



***ICAO Ninth Symposium and Exhibition on MRTDs,  
Biometrics and Border Security 22-24 October 2013***

***Integrating security and facilitation  
in ABC: an industry perspective***

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## *Agenda*

- **ABC snapshots**
- **Reviewing the Pillars**
- **What is at stake: Border Control Use case**
- **Stakeholders and Social Networks**
- **KSF for extended ABC deployment**
- **Caveats, open issues and conclusion**



## ABC Snapshot I

- 2 schools with various goals but security in common
  - e-MRTD-based → *facilitation - efficiency* → *political*
  - RTP based → *recognition - convenience* → *business*
- 🔔 They share premises & should complete, not compete
- Various Biometrics (3 and +)
  - Face (Portugal, Australia)
  - Finger (Serbia, France)
  - Iris (Netherlands, Indonesia, UAE)
- Some countries maintained both types (UK)
- Some RTPs use tokens, some do not
- Some RTPs cost money, some are free (legal reasons)
- Some programs use other MRTDs (e-ID)
- 🔔 Implementation history looks somewhat chaotic
- 🔔 No common golden rules as yet



## ABC Snapshot II

- **Survey courtesy of IATA**

Key Results	Airports	Governments
ABC Program in place	83	32
Fast Track immigration in place	17	12
Intend to have either or both	33	29
RTP in place	n/a	11
Intend to implement RTP	n/a	26

*source IATA 2012*

- **Today exceeding 120 airports, reaching 40 countries**
- **4 continents equipped**
- **RTP became international and intertwined (US - NL ...)**
- **ABC Successful also in multimodality travel**
- **Extremely successful at large scale pedestrian BC**



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## *Are the ABC Pillars safe?*

- **Tokens (MRTD Documents)**
  - From BAC to EAC then SAC
  - Fraud and misuse has already evolved → impersonation
- **Inspection systems**
  - 🔔 **Laggard!!**
  - Still poorly/partly implemented in several large countries
  - ICAO PKD still not enough: certificates need uploads!
- **Evidence of Identification**
  - Breeder documents are a true Achilles Heel
  - Standardization efforts are only beginning
  - Dematerializing is a way forward, but it will take a while!
- **Processes cannot succeed as stand alone**
  - Hub scheduling require total commitment to team work
  - Linkage to the risk assessment chain of Int. Bord. Mgmt.
- 💣 **Border control silos: the ultimate enemy (JBOC as antidote)**



## ***How about the ABC Backbone?***

- **Biometrics**
  - Enrolment, sensor certification and image quality prevail
  - Multiple Biometrics in largest population projects
  - From Border control to secure boarding control
- **Detection Technologies**
  - Somewhat laggard, too costly, detrimental to flow
  - Replacing metal detectors by millimetric wave imagers
  - Detecting LAG's in unopened cabin luggage
- **Best ABC Practices**
  - Progressively developed (eg: by ACI or Frontex)

*[http://www.frontex.europa.eu/assets/Publications/Research/Best\\_Practice\\_Technical\\_Guidelines\\_for\\_Automated\\_Border\\_Control\\_Systems.pdf](http://www.frontex.europa.eu/assets/Publications/Research/Best_Practice_Technical_Guidelines_for_Automated_Border_Control_Systems.pdf)*

