

Counterintelligence Strategic Partnership Program

Intellectual Property and Security



Nanomanufacturing
Summit 2013

& 12th Annual NanoBusiness Conference



October 17th 2013

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What is taxed?

Tax imposed

26 USC Sec. 1
"imposed on the
TAXABLE INCOME"



Taxable income defined

26 USC Sec. 63
"taxable income" means
gross income minus
the DEDUCTIONS"



Special rules for determining source

26 USC Sec. 863
"Items of gross income... and deductions,
other than those specified... shall be allocated...
under REGULATIONS"



Computation of taxable income...

**TAXABLE
INCOME**

26 CFR Sec. 861-8T(d)(2)(iii)
"Income that is not
considered tax exempt.
A. foreign taxpayer
B. DISC or a FSC... [international
or foreign sales corporation]
C. possessions corporation
X D. FOREIGN EARNED INCOME



*Most Americans don't earn
any "Foreign earned income."*

WhatIsTaxed.com

Computation of taxable income...

*Regulations: 26 CFR Sec. 861-8, and Sec. 861-8T

1. "how to determine taxable income"
2. "specific sources"
3. "income that is exempt or excluded"
4. "eliminated income"
5. "eliminated items"
6. "excluded income"
7. "exempt income" (defined)
8. "deductions to excluded income"
9. "allocating deductions"
10. "allocation and apportionment of deductions"
11. "gross income may include excluded income"
12. "INCOME that is NOT considered TAX EXEMPT"

*Source <http://ecfr.gpoaccess.gov>

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organized by
NanoBusiness
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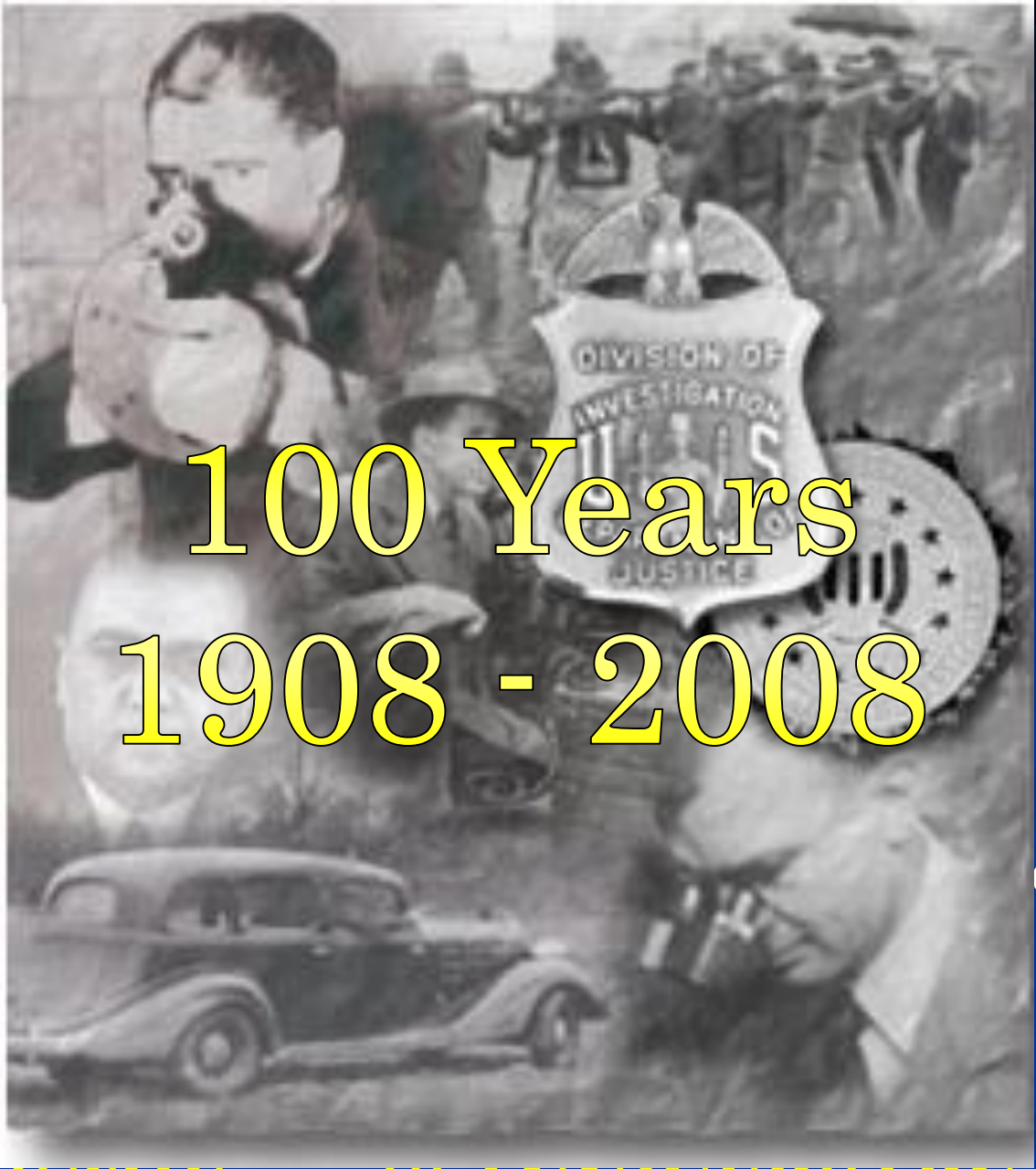
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FBI 101: OUR MISSION

