### **BLOCKCHAIN & BIG DATA:** THE FUTURE OF BRAND PROTECTION OR HYPE?

Mike Tobin, DSS Jim Reiman, Sun Chemical January 31, 2018







working for you.

## **THE ISSUE**

Brand protection strategies & tactics were developed to combat a nuisance level problem- not a \$960 billion plague

Counterfeiting was often confined to national borders with small time criminals as perps

IP wasn't out in the open nor were advanced reproduction technologies readily available

**Online markets didn't exist to create a massive addressable market** 

\*OECD/EUIPO, (2016). Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact, OECD Publishing, Paris

### **ADAPTING BRAND PROTECTION**

With new threats & growth in counterfeiting brand protection must evolve New tools are necessary with technology based solutions providing the most obvious path

Less control of IP & explosive growth of online markets mean passive BP tactics create tremendous exposure Solutions must fit today's supply chain where multiple parties are involved from manufacturing to distribution

# **LEVERAGING DATA**

Connectivity has democratized knowledge so actions previously restricted to internal stakeholders can now be shared. *i.e: Product Authentication* 

With always on connectivity business systems have moved to data driven models because so much information is now captured. *aka: Big Data* 

Since data is now the main asset the open framework which can be supported creates tremendous new possibilities *eg: Systems integrated with partners* 

# **REACTIVE TO PREDICTIVE**

### **REACTIVE MODEL**

#### Enforcement

- Investigation
- Interdiction
- Internally Focused

#### Issues

- Not Scalable
- International Constraints
- Risks Customer Trust
- Costly

# A DATA CENTRIC APPROACH

SHIFT FROM REACTIVE TO PREDICTIVE REVOLVES AROUND THE USE OF DATA TO VALIDATE PRODUCT AUTHENTICITY.



Aggregated Data

Product is authenticated based on algorithmic risk analysis engine with both data from marking, associated data, & historical data

0.00	C Report Prove 1			A	8 mm
1000					
-	-	aller her		Los Maria Cart	
And in case	_				
instance of		And Address	2.2	Contract to the second	Date: - and
(maintain)	second .	And Address	41.41	and a second second second	contract.
	-	dance descent			a. mar.
and the second	interest in	Including Stationers	10.0		The second secon
hadren and	const.	dance burnings	44.49		inera risetti
and the second second	ter a	Carrier Manhoose	-	In case of the local division of the local d	- Represe Taxas, Taxas I constrain
	man.	Annual Residences	41.0	1000 B 1000 B 1000 B 1000	man conte
I searched in the	times ;	- Carlos Martineses	41.4	proprieta de las	and a second sec
ALC: NO	_				
planeters.	104	Rot Permitte	41.4	2.46.0011.0.0018.00	
Contraction of the	Test to	And Participa	11.0	2 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mar Ind
10000	0.04	mai factado-	-	1.4.00.04.0.0	
Instance of	Det U	the Particular	41.4	(1-4x) (0) (1-2x) (1-4x) (0) (4x)	Bank that
index- set	100704/D	the farmers	44.44	and the second s	And by York, Addah company
Sector and	tiples -	and downed	10.10		April 148, http://www.
(and a descent of the second s	Name -	Mark (Normality	97.0		Server tool
ALC: NO.	100	Mark Parchaster	10.0	to depend on the second	a mon
		their devices.	-		dependent to an a statut a conserva-
panets -	100.00	the ministe	41.6		darrer telle
Aug. 10.11	Aug 10-	Man April April 1	41.0		dagend loads
The second second	100.00	All Avenue	10.0	1.000	Income loss
		and the same		1.0000000000000000000000000000000000000	tertiti canna
(period)	10.00	ALC: NOTION	10.01	100000000000000000000000000000000000000	1000 000
	100.00	the street			
Jacobia - Maria	classes.	the bullet		100000000	Appropriate limits continue
-	Sec. in	Non factories			Starter Line
100.000	Barry .	The Person of	41.4	100000000000000000000000000000000000000	the second se
And and a second	Transfer Contraction	Mark Rennerth		1900000000	101.04

**In-field Authentication** 

#### **Data Capture**

Archiving of data from authentication activities is saved which strengthens the overall analysis so accuracy improves over time

