World Summit on the Information Society (WSIS) Implementation Process

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015

working together towards **2025**

#ICT4SDG

WSIS Forum 2017:

Cyber-security and Managers : **Opportunities & Challenges**

Federico SMITH
Manager Excellence Center DS PLatform, Scalian Group

12th June 2017,
International Telecoms Union (IUT)

SUMMARY

1. Governance and Big Data: the new "petroleum power"

  a) Issues on intellectual property : patents

  b) Opportunities

2. Cyberwarfare : a reality for connected organizations

  a)"Historical flaws and attacks" 2014-2017

  b) The "new digital farwest" era

3. The Challenge for the international community

  a) Thought

  b) Our challenge : How to revive our "Democracies and economies" ?

#ICT4SDG

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
2025 working together towards

ITU | United Nations Educational, Scientific and Cultural Organization | UNITED NATIONS UNCTAD | UNDP Empowered lives. Resilient nations. | UNDESA | FAO FIAT PANIS | UNEP | WMO | ILO | World Health Organization | International Trade Centre | WIPO WORLD INTELLECTUAL PROPERTY ORGANIZATION

1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…

a) Issues on Intellectual Property : Top 20 Software Leaders

Global 100 Software Leaders 2016

- **U.S:** **80 %**
- **Germany:** **10 %**
- **Japan:** **05 %**
- **France:** **05 %**

Rank	Company	Country HQ	2014 Software revenue (US$M)	2014 Total revenue (US$M)	Software revenue as % of total
1	Microsoft	USA	62,014	93,456	66.36%
2	Oracle	USA	29,881	38,828	76.96%
3	IBM	USA	29,286	92,793	31.56%
4	SAP	Germany	18,777	23,289	80.63%
5	Symantec	USA	6,138	6,615	92.79%
6	EMC	USA	5,844	24,439	23.91%
7	VMware	USA	5,52	6,035	91.47%
8	HP	USA	5,082	110,577	4.60%
9	Salesforce.com	USA	4,82	5,274	91.40%
10	Intuit	USA	4,324	4,573	94.55%
11	Adobe	USA	4,061	4,184	97.06%
12	CA Technologies	USA	4,053	4,41	91.90%
13	SAS*	USA	2,884	3,084	93.49%
14	Cisco	USA	2,836	47,823	5.93%
15	Dassault Systemes	France	2,695	3,038	88.71%
16	Siemens	Germany	2,613	95,542	2.73%
17	Fujitsu	Japan	2,527	43,526	5.81%
18	Autodesk	USA	2,413	2,486	97.06%
19	Citrix	USA	2,376	3,143	75.60%
20	Google	USA	2,273	66,001	3.44%

http://www.pwc.com/gx/en/industries/technology/publications/global-100-software-leaders.html

1. Governance and Big Data : the new « *Petroleum power* »
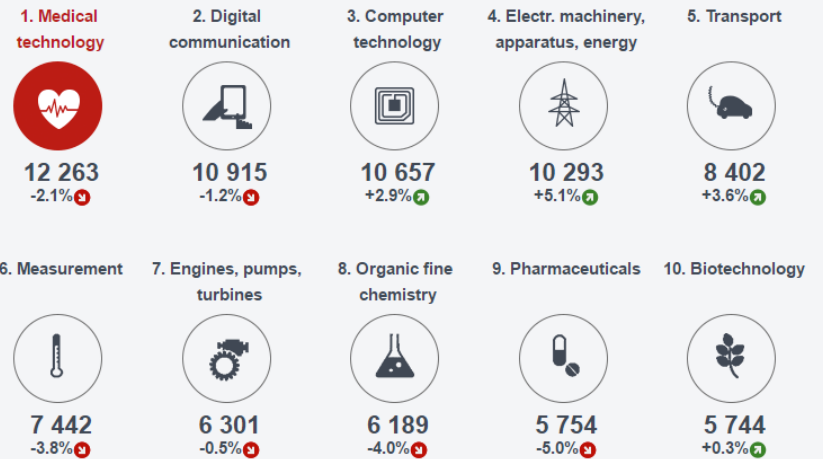## The creation of a "new industry", for a new domination…
a) Issues on the intellectual property : European patent applications

Key trends

- **- 2.1% Medical technologies**

- **- 1,2% Digital Communication**

- **- 3,8% Measurement**

- **- 0,5 % Engines, pumps, turbines**

- **- 4% Organic fine chemistry**

Top technical fields

Medical technology was once again the field where the most applications were filed, despite a slight drop in 2016. The strongest growth from among the top fields came from Electrical machinery/apparatus/energy, followed by Transport and Computer technology. Pharmaceuticals and Organic fine chemistry saw the greatest drop in the number of applications.

