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**CYBER RISKS:**

**IS THE MARINE INSURANCE  
INDUSTRY PREPARED?**

**Marine Insurance Day  
October 2, 2015  
New York City**

## Panel

- Christine Marciano - Cyber Data Risk Managers, LLC.
- Patrick Hickey - Aspen Insurance
- David Hall - Wiggin and Dana LLP
- Thomas Bradshaw, AIG
- Moderator: Jonathan O'Hara - Aspen Insurance



**Christine Marciano**

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# Cyber Security Risk & the Challenge to Maritime Networks



- **Piracy 2.0** - Pirates now have a better, more efficient weapon – the internet!
- **2012** - More than 120 ships, including Asian coast guard vessels, documented malicious jamming of global positioning signals.
- **2013** - Drug smugglers hacked cargo tracking systems at the Port of Antwerp to avoid detection.
- **2014** – A major U.S. port facility suffered a system disruption that shut multiple ship-to-shore cranes for several hours.

# The Risk of Cyber Attack in the Maritime Sector

- Potential for catastrophic losses
- Financial loss
- Spoofing attacks - This type of cyber attack could lead a vessel off course and result in a grounding, collision or similar serious marine incident.
- Denial of service attacks
- Unauthorized access to wireless Internet networks, GPS tracking technologies, and Automated Identification Systems
- Data theft
- Cargo theft
- Cyber extortion
- Property damage
- Bodily injury/harm/death

# Cyber Insurance and The Coverage Gap

- **Marine insurance policies exclude computer related liability and losses resulting from computer and network security failure.**
- **Standalone cyber insurance *may* offer cover for:**
  - Data theft
  - Incident response
  - Network business interruption
  - Cyber extortion
  - Property damage\* – excluded.
  - Bodily injury/harm/death\* – excluded.

\* excluded in all cyber policies, except one.

# Coming Soon! Drone Ships – how will insurance react?

- Unmanned ships will increase vulnerabilities leading to more cyber attacks
- The key question will be where do we draw the line between different covers – cyber and liability?
- Product liability
- Cyber liability
- Professional liability
- Pollution/Environmental liability
- Property Damage
- Bodily injury harm/loss of life
- Terrorism

# Cyber Security Resources for Maritime

## **US Coast Guard rolls out cyber security strategy**

- <http://www.uscg.mil/seniorleadership/DOCS/cyber.pdf>

## **IMO Measures to Enhance Maritime Security**

- [https://www.intertanko.com/Documents/MSC%2095-4-1%20-%20Industry%20guidelines%20on%20cyber%20security%20on%20board%20ships%20\(ICS,%20BIMCO,%20INTERTANKO%20ann...\).pdf](https://www.intertanko.com/Documents/MSC%2095-4-1%20-%20Industry%20guidelines%20on%20cyber%20security%20on%20board%20ships%20(ICS,%20BIMCO,%20INTERTANKO%20ann...).pdf)

## **Allianz Safety and Shipping Review 2015**

- <http://www.agcs.allianz.com/assets/PDFs/Reports/Shipping-Review-2015.pdf>



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## CYBER RISKS:

# IS THE MARINE INSURANCE INDUSTRY PREPARED?

Patrick Hickey  
Executive Vice President  
Head of Marine, US Insurance

Aspen Insurance Holdings Limited

# What do we know?

“There are known knowns. These are the things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know.”

