Context Computing, The Next Mega-Trend

IBM InfoSphere Identity Insight
Portfolio Overview

Why Data Matters: Context Reveals Answers

https://www.youtube.com/watch?v=ipxRA7ira4c

Jeff Jonas, IBM Fellow, Chief Scientist, IBM Context Computing

Agenda

- *InfoSphere Identity Insight*

- *Use Cases*

- *Global Name Management*

The General Elevator Pitch for IBM Identity Insight

- IBM Identity Insight uses **Context Accumulation** methods to detect like and related entities

  - across large, sparse, and **disparate** collections of data,

  - that is both **new and old** data,

- to **perform analytics** on events, people, things, transactions, and relationships.

- Compared to manual methods that are labor intensive and costly,

  Identity Insight enables organizations to make better decisions, faster

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"Who is Who?"

Recognizes the single identity who is made up of multiple records

Mr. Joseph Carbella	**Mr. Joey Carbello**	**Mr. Joe Carbello**	**Mr. Joe Jones**
55 Church Street	**555 Church Ave**	1 Bourne St	APT 4909
New York, NY 10007	**New York, NY 10070**	Clinton MA 01510	Bethesda, MD 20814
Tel#: 212-693-5312	Tel#: **212-693-5312**	TEL#: 978-365-6631	Tel#: **978-365-6631**
DOB: 07/08/66	DL#: **544 210 836**	DL#: **544 210 836**	DOB: **09/07/66**
SID#: 068588345	PPN#: 086588345	DOB: 07/09/66	
DL#: 544 210 836			

Close match

Exact match

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Sees beyond a single identity into their network of associates

Joseph Carbella

Arrested while driving an automobile owned by…

Tom Sinclair

Who listed the same address as…

Victor Martin

Suspect in the armed robbery of a state armory.
Who shares a dialed phone number with…

Joshua Clark

Listed on consolidated watch list for funding terrorist activities.

InfoSphere Identity Insight creates intelligence for fraud and threat applications

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Finance and Insurance

Intelligence & Law Enforcement

Government Services

Fraud Reduction
Uncover fraud rings and fake identities across multiple channels

Financial Crimes
Prevent fraud from insider and external threats:
- Account Opening
- Cyber crime
- Anti Money Laundering
- Watch List Checking

Governance/Compliance
Regulatory for finding and reporting suspicious activity
- KYC/CIP
- Sanctions screening
- OFAC/PEP
- Fact Act Red Flags

Identity Analytics
Match identities and relationships of person's of interest across 100s of data sources and billions of records.

Global Master Name Index
Persons of Interest index across the department systems

Investigative Link Analysis
Explore suspect's relationships buried in myriad data silos

Insider Threat Mitigation
Recognize and respond to potential insider and collusion threats before damage occurs

Program Integrity
Verify citizen identity upon initial interaction for more accurate, determination of eligibility for one or more social programs

Payment and Tax Fraud Control
Reduce improper payments where citizen is applying for mutually exclusive benefits. Identify individuals who are evading tax liabilities.

Eligibility Verification
Background check program applicants with watch lists and other data

Benefit Fraud (Medicare/Medicaid)
Uncover hidden relationships between the citizen and other benefits recipients that would negate/reduce benefits .

Case Study: State of North Carolina, Detecting and pursuing Medicaid fraud

The Need:

North Carolina faces a significant exposure to healthcare fraud and abuse. The current business process and technology used to fight fraud, waste, and abuse in Medicaid is ineffective – producing only around **$25 million annually** in recoveries. This leakage, combined with a significant state budget deficit, motivated the state to aggressively pursue cost takeout projects.

The Solution:

The state implemented a comprehensive fraud analytics solution, based on IBM technologies. The IBM solution examines claims for suspicious patterns of behavior, quickly identifying providers and recipients for investigation. In addition, the solution has identified organized criminal rings and collusive behaviors..

Benefits:

- **$70M in potential recoupments** identified in the first 12 months

- Identified **$191M in suspect Medicaid claims** from 206 outpatient behavioral health providers in 2012.

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
www.ncdhhs.gov

"I think we are going to save tens of millions of dollars."

– Beverly Perdue, Governor State of North Carolina

Solution components:
- IBM Fraud and Abuse Management Solution
- InfoSphere Identity Insight
- IBM Global Business Services: Business Analytics and Optimization
- IBM Software Group: Lab Services

For more information, see the YouTube video at: *http://www.youtube.com/watch?v=Yqf9FBGZfbw&feature=relmfu*

i2 Analyst's Notebook and Identity Insight Case Study
Toronto Police Service

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Challenge

- Spending significant time and expense manually building linkages between various data sources

- Required a way to automatically uncover relationships that may represent potential cases of duplication

- Wanted to uncover potential leads on active and inactive cases, and uncover other facts that previously may have been hidden.

Solution

- IBM InfoSphere Identity Insight integrated with IBM Cognos and i2 Analyst Notebook

Business Benefits

- With Analyst Notebook and pre-integrated data from Identity Insight, deep investigations can be performed on lesser crimes and not just major crimes giving **one person the ability to do in minutes what it would take multiple data clerks to do in hours or days**

- Data is resolved and related automatically every hour. Currently processing on average 7000 new records per day.