1. Medical technology	2. Digital communication	3. Computer technology	4. Electr. machinery, apparatus, energy	5. Transport
12 263 -2.1%	10 915 -1.2%	10 657 +2.9%	10 293 +5.1%	8 402 +3.6%

6. Measurement	7. Engines, pumps, turbines	8. Organic fine chemistry	9. Pharmaceuticals	10. Biotechnology
7 442 -3.8%	6 301 -0.5%	6 189 -4.0%	5 754 -5.0%	5 744 +0.3%

Source European Patent Office : https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016/statistics/patent-applications.html#tab3
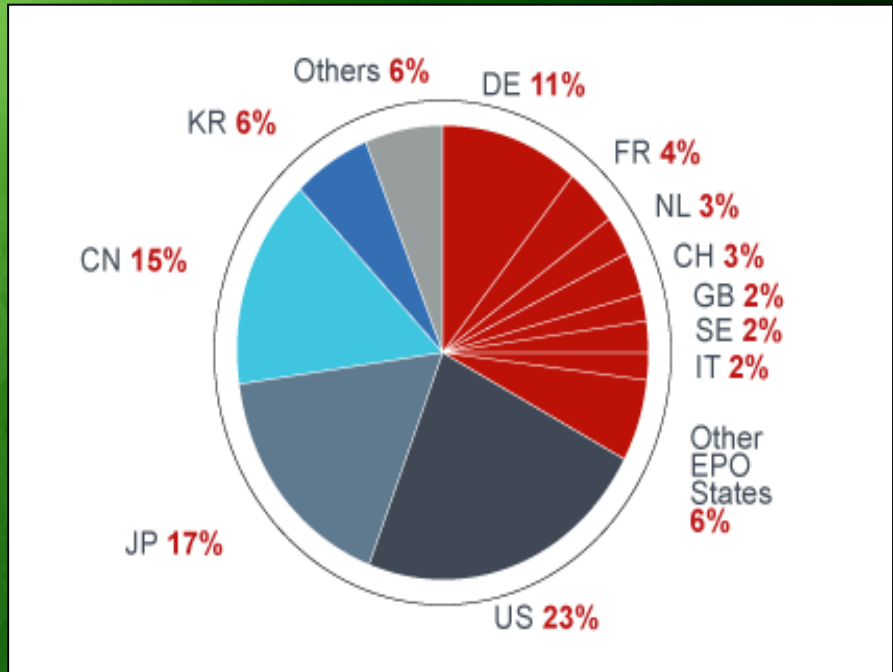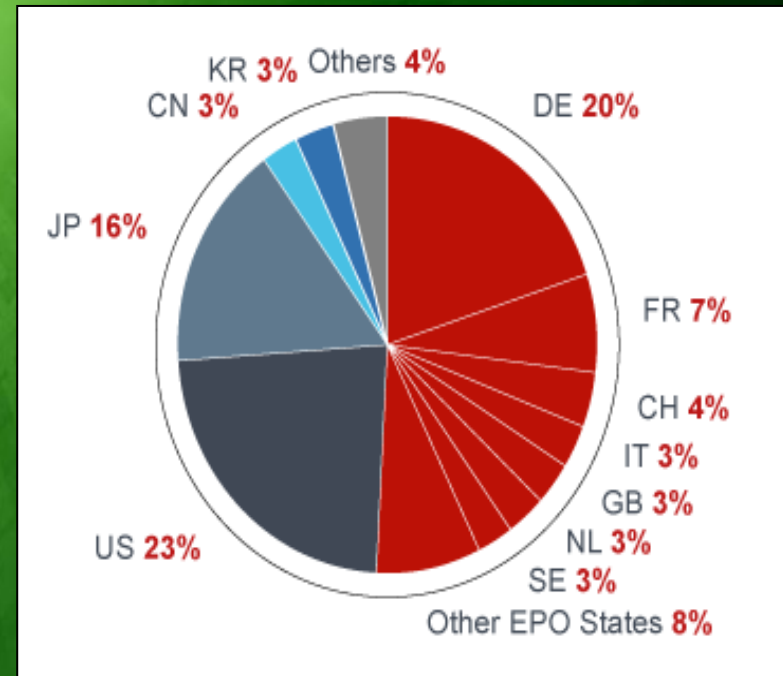
1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…