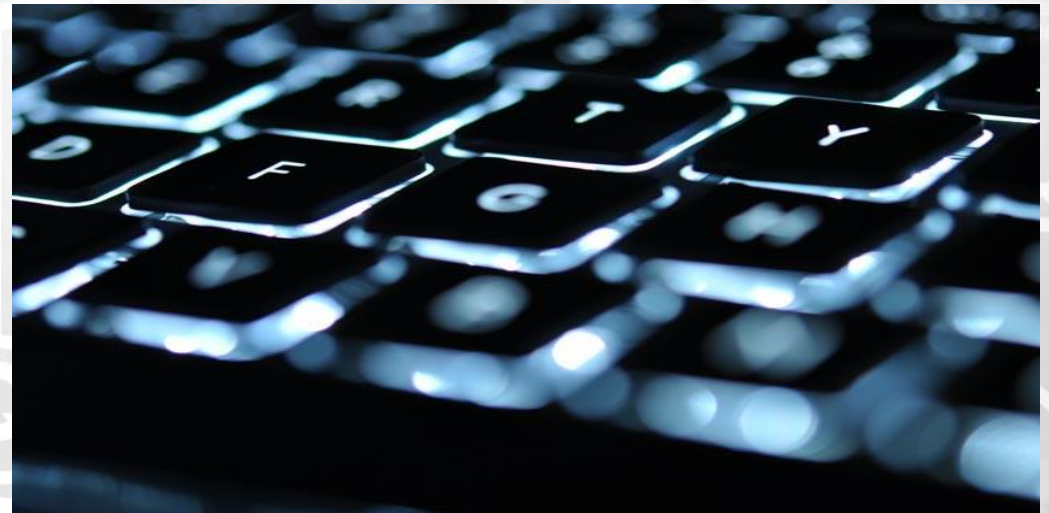
- Donald Rumsfeld

“There are two kinds of people in America today: those who have experienced a foreign cyber attack and know it, and those who have experienced a foreign cyber attack and don't know it.

- Frank Wolf

# Known (potential) marine insurance cyber risks

- Primary property damage (Hull, Cargo, Yachts, Marinas/Boat Dealers)
- Third party property damage (Marine Liabilities)
- Third party bodily injury (Marine Liabilities)
- E&O
- DSU/ALOP
- Manuscript wording



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## Known customer concerns

- Loss of confidential data
- Loss of reputation / Loss of market
- Liability
- Balance sheet / share price



# Unknown Marine insurance cyber risks

- Can we determine the proximate cause of the loss?
- Will industry cyber exclusions withstand the test of time?
- Are we already paying cyber losses today in marine?
- The internet of things – connected vessels, trucks, warehouses

# Known Cyber Insurance Market

- \$2 - \$2.5 billion in annual cyber premium (\$1 billion in 2012)
- 90% purchased by U.S. companies
- Roughly \$450 million in available capacity any one risk
- #1 concern expressed by risk managers at 2015 RIMS
- No standard policy wording
- No standard exclusion wording (CL 380 **10/11/2003**)
- Lack of underwriting data
- Inability to model catastrophic events
- Labeled “biggest systemic risk” by one Lloyd’s Syndicate

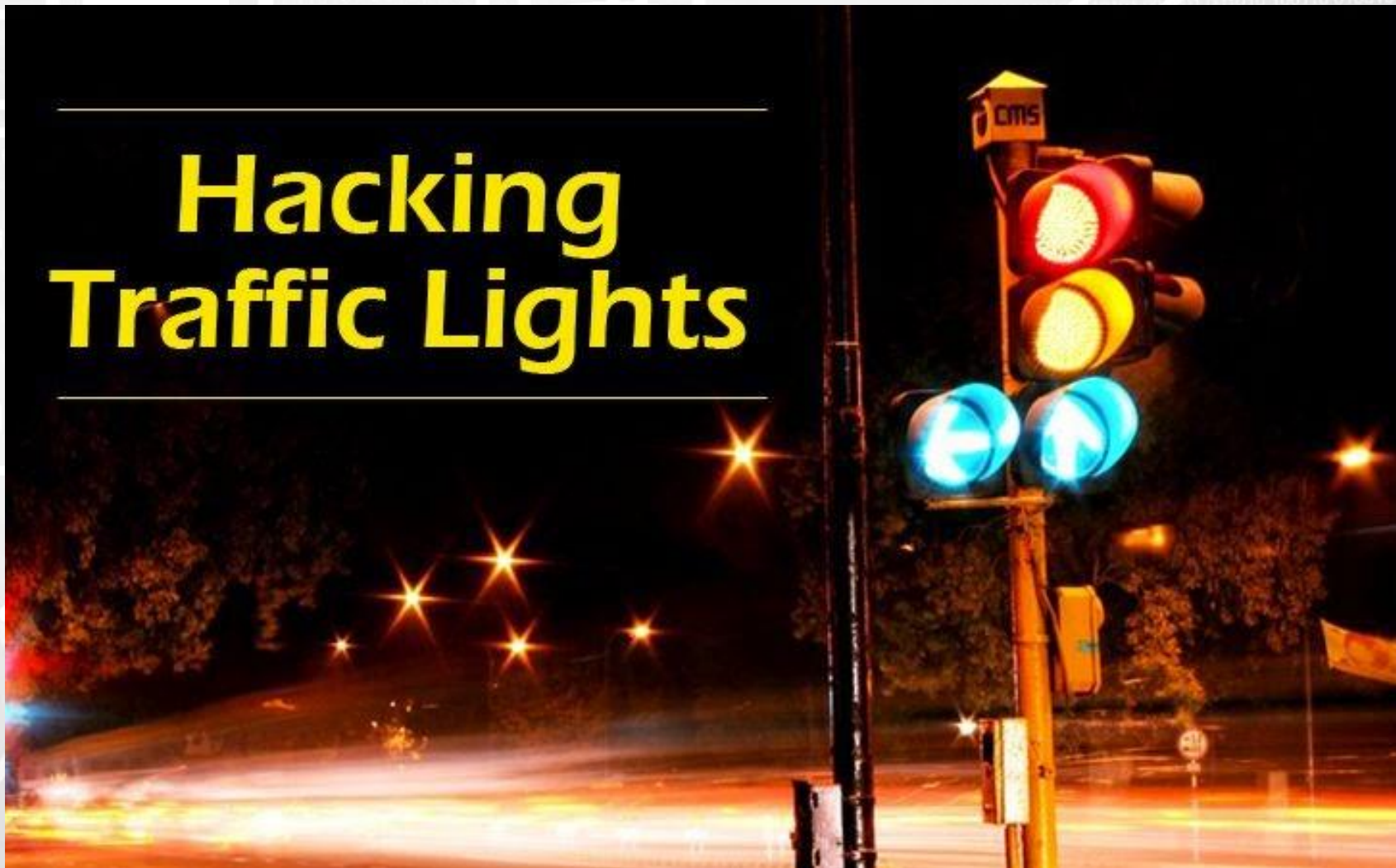
Cargo loss...»

