Connecting the Dots: How to improve the traditional Lawful Interception Infrastructures with new Investigation Tools oriented to Social Networks, Deep and Dark Web

Tuesday, 23 May

IAP
International Association of Prosecutors

RESI GROUP
Your brain on the network

The Company

IPS is an Italian company that designs and manufactures products and solutions for communications monitoring and interceptions.

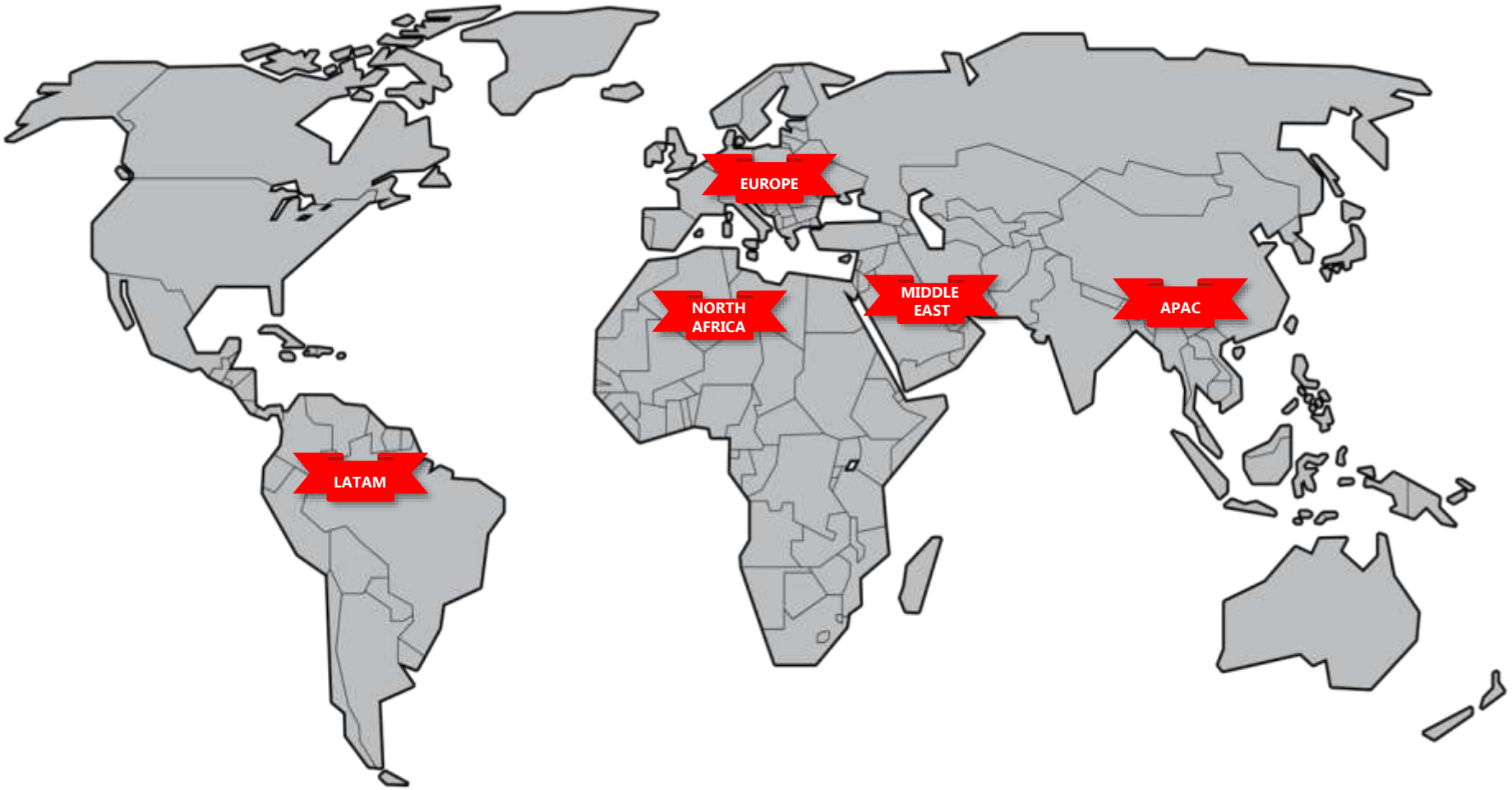
- Private and independent company
- 30 years experience in tech arena
- Mix of IT, Networking and Security
- In-house development of core technology
- 24x7x365 Technical Support

Technology Transparency and Know-How Transfer

Our Customers

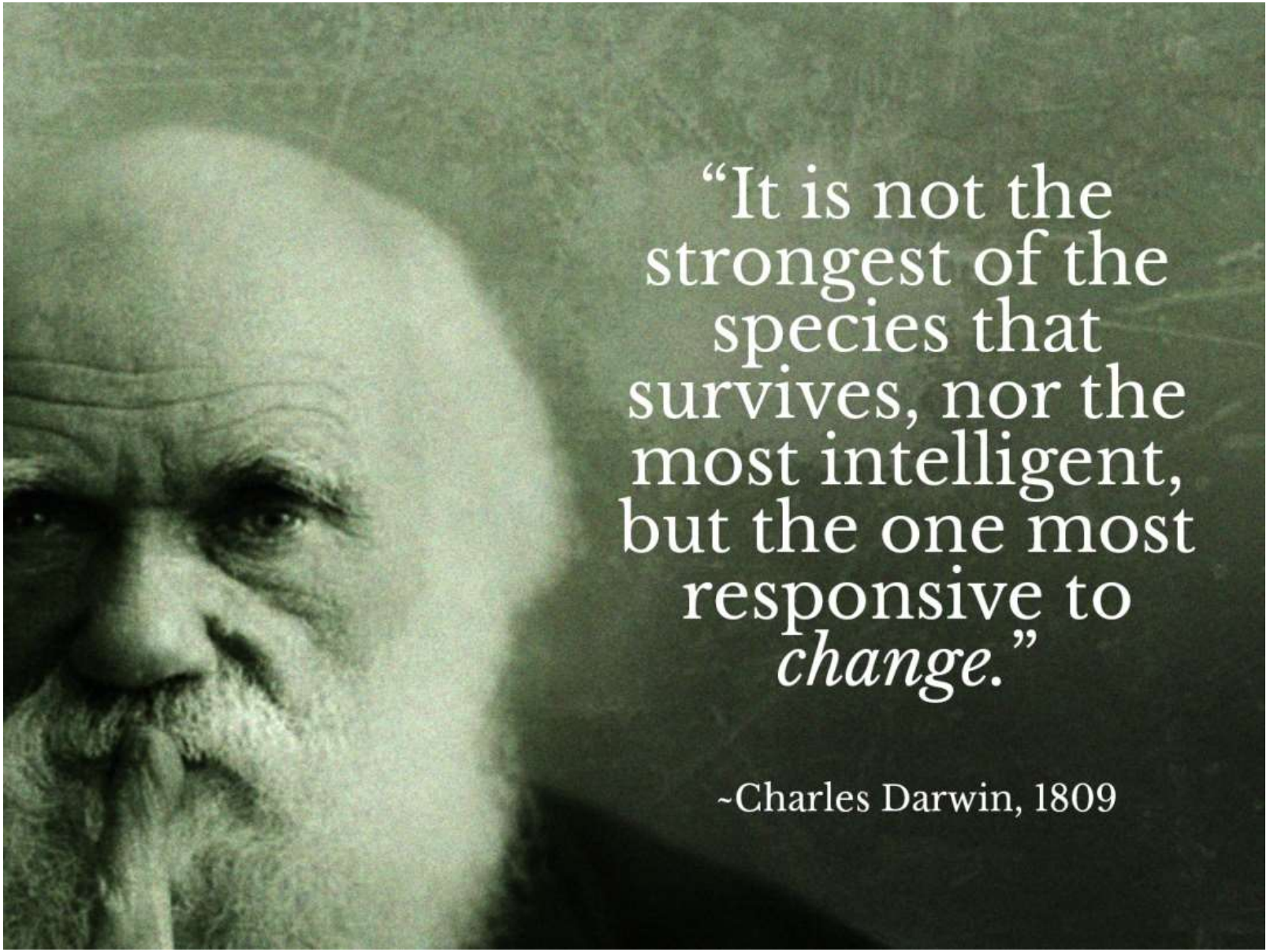
Prosecutors Offices	Supply of Monitoring Centers. In Italy as managed services. In the international market as nation-wide turn-key projects.
Law Ennforcement and Intelligence Agencies	Supply of tactical or strategic solutions to Italian and International agencies.
Telecom Operators and Internet Service Providers	Supply of systems to be installed in the network to provide communication content and relevant information to the above mentioned Government customers.