a) Issues on Intellectual Property : European patent fillings

Key trends

- **Asia:** 38%
- **Europe:** 33%
- **USA:** 23%
- **Others:** 06%

Others 6%   DE 11%
KR 6%   FR 4%
CN 15%   NL 3%
             CH 3%
             GB 2%
             SE 2%
             IT 2%
             Other EPO States 6%
JP 17%
US 23%

Source:https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016/statistics/patent-filings.html#tab3

1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…

a) Issues on Intellectual Property : Granted patents per country

Key trends

- **Europe: 51%**
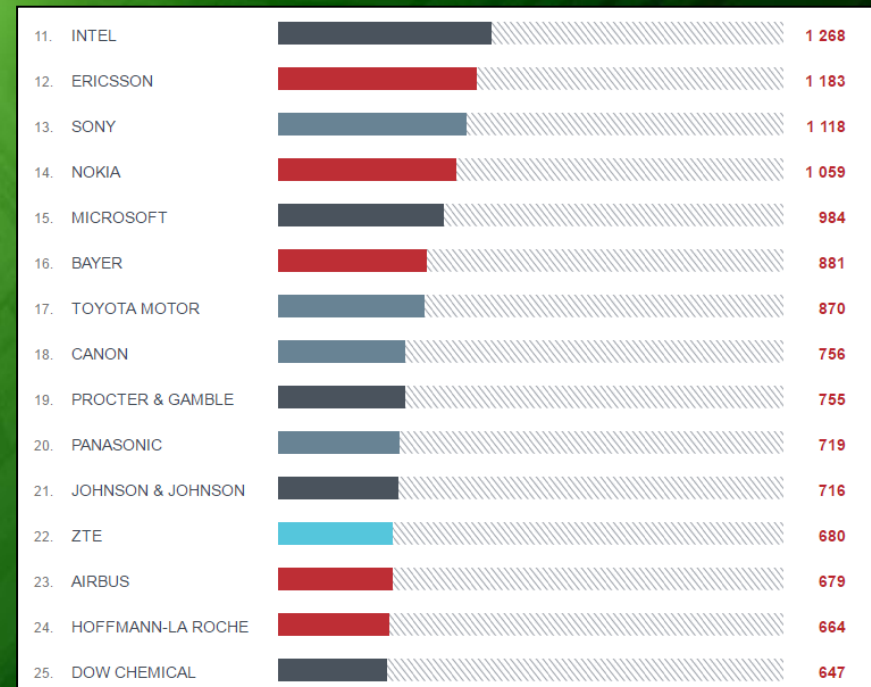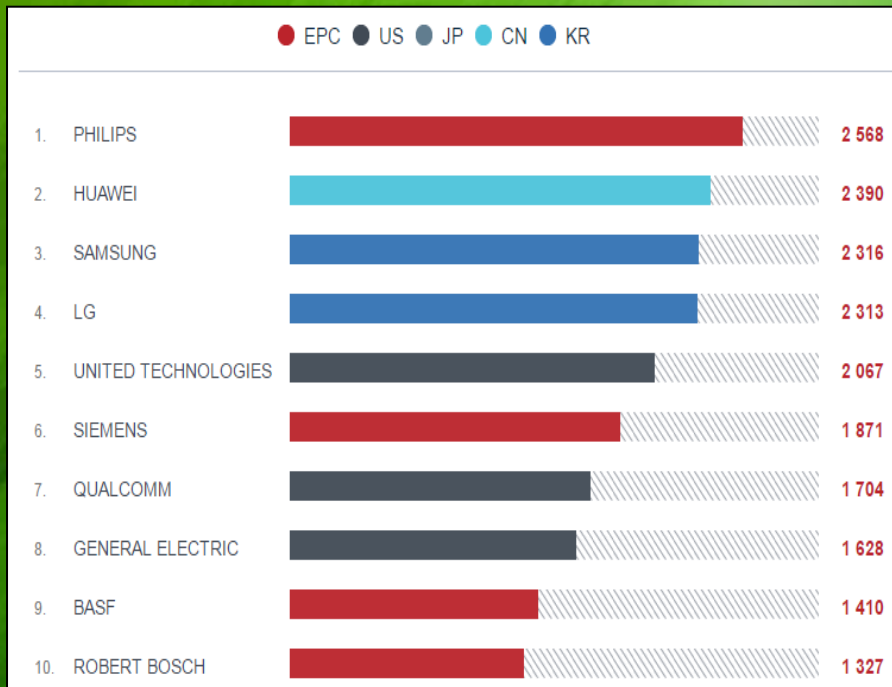
- **U.S: 23%**