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.....or a Cyber loss?

# Hacking Traffic Lights





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# CYBER RISKS: IS THE MARINE INSURANCE INDUSTRY PREPARED?

DAVID L. HALL

OCTOBER 2, 2015

# Factors at Work

- Big Data: data sets so large and complex that traditional data management tools and data processing applications are inadequate.
- Big Data managed by “supervisory control and data acquisition” (SCADA) and “industrial control systems” (ICS).
- Shareholder pressure to improve returns and reduce costs by increasing reliance on operational IT.
- Virtual world: geographic distribution of infrastructure (and maritime assets) requires use of IT.
- Increasing automation on board vessels
- Energy sector is targeted for cyber intrusions.

# Who Uses Big Data in Energy and Marine Sectors?

- Deepwater Exploration & Production (E&P)
- Onshore E&P
- Midstream Transportation
- Maritime Transportation
- Refining & Petrochemical
- Non-Marine/Non-Energy



# Threats to the Marine Sector

- University of Texas researchers demonstrated in July 2013 that it is possible to change a vessel's direction by interfering with its GPS signal to cause the onboard navigation systems to falsely interpret a vessel's position and heading
- Hacker caused a floating oil platform off Africa to tilt to one side, forcing temporary shutdown.
- Somali pirates employed hackers to infiltrate a shipping company's cyber systems to identify vessels passing through the Gulf of Aden with valuable cargoes and minimal on-board security leading to the hijacking of at least one vessel

All examples from a report submitted by Canada to the IMO in July 2014 (<http://www.protect-group.org/assets/Uploads/FAL-39-7-Measures-toward-enhancing-maritime-cybersecurity-Canada.pdf>)

# Governmental Data Breach Requirements

- 47 different state rules on data breach reporting.
  - Most states require notice to those whose private information is affected.
  - Some states require reporting to state attorney general, which could trigger investigation of the company's cybersecurity programs.
  - Notification to insurers?
- Federal guidelines and requirements: a patch work quilt.
  - Federal Trade Commission (FTC) enforcement
  - NIST Framework
  - Other agencies are starting to weigh in: DoD and SEC
  - Federal legislation has been debated without success

# Coverage for Cyber Attack Under Available Marine and Energy Policies

## Cyber Risk Policies

- Limited cyber-risk insurance policies provide coverage for first party property and limited third party claims with relatively low limits.
- Coverages:
  - Forensic analysis, remediation of data systems, notification to customers, public affairs/public relations and notification to third parties.
  - Loss of intellectual property, financial information, and proprietary data of the insured.
  - London market coverages have provided some property damage and business interruption coverages.
  - E&P losses (pollution, redrill, lost tools) are NOT covered under most cyber risk policies.