(					
the A Description of some			1.1	8 ( Perc)	
and the second se					ALC: NO.
ALC: NOT THE OWNER OF	- Sector	1011101		a station of the state of the	100-100
anappe-	_				
0.000.00	177440	COLO BATTANO		1000 000 110 00 000 000	Transfer or processor
And in case	and the second s	Intel Spillings	10.0	provided to developed	Table Analy
	- 0-1	man destaurs		1111100-1-1-00-00-000	10.000
-	(and )	Incom Stationer		Distance in spirit and	Characterization -
	(and the set	inter Bartlands		and the second second	Ingly Terms
instant.	Bas 201	including including	-04-18	PUTTING & MUSICAR	Bearing state, Insuitaneers
1	date:	Tank Bullion		1000 BOLD BOLD BO	Control 1 ( pressore)
Antonio	- Indahar	Incide Manhooder		100000-000-00	
ALC: NO. OF	-	-	_	_	
10000	-84	And the facility		1-0-01-1-0-0-0	- 18-58ad
And and a second second	(Instant)	And fair faile	10.0	and the second second	1000-last
1.0	dates in the second	And Replacing	-0.14	11000033-000	proget a positive
Address of	Bar 10	the locate		LOUISIAN.	0.00 M
	0.000	the during the		to device a second	Barris new home-second
in second	termine .	ALL DUTING		a management	Galatic land, haddingstory
0.000	(and and	And increases		to depend to compare	former law
1000	- 100	and Applement	10.0	100000.0000	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
4.000	-	Mail Partnerski		1000 0000 12-00 00-00.	Report Date, 19 51 - contra-
me-this	1000.007	that iteringing	- 84.00	A REPORT OF A REPORT	States Late
And and a second second	1004-00	And includes	-00.48	1-0-0413-1-06149-045	dependence.
Address	day inc.	And furningly		100000000000000000000000000000000000000	Serve See
414.178	84.0	this is included	-44.14	1-10-10-1	dealers and the
window	Pariset.	The locate		100010-000	1000 0000
	(mainteen)	and includes	-00.10	1-02-021 02 02	
and the second	and and a second	And Periods	05.48	1.000000010.0000000	formed lank, finally company

# **ALGORITHMIC RISK ANALYSIS**

02

X+

\y

(a+b)2= a2+2 abt

**Existing BP technologies & tactics revolve** around validating a mark or packaging

**Risk analysis will look at these factors and** others to generate a score which will determine authenticity

2/13

(10)

×2 = 1

#### 27115005

This presents problems because if its printed, it can be counterfeited

\$ (0, 500 ) + 00 / 6.

Approach is more difficult to counterfeit because it isn't any one factor but a wide range of data used to make the determination = (a

Algorithmic analysis offers a much stronger approach because mark/packaging is only one single factor

Additional factors can include intended destination, product, date from manufacture, authorized outlet, propensity to counterfeit, etc.

Added benefit is the use of existing bar codes or other marking

## BLOCKCHAIN

### What is blockchain?

System of distributed ledgers
used to aggregate data across an
open network

- Strong encryption & data replication mitigates many threats from hacking which might otherwise exist Blockchain in supply chain applications is built on two themes

- Data: The idea that currently lots of data is being generated but not captured or used

 Openness: Unlike a proprietary system, a blockchain deployment would be built upon the idea of openness for multiple parties

### **BLOCKCHAIN CHALLENGES**

### **Physical to Digital**

- Blockchain was created for a purely digital good
- Challenges exist in transporting data from the physical world into a virtual one

How much process disruption is the supply chain ecosystem willing to tolerate?

- Most companies have limited control over their supply chain and lack the institutional will to dictate change

- Can incentive be created to facilitate process change?

### **BLOCKCHAIN IN BRAND PROTECTION**

#### **Data Archiving Mechanism**

- Blockchain in itself has no value in brand protection, it's merely a network which connects related companies

- Data is at the center of everything whether on a blockchain network or not

#### **Utilizing The Data**

 Data can be accessed and used by supply chain personnel, law enforcement, & consumers

 Used by brand to provide authentication, help in takedowns, & understand developments in the supply chain

# **FACTORS TO CONSIDER**

### **1. DATA IS EVERYTHING**

Even if not being used right now, collecting & storing data will pay dividends in the future. Find ways to implement & collect data in an iterative process, trying to create from scratch is doomed to failure.

### **2. MOVE TOWARD PREDICTIVE**

Any new BP initiative should be moving towards a predictive model. Passive is ineffective & a waste of resources.

### **3. BLOCKCHAIN?**

Shows promise but challenges will delay adoption. Data is still key whether it's gathered in a blockchain network or not.

## **CONTACT INFORMATION**

MIKE TOBIN VP Sales & Marketing

Phone: 703-328-1801 Email: mtobin@DSSsecure.com

JIM REIMAN Director Sales

Phone: 860-491-0042 Email: james.reiman@sunchemical.com