount	10.49% 15
Faster drilling time to TD	34.27% 49
Reduced NPT	43.36% 62
Higher producing wells	11.89% 17
Totals	100% 143



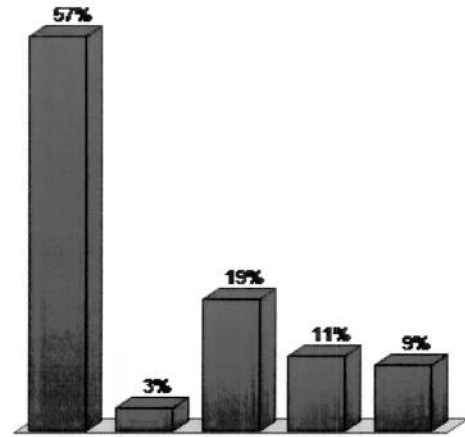
5. Which represents the greatest technological challenge? (Multiple Choice)

Responses	
Percent	Count
12,000 + Water Depth	48.53% 66
20,000 psi well construction	51.47% 70
Totals	100% 136



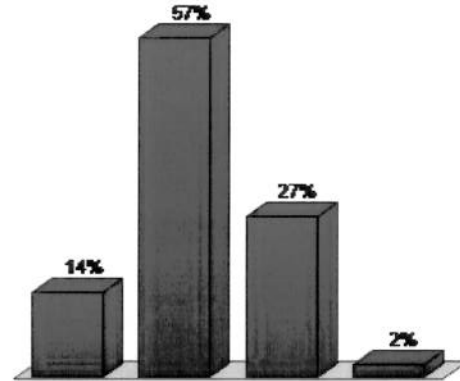
6. Of the following, which represents the greatest immediate 'need' for the Drilling Industry? (Multiple Choice)

	Responses	
	Percent	Count
Human Resources (e.g. skilled manpower)	57.43%	85
Availability of contract resources	3.38%	5
Higher levels of drillfloor automation	18.92%	28
Higher resolution of downhole instrumentation and control	10.81%	16
Faster speed of data and communication	9.46%	14
Totals	100%	148



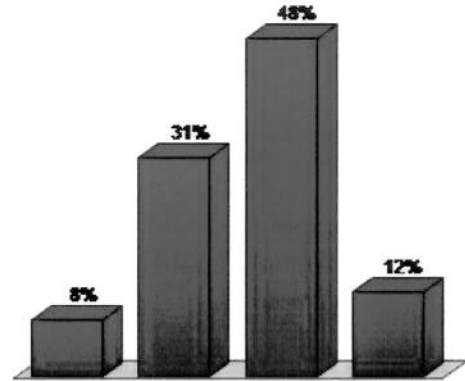
7. To move the drill crew a significant distance away from the drill floor and reduce the amount of human interaction required around the rotary, select the most important technology for further development?
 (Multiple Choice)

Responses	
Percent	Count
Improved situation awareness using video and vision systems	14.19% 21
Further advancements in automating the drilling process	56.76% 84
Improved tubular handling tools and mechanization	27.03% 40
That's crazy talk, keep them where they're at	2.03% 3
Totals	100% 148



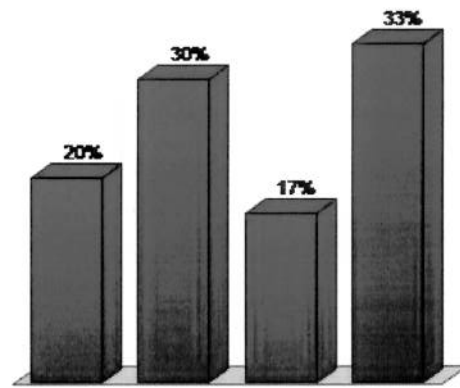
8. As more systems and displays are being added to the drillers cabin, there is a sense of information overload. Rate the value of consolidating the information into a single set of standardized displays: (Multiple Choice)

Responses	
	Count
Of minimal benefit to the driller	12
Of value but difficult to justify the effort	46
A radical improvement	71
You have to be kidding, the system manufacturers would never agree to a common display	18
Totals	147



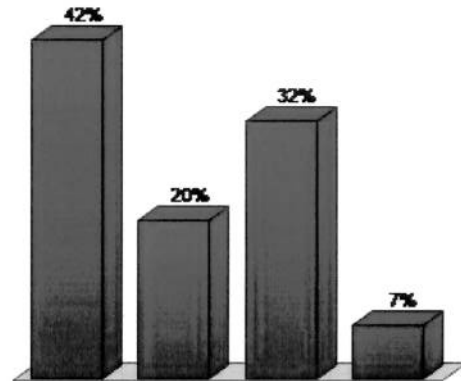
9. As lines between IT (information technology) and OT (operational technology) begin to blur, how do we educate and enable the “Electronic Technician” for this expanded IT field? Does your company engage: (Multiple Choice)

	Responses	
	Percent	Count
Dedicated rig personnel with an IT role to support related issues on drilling control systems	20.14%	29
Mandatory cross training of the Electronic Technicians for specific IT skills	29.86%	43
Optional cross training of the Electronic Technician for specific IT skills	16.67%	24
No comment; not an owner / operator or system supplier	33.33%	48
Totals	100%	144