# Coverage for Cyber Attack Under Available Marine and Energy Policies

## Property Insurance

- Provides coverage for company's physical assets and business interruption/contingent business interruption.
- Often EXCLUDES losses resulting from cyber risks/cyber attacks.
- US Courts are divided regarding whether damage to software/computer systems are "physical damage to tangible property."
  - *Am. Guarantee & Liab. Ins. Co. v. Ingram Micro, Inc.*, No. CIV. 99-185 TUC ACM, 2000 WL 726789 (D. Ariz. 2000) (Corruption of electronic data was physical damage to tangible property).
  - *Lambrecht & Assocs., Inc. v. State Farm Lloyds*, 119 S.W.3d 16 (Tex. App.—Tyler 2003, no pet.) (Damage to data is loss of tangible property).
  - *Ward Gen. Ins. Servs., Inc. v. Emp'rs Fire Ins. Co.*, 7 Cal. Rptr. 3d 844 (Cal. Ct. App. 2004) (Loss suffered by plaintiff was a loss of information. Plaintiff did not lose the tangible material of the storage medium).

# Coverage for Cyber Attack Under Available Marine and Energy Policies

## D&O Policies

- Provide some coverage to corporate management and the entity for securities claims related to alleged failures to mitigate cyber risks.
- Many D&O policies have exclusions for cyber risks.
- Most D&O policies will NOT provide coverage for property damage, environmental impairment or business interruption.
- Many D&O policies do not cover officer and director liability for failure to provide/purchase adequate insurance.



# Coverage for Cyber Attack Under Available Marine and Energy Policies

## Commercial General Liability Insurance (CGL) Property Damage – Coverage A

- Is damage to electronic data “property damage”?
- *Magnetic Data, Inc. v. St. Paul Fire & Marine Ins. Co.*, 442 N.W.2d 153 (Minn. 1989) – electronic data erased from hard drive was intangible and not covered under “property damage” definition.
- After 2001, many policies exempted “electronic data” from “property damage” definition.
- After 2004, ISO wording excluded “[d]amages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data.”
- “Electronic Data Liability” Endorsement reintroduced “electronic data” into the definition of “property damage.”

# Coverage for Cyber Attack Under Available Marine and Energy Policies

## Commercial General Liability Insurance (CGL) Personal and Advertising Injury Liability – Coverage B

- “Personal and advertising injury” includes:
  - “Oral or written publication, in any manner, of material that violates a person’s right of privacy.”
  - Coverage for loss of personally identifiable information (PII).
- *Zurich Am. Ins. v. Sony Corp.*, No. 651982-2011 (N.Y. Sup. Ct. Feb. 24, 2014). Coverage B of the CGL policy applied to publication of Sony customers’ confidential information. Because the disclosures were made by the hackers, and not Sony, insurer had no duty to defend insured or pay damages.
- *Netscape Commc’ns Corp. v. Fed. Ins. Co.*, 343 Fed. App’x 271 (9th Cir. 2009). SmartDownload software collected claimants’ internet usage and used information for advertising. Court found claims within “personal injury” coverage and ruled insurer had duty to defend insured. Court did not require a disclosure of PII to a third party.

# Cyber Risk Exclusions – Ambiguity

## Judicial Treatment of Insurance Policies

- Courts construe insurance policies according to general rules of contract construction to ascertain the parties' intent.
  - “contra proferentem”
- They examine the entire agreement and seek to harmonize and give effect to all provisions so that none are meaningless. *Gilbert Tex. Constr., L.P. v. Underwriters at Lloyd's London*, 327 S.W.3d 118, 126 (Tex. 2010).
- Ambiguity in exclusions: “The court must adopt the construction of an exclusionary clause urged by the insured as long as that construction is not unreasonable, even if the construction urged by the insurer appears to be more reasonable or a more accurate reflection of the parties' intent.” *Nat'l Union Fire Ins. Co. of Pittsburgh, Pa. v. Hudson Energy Co.*, 811 S.W.2d 552, 555 (Tex. 1991).

