

ZOCA Container Security

“Taking container security to the next level”

The logo for UNECE, consisting of the word "UNECE" in blue, bold, sans-serif capital letters with a white outline, set against a white rectangular background.

UNECE

The logo for TIR, consisting of the letters "TIR" in white, bold, sans-serif capital letters with a blue outline, set against a blue rectangular background.

TIR

June 15th, 2005

introduction
Jaap van den Hoek
Director

ZOCA Container Security BV

About ZOCA Container Security:

- Founded in 2003 by 5 private investors
- Independent company, no links to government or industry
- Based in The Netherlands
- Iridium LLC Value Added Manufacturer
- Member of the Port Security Combination Netherlands
- Member of ISO TC 8 and ISO TC 104
- Member (affiliated) of Containers Owners Association

Market situation:

- Increase in theft by organised crime, piracy and pilferage
- Increase of smuggling people, narcotics, weapons and other illegal goods
- Cargo volumes still rising
- World wide > 171 million TEU (ISO 1999) in use, between 100 and 200 million movements per year
- Damages up to 50 Billion dollars worldwide
- Insurance companies: no longer willing to insure high risk cargo

Current locks and e-seals are imperfect:

Locks are always positioned on the outside of the container

Physical keys are required to access the container

Container can still be opened with the actual lock on it (non tamper evident intrusion)

Seals, like TIR or twist cables can easily be broken or copied

E-seals do not use universal frequency or standard software code and platforms and require expensive technical infrastructure

ening freight
ort security

Baldwin, Chair of
Freight containers

y in transportation has
led from its provision
of ensuring the
freight cargo in good
condition throughout a
long journey. Today security
is both the safe delivery
of any merchandise
of the cargo or the
ship. This scope is much
larger than any ISO
standard or even any one
industry. It is nonetheless
addressed and covered
by a series of co-operations
between ISO and various
international bodies.

TC 104 has been active
with the World Customs
(WCO) on container
security. We have been
part of a Joint Working
Group with technical committee
TC 122, Packaging, on the
frequency identification
technology for marking and
tracking within the
container. Our co-operation
with the ISO and other
international bodies
addresses the security
issues associated with the
freight containers.
Even as this article goes
to press, TC 104 is hard at work
refining this PAS and studying it
for publication as a full ISO
standard. In particular
this work will impose tight
manufacturing quality controls
and seal security requirements
that will help ensure that
security is in fact enhanced
when "ISO" seals are used.
The standard will provide a
means to ensure seals are
properly controlled during
manufacture.



Physical application of a "high security" seal on an existing freight container.



... which can nevertheless be relatively easily breached

copying or other fraudulent use of the
seals or seal numbers.

Standards for electronic seals

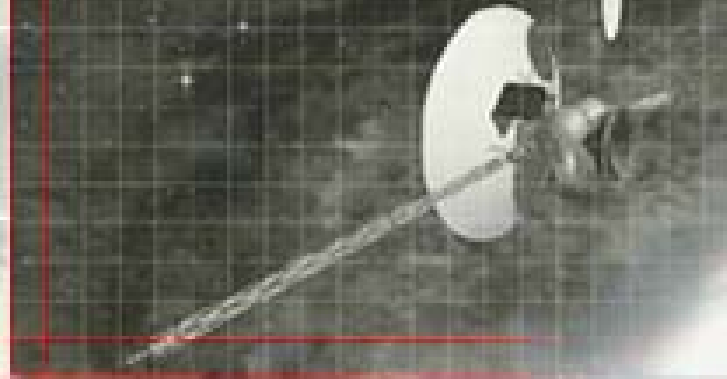
Building on the work with
mechanical seals, the TC 104/TC 122
JWG is actively developing a series
of standards for electronic seals. These
will meet the structural standards that

ZOCA will offer the answer:

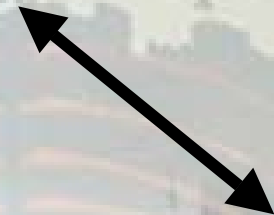
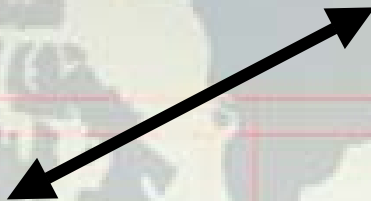
- Incorporated in today's mode of transport (sea, land)
- Adapted to the millions of containers in use
- Fit in the accepted methods and procedures
- Operating the service is easy and fast
- Supports and strengthens existing seals and protocols