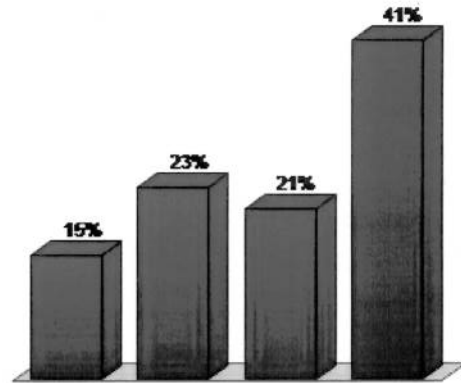
10. Hardware in the Loop (HIL) testing is a QA/QC method of validating software without necessarily having the 'big iron' immediately available. Where would you see its primary value as a testing method? (Multiple Choice)

	Responses	
	Percent	Count
During the initial system development and engineering	42.03%	58
During initial installation and commissioning of the system	19.57%	27
Used as a method to validate modifications and/or software changes to a system in-service, prior to deploying the respective change	31.88%	44
To troubleshoot unanticipated problems with software already in use and operation	6.52%	9
Totals	100%	138



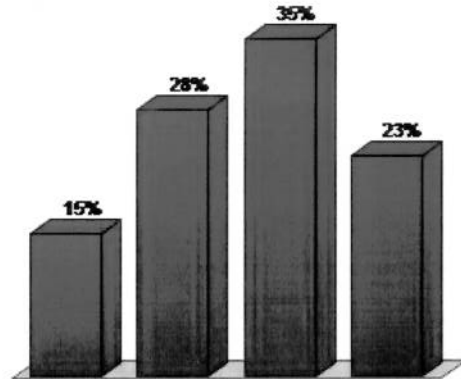
11. What are the major barriers to uptake of automation in well construction? (Multiple Choice)

	Responses	
	Percent	Count
Status quo – what we do today is fine	15.07%	22
Reliability is an issue	23.29%	34
Increase in operational efficiency has not been proven	20.55%	30
All of the above	41.1%	60
Totals	100%	146



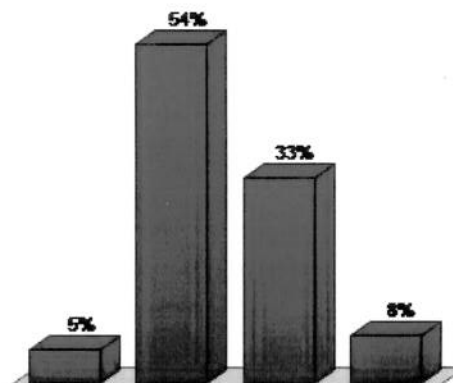
12. What percentage of rigs may in 20 years run autonomously? (Multiple Choice)

	Responses	
	Percent	Count
None	14.77%	22
Below 5%	27.52%	41
Up to 30%	34.9%	52
Higher than 30%	22.82%	34
Totals	100%	149



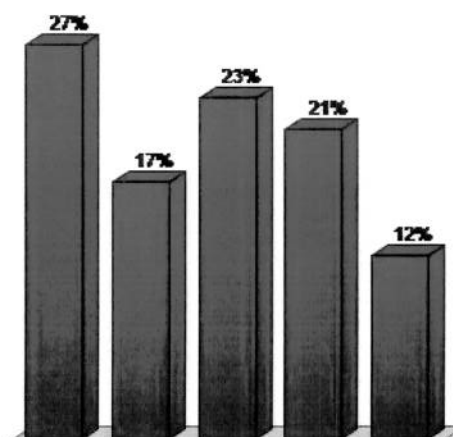
13. In 20 years, what will be the tasks of the modern drilling crew? (Multiple Choice)

Responses		
	Percent	Count
As today	5.48%	8
Supervisory with manual incident handling	54.11%	79
Purely maintenance and logistics – rig processes otherwise controlled from off-site	32.88%	48
No crew on rig. Task force sent to rig only for inspection & maintenance	7.53%	11
Totals	100%	146



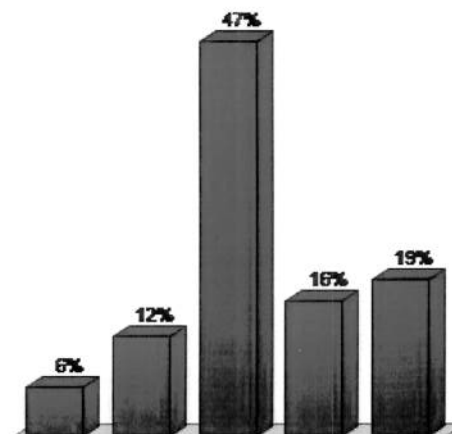
14. What is the biggest obstacle to innovation in BOP Control Systems? (Multiple Choice)

Responses		
	Percent	Count
Risk	26.62%	37
Bureaucracy	17.27%	24
Enabling technology	23.02%	32
Entrenched mentality (Not on My Rig)	20.86%	29
Technician training / experience / ability	12.23%	17
Totals	100%	139



15. What area of the BOP Control Systems need the most attention or improvement? (Multiple Choice)

	Responses	
	Percent	Count
HPU / Mixing Units	5.98%	7
Fluidic Systems	11.97%	14
Communications (MUX, Umbilical Cables)	47.01%	55
Power (to the stack / PODS)	16.24%	19
POD Configuration	18.8%	22
Totals	100%	117



16. Will acoustic systems become the primary control path? (Multiple Choice)

	Responses	
	Percent	Count
NOW!	3.88%	4
In 3 years	4.85%	5
In 5 years	20.39%	21
In 10 years	14.56%	15
Never	56.31%	58
Totals	100%	103