- 40% compression rate for identities in their data as well as relationships and linkages that they never knew before. (In one instance they identified two members from different gangs sharing the same phone number).

Case Study: Insurance Bureau of Canada

Challenges

- Constrained by the manual and ad hoc approach to detecting and investigating potential fraud

Solution:

- IBM i2
- IBM Identity Insight
- IBM SPSS Modeler.

Customer Value:

- **In weeks** verified two criminal fraud rings **that took years** using manual methods

- From limited POC data found 2,000 automobile claims that were potentially fraudulent and had a value of Can$41 million

- **Found previously unknown** suspect fraud ring

Case Study: MoneyGram International

Fraud behavior, a thing of the past..

- 230,000 locations in 190 countries
- Pressured by multiple layers of international **compliance regulations**
- Existing infrastructure **wasn't flexible**
- Rapidly **changing regulations** and constantly **evolving fraud** tactics

MoneyGram protects its customers

- Protects thousands of customers from losing money
- Stopped over **US$200 million in fraud** over 18 months
- Increased by **40%** ability to interrupt potentially fraudulent transactions
- Realized **72% reduction** in consumer fraud complaints

Outsmarting fraudsters with better technology

- InfoSphere Identity Insight

    identify the covert

- Alpine Consulting

    implement with experience

- InfoSphere Global Name Management

    uncover name deception

- InfoSphere DataStage

    cost effectively transfer data

"By using InfoSphere Identity Insight to build a single source for name resolution, we can create synergies between fraud, anti-money laundering, loyalty and possibly even watch list interdiction" — Ted Bridenstine, Systems Development Manager, MoneyGram International

Case Study: Cisco Systems, Inc.

- **Business Need:**
  Cisco Systems, Inc. (Cisco) sells its products through resellers in many countries, each with its own competitive pricing structure. The Cisco Fraud and Compliance group reviews thousands of transactions to identify anomalies and clues indicating when a reseller buys the Cisco products in one country and fraudulently resells the products in another in violation of Cisco's reseller agreement. Fraudulent transactions such as these can be costly for the company. Cisco sought a solution to identify and stop fraudulent purchases before they impacted the business.

- **Solution:**
  IBM SPSS Modeler software to perform data-mining activities on large data sets
  IBM InfoSphere Identity Insight and IBM InfoSphere Data Explorer software provide Cisco with discovery-navigation and search tools

- **Benefits of the Solution:**
  - Identified fraudulent activity resulting in more than **$20 million in savings** in the first year.
  - Can isolate fraudulent resellers, enabling the company to **optimize resource allocation** for fraud investigation.

Anonymous Resolution

- Accelerate knowledge discovery process through inter-agency data sharing

- Clear text information remains only with the data owner so that privacy and security controls are maintained

- Personally Identifiable Information (PII) is encrypted through a one-way hash that results in an irreversible digital signature

- Determines both identities and relationships
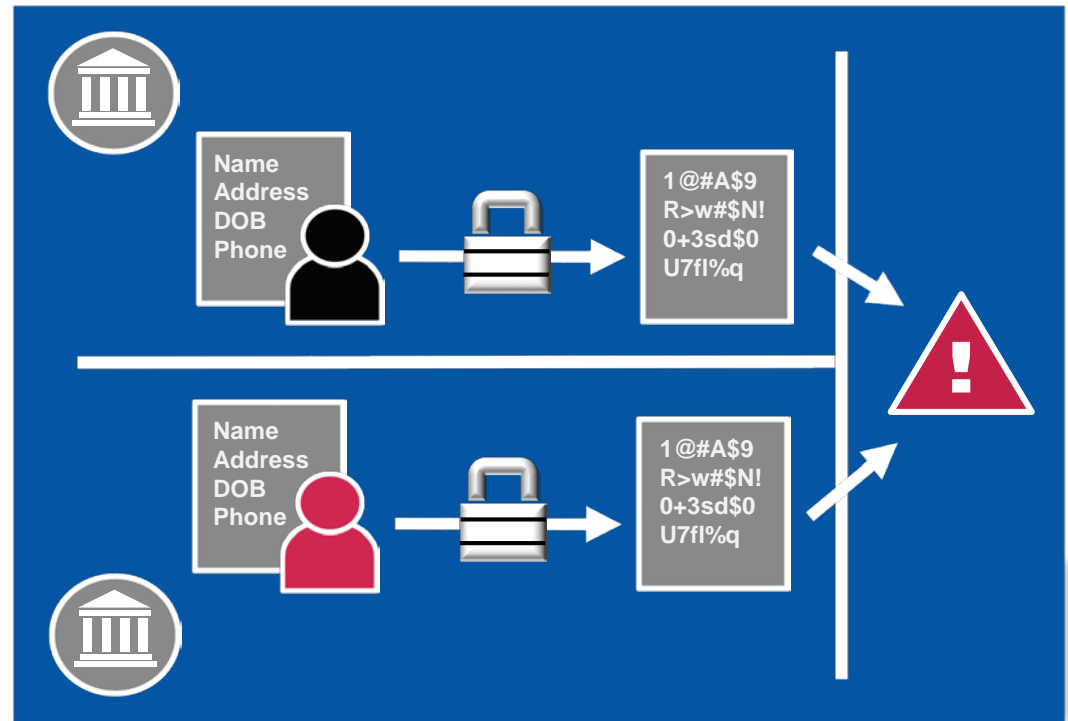
No other commercially available technology allows data used in joint missions to be protected at the originating department before it is co-mingled.