- **Asia: 22%**

- **Others: 04%**

Source European Patent Office:
https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016/statistics/granted-patents.html#tab2

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
2025 working together towards

1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…

a) Issues on Intellectual Property : Top 25 applicants

Legend: ● EPC ● US ● JP ● CN ● KR

#	Applicant	Value
1.	PHILIPS	2 568
2.	HUAWEI	2 390
3.	SAMSUNG	2 316
4.	LG	2 313
5.	UNITED TECHNOLOGIES	2 067
6.	SIEMENS	1 871
7.	QUALCOMM	1 704
8.	GENERAL ELECTRIC	1 628
9.	BASF	1 410
10.	ROBERT BOSCH	1 327
11.	INTEL	1 268
12.	ERICSSON	1 183
13.	SONY	1 118
14.	NOKIA	1 059
15.	MICROSOFT	984
16.	BAYER	881
17.	TOYOTA MOTOR	870
18.	CANON	756
19.	PROCTER & GAMBLE	755
20.	PANASONIC	719
21.	JOHNSON & JOHNSON	716
22.	ZTE	680
23.	AIRBUS	679
24.	HOFFMANN-LA ROCHE	664
25.	DOW CHEMICAL	647

Source European Patent Office:
https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016/statistics/applicants.html#tab1

1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…
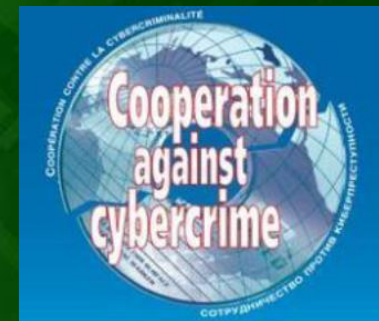
b) Opportunities

Octopus Cybercrime Community -OCC 12/04/2013

Council of Europe: Budapest Convention on Cybercrime - (CETS 185)
65 signatory countries (EU & non-EU) created on 11/23/2001

Public / private sector cooperation :

- ➢ **Art2. Illegal access**
- ➢ **Art3. Illegal interception**
- ➢ **Art8. Computer falsification**
- ➢ **Art9. Computer Fraud**
- ➢ **Art10. Intellectual property and fundamental rights**

1. Governance and Big Data : the new « *Petroleum power* »

The creation of a "new industry", for a new domination…

b) Opportunities

" Digital trust, peace and cybereducation "

JE SUIS INTERNET

SPEAK UP FOR YOUR RIGHT TO PEACE AND SECURITY IN THE DIGITAL WORLD

> **10/16/2015** : **US/China Cyber Agreement**

> **04/06&07/2017** : **Conference "Building International Peace and Security in the Electronic and Digital Society - Public and Private Stakeholders, Roles and Responsibilities", UNESCO, Paris**

> **05/25/2017: Facebook, Google and Microsoft call for review of NSA surveillance program**

> **05/25/2018 : General Data Protection Retention**

> **Cybersecurity faces 1.8 Million Worker shortfall by 2022**

> **R&D and employment - stability**

> **The legal status of whistle blower (political refugee)**

> **June 2017 : The call of Microsoft to create an international NGO fighting cybercrime**

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
2025 working together towards

2.   Cyberwarfare : a reality for connected organizations

2.   Cyberwarfare : a reality for connected organizations

a) "Historical flaws and attacks" 2014-2016

- Interpol operation "sextorsion" International police operation against users of the "Blackshades software"

- Interpol "sniping" in Europe against cybercrime - **34 countries** / **1000 people**

- The website of the Ministry of Defense (France) cyber attacked by Anonymous.

