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# OPERATIONAL TECHNOLOGY CYBERSECURITY EXPERT PANEL FORUM 2023

22 – 23 AUGUST 2023

OT Cybersecurity - From Speculation To  
Science



# OT Cybersecurity From Speculation To Science

**Horror Vacui:**

The fear of leaving blank spaces on a map



1635

G8200  
n° 409.

60



A  
NEW MAP  
OF  
AFRICA  
FROM THE LATEST AUTHORITIES.  
By JOHN CARY, Engraver.  
1805.





# OT Cybersecurity From Speculation To Science

# OPERATIONAL TECHNOLOGY CYBERSECURITY EXPERT PANEL FORUM 2023

## Electrocardiogram (ECG or EKG)



Johnorchard, CC BY-SA 4.0  
via Wikimedia Commons



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## Security Control Test Cases

Controls	Encryption	Access Control	SIEM	HIDS	NIDS	SOAR
1 (baseline)						
2	X	X				
3			X		X	
4	X		X	X		
5			X	X	X	X

Reference: Hardening Wind Energy Systems From Cyber Threats – Final Report

Sandia Report: SAND2023-12610

# OPERATIONAL TECHNOLOGY CYBERSECURITY EXPERT PANEL FORUM 2023

## Test Results From Two Attack Scenarios

	Baseline	Encryption + Access Control	SIEM + NIDS	Encryption + SIEM + HIDS	SIEM + HIDS+ NIDS + SOAR
Physical Resilience	46.4%	96.0%	46.4%	96.0%	96.0%
Cyber Resilience	38.5%	46.2%	38.5%	46.2%	76.9%

Reference: Hardening Wind Energy Systems From Cyber Threats – Final Report

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Cyber Resilience	38.5%	46.2%	38.5%	46.2%	76.9%
3 Year Cost US\$	0	0.45M	12M	11.47M	21.9M



# OT Cybersecurity From Speculation To Science

The greatest obstacle to discovery is not  
ignorance - - it is the illusion of knowledge.

Historian Daniel Boorstin



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