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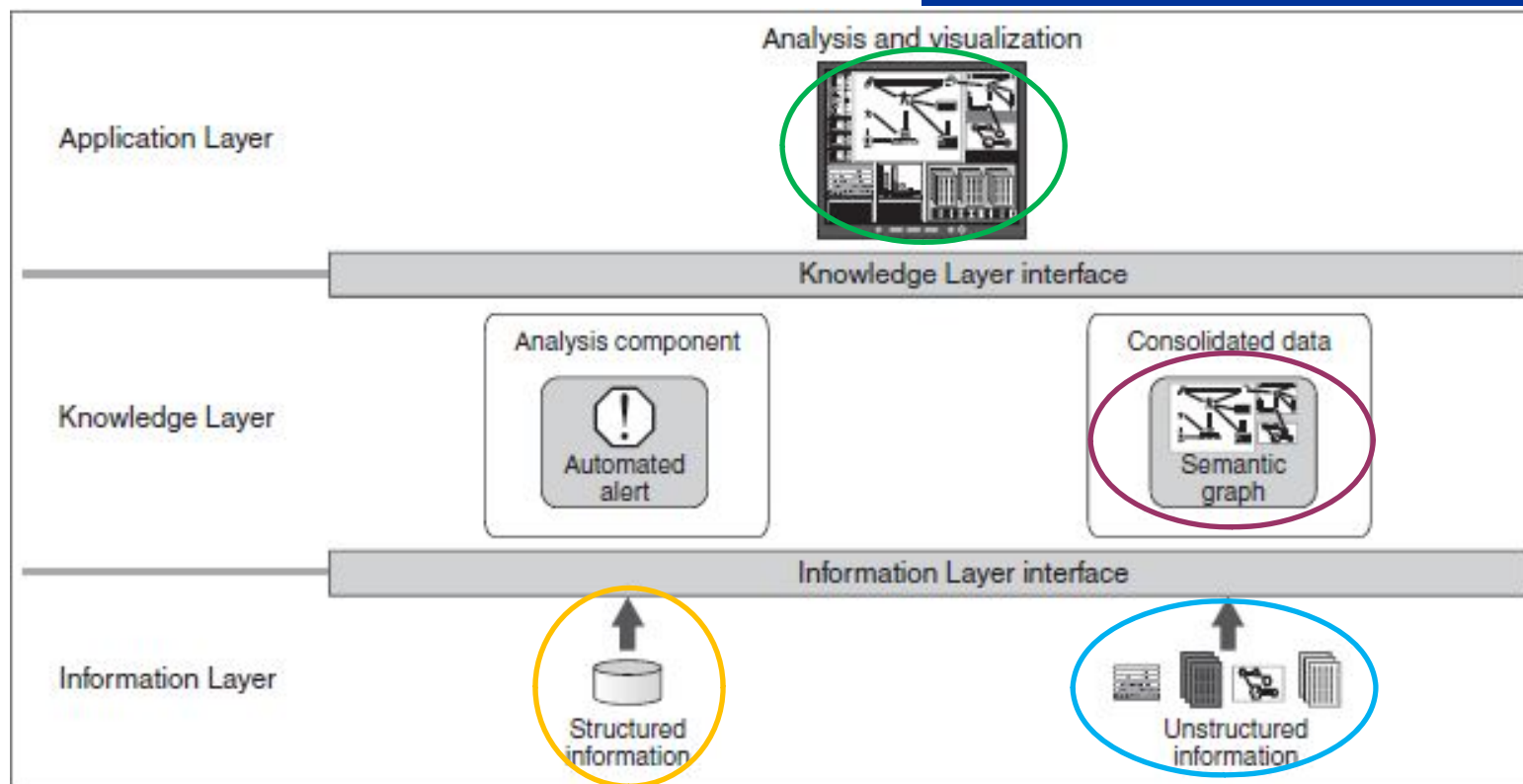
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## ***Border Control Use Case: Global Picture of a Risk based Analysis***



Source: DHS.

- Analysts/JBOC
- Decision Making
- API-PNR-CRS
- Watchlists
- OSINT
- Text mining
- Nat. Gov. Agencies
- Ad Hoc Social Networks

<http://www.gao.gov/new.items/d07293.pdf>



# Data Consolidation & Relationships: Generic Semantic Graph

## At the crossroads

- API
- PNR (CRS)
- DCS
- Nat. Gov. Agencies
- Inter-Agencies - Int'l
- Social Networks
- External Events

ID links (outbound)