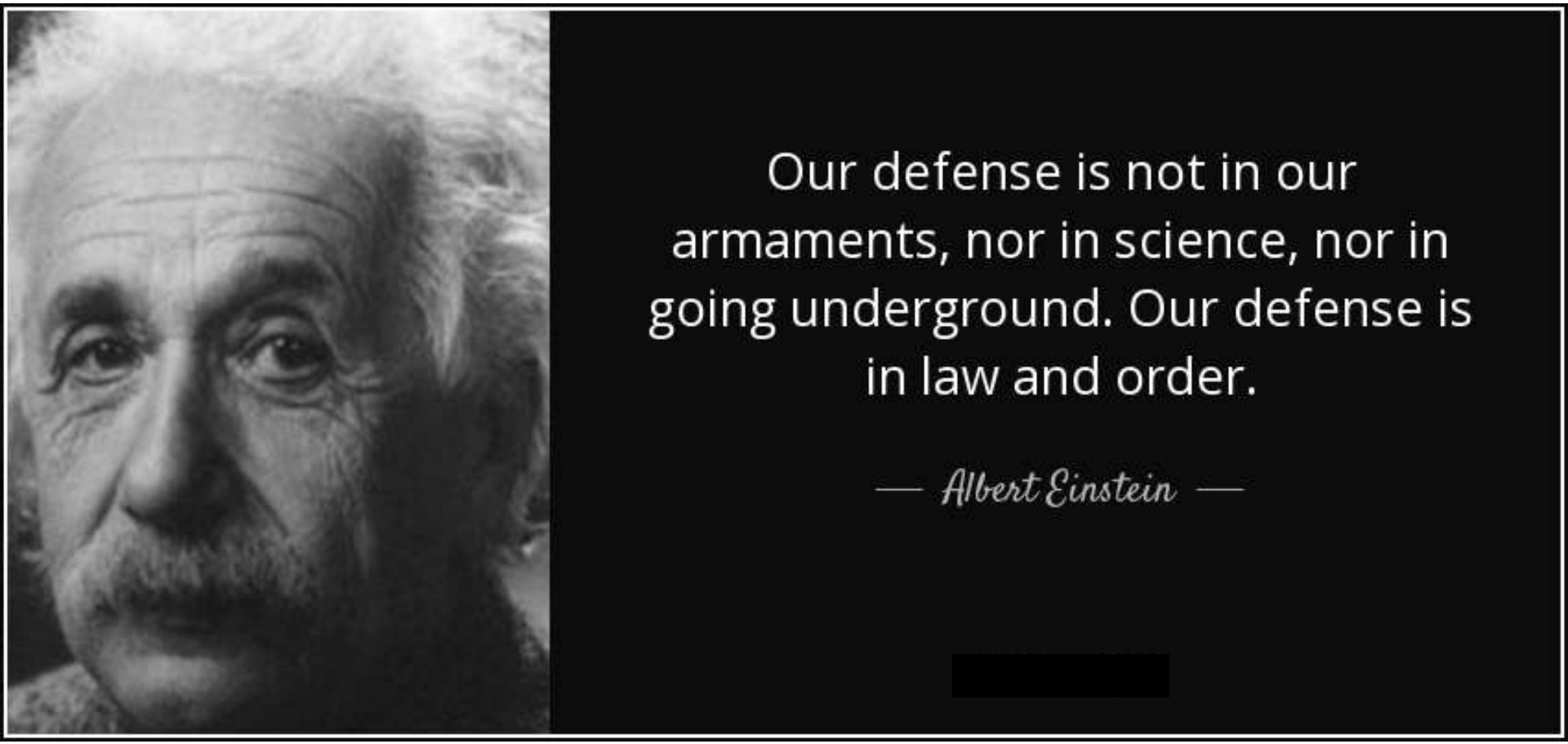
International Presence



Agenda

- The evolution of the Web
  - From Web 1.0 to 4.0
- Privacy vs Security in an totally Encrypted Web
- Unconventional IP Intelligence
- OSINT: Open Source Intelligence with Medusa™


"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to *change*."
~Charles Darwin, 1809


Our defense is not in our armaments, nor in science, nor in going underground. Our defense is in law and order.
— Albert Einstein —

MARTEDI' 26 GIUGNO 1962

TRAPANI NUOVA

Secondo tre esperti americani

Nel 2000 i telefoni faranno tutto loro

Leggeremo i giornali attraverso la rete telefonica e potremo anche servircene per le operazioni di banca

Tuesday 26 June 1962 - According to three American experts
In the year 2000 telephones will do everything by themselves.
We will read newspapers through telephone network and we could also use it for banking operations.

The forecast was correct, around 50 years in advance!

Full Article

According to three American experts.

In the year 2000 telephones will do everything by themselves.

We will read newspapers through telephone network and we could also use them for banking operations

Three managers of the American Telephone and Telegraph Company, engineers J. H. Felker, C. M. Mapes and Dr. H. M. Boettinger, made some foresight on the evolution of telephony towards year 2000, during a radio interview on the national broadcast "Dimension" by C.B.S.

The three experts affirm that, for a start, morning newspapers will be spread directly in "facsimile" through the telephone network. After the breakfast and **read the telephotographic newspaper**, the business man will maybe decide to stay at home to avoid some traffic jam, however without neglecting his activities.

With the help of the "**videophone**", whose screen will be a lot more efficient and more clear than modern televisions, he will be able to stay in contact with the office or even **set up a meeting** with his colleagues or associates in different locations.

But the husband won't be the only one to benefit from the progress. The wife will be able to use the telephone service to avoid tiresome walks to the **shops**. With watchful eyes she will follow shop owners explanations on the color screen of her videophone and she'll analyze the **goods on display**, before taking the **order**.

The three experts foretell that the family of tomorrow will use the telephone also to get at home educational, artistic and cultural channels. **Televisions** with closed circuit tied to the telephone network will spread school lessons, meetings with screenings and **visits to the museum** directly at home. They will also be able to **read the last books** without being forced to go at the library for the loan.

In travels people will use the **telephone on automobiles**, **airplanes** and in any other means of transportation. They will be able to call any user in any part of the world through direct dialing. However, they won't need to input the number and the area code of the city they are calling. All they will need to do is tell the telephone number and this (the device) will **translate the voice** in electric impulses.