# Contact Information



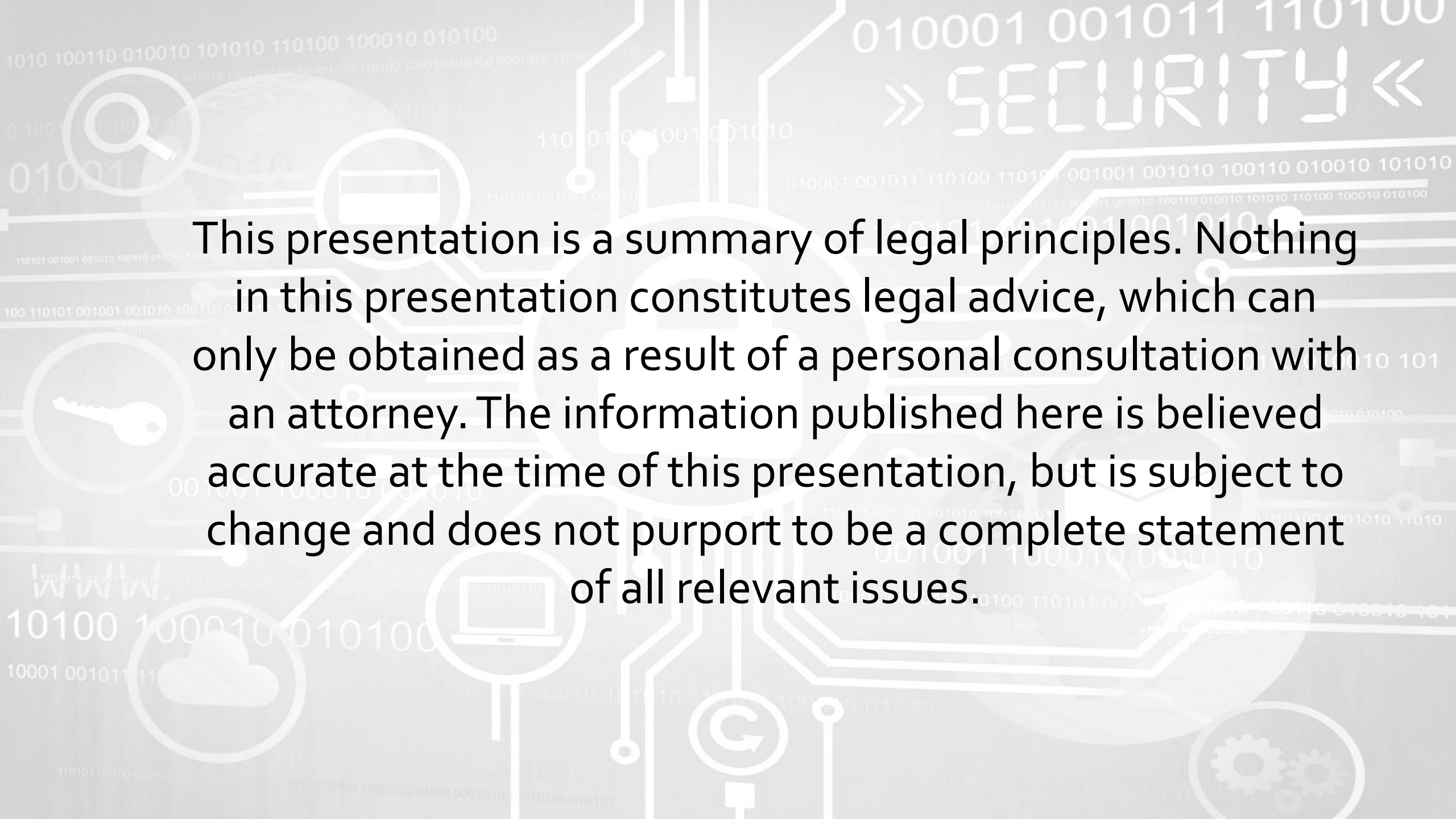
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# CYBER RISKS:

## IS THE MARINE INSURANCE INDUSTRY PREPARED?

THOMAS BRADSHAW, AIG



**Cyber Risks:  
Is the Marine Industry Prepared?**



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