

APPLIED INTELLIGENCE: **Using information that isn't there**

Michael Schrenk
Las Vegas, Nevada

@mgschrenk

Please note that this set of slides is intended to accompany a live narrative and not intended to stand alone.

APPLIED INTELLIGENCE: Using information that isn't there

In this talk, you will learn,

- 1.) How we leak data via meta data
- 2.) How meta data becomes intelligence
- 3.) How meta data is turned into competitive intelligence
- 4.) How I use competitive intelligence in a online retail business I own.

APPLIED INTELLIGENCE:

Using information that isn't there

**You'll learn how we collect and use
Competitive Intelligence to:**

- 1.) Tell the difference between a bad month and a collapsing market.
- 2.) How to gauge the health of our industry
- 3.) Know how much to pay for inventory
- 4.) Know how much money our competitors are doing, and how they do it.

APPLIED INTELLIGENCE:

Using information that isn't there

For example
and use

Competitive Intelligence
takes the guesswork
out of business

lect

1.)

nth

2.) How to gauge the health of our industry

3.) Know how much to pay for inventory

4.) Know how much money our competitors are doing, and how they do it.

APPLIED INTELLIGENCE:

Using information that isn't there

(Gross) overview of intelligence types

1.) Business Intelligence

Inward looking, operations-based

2.) Military Intelligence

Generally doesn't translate to business,
with the exception of OPSEC

3.) Competitive Intelligence

Outward looking

Shouldn't be limited to Marketing Dept

APPLIED INTELLIGENCE:

Using information that isn't there

Why hackers collect better intelligence than Marketing Departments

1.) Remote

Creates new targets

2.) Anonymous

Reduces exposure

3.) Automated

Reduces cost, makes trending possible

4.) Actionable

Shouldn't be limited to Marketing Dept

APPLIED INTELLIGENCE: **Using information that isn't there**

Intelligence is only useful when it is actionable.

NSA and INTERPOL have shown us that actionable data is more important than mass volumes of data

APPLIED INTELLIGENCE: **Using information that isn't there**

The faster you can act on intelligence the better.

From a Competitive Intelligence standpoint, it's no longer intelligence if known by everyone.

APPLIED INTELLIGENCE:

Using information that isn't there

So, most of the really good intelligence is

Context based
Requires interpretation
Is Meta Data

APPLIED INTELLIGENCE: Using information that isn't there

*“Nobody is listening to your telephone calls.
That’s not what this program is about...”*

*They’re not looking at names and they’re not
looking at content, but **sifting through this so-
called meta data...**”*

*Barack Obama
On NSA surveillance
June 7, 2013*

APPLIED INTELLIGENCE: **Using information that isn't there**

“We kill people based on metadata.”

Michael Hayden
NSA Director (retired)
May 11, 2014
Johns Hopkins University

APPLIED INTELLIGENCE:

Using information that isn't there

Meta data that the NSA collects

- The originating phone number
- The destination phone number
- The time the call was placed
- The duration of the call

APPLIED INTELLIGENCE:

Using information that isn't there

This meta data alone reveals insights into

The hierarchy between callers

The relationship between callers and events

“Burner phone” detection

APPLIED INTELLIGENCE:

Using information that isn't there

Meta data isn't the data itself, but it is data that describes data

Meta data provides context for data

Often meta data is more intelligence-rich than the data itself

APPLIED INTELLIGENCE: **Using information that isn't there**

You could say that meta data is the data of convenience

Unlike the audio phone calls, meta data is numeric and easy to quickly process

APPLIED INTELLIGENCE:

Using information that isn't there

Meta data is every where and it often goes unnoticed.

Let's look at some examples.