Payment links

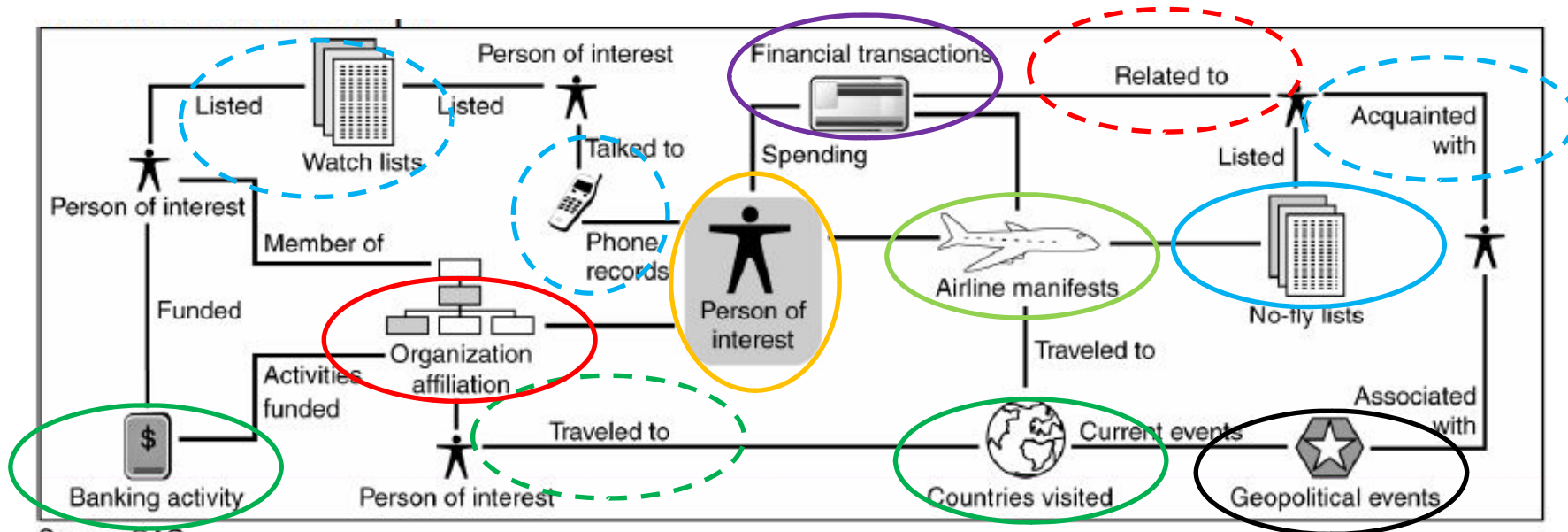
Travel links (with PNR)

Black Lists - SIS-VIS (BMS) - Phone taps

Synchronized, harmonized Intelligence

Big Data or Big-Daddy

Reactive actions



Source: GAO.

<http://www.gao.gov/new.items/d07293.pdf>



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## ***Transportation Security: Stakeholders' large scale mutations***

- **Geopolitical & geo-economical harmonization/stability**
  - **GCC - EU - NA (WHTI) - CARICOM - CEMAC**
  - **Sovereignty over Border Control legislation (migrations)**
- **Winners**
  - **CRS and GDS who acted as cloud precursors**
  - **Shrinking # of Biometrics-savvy System Integrators**
  - **Google penetration in airline reservations and Biometrics**



# Google Shifting Paradigm: multiple Biometrics FR Acquisitions I

2004



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2006



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02-Jan-2006  
LAPD Systems Keep  
an Eye on Crime  
[eWeek.com](#)

30-Nov-2005  
Neven Vision Appoints  
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Its Position as a Leader  
in Mobile Marketing





## Google Shifting Paradigm: FR Acquisitions II

2011

 **pittpatt**

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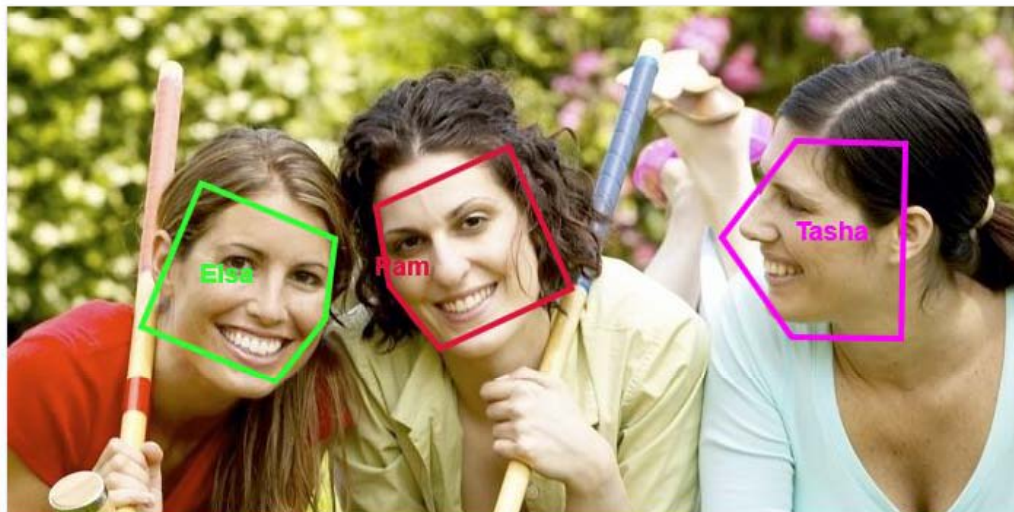
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Detecting Faces