The mission of the FBI is to protect and defend the United States against terrorist and foreign intelligence threats, to uphold and enforce the criminal laws of the United States, and to provide leadership and criminal justice services to federal, state, municipal, and international agencies and partners.

FBI 101: **Our Priorities**

- 1. Protect the U.S. from terrorist attack**
- 2. Protect the U.S. against foreign intelligence operations and espionage**
- 3. Protect the U.S. against cyber-based attacks and high-technology crimes**



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2008 WAS THE 100TH ANNIVERSARY OF THE

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FBI

Philadelphia Field Office



Two Full time CI squads

**Eight Resident Agencies
throughout Eastern PA**

**Consists of Intel Analysts,
investigative support personnel,
and Special Agents who possess
degrees ranging from engineering,
languages, political science,
computer science, and history.**

Counterintelligence Strategic Partnerships



WORK TO DETERMINE AND SAFEGUARD THOSE TECHNOLOGIES WHICH, IF COMPROMISED, WOULD RESULT IN CATASTROPHIC LOSSES TO NATIONAL SECURITY.

Strategic Partnerships: **RELATIONSHIPS**

➤ **BUSINESSES**

➤ **ACADEMIA**

➤ **U.S. GOVERNMENT AGENCIES**

FIRST LINE OF DEFENSE

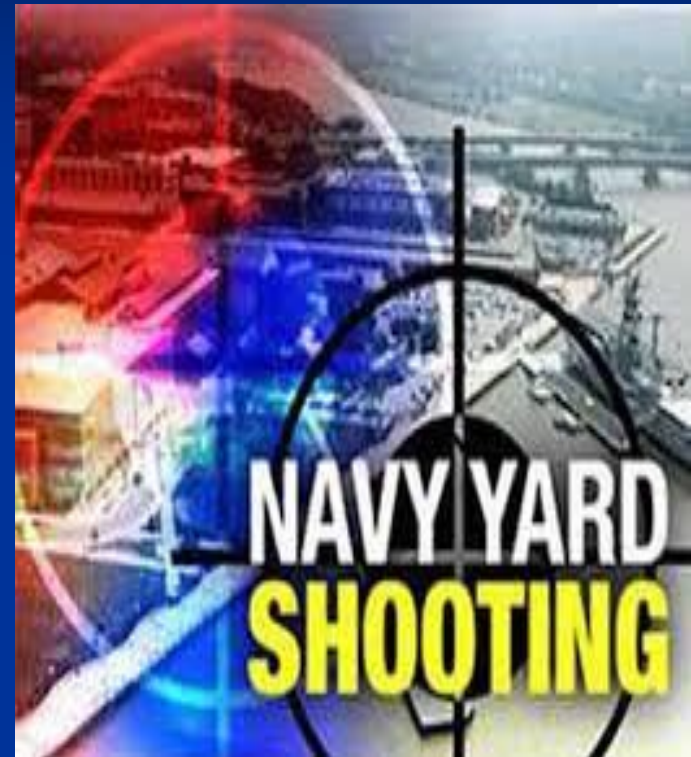


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FIRST LINE OF DEFENSE



FIRST LINE OF DEFENSE



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The Challenge?

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**To protect United States'
sensitive information, its
technologies, and its
competitiveness in the
age of globalization.**

Our Solution

??

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To foster communication and build awareness through partnerships with key public and private entities; by educating and enabling you—OUR PARTNERS—to identify what is at Counterintelligence risk and how to protect it.

INTELLECTUAL PROPERTY THEFT


&

ECONOMIC ESPIONAGE



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What constitutes Intellectual Property?

(3 things)

1. COPYRIGHT ©

Exclusive economic right given to creator of literary or artistic work.