The ZOCA Container Security Service (world wide patent applies) consists of four major components:

- A strong mechanical lock situated inside the container
- Operated through a Mobile Device
- Mobile Device is operated in a “Geo Fenced Area” only
- All activities are managed by a central Global Processing Centre 24/7/365
(outsourced to BOSCH Communications Centre, ISO 9001 and VDS Security certified to German standards) including alarm follow up and technical assistance



Iridium



Lock/open container

“fixed data” (transmit)

Data string indicator

GPS data

PIN code

Mobile serial number

Container ID

Owner/recipient goods ID

Menu choices

Authentication code

HOW IT WORKS....

“fixed data” (transmit)

- Data string indicator
- GPS data
- PIN code
- Mobile serial number
- Container ID
- Owner/recipient goods ID
- Menu choices
- Authentication code
- BoL number
- TIR number

ZOCA offers ease of use:

End user data entry is kept to a minimum:

Only PIN, menu choice and variable data to be entered by operator.

“fixed data” (transmit)

- Data string indicator
- GPS data
- PIN code**
- Mobile serial number
- Container ID (TIR)**
- Owner/recipient goods ID
- Menu choices**
- Authentication code

“**Variable**” data

- Bill of Lading Number
- TIR Carnet number/**
- TIR Consignment ID**
- (or customer preference
Like T -1 document
number..)

“fixed data” (transmit)

- Data string indicator
- GPS data
- PIN code
- Mobile serial number
- Container ID (TIR)**
- Owner/recipient goods ID
- Menu choices
- Authentication code
- BoL number
- TIR number**

What do you need for the Service to be operational?

- Lock installed inside of the container
- Mobile Device at each point of interaction
- Subscription to the Service