- Lizar squad attacks institutional sites (**20,000**) - # OPFRANCE / Charlie Hebdo

- "Babar" the DGSE software that is rampant in the Middle East

- The Office of the Intelligence Services Directorate (ODIN-USA) announces the creation

- of a "pre-crime" computer system - social media + bitcoin

- Extensive Europol operation against the RAMNIT virus (**3 million** infected computers)

- Snecma (Safran group) - industrial sabotage (France)

- Heartbleed "the" most important "security vulnerability

- Dragonfly - Target: **84 countries** / **1000 companies**

- Theft of personal data from **4.5 million** patients in the US community health system

- Morgan Chase **83 million** stolen data.

- Target (USA) - **40 million** bank accounts looted

- Anthem - data theft of **81 million** people (USA)
  Excellus Bluecross BlueShield victim of a piracy (**10.5 million** insured data)

2. Cyberwarfare : a reality for connected organizations
a) The 10 cyber attacks that marked the year 2016

01. Malware Locky (February): a ransomware.

02. Swift Network (April): the Central Bank of Bangladesh (**72 million euros**)

03. LinkedIn (May): **117 million** emails/password sold on the dark web.

04. Tumblr and MySpace (May): **360 million** email addresses to the dark web

05. TheDAO / Ethereum (June): $ **50 million** was stolen.

06. Ashley Madison (August): **37 million** members (emails, phones, etc…)

07. Yahoo Mail (September): **1 billion** Of user accounts.

08. Dyn (October): massive DDoS attacks (Netflix, Spotify, Airbnb, Twitter, Paypal, Sony Playstation network).

09. Dailymotion (October): **85** million accounts users

**10. AdultFriendFinder** (November): with **400 million** accounts affected.

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
working together towards 2025

2. Cyberwarfare : a reality for connected organizations
b) The "new digital farwest " era : The Shadow Brokers's "hack back"

10/04/2017: Shadow Brokers Release Password to NSA's Tools in response to U.S. Attacks on Syria

Is wannacry an open door on the unknown ?

THE OVER MILITARIZATION OF CYBERSPACE

- TAILORED (USA)
- ANONGHOST, ANONYMOUS
- UNITÉ 61398 CALLED « SHANGAI GROUP »
- UNITÉ S-74 (ISRAËL),
- SHADOW BROKERS,
- SYRIAN ELECTRONIC ARMY,
- TARH ANDISHAN,
- CHAOS COMPUTER CLUB
- NETWORK CRACK PROGRAM HACKER GROUP, LANZARUS GROUP, ETC...
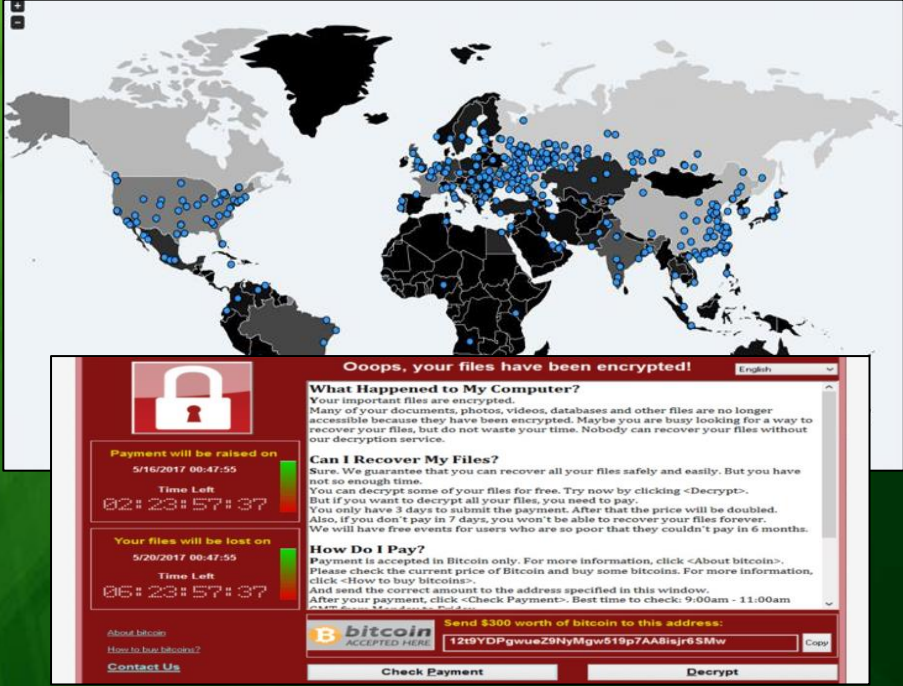
Ooops, your files have been encrypted!