Includes the right to: distribute, copy, perform, display, modify.

Difference between Copyright and Patent:

Patent = right to exclude others from making, using, selling.

Copyright = exclusive right to copy, distribute, prepare derivative works.

2. Trademark ® TM

Distinctive sign that identifies the goods of a particular producer.

Allows the consumer to easily recognize the source of the product.

Some familiar examples...



3. TRADE SECRET

Information companies keep secret to give them an advantage over their competitors

and

the information derives independent economic value from not being generally known.

“ A **trade secret** is really just *a piece of information* (such as a customer list, or a method of production, or a secret formula for a soft drink) *that the holder tries to keep secret* by executing confidentiality agreements with employees and others and by hiding the information from outsiders by means of fences, safes, encryption, and other means of concealment, *so that the only way the secret can be unmasked is by a breach of contract or a tort.*”

- *ConFold Pac. v. Polaris Industries*, 433 F.3d 952, 959 (7th Cir. 2006)

TRADE SECRET?

- CUSTOMER LIST YES OR NO
- COMPANY QUARTERLY EARNINGS STATEMENT NO
- COMPANY DIRECTORY NO
- VENDOR SUPPLY LIST YES
- FORMULA(S) YES
- COMPUTER SOURCE CODE YES
- LIST OF BOARD OF DIRECTORS NO

TARGETED TECHNOLOGIES:

- **NANOTECHNOLOGY**
- **AERONAUTICS SYSTEMS**
- **QUANTUM COMPUTING**
- **CHEMICAL/BIOLOGICAL SYSTEMS**
- **PHARMACEUTICAL RESEARCH**
- **GROUND SYSTEMS**
- **INFORMATION SYSTEMS/WARFARE**

ECONOMIC ESPIONAGE: THE ROLE OF TECHNOLOGY

**HOWEVER, ENTITIES WILL
TAKE ANYTHING THAT COULD
POTENTIALLY GIVE THEM AN
EDGE**

From seed experimentation



Fairchild Tropical Botanic Garden Seed Lab.

To oil exploration software



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CHALLENGES IN THE 21ST CENTURY

➤ ADVANCES IN TECHNOLOGY



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What is a foreign intelligence service?

- A foreign organization
- Usually part of a government
- Purpose: gather/analyze information which will benefit their organization, and ultimately their government

TERMS OF ART:

- INTELLIGENCE OFFICER (IO)
 - a) Employee of the organization
 - b) Specially trained to collect/analyze info
- INTELLIGENCE =

The collected info or its analytical derivative

Do Foreign Intelligence Services really target U.S. companies or research institutions?

- FIS target *information*
- FIS target people who have information (or may be able to get it in the future)
- Open environments = ideal place to find recruits
- FIS have been operating on US campuses and have attended corporate trade shows for many, many years

ECONOMIC ESPIONAGE



Vs

INDUSTRIAL ESPIONAGE

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ECONOMIC ESPIONAGE ACT



➤ **ECONOMIC ESPIONAGE**
TITLE 18 U.S.C., SECTION 1831

- TAKEN WITHOUT AUTHORIZATION**
- BELIEF IT WAS A TRADE SECRET**
- ACTUAL TRADE SECRET**
- BENEFIT ANY FOREIGN**
GOVERNMENT, FOREIGN
INSTRUMENTALITY OR FOREIGN
AGENT



- In **Economic Espionage**, a **foreign** govt., **foreign** instrumentality, or **foreign** agent is the recipient or beneficiary of the stolen information

ECONOMIC ESPIONAGE ACT



- **THEFT OF TRADE SECRETS**
(AKA INDUSTRIAL ESPIONAGE)

TITLE 18 U.S.C., SECTION 1832

-TAKEN WITHOUT AUTHORIZATION

-BELIEF IT WAS A TRADE SECRET

-ACTUAL TRADE SECRET

-ECONOMIC BENEFIT

-INJURY TO OWNER

-INTERSTATE OR FOREIGN COMMERCE



- In **Industrial Espionage (TTS)**, the accused intends economic benefit for **someone other than the rights holder**.

ECONOMIC ESPIONAGE ACT

➤ CRIMINAL PENALTIES:

SECTION 1831

(ECONOMIC ESPIONAGE)

- INDIVIDUAL FINE: 15 YEARS/ \$500,000 MAXIMUM.
- ORGANIZATIONAL FINE: \$10 MILLION MAXIMUM

SECTION 1832

(THEFT OF TRADE SECRETS)

- INDIVIDUAL FINE: 10 YEARS/LESS THAN \$500,000 MAXIMUM.
- ORGANIZATIONAL FINE: \$5 MILLION MAXIMUM.