Facebook Is Most Likely Tracking Your Rainbow Profile Picture

By [Chris Smith](#) on Jun 30, 2015 at 8:15 PM

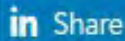
SHARE THIS STORY



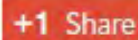
Tweet



Like



Share



+1 Share



Submit



Image Source: Gizmodo

Facebook Is Most Likely Tracking Your Rainbow Profile Picture

DATA: Who changed their profile picture

By Chris Smith on Jun 30, 2015 at 8:15 PM

META DATA

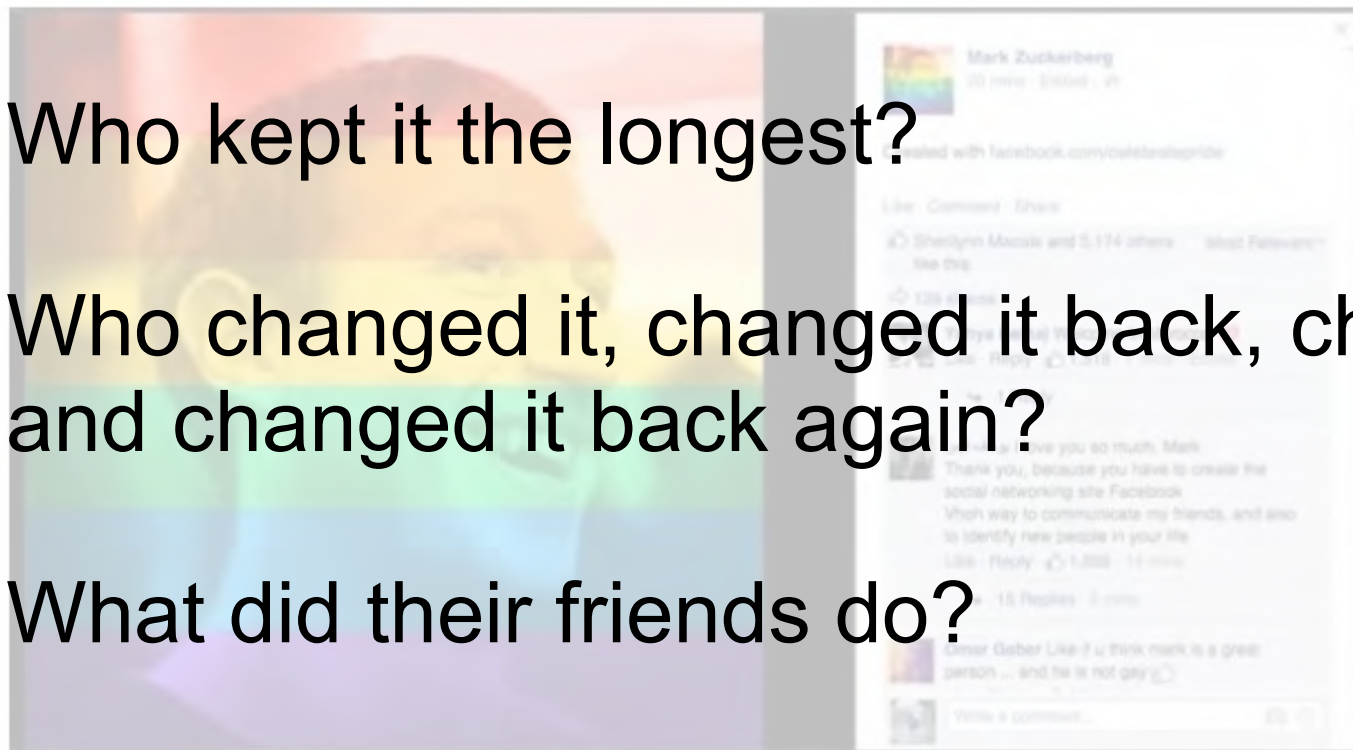
How quickly did they change profile picture?

Who kept it the longest?

Who changed it, changed it back, changed it, and changed it back again?

What did their friends do?

Who changed back after this story broke?



Sequential Numbers



Sequential Numbers are everywhere
Vehicle Identification Numbers
Social Security Numbers
Ticket Numbers

In most cases, what's needed are **unique** numbers, not **sequential** numbers.

Often caused by **exposing DB table indexes**

Sequential Numbers



The Social Security Administration nearly exposed an entire generation to identity fraud.

Sequential Numbers



XXX – XX – XXX
AREA GROUP SERIAL

Area State, Territory or US possession (*range*)
Group Used for administration purposes
Serial Incremental (*with a few exceptions*)

SSN coding 1935 through 1972

Sequential Numbers



Originally used to track income for the sake of calculating retirement benefits

Found it's way into the tax system

Became the de facto identifier for:

Student IDs, Utility service, Employee IDs,
Credit reporting

Sequential Numbers



Social Security Number Trivia

If asked for your SSN, the SSA recommends you ask what law requires it's use

SSNs from Micronesia, Marshall Islands and Palau, overlap SSNs from NH and ME

Sequential Numbers



Social Security Number Trivia

Replacement cards are limited to 3 per year or ten per lifetime.

SSNs become public at death (*creating a lot of SSNs for security researchers*).

Sequential Numbers



The tax laws changed in the early '80s

Parents needed a SSN for each dependent.

Prior to this, citizens usually didn't get a SS Card until their teen years.

Parents, because of the new tax law, commonly filed for SS Cards for all of their children at once.

Sequential Numbers



Since parents filed all their children's applications at the same time, they received incremental SSNs.

If one SSN were known (from one of a multitude of places, including the Death List) the SSNs of the siblings would be easy to guess, making an entire generation susceptible to identity fraud.

Bubble or just a bad month?

My girlfriend and I tried starting several online businesses, but without much success.

We finally found a collectibles niche that looked promising.

Our month-to-month sales were increasing about 150% for the first six months, or so from our main sales channel, which accounted for most of our sales.

Bubble or just a bad month?

Fueled by our early success, we started investing more heavily in inventory and equipment.

Just as everything was going well, we ran into October, and had **ABBISMAL** sales on our main sales channel.

Like many collectibles, they run in cycles and bubbles.

Were we in a bubble, or did we just have a bad month...?

Bubble or just a bad month?

Given our investment, we needed to find out why our sales were down.

As Betty read sales figures, I entered them into a spreadsheet for analysis. At about the same time, we both noticed that the order numbers were incremental. If they were sequential we could figure this out.

Bubble or just a bad month?

We found two orders placed closely together, and they were sequential.

Bubble or just a bad month?

Given that:

- 1.) Orders tended to be roughly the same value
- 2.) We believed that our prices/orders typical.

We were able to:

- 3.) Approximate the channel's gross monthly sales.
- 4.) Conclude that the channel/market was strong.

Our business rebounded the next month.

Bubble or just a bad month?

This has become something of a game for us.

We now:

Chart the entire sales channel's month-to-month gross profit & compare to our own.

Make strategic purchases from our competitors to manipulate markets.

Monitor their server response times to estimate peak traffic times

Other competitive intelligence techniques we use

We use eBay to build supply and demand curves

We aggregate our buying sources with our sales channels and let software show us buying opportunities.

We track our competitor's inventories, record their sales,

know which ones are successful,

Study what they're selling