Conversations will absorb just a little part of the traffic on the telephone lines. It's foreseen that yet in 1975 the volume of commercial data broadcast through telephone lines will exceed the data used for conversations. There are "**data-phone**" devices being finalized, able to transmit 3000 words per minute, so that an electronic brain can call on an analogue machine with a speed far more superior than human speed. One of this **machines wired to the telephone network** will be able to read a stock inventory and, once the calculation are done, it will call another machine in the main warehouse to order supplies or the day after.

In the year 2000 people will use the telephone even to do **banking operations**. Checks will be written with magnetic ink that can be read by specific machines in banks. This machines not only will validate the check, they will also record the operation on the personal bank account.

What has really changed?

FREE
VIA SLOWROBOT.COM

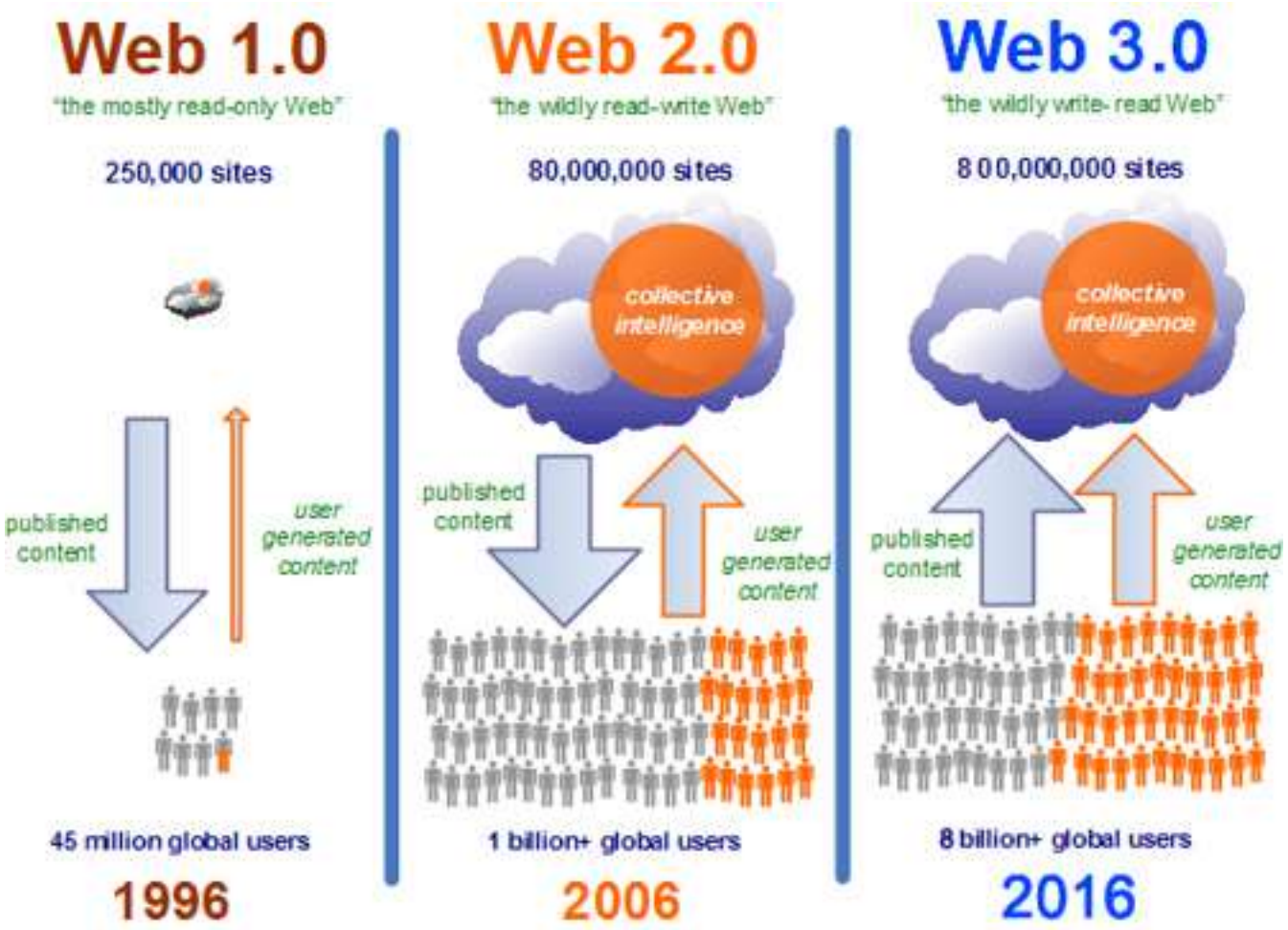
What has not changed during the years?

- Communicate
- Share
- Inform

What has changed?

The means of communication

The technology change began in 2007


Web 1.0
"the mostly read-only Web"
250,000 sites
published content
user generated content
45 million global users
1996
Web 2.0
"the wildly read-write Web"
80,000,000 sites
collective intelligence
published content
user generated content
1 billion+ global users
2006
Web 3.0
"the wildly write- read Web"
800,000,000 sites
collective intelligence
published content
user generated content
8 billion+ global users
2016

The Apps

NETWORKWORLD
FROM IDG

OPINION

We touch our phones 2,617 times a day, says study

Feeling a peculiar pull towards your phone? You're not alone. An obsession to touch phones is rampant.

CLOUD TRANSFORMATION
Microsoft Cloud
Where are you on the path to **cloud intelligence?**
Find Out Now

RELATED

40 things to love about Apple

Attention spans in apps decrease signific...

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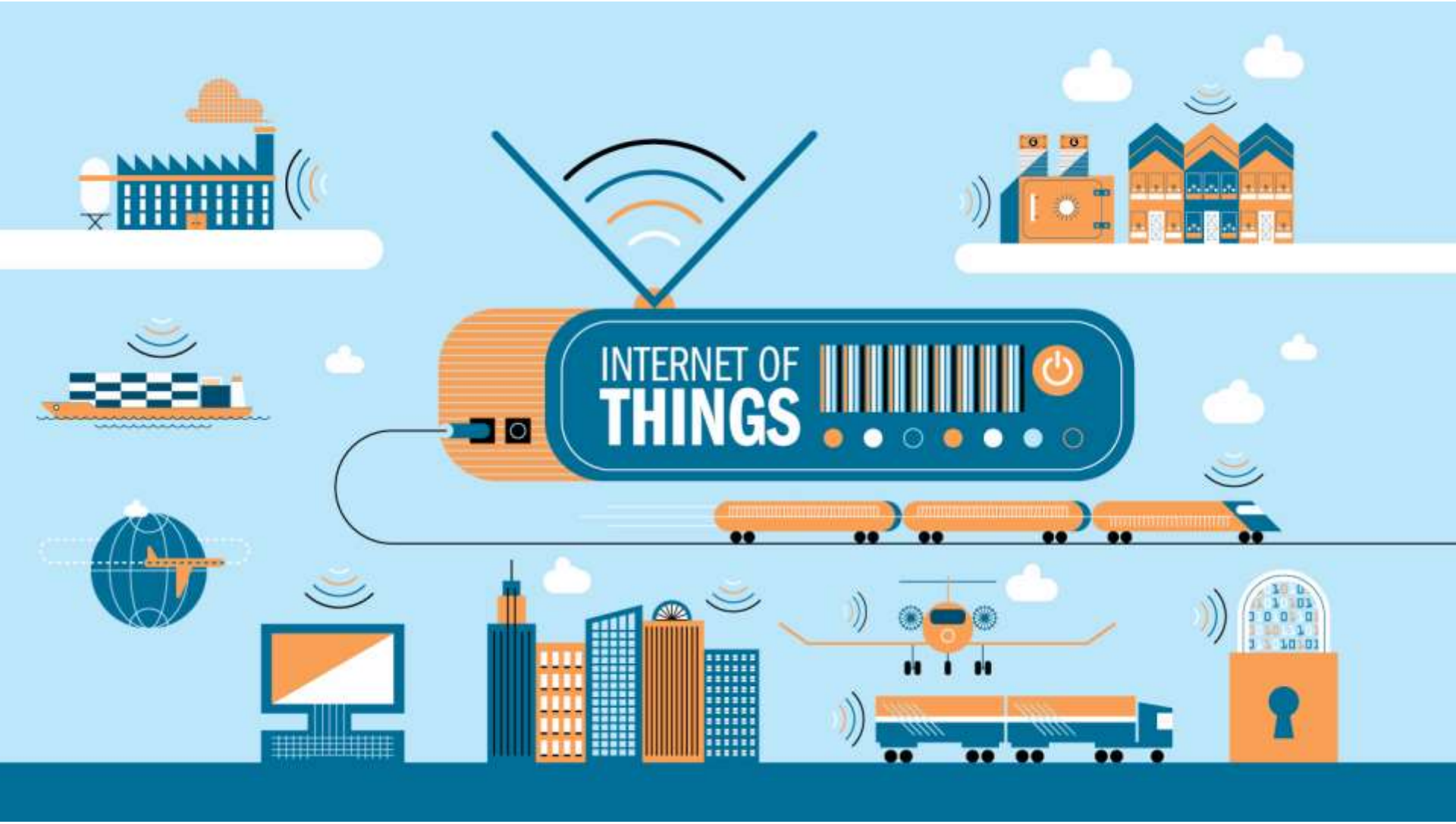
VIDEO
Four devices to get a better night's sleep