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ADMINISTRATION STRATEGY ON MITIGATING THE THEFT OF U.S. TRADE SECRETS



FEBRUARY 2013

Administration Strategy on Mitigating the Theft of U.S. Trade Secrets

“We are going to aggressively protect our intellectual property. Our single greatest asset is the innovation and the ingenuity and creativity of the American people. It is essential to our prosperity and it will only become more so in this century.”

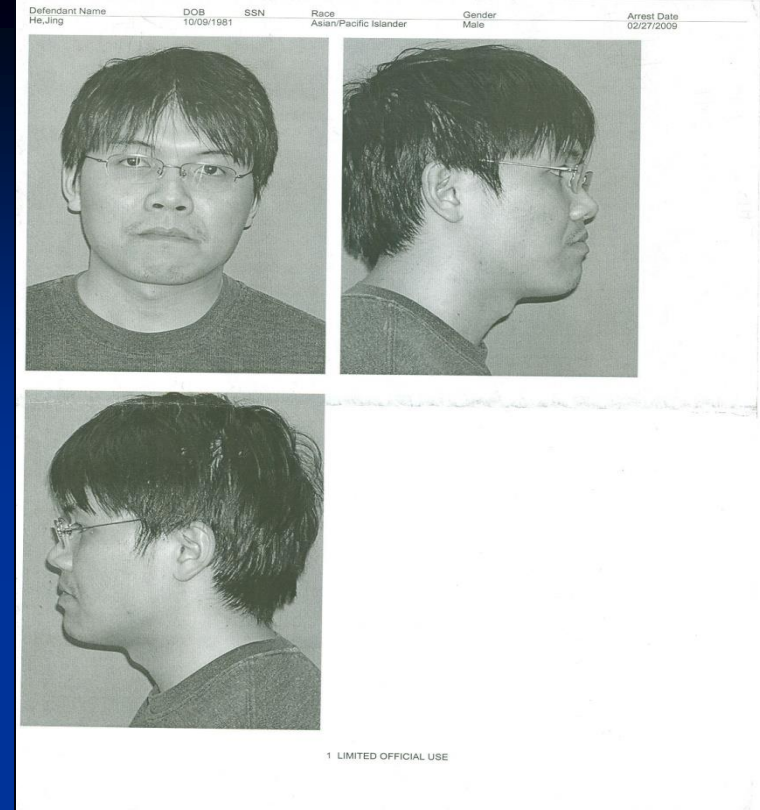
“We cannot look back years from now and wonder why we did nothing in the face of real threats to our security and our economy.”

—President Barack Obama

Case # 1

“Mr. Li”

- Chinese national
- Software engineer
- J-1 visa
- Interned for a well known software company just outside Philadelphia
- SPYING FOR: Self? University?



“Mr. Li” (continued)



- **Graduate of the University of Science and Technology of China, Hefei, Anhui, PRC**
- **Attempted to steal proprietary source code**
- **Valued between 2.5 and 7 million USD**
- **Pled guilty to theft of trade secrets**
- **Sentenced to 24 months in federal prison with immediate deportation following**

CASE #2



- **NAME:** Hua Jun Zhao
- **ARREST:** March 29, 2013
- **EMPLOYER:** Medical College of Wisconsin
- **JOB TITLE:** Researcher
- **TRADE SECRET:** 3 vials of cancer fighting compound
- **SPYING FOR:** ?? Case goes forward. Zhejiang University? Government of China?
- **METHODOLOGY:** Physically removed vials off supervisor's desk. Video footage captured him in the professor's office.

After returning from trip to China in December, Zhao made claims to co-workers to be a professor at Zhejiang University.

Examples Of Everyday Unsolicited/Unusual Email Requests for Information or Employment

- An executive from a foreign development bureau sends an unsolicited email to a US Company requesting information on a restricted item and asks for a sample for testing.
- A US Company receives an email from a foreign entity looking to acquire sensitive items for an unidentified end user in the Middle East.
- An employee of a US Company receives an email from a foreign based company looking for a UAV for one of their “projects”.

Cyber Intrusions Examples

The cell phone of a CDC employee was compromised by malware which enabled another individual to control the telephone. The employee received a telephone call in which the caller demanded the employee “provide diagrams, blueprints, and schematics, along with information on materials and projects, or else”.

A member of an identified cyber intrusion set used the “friend suggestions” function on a social networking site, as a tool for victim reconnaissance and research; identifying members who listed a CDC as their place of employment.