Global Name Recognition

Kat
Cait
Katchen
Aikaterina
Katya
Catriona
Catriona
Ekate
Katrina
Kathy
Casey

Return best matches on name with fewest irrelevant results

- Patented linguistics-based approach
- Relevance scoring - real world usage of names offers unique capability to control false positives
- Tunable false negative and false positives
- Person and organizational names
- Match within and across native writing script

SAFETY ACT CERTIFIED

Example: The Same Name across the Arabic World

When an Arabic name transliterated to Roman characters, the name takes on many forms depending upon the rules adopted by specific countries
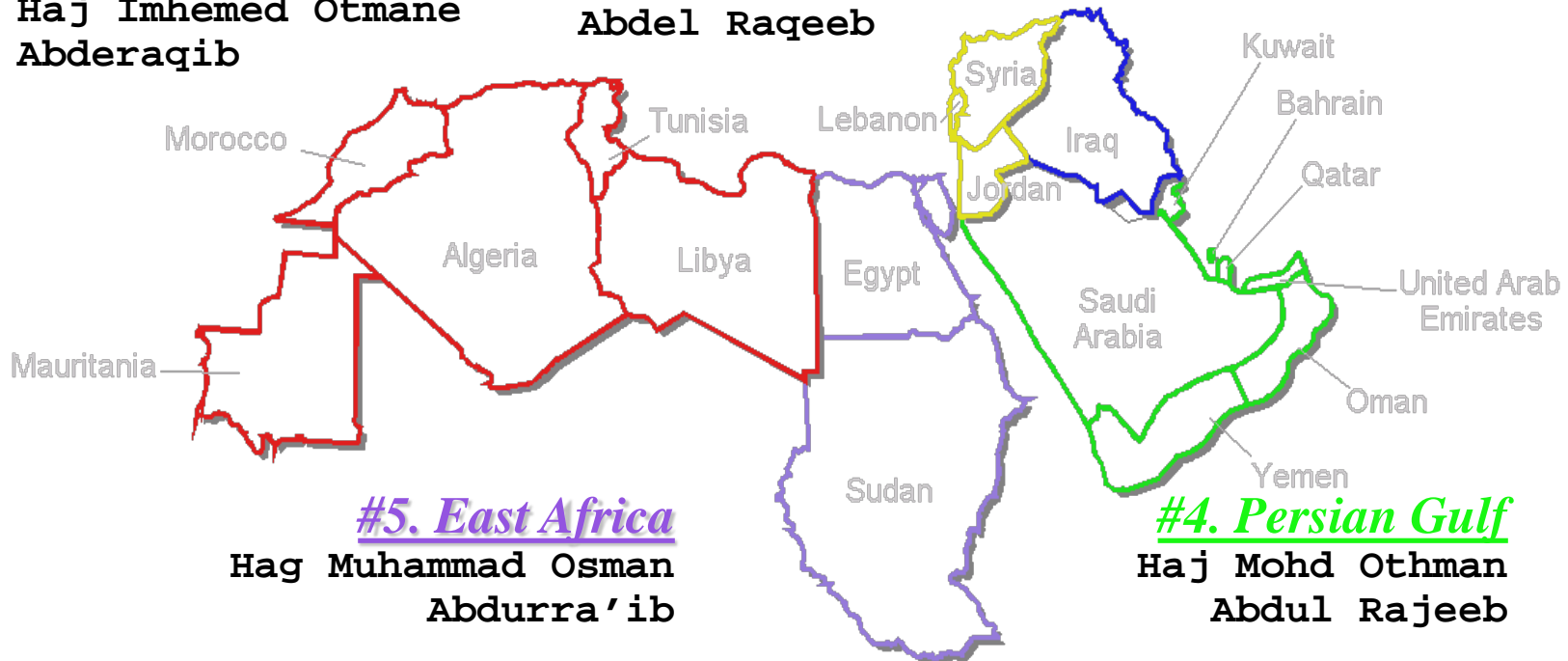
حاج محمد عثمان عبد الرقيب

#3. Iraq
Hajj Mohamed Uthman
Abd Al Ragib

2#. Levantine
Muhamad Usman
Abdel Raqeeb

1#. West Africa
Haj Imhemed Otmane
Abderaqib

#5. East Africa
Hag Muhammad Osman
Abdurra'ib

#4. Persian Gulf
Haj Mohd Othman
Abdul Rajeeb

Questions?

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