Tracking Faces



Recognizing Faces



**Will we be still able to protect our own image  
warehouse without abuse?**



# Google Shifting Paradigm: acquisition of ITA Software (Orbitz) III

2011

ITA Software  
Innovative Travel Technology

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Latest News

Google has now closed its acquisition of ITA. While it's business as usual for ITA, we are excited to begin work on a better user experience for flight search.

Accovia Renews Agreement with ITA Software  
Accovia Press Release June 6, 2011

ITA Statement on DOJ Approval to be Acquired by Google

> See all News



**Google is becoming the ultimate cloud-based GDS and CRS!**



# Google Shifting Paradigm: more FR & Mobility Acquisitions IV


2012 May

CNET > Mobile Phones > Crave

## Google officially acquires Motorola Mobility for US\$12.5 billion

by Don Reisinger | 23 May 2012 8:30am SGT

1 comments



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2012 Oct.

FILED UNDER *Cellphones*

**Googlerola** buys Viewdle, ups Android's augmented reality and face recognition game

By Michael Gorman posted Oct 3rd 2012 9:17PM







# Google Shifting Paradigm: snapping Waze away from Facebook V

2013 May

Mike Isaac / AllThingsD:

## Facebook Acquisition Talks With Waze Fall

**Apart** – After months of negotiations, Facebook is no longer in talks to acquire Waze, the Israel-based social mapping and navigation startup, according to sources familiar with the matter. – The two companies had been in discussion for a potential acquisition ...



**More:** Computerworld, Mobile Marketing Watch, GigaOM, The Verge, Examiner, AllFacebook, ReadWrite, VentureBeat, CNET, Mashable, Business Insider and Macgasm

2013 June

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## Google-Waze acquisition will be investigated by the FTC



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    - **Pervasive Social Networks**
  - **Threats**
    - **Business model for Legacy airline data aggregators?**
    - **Public to use short term multiple identities, to resist overwhelming Social Networks?**
    - **Data ownership, privacy protection challenges on the rise!**
-  **Stakeholders are playing a musical chair game**
-  **The landscape will be transformed**



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## ***KSF and Pro's towards ABC***

- **Process Owners (Control Authorities)**
  - **Reallocate inspection resources to most important tasks**
  - **Develop usage of Fast Tracks across customs/immigration**
  - **Plan ahead to use additional “locally-smart “ Tokens/e-MRTDs**
  
- **Other Stakeholders (Airports, Airlines, Ground Handlers)**
  - **Promote speedy access to Security and/or Border Control**
  - **Engage as partners in FT programs where Control Authorities perform required background checks for initial enrolment**
  
- **Empowering ABC Practices (Stakeholders & Travelers)**
  - **Pooled resource as last instance in a risk-based approach**
  - **Progressively developed (eg: by ACI or Frontex)**




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## ***Caveats and Con's towards ABC: which Criteria and Exit Strategy?***

- **Performance criteria and ROI for ABC systems need to be reevaluated for each case, as part of a GLOBAL RISK ASSESSMENT**
  - **How about Exit Border Control (UK, US, ...)?**
    - **Topology/functionality/equipment/process redesign needed to track and tally emigration with reasonable CAPEX**
    - **For a last and valid API confirmation upon Int'l departure, could ABC evolve towards Automated (self-)Boarding ID verification?**
-  **If only for the sake of efficiency, secure Entry/Exit programs ought to include ABC in future planning**



## ***Conclusion: future ABC to evolve from content description to extent validation and intent prediction***

### ■ **Content (document)**

- Future ABC services require new expertise from staff
- ... maybe also a paradigm shift in individual citizen behavior

### ■ **Extent (risk analysis)**

- Further ABC automation in synch with both JBOC and future travelers' MRTDs
- Future intelligent real-time “tracking-as-a-service”
- Maybe also a paradigm shift towards “self-redress” aspects

### ■ **Intent**

- Bolstering yet-to-emerge behavioral analysis and HUMINT

💣 **Final caveat: need major national commitments to uproot operational silos**



***Thanks for your attention!***

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