Critical Information

Things You Should NOT Share on SNS

- Names and photos of you, your family and co-workers
- Usernames, passwords, network details
- Job title, location, salary, clearances
- Physical security and logistics
- Mission capabilities and limitations
- Schedules and travel itineraries
- Social security number, credit cards, banking information
- Hobbies, likes, dislikes, etc.

InfraGard

*A Government and Private
Sector Alliance*

Contact:

www.infragard.net

www.infragardphl.org





OVERSEAS TRAVEL

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KNOW THAT YOU ARE A TARGET

You or your company may be a target of a foreign country's efforts to obtain information or technologies in order to:

Increase their market
share

Build their economy

Modernize their
military

Types of Critical Business Info

- Customer Data
- Employee Data
- Vendor information
- Pricing strategies
- Proprietary formulae
- Technical components and plans
- Corporate strategies
- Corporate Financial data
- Phone directories
- Computer access protocols
- Computer network design
- Acquisition strategies
- Marketing strategies
- Investment data
- Negotiation strategies
- Passwords (computer, phone, social networks sites)

Security Lapses:

When travelling abroad, executives often adopt predictable travel patterns.

--Frequent 5 star hotels/restaurants

--Become targets of terrorists, criminals and foreign intel collectors

Devastating example:

~Mumbai, India terrorist attacks, November 2008 (“they wanted anyone with British or American passports.”)

~TV interview lead attackers to the victims

Conferences

Professional gatherings are of interest to economic competitors, criminals, terrorists and intel services.

Many conferences are held in large hotels and conventions centers.

Thousands of attendees create a target rich environment.

Conferences cont.

The collegial environment fosters and encourages networking.

This social atmosphere also fosters a false sense of security, and opportunities for exploitation.

**Example: Las Vegas CES conferences
2011, 2012.**

Establish points of contacts for emergencies

- **FOR YOUR FAMILY**
- **FOR YOUR FOREIGN HOST**
- **REGISTER YOUR TRIP WITH THE STATE DEPT. (WWW.STATE.GOV, SMART TRAVELER PROGRAM)**
- **OBTAIN PHONE # AND ADDRESS OF THE US EMBASSY OR CONSULATE IN THE PLACE YOU ARE GOING. (Before you go)**

SANITIZE

- **YOUR LAPTOP**
- **YOUR TELEPHONE/PDA**
- **CONSIDER TAKING A “CLEAN” LAPTOP OR PHONE ON YOUR TRIP**
- **CONSIDER USING A NEW “THROWAWAY” EMAIL ACCOUNT WHILE TRAVELING (ymail, gmail, etc.)**

SANITIZE (cont.)

- **Use up to date protections: anti-virus, spyware, security patches, firewalls**
- **Clean out your voicemail to avoid compromise of the information contained therein**

Before you go and when you return:

Research the destination on www.state.gov, and
The CIA World Factbook

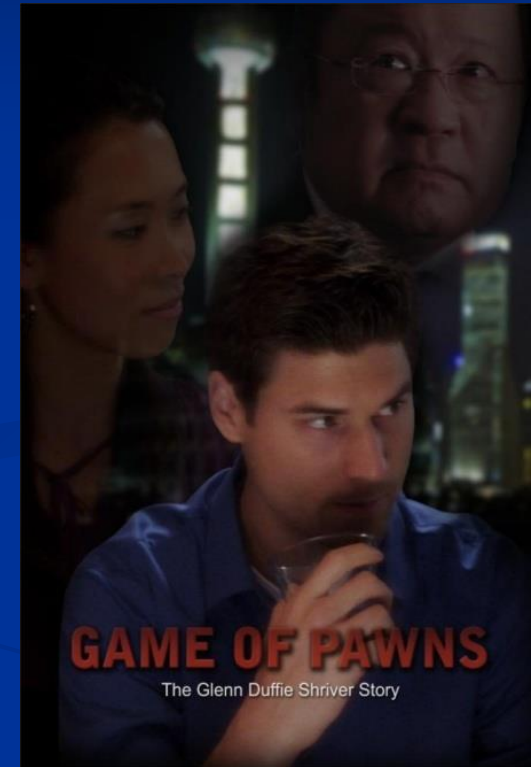
Consider a pre-brief with your security
personnel and a post trip brief.

(Or with your FBI point of contact)

“GAME OF PAWNS”

The true story of a student recruited to work as a spy.

- Dramatic film based on the true story of Glenn Duffie Shriver
- Being shown to university students, faculty members, and business travelers around the country by the FBI.
- Good example of the lengths foreign intel services will go to get information.



QUESTIONS & COMMENTS



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