Web 3.0

- Internet as an unlimited database
- The performance of the devices
- Artificial Intelligence
- Semantic Web
- An adaptable web to different devices
- Internet of Things and Cloud

ALL ENCRYPTED !!!


INTERNET OF
THINGS

Web 4.0

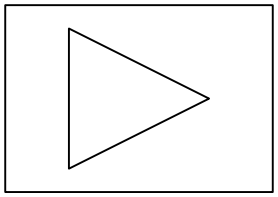
The Web becomes a service tool to help people to achieve their goals (knowledge, work) by exploiting the huge amount of data coming from the web: not only “static” (content) resources, but more and more “intelligent”.

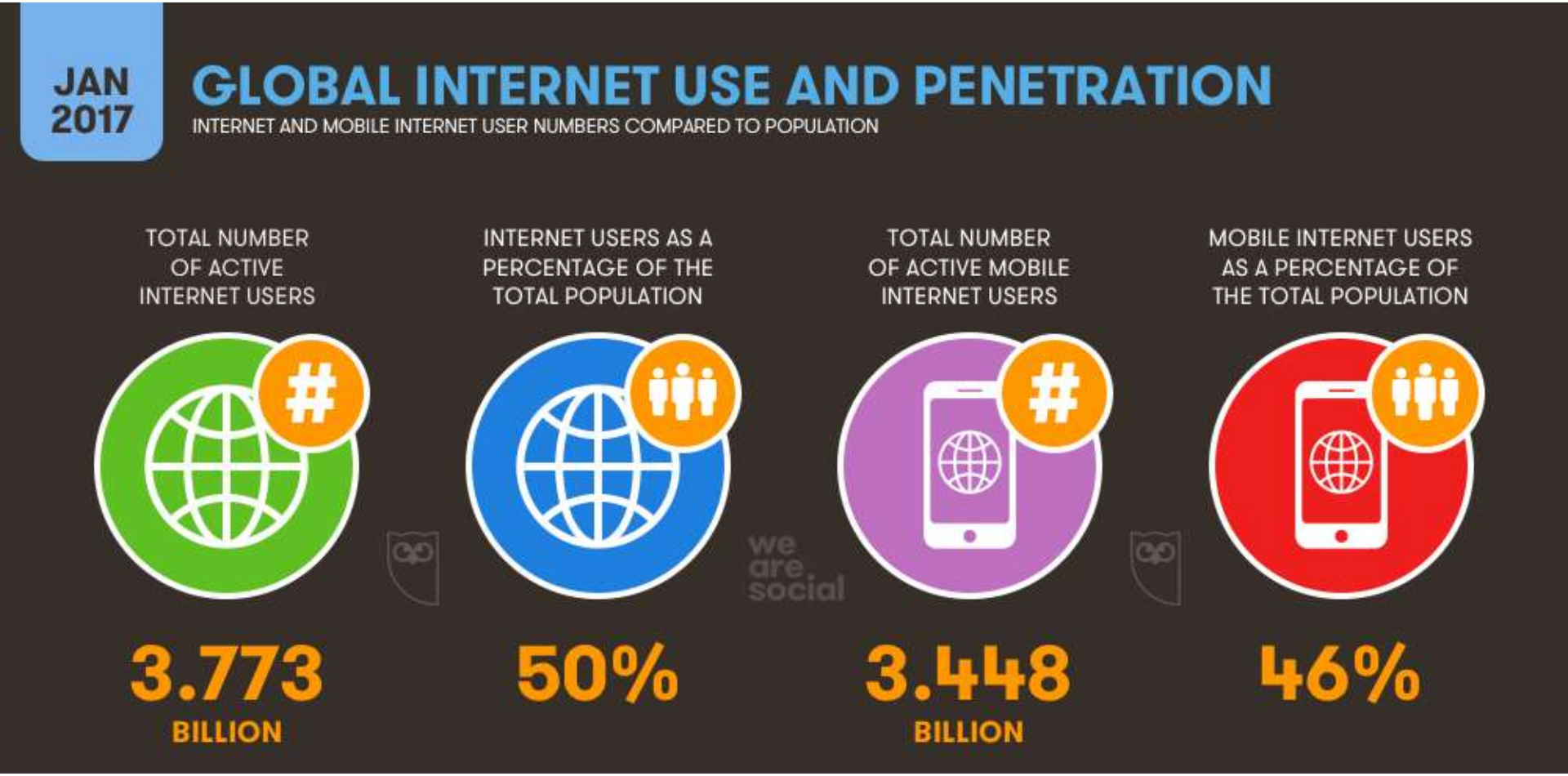
Internet as a commodity in a fully immersive experience.

- **Augmented reality**
- **Total Automation**

ALL ENCRYPTED !!!

Augmented Reality





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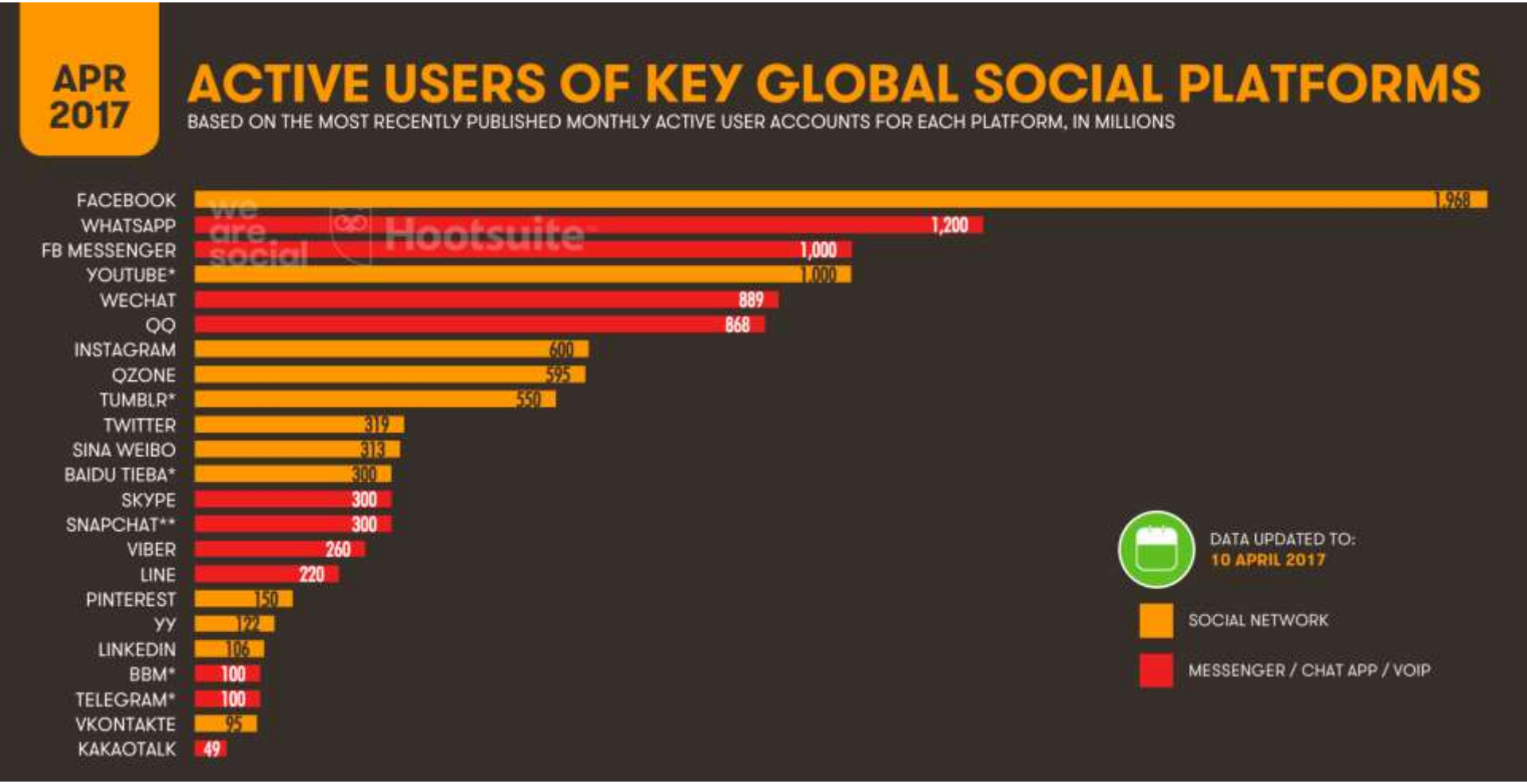


www.everysecond.io

The worst has yet to come…

Dark Web

Surface Web
YAHOO!
Google
reddit
CNN.com
bing
Deep Web
Academic databases
Medical records
Financial records
Legal documents
Some scientific reports
Some government reports
Subscription-only information
Some organization-specific repositories
96% of content on the Web (estimated)
Dark Web
TOR
Political protest
Drug trafficking and other illegal activities

What can you find on the **Dark Web**?

In the Dark Web you can freely…

- Surf anonymously on Internet
- Access to hidden sites (not visible on standard Internet)
- Sell or Buy illegal materials, as:
  - weapons
  - drugs
  - false documents (Passports, Patents)
  - banknotes and credit cards
  - and more…

ALL ENCRYPTED !!!

Surfing on the Dark Web

ITALY Passport

ID - Documents » Passports

Change your life!

Price: **0.29** BTC

in stock

ADD TO BASKET

Along with the payment send your HQ portrait photo to **forgerystore@sigaint.org**

« back | print

New **Digital Payments**

Facebook payments are coming to Europe

Hannah Roberts
Dec. 8, 2016, 2:41 PM 778

Facebook has quietly secured an e-payments license from the Central Bank of Ireland, signalling that the ability to pay people through the Messenger app (already available in the US) could soon be coming to Europe, TechCrunch reports.

The Central Bank of Ireland's register shows that the license was authorised to Facebook Payments International Limited (FBPIL) in October for "e-money issuance" and "payment services." FBPIL confirmed the approval of the European license to TechCrunch.

E-Money Institution

Name:	Facebook Payments International Limited	**Reference No:**	C148215
		Address:	*N\A*

MOBILE PAYMENTS

Facebook Payments Registered as E-Money Entity in Spain

by Fintechnews Switzerland / January 9, 2017

Facebook has registered as an electronic money provider in Spain as the firm seeks to expands its peer-to-peer payments functionalities over Messenger to Europe.

Facebook Payments International Limited (FBPIL) was added to the Bank of Spain's register of e-money entities on December 30, 2016, and follows a license granted by the Central Bank of Ireland.

In October, the Central Bank of Ireland granted a license to FBPIL pertaining to e-money issuing and payment services provision and includes credit transfer, payment transactions and money remittance.

The Irish license applies throughout all 27 EU member states, with the firm only needing to notify the respective central banks to validate the authorization.

Confirming the approval of the European license, Facebook wrote in an email to TechCrunch:

> *"The license enables us to roll out products like charitable donations on Facebook or peer-to-peer payments via Messenger in Europe, as we have in the U.S. The license authorizes FBPIL to issue donations from Facebook users to charities registered in the European Economic Area (EEA) only; and peer-to-peer payments, within the EEA."*

Facebank

facebook
1234 5678 9876 5432
1234
MONTH/YEAR
VALID THRU
12/99
CARDHOLDER

Not finished yet…

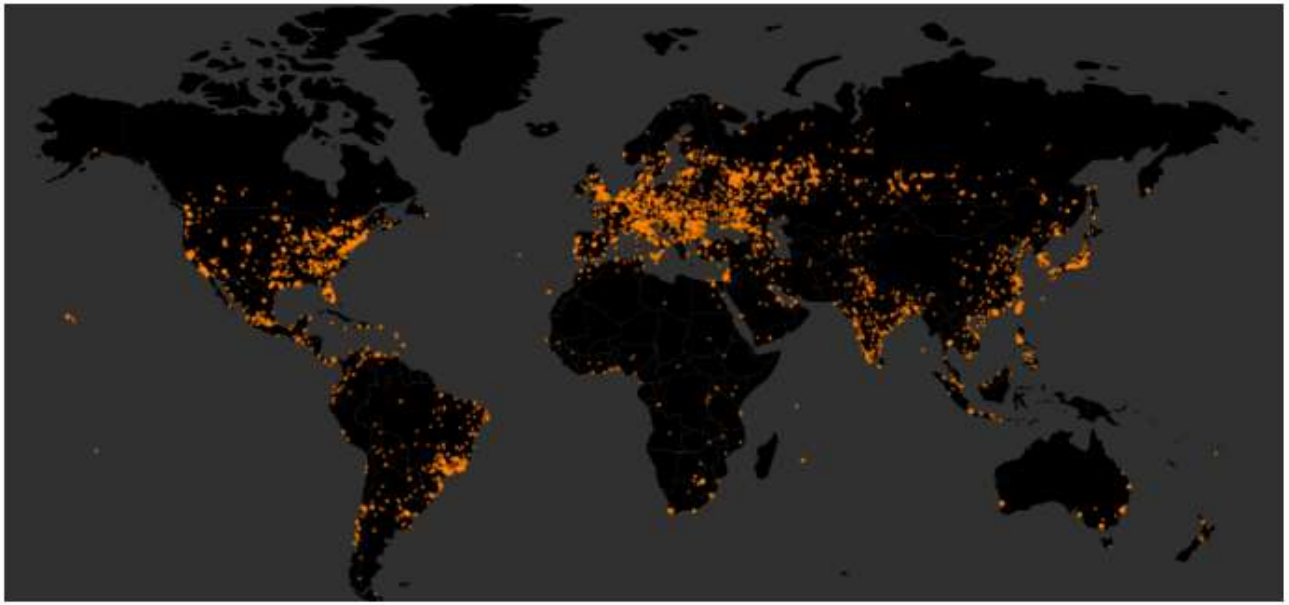
A world of vulnerabilities

INTERNATIONAL

Ransomware Attacks Ravage Computer Networks In Dozens Of Countries

May 12, 2017 · 11:05 AM ET

BILL CHAPPELL MAGGIE PENMAN



Each orange dot is a unique infection by WannaCrypt ransomware as recorded by MalwareTech.com

Courtesy of malwaretech.com

What is Europe doing ?

Privacy vs Security

Europe vs Privacy

Digital Single Market – Stronger privacy rules for electronic communications

Brussels, 10 January 2017

Questions and Answers

Why is the Commission modernising EU digital privacy rules?
Since the last revision of the ePrivacy Directive in 2009, electronic communications services have evolved significantly. Consumers and businesses are relying more and more on internet based services to communicate, such as instant messaging, voice over IP and web-based e-mail, but these services are not covered by current ePrivacy rules…….
Europeans are concerned about their privacy…..

What is the Commission proposing?

The cornerstones of the proposed rules on Privacy and Electronic Communications are:

All electronic communications must be confidential. Listening to, tapping, **intercepting**, scanning and storing of for example, text messages, emails or voice calls **will not be allowed without the consent of the user**. The proposed Regulation also specifies when processing of communications data is exceptionally permitted and when it needs the consent of the user.

Europe vs Encryption

EU to propose new rules targeting encrypted apps in June

By Catherine Stupp | EURACTIV.com 29 mar 2017

EU Justice Commissioner Vera Jourová said she will announce **"three or four options"**

Non-legislative measures will be provisional "to have a quick solution", since negotiations over EU laws can drag on for years before they are passed.

"At the moment, prosecutors, judges, also police and law enforcement authorities, are dependent on whether or not providers will voluntarily provide the access and the evidence. This is not the way we can facilitate and ensure the security of Europeans, being dependent on some voluntary action," Jourová said.

Pressure from UK, France and Germany
making internet operators subject to the same requirements as telephone operators.

Five member states want EU-wide laws on encryption

Hungary, Croatia, Italy, Latvia and Poland

***Gilles de Kerchove, the EU's anti-terrorism coordinator**, said "it's much too early to say that **backdoor** would be a solution" for accessing encrypted data of messaging services like WhatsApp and Telegram.*

ePrivacy directive
In Jan 2017, the Commission proposed changes to the EU ePrivacy law affecting telecoms services and **extended** the eight-year-old privacy rules for the first time **to internet services.**

“three or four options”
to safeguard
Privacy and Security

- **Only standard encryption (SSL/https).**
- **Proprietary or End-to-End encryption blocked on the net.**
- ***Server of the providers installed within the country (preferred but difficult).***
- **State based backdoor (each device operating in a country).**
- **State based digital certificate (for all services used in a country).**

It’s clear: we are in an uneven fight.

- Until national or international regulation will ever be in place, **“non-legislative measures”** must be taken
- We called them “**Unconventional IP Intelligence**” and is a mix of:
  - **Metadata extraction** **from network traffic monitoring**
  - **Open Source Intelligence**
  - **Device Infection**
  - **Data Fusion**

Results?

France - Arrested thanks to photos posted on Facebook

He was enjoying in Morocco the spoils of 1,700,000 Euros, as result of a robbery in Cannes, last year.

Thanks to the photos published on the social network, French agents were able to track him down, ending his fugitive.

The thief had been convicted by the French authorities to ten years in prison.

The Telegraph

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News

Mafia fugitive arrested in Mexico - thanks to Facebook

Roseville man accused of assaulting child arrested, thanks to Facebook post

Roseville police posted surveillance photos of suspect on Facebook

Main issues for the investigators

- Time and resources
- Technical knowledge
- The digital transformation and the technological changes
- Search tools
- Link analysis and correlations
- A large amount of data to be analyzed

MEDUSA Labs™

The new way to collect and analyze users digital data

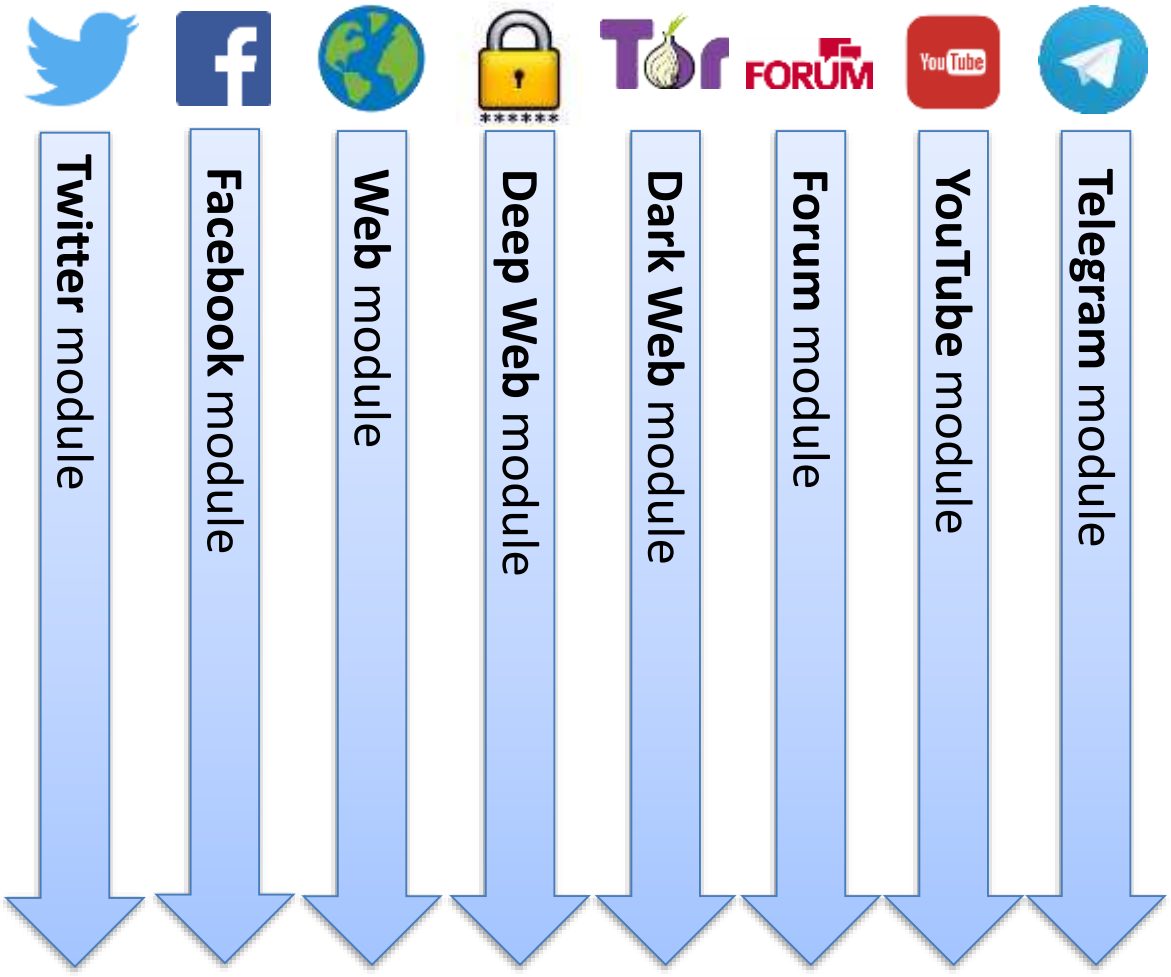
MEDUSA™ Main Modules

Data Gathering

- Data crawling
- Task (Monitoring)
- Alarms

Analysis Tool

- Summary (graphs, trends)
- Geo Distribution
- Word Cloud
- Semantic Analysis
- Sentiment Analysis
- Link Analysis

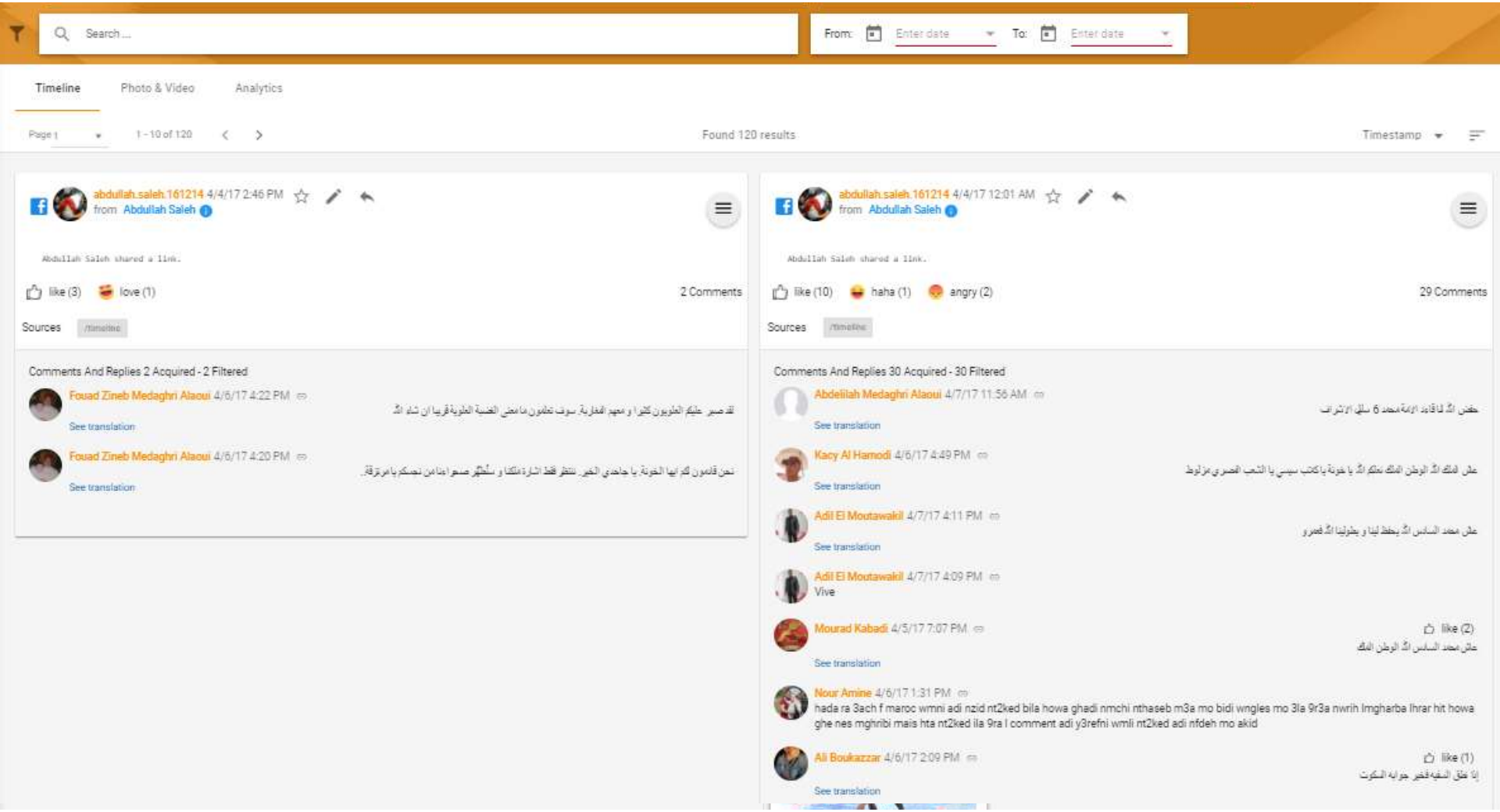


MEDUSA™ Key Features

- **Historical data on your own private and secure database**
- **Automation of manual processes with savings in human resources**
- Fully customizable reports, alarms and notifications
- Avatar Management
- 3rd parties databases integration (open platform)
- Big Data ready
- Language independent

What do you need to start a new activity?

- Name and Surname
- Telephone number
- Email address
- Username or Alias
- Webpage URL
- Geographic Area
- Topic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From: Enter date
To: Enter date
Timeline
Photo & Video
Analytics
Page 1
1 - 10 of 120
Found 120 results
Timestamp
abdullah.saleh.161214 4/4/17 2:46 PM
from Abdullah Saleh
Abdullah Saleh shared a link.
like (3)
love (1)
2 Comments
Sources
Comments And Replies 2 Acquired - 2 Filtered
Fouad Zineb Medaghri Alaoui 4/6/17 4:22 PM
See translation
Fouad Zineb Medaghri Alaoui 4/6/17 4:20 PM
See translation
abdullah.saleh.161214 4/4/17 12:01 AM
from Abdullah Saleh
Abdullah Saleh shared a link.
like (10)
haha (1)
angry (2)
29 Comments
Sources
Comments And Replies 30 Acquired - 30 Filtered
Abdelilah Medaghri Alaoui 4/7/17 11:56 AM
See translation
Kacy Al Hamodi 4/6/17 4:49 PM
See translation
Adil El Moutawakil 4/7/17 4:11 PM
See translation
Adil El Moutawakil 4/7/17 4:09 PM
Vive
Mourad Kabadi 4/5/17 7:07 PM
See translation
like (2)
Nour Amine 4/6/17 1:31 PM
hada ra 3ach f maroc wmni adi nzid nt2ked bila howa ghadi nmchi nthaseb m3a mo bidi wngles mo 3la 9r3a nwrih lmgharba lhrar hit howa ghe nes mghribi mais hta nt2ked ila 9ra l comment adi y3refni wmli nt2ked adi nfdeh mo akid
Ali Boukazzar 4/6/17 2:09 PM
See translation
like (1)

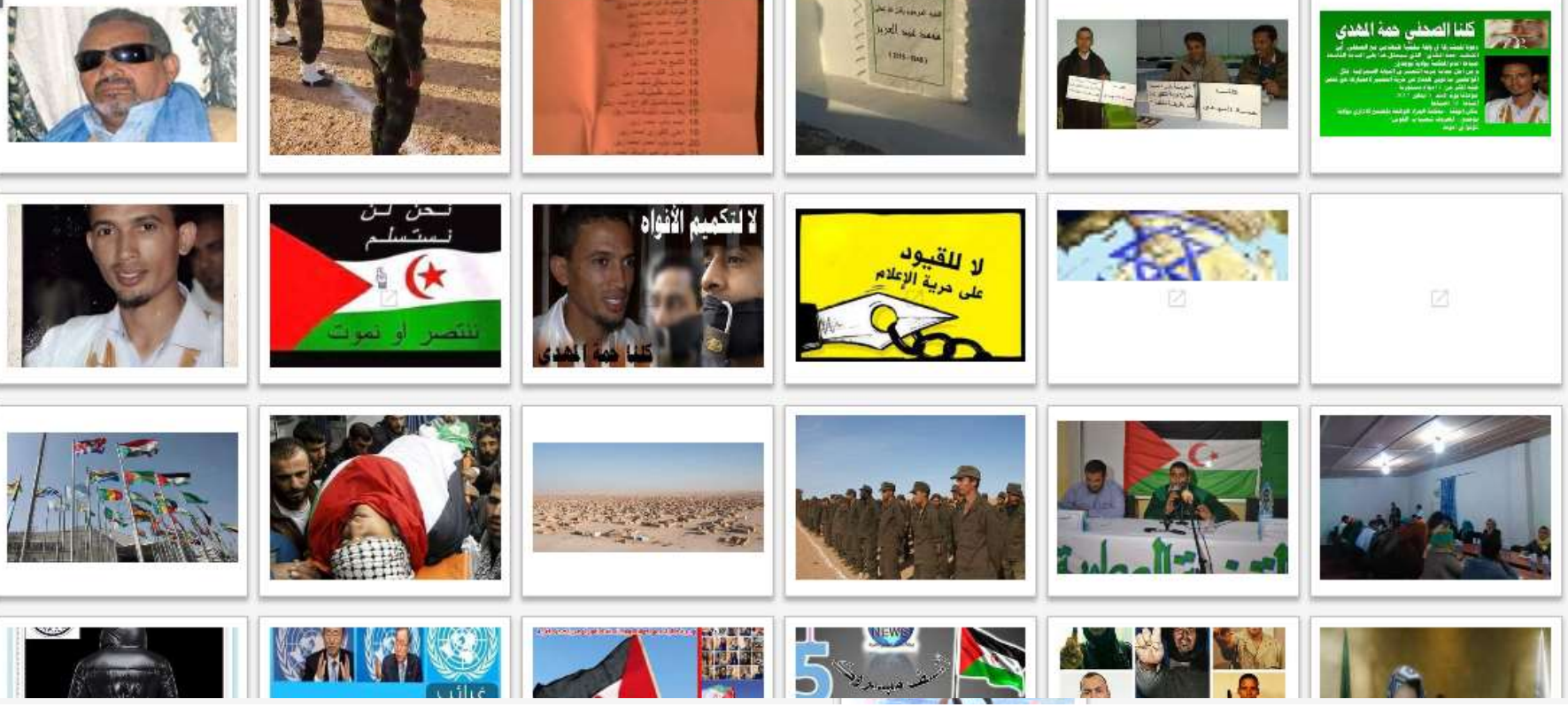
Search ...

From: Enter date To: Enter date

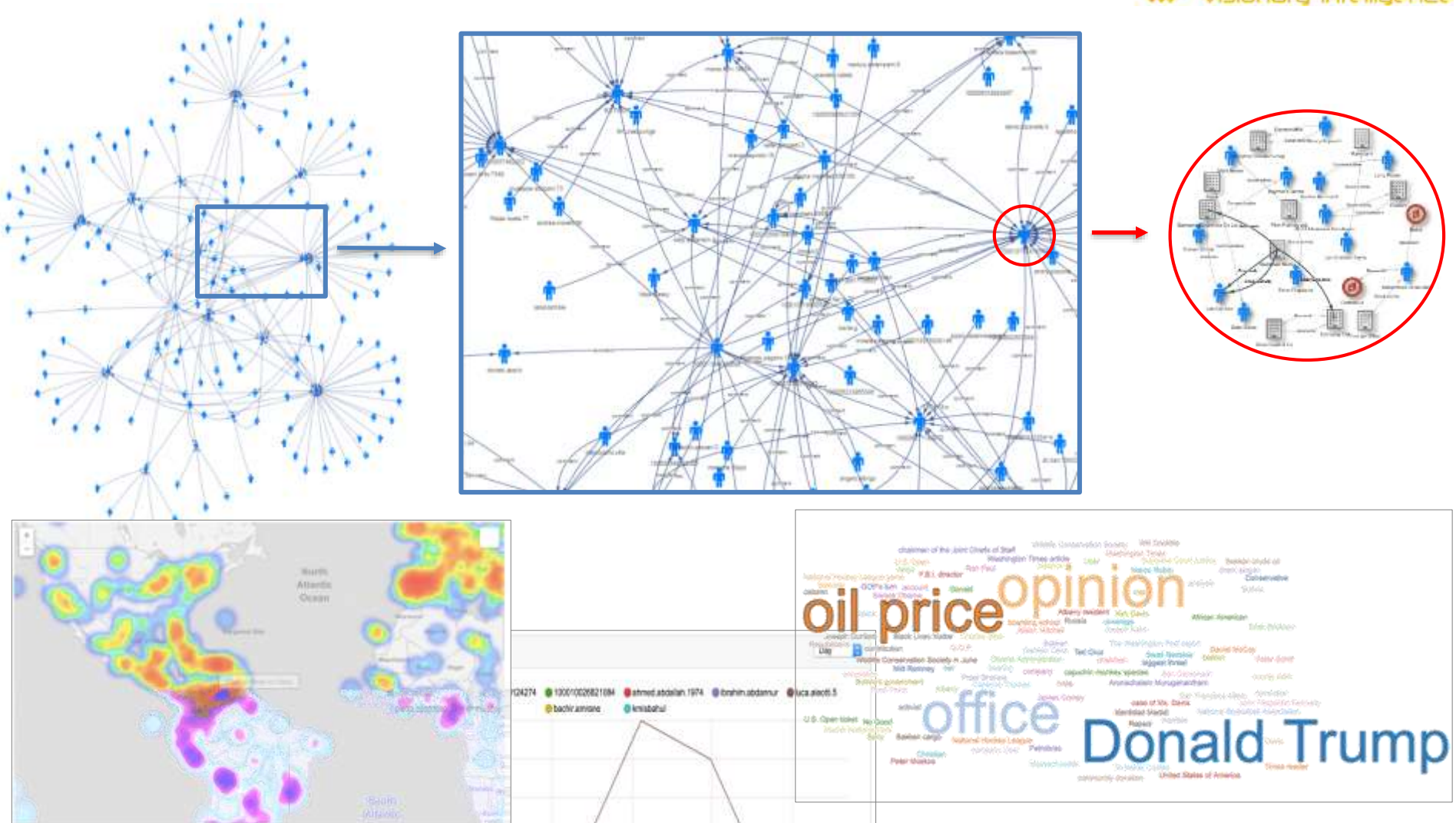
Timeline | Photo & Video | Analytics

Found 33 results

Timestamp



Data Fusion



Information will be always harder to get
a new investigative approach is needed
more like “intelligence analyst”
than traditional “judiciary police”

Aoccdrnig to rsceearch at Cmarbidge Uinervtisy, it deosn’t mttaer in waht oredr the ltteers in a wrod aer, the olny ipmoratnt tinhg is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a ttaol mses and you can sitll raed it wouthit a porlbem. Tihs is bcuseae the hmuan mnid deos not raed ervey ltteer by istelf, but the wrod as a wohle.

Thank you!

For any further clarification pleas contact us.

info@ips.intelligence.com

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