2. Cyberwarfare : a reality for connected organizations

b) The "new digital farwest" era : Data at the center of the attentions

- 58 surveillance/spying programs for 8 countries - 24 programs just for USA

- 06/01/2017 : Fireball Malware affects nearly 250 millions computers

- 06/02/2017 : Insecure Hadoop clusters expose over 5 000 terabytes of data.

- 04/03/2017 : Mr President Trump signed the internet privacy bill.

- 06/04/2017 : Ramona Fricosu jailed 6 months for refusing to give Police his iPhone passcode

- 06/06/2017 : a 14 years old boy arrested in Japan for creating Ransomware.

- 06/08/2017 : 22 distributors working as Apple distributors as part of a $7 million operation

- 06/07/2017: Nacira Salvan, a French Expert in cybersecurity calls for "Citizen Cybernetic Weapons (Digital hygiene) and cybereducation.

US government hack stole fingerprints of 5.6 million federal employees

Office of Personnel Management hack, which US believes China is responsible for, originally thought to have compromised prints of only 1.1 million workers

FireBall Malware
250 Million PCs Infected

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
2025 working together towards

2. Cyberwarfare : a reality for connected organizations
b) The "new digital farwest" era : Data at the center of the attentions

- **Big Data and legislation**

- **Massive industrial spying activities (Snowden, State against over states, Companies,etc...)**

- **Cyber weapons for purposes of damage or obtain technology (Ex: Stuxnet, Spamhaus, JP Morgan Chase & Co, Saudi Aramco, Snecma, etc...).**

- **Cybercrime activities and cyberterrorism**

➢ **Information on research and development (R&D).**
➢ **The information exchanged by heads of state and / or CEOs of companies.**
➢ **Elements of negotiation: contracts, income statements, negotiations, etc...**

All monitored, all equal ....

3. The Challenge for the international community
b) How to revive our "Democracies and economies" ?

What kind of world do we want?
What is our international digital dream ?

1/Intellectual property and law
2/ Economy
3/ Research and Development
4/ Security
5/ Infrastructure
6/ Democracy

Like Martin Luther King, "I have a dream"

World Summit on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015
2025

Appendix

- Mass surveillance in the USA and list of governments using it
https://en.wikipedia.org/wiki/Mass_surveillance_in_the_United_States

https://en.wikipedia.org/wiki/List_of_government_mass_surveillance_projects

 - PRISM
https://fr.wikipedia.org/wiki/PRISM_(programme_de_surveillance)

https://www.theguardian.com/us-news/prism

https://www.washingtonpost.com/news/wonk/wp/2013/06/12/heres-everything-we-know-about-prism-to-date/?utm_term=.3c1b8aa8640a

- PRECRIME
https://www.cnet.com/news/homeland-security-moves-forward-with-pre-crime-detection/

https://www.wired.com/2011/10/pre-crime-detection/

http://www.globalresearch.ca/police-claim-minority-report-style-pre-crime-program-reduces-crime-rate/5413988

http://tempsreel.nouvelobs.com/rue89/rue89-etats-unis/20121217.RUE1877/les-etats-unis-regroupent-leurs-fichiers-pour-detecter-le-pre-crime.html

http://www.atlantico.fr/decryptage/machine-predire-crimes-quand-minority-report-devient-realite-etats-unis-274020.html

https://www.iarpa.gov/index.php/research-programs/cause/cause-baa

Appendix

https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/OSTP-AI-RFI-Responses.pdf

https://nworeport.me/tag/artificial-intelligence/

Big Data and privacy

https://bigdatawg.nist.gov/pdf/pcast_big_data_and_privacy_-_may_2014.pdf

Big Data : preserving our values

http://www.cfr.org/technology-and-science/white-house-big-data---seizing-opportunities-preserving-values/p32916

Small Data Surveillance v. Big Data Cybersurveