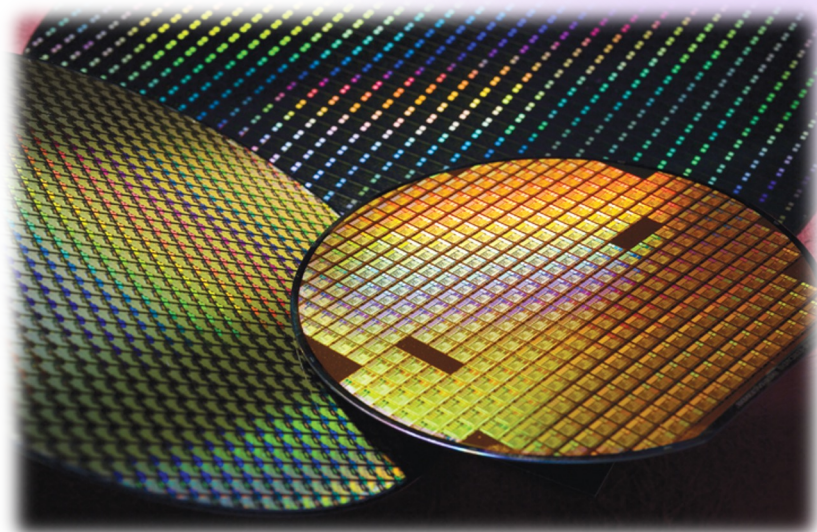


# Cyber Threat and Security Strategies

Jay Kuo





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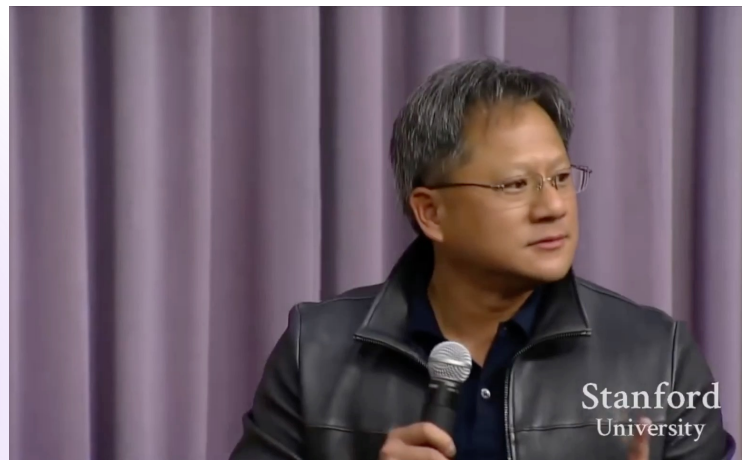




# 01 Introduction

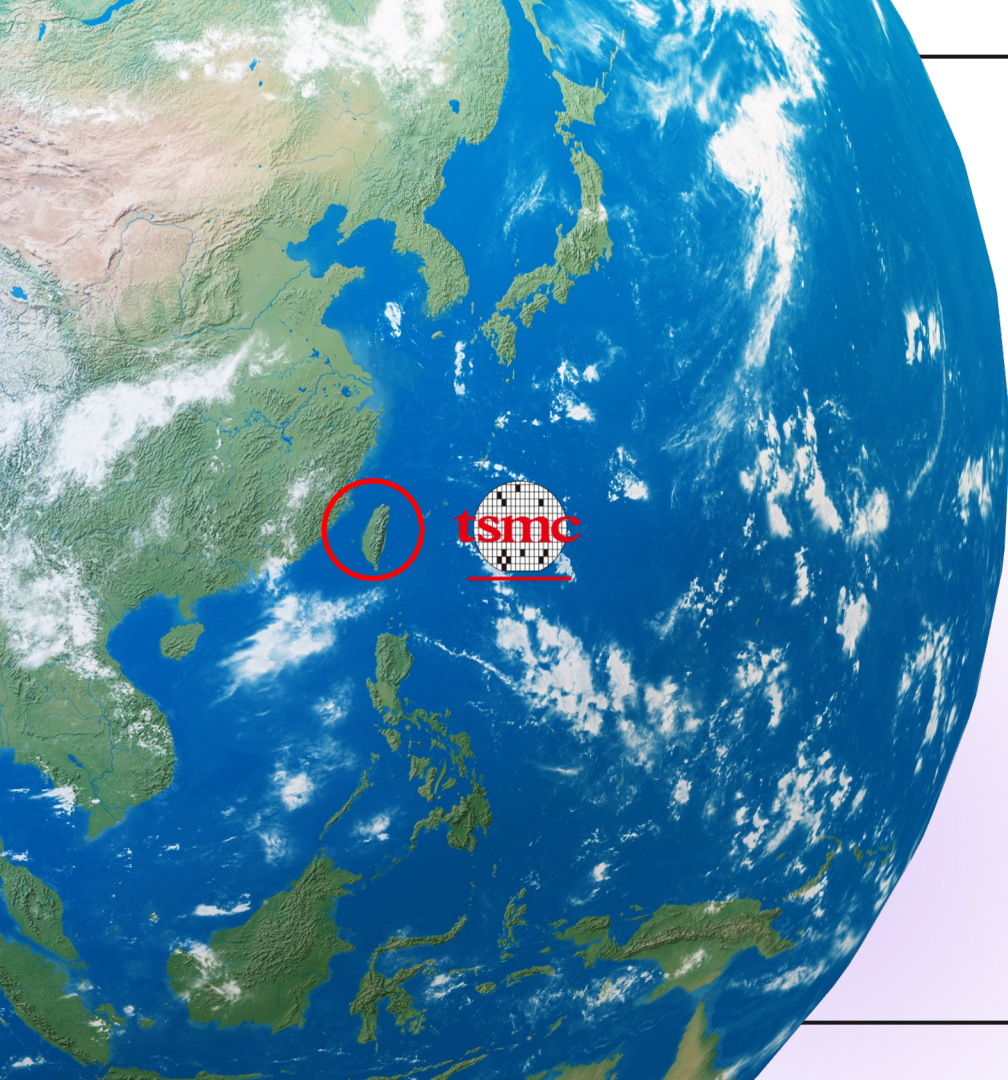


# 01 Introduction



*(Stanford Engineering Hero Lecture: Morris Chang in conversation with president John L. Hennessy)*





# 01

# Introduction

After nine years,

- TSMC's stock price has increased 6 times (118.5 to 730)
- 56.7% market share (Sacks)
- Almost 90% market share in AI and quantum computing applications. (Hille)



# The Cyber Threat

## Situation

- TSMC targeted in espionage campaign
- Attack attributed to China's Budworm/ APT27
- Malicious tactics include posing as TSMC
- Cobalt Strike beacon used for infiltration

## Background

- EclecticIQ links attacks to Chinese spies
- Campaign targets East Asian semiconductor firms
- Budworm known for global espionage efforts
- Attack vectors involves HyperBro loader, Cobalt Strike Beacon

## Assessment

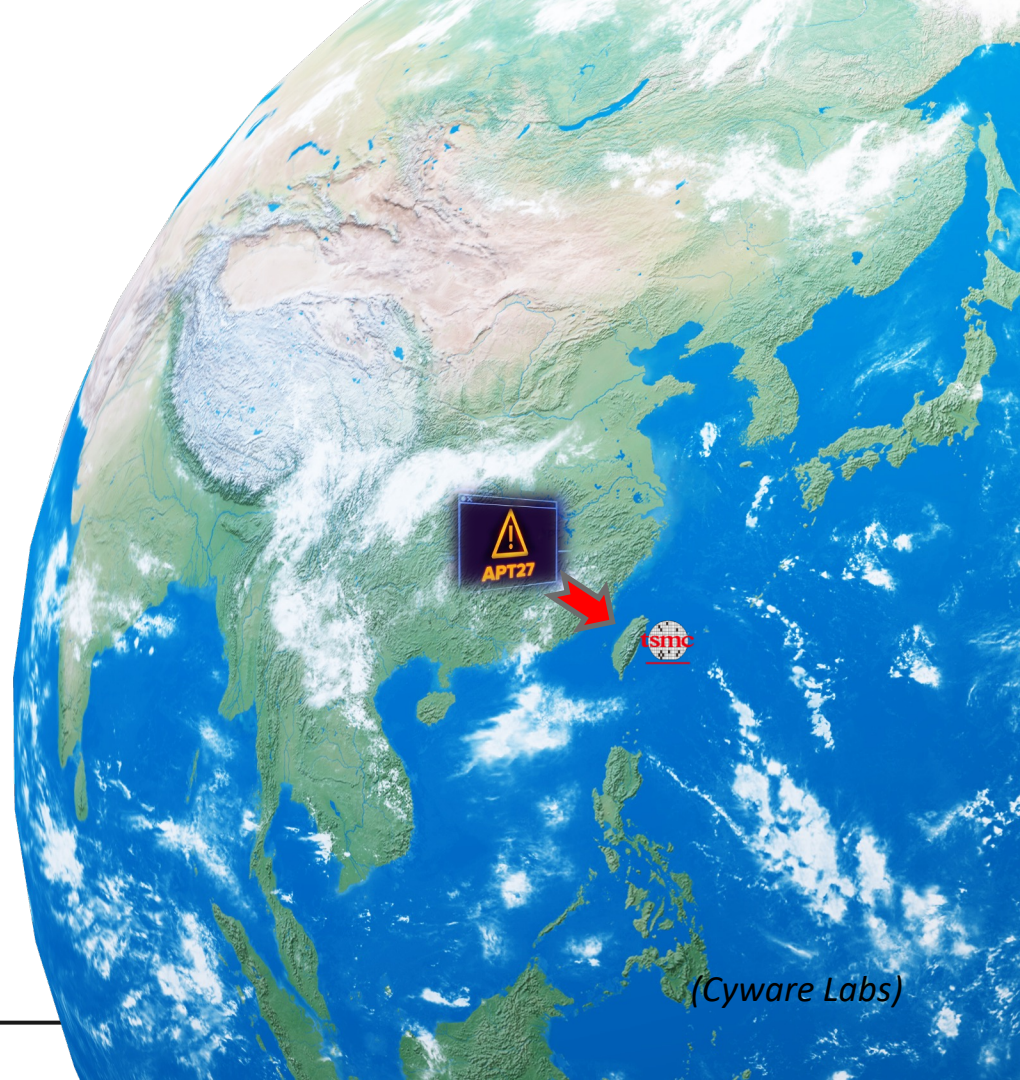
- Serious threat to TSMC and Taiwan Semiconductor industry
- Use of sophisticated malware techniques
- Potential for significant data compromise
- Advanced persistent threat with long-term access intentions



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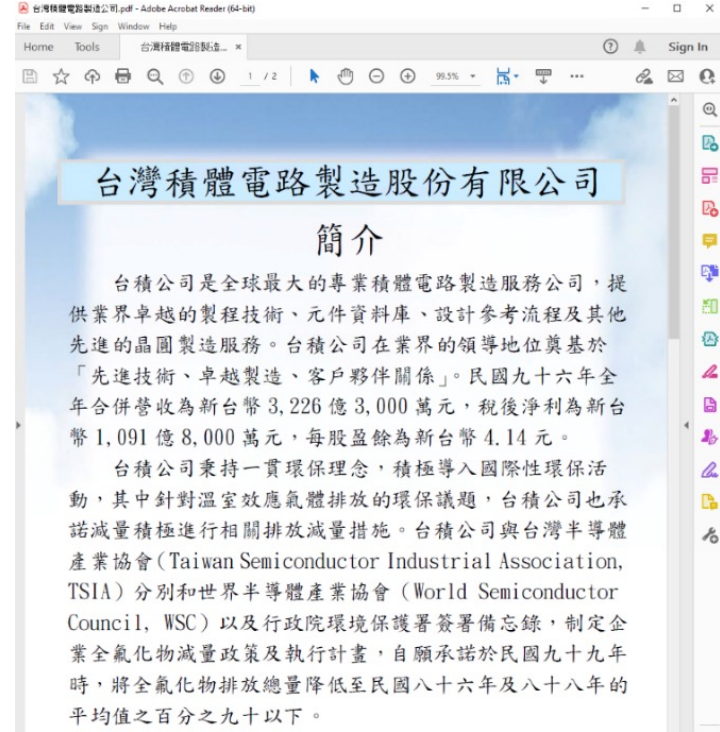
*(Cyware Labs)*



# The Cyber Threat

## Background

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Decoy TSMC document (*EclecticIQ*)





# The Cyber Threat

## Assessment

- Serious threat to TSMC and Semiconductor industry.
- Use of sophisticated malware techniques.
- Potential for significant data compromise.
- Advanced persistent threat with long-term access intentions.



# Mitigation Methods

## Immediate Security audit

- CISO
- IT Security Committee

## Enhanced Intrusion Detection System

- CIO
- IT Infrastructure Teams

## Employee Cybersecurity Training

- HR Managers
- Department Managers

## Review and Update Incident Response Plan

- CISO
- Risk Management Teams
- Legal Department

## Strengthen Vendor Risk Management

- Chief Supply Chain Officer
- Procurement Managers

## Data Encryption

- CIO
- Data Protection Officers

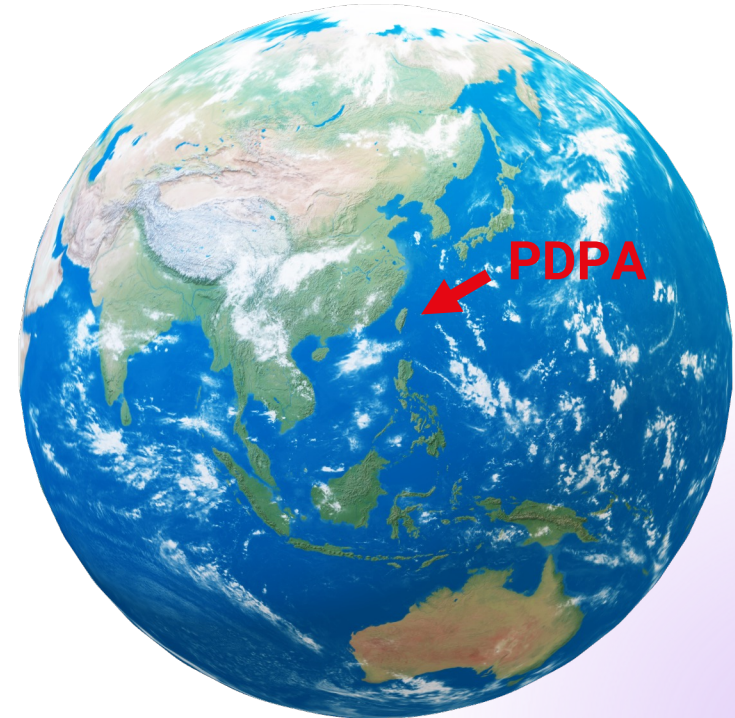
# Cyber Ethics Applications

## Legislation and Cyber Norms Framework

- PDPA (Taiwan's Personal Data Protection Act)
- GDPR
- NIST cybersecurity framework
- ISO/IEC 27001
- United States' CISA Cyber Essentials

## Ethical Values

- Leadership
- Confidentiality of Client Data
- Transparency on Standards
- Integrity in Reporting
- Accountability





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# Recommendation

## Future Incident Response

- Adaptive Incident Response Framework
- Augmented Threat Intelligence Collaboration
- Enhanced Supply Chain Cybersecurity

## Future Mitigation

- AI-driven Security Solutions
- Enhanced End-to-End Encryption
- Advanced Anomaly Detection Systems





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# Thanks!

**Do you have any questions?**

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