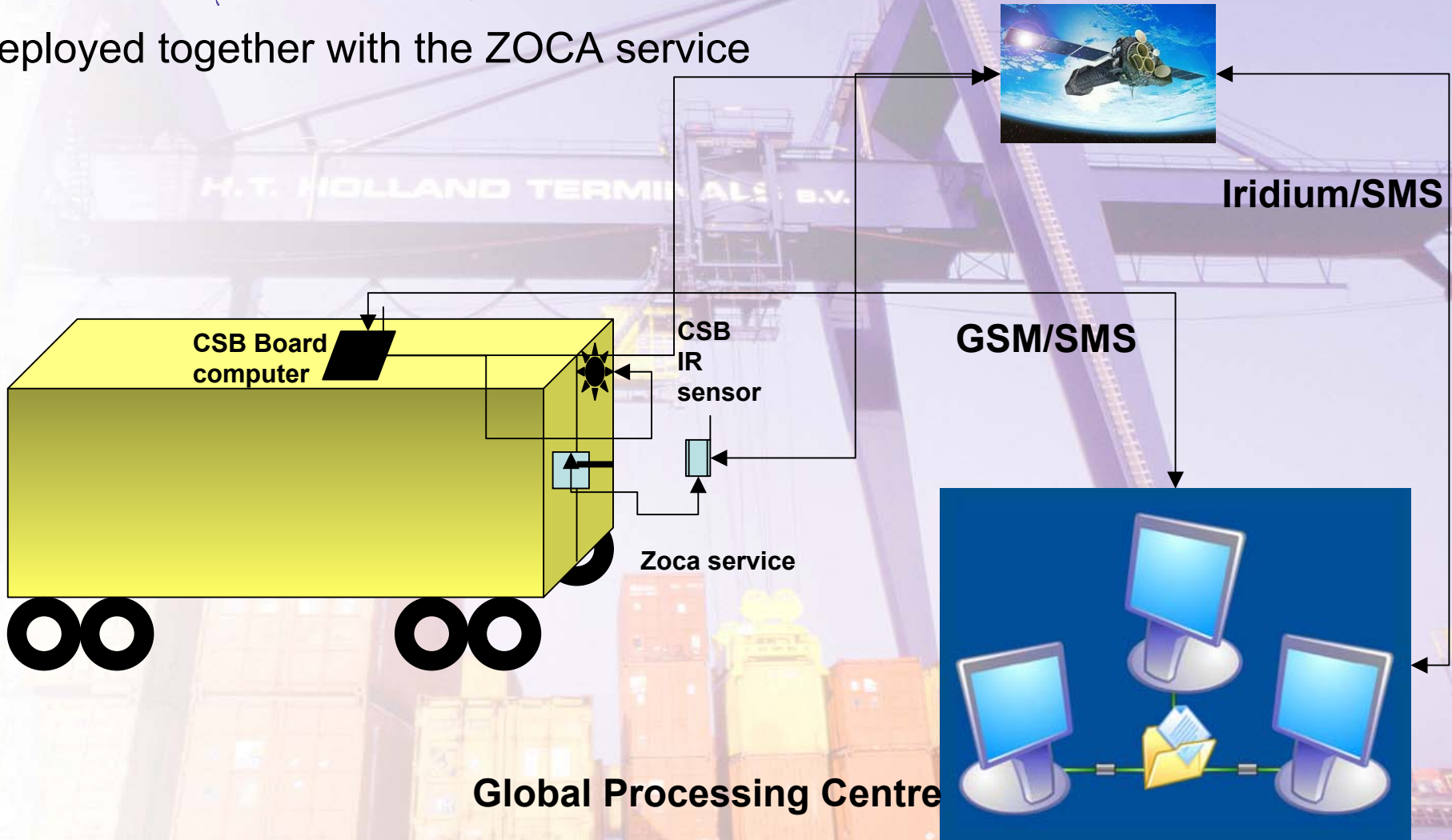


What does it look like on the outside?
Tamper Proof Installation!

H.T. HOLLAND TERMINALS B.V.



OSCH Container Security Box solution employed together with the ZOCCA service



BOSCH Container Security Box solution
deployed together with the ZOCCA service

H.T. HOLLAND TERMINALS B.V.




Track & Trace options

HiLocate 5.4.2 (Zoca@Bosch) Dealer Version - not for resale

File View Admin Advanced

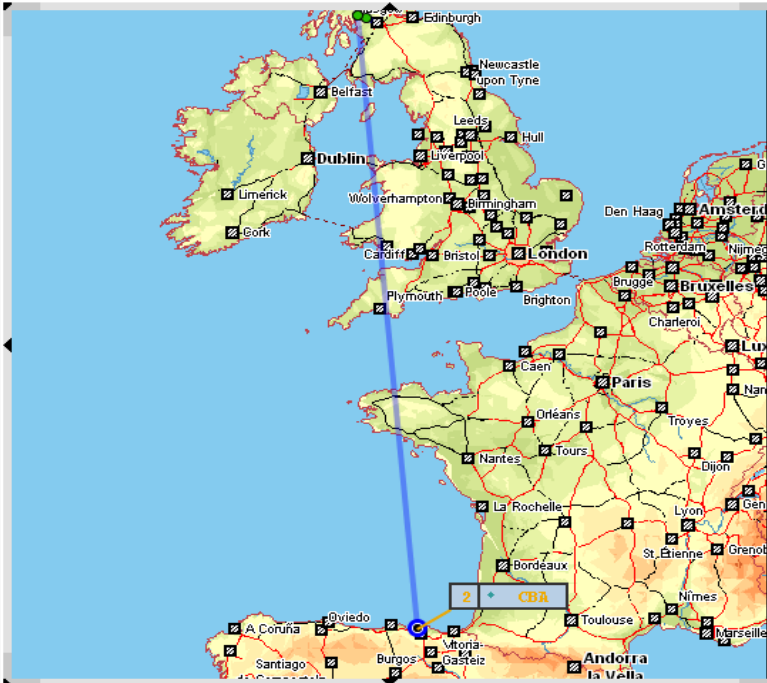
MC Table Events Tracks

MCs loaded: 2 (MCs on alarm: 1)

Name	State	Last position	Last message
ABC	OK	09.05 10:04:12	09.05 10:06:12
CBA		09.05 14:20:16	09.05 14:23:02

File View Follow

1,592.3



0 km 600

Longitude -3°2'27.24"

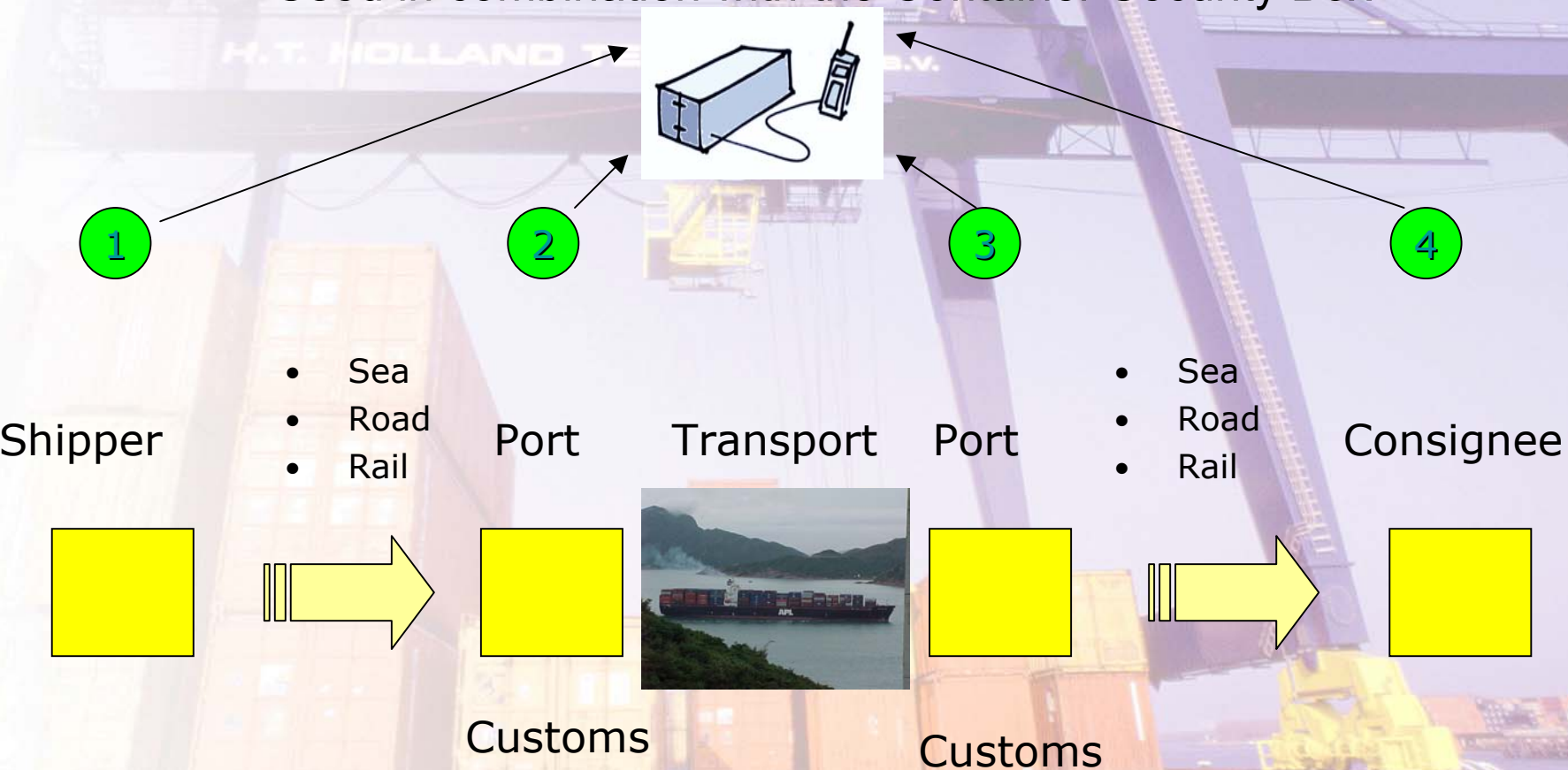
Latitude 43°20'40.20"

Zoca: CBA (261)
 Rec/Rep cycle: 3600s/1440m
 MC phone: +4915117452612
 Emergency phone:
 Private phone:

start Outlook Ex... C:\Documents... HiLocate - Mic... HiLocate 5.4.2... Document1 - Mi... 9:38 PM

ZOCA offers ease of use:

Control during the entire process including Track and Trace when Used in combination with the Container Security Box



Advantages & benefits for Customs, Shippers & Carriers:

- Audit trail on opening/closing and track&trace will decrease pilferage and insurance claims considerably for all parties involved**
- Audit trail available for Customs & Excise authorities real time**
- The offering will increase carriers share in customers transport contract, so customers will be able to negotiate with carriers for secure transport facilities
- Provides high tech security service for high valuable shipments

Advantages & benefits in general:

- Compliance with international rules & regulations for secure transport**
- Improvement / add on to several protocols (TIR/BoL/CSI)**
- Possibility to insure specific valuable cargo again (lower premiums)**
- More efficient logistical process**
- Customers are satisfied (got what they wanted, intact and in time!)**

The ZOCA Business Case:

- Equipment is free for Shipper and Carrier
- Pricing is based on “per trip” basis, varying on frequency and number of containers used
- Possible premium for ZOCA if ROI / operational savings exceed expectations e.g. Insurance premium discount, decrease in pilferage

The ZOCA Business Case – continued -

-Carry out feasibility study, business case, including cost/benefits analysis (include investment, depreciation, cost of security/ ROI) will provide acceptable “price per trip” business model

Products and documentation provided:

-Business process impact review

-Minimum of 1 pilot project recommended (at no additional costs)

-Evaluation Report

-Roll out strategy fit to customers needs

Some of the highlights in 2004 & 2005

- Dutch customs technical company seal approval in March 2004
- ZOCA achieved IRIDIUM LLC Value Added Manufacturers status in June 2004
- Pilot successfully executed in July 2004 from Eastern Europe (Poland) to Eindhoven, Netherlands with Philips Consumer Electronics & APL
- New pilot in November 2004 – May 2005 with world leader in global liquor import / export company DIAGEO, deploying 20 containers from Glasgow - Madrid

Some of the highlights in 2004 & 2005 (Continued)

- ZOCA published articles on Container Security in Cargo Security International (February '05 issue) and TransSec magazine (June '05 issue) and Safety at Sea (Lloyds, May)
- ZOCA and NEN (Dutch national normalisation institute) hosted ISO TC8 meeting in Delft, The Netherlands in April
- ZOCA invited by Dutch Ministry of Finance to participate in Green Lane trial with Philips Lighting and DHS end of April
- Met with US DHS Under Secretary McQueary (Technology & Science) at invitation at the Rotterdam Port Authority, 25th of May

ZOCA will align with new security initiatives:

- IMO ISPS
- American Customs CSI, CT-PAT (Green Lane pilot candidate)
- New EU legislation (EU 725/2004) and the (upcoming) directive
- New ISO guidelines for containers and safety management systems (technical committee 8 and 104) (ZOCA is a member of both committees since December 2004)
- ZOCA is an affiliate member of the Container Owners Association
- Possible back up for new TIR digital “carnet”, ZOCA will present its service to the TIR convention in Geneva in June 2005

Some of the highlights in 2004 & 2005 (Continued)

ZOCA is engaged in (commercial) negotiations with (amongst others):

- Imperial Tobacco (possible pilot project)
- BAT
- Intel (possible pilot project)
- Philips Lighting (possible “Green Lane” pilot project)
- TOYOTA
- Sony Logistics Europe
- AON (insurance)
- AIG (insurance)
- TAPA EMEA
- TNT/Wilson
- Evergreen
- K-Line
- APL

Some of the highlights in 2004 & 2005 (continued)

- ZOCA sponsors objective academic research on costing model for deployment
- ZOCA joins Port Security Combination NL (ISPS implementation)
- ZOCA joins ISO TC 8 & 104 in December 2004
- ZOCA demonstrated to CSI & US Department of Homeland Security in March 2005 as front running innovative marine security technology
- ZOCA will present to TIR Working Group on Transport meeting in Geneva on June 15th, 2005

H.T. HOLLAND

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