Maritime Perspective
Protecting Ports, Vessels & Cargoes
HPH Ports Around The World – 49 Ports

- Bahamas
- Freeport
- Dammam
- Saudi Arabia
- Duisburg
- Germany
- Willebroek
- Belgium
- Karachi
- Pakistan
- Gdynia
- Poland
- Port Klang
- Malaysia
- Jakarta
- Indonesia
- Laem Chabang
- Thailand
- Veracruz
- Mexico
- Ensenada
- Manzanillo
- Cristobal
- Panama
- Kwai Tsing
- Tuen Mun
- Hong Kong
- Shanghai
- Shanghai Pudong
- Ningbo
- Yantian
- Xiamen
- Shantou
- Jiangmen
- Nanhai
- Jiuzhou
- Gaolan
- Huizhou
- Buenos Aires
- Argentina
- Sohar
- Oman
- Alexandria
- El Dekheila
- Egypt
- Dar es Salaam
- Tanzania
- Shanghai
- Shanghai Pudong
- Ningbo
- Yantian
- Xiamen
- Shantou
- Jiangmen
- Nanhai
- Jiuzhou
- Gaolan
- Huizhou
- HPH 2008 Volume 69 million Containers
The 15,000 TEU Containership

LOA. = 400 m (1,312 ft.)
Draft = 14 m (46 ft.)
BEAM = 69 m (226 ft.)
Quarantine Station

The 15,000 TEU Containership

Panamax Dimensions
Implementation of the IMO – ISPS Code

The code contains mandatory security related requirements for governments, port operators and shipping companies. Each government, port operator and ship must have a security designate, security plan, training and risk assessment as per international law commenced 1 July 2004.
Key elements of CSI

- Establish security criteria for identifying containers that may pose a risk for terrorism, based on advance information.
- Pre-screen containers at the earliest possible point.
- Use technology to quickly pre-screen containers that may pose a risk for terrorism.
- Develop secure and "smart" containers.
69 million Trojan Horses
Customs Declaration

1. Family Name
   First (Given)  Middle

2. Birth date  Day  Month  Year

3. Number of Family members traveling with you

4. (a) U.S. Street Address (hotel name/destination)
   (b) City  (c) State

5. Passport issued by (country)

6. Passport number

7. Country of Residence

8. Countries visited on this trip prior to U.S. arrival

9. Airline/Flight No. or Vessel Name

10. The primary purpose of this trip is:
    Yes  No

11. I am (We are) bringing
    (a) fruits, vegetables, plants, seeds, food, insects:  Yes  No
    (b) meats, animals, animals' products:  Yes  No
    (c) disease agents, ticks, snails:  Yes  No
    (d) soil or dirt, seeds, farm/ranch/pasture:  Yes  No

12. I have (We have) in close proximity of (such as touching or handling) livestock:
    Yes  No

13. I am (We are) carrying currency or monetary instruments over $10,000 U.S. or foreign equivalent:
    Yes  No

14. I have (We have) commercial merchandise:
    Yes  No

15. Residents — the total value of all goods, including commercial merchandise I/we have purchased or acquired abroad, (including gifts for someone else, but not items mailed to the U.S.) and am/are bringing to the U.S. is: $

   Visitors — the total value of all articles that will remain in the U.S., including commercial merchandise is: $

Read the instructions on the back of this form. Space is provided to list all the items you must declare.

I HAVE READ THE IMPORTANT INFORMATION ON THE REVERSE SIDE OF THIS FORM AND HAVE MADE A TRUTHFUL DECLARATION.

(X) (Signature)

(Date/month/year)

For Official Use Only

CBP Form 6059B (01/04)
Layers of Security

- Container Imaging
- Radiation Detection
- Container Monitoring – Location & Tamper Evidence
- Manifest Information
- Basic Port/Terminal Security (ISPS Code)
Radiation Detectors - Felixstowe
Radiation Scanning and X-Ray Imaging in Hong Kong....Tractor moving at 16 kmp
Data Integration
Data Integration Folder for Every Container Onboard
Secure Freight Initiative
SAFE Port Act, Oct ‘06

Section 208 -
Directs the Secretary to conduct a pilot project at an overseas port similar to the Integrated Container Inspection System being tested at the port in Hong Kong.
9/11 Commission Act, Aug ’07
Title XVII - Maritime Cargo
Section 1701 - U.S. 100% Container Inspections

• Imaging & Radiation Scanning in Ports prior to arrival in U.S.
• Passed House 371 to 40
• Passed Senate 85 to 8
• Effective July 1, 2012
100 % Scanning Challenges

- Sustainability of the scanning equipment in extreme weather conditions
- Varying costs of transferring the data back to the United States
- Re-configuring port layouts to accommodate the equipment without affecting port efficiency
- Developing local response protocols for adjudicating alarms
- Addressing health and safety concerns of host governments and respective trucking and labor unions
- Identifying who will incur the costs for operating and maintaining the scanning equipment
- Acquiring necessary trade data prior to processing containers and addressing privacy concerns
100% Scanning Challenges

• Concluding agreements with partnering nations and terminal operators to document roles and responsibilities regarding issues such as: ownership, operation, and maintenance of the equipment; sharing of information; and import duty and tax considerations

• Staffing implications for both the foreign customs service and terminal operator

• Licensing requirements for the scanning technology

• Reaching agreement with foreign and industry partners to continue scanning 100 percent of U.S.-bound containers after the pilot ends; and

• Discussing the potential requirements for reciprocal scanning of U.S. exports.
Simulating the Impact of Container Inspections on Port Terminal Operations

Nitin Bakshi, The Wharton School, University of Pennsylvania
Noah Gans, The Wharton School, University of Pennsylvania
Month of Data from Hong Kong and Yantian
Present CSI Protocol

• Containers Tagged for Inspection
  – US-bound containers only
  – 24 hours before departure

• Inspection process for tagged containers
  – 2 handheld spectroscopic devices per high-energy x-ray radiographic scanner
  – inspections First-Come-First-Served
  – 60 minutes to notify local authorities
  – 40 minutes to pick from stack and transport to inspection station
  – 20 minutes to inspect containers
Results for the CSI Protocol

- Percentage of delayed containers
  - With 1 inspection station at Hong Kong
    - a 5% inspection rate is workable
    - at a 7% inspection rate, 100% utilization
  - With 2 inspection stations
    - a 10% inspection rate is workable
    - at a 14% inspection rate, 100% utilization
  - At terminal Yantian the analogues are
    - 1% and 3% for workable rates
    - 2% and 4% for 100% utilization
Base case: as inspection rates climb the % delayed explodes.

Terminal A
24-Hour Rule, Inspections First-Come-First-Served

With 1 x-ray, scanner utilization hits 100% at a 7% inspection rate and the backlog explodes.

With 2 x-rays, scanner utilization hits 100% at a 14% inspection rate and the backlog explodes.

% of US-bound containers tagged for inspection

- With 1 Server
- With 2 Servers
Base case: as inspection rates climb the % delayed explodes

Terminal B
24-Hour Rule, Inspections First-Come-First-Served

% of US-bound containers tagged for inspection

% of inspected containers that are delayed

With 1 x-ray, scanner utilization hits 100% at a 2% inspection rate and the backlog explodes

With 2 x-rays, scanner utilization hits 100% at a 4% inspection rate and the backlog explodes
Base case: for utilization \( \geq 100\% \) inspection backlog explodes

Terminal A

24-Hour Rule, Inspections First-Come-First-Served

At inspection rates of 7\% (for 1 scanner) and 14\% (for 2 scanners), the scanners hit 100\% utilization and the inspection queue explodes.

These maximums are finite only because they represent the buildup that occurs during the one month we have simulated. With each additional month of (similar) traffic, the inspection queue would grow by the same number of acres...indefinitely.

At inspection rates of 7\% (for 1 scanner) and 14\% (for 2 scanners), the scanners hit 100\% utilization and the inspection queue explodes.

These maximums are finite only because they represent the buildup that occurs during the one month we have simulated. With each additional month of (similar) traffic, the inspection queue would grow by the same number of acres...indefinitely.
Base case: for utilization ≥ 100% inspection backlog explodes

Terminal B
24-Hour Rule, Inspections First-Come-First-Served

At inspection rates of 2% (for 1 scanner) and 4% (for 2 scanners), the scanners hit 100% utilization and the inspection queue explodes.

These maximums are finite only because they represent the buildup that occurs during the one month we have simulated. With each additional month of (similar) traffic, the inspection queue would grow by the same number of acres...indefinitely.

At inspection rates of 2% (for 1 scanner) and 4% (for 2 scanners), the scanners hit 100% utilization and the inspection queue explodes.

These maximums are finite only because they represent the buildup that occurs during the one month we have simulated. With each additional month of (similar) traffic, the inspection queue would grow by the same number of acres...indefinitely.
EFFECTIVE SECURITY

Drug interceptions increase at Freeport Container Port; another big bust yesterday

By LEDEDRA MARCHE
Senior FN Reporter
lededra@nasguard.com

Officers from the Drug Enforcement Unit are continuing investigations into Wednesday’s seizure.

Over the past 18 months, the container terminal — with its interdiction partners, Bahamas and U.S. Customs and Border Patrol agents, the DEA and DEU — has intercepted nearly a metric ton of cocaine.

The success in drug detection in containers that pass through the Freeport Container Port is a result of the new security initiatives, inclusive of electronic surveillance technology, physical perimeter installations and well-trained Bahamian operators and officers, at the 115-acre site.

(Continued on Page 6)
Layers of Security

- Container Imaging
- Radiation Detection
- Container Monitoring –Location & Tamper Evidence
- Manifest Information
- Basic Port/Terminal Security (ISPS Code)
9/11 Commission Act, Aug ’07
Title XVII - Maritime Cargo
Section 1701 - U.S. 100% Container Inspections

- Imaging & Radiation Scanning in Ports prior to arrival in U.S.
- Passed House 371 to 40
- Passed Senate 85 to 8
- Effective July 1, 2012
International Supply Chain Vulnerabilities

Gary D. Gilbert
Senior Vice President
Hutchison Port Holdings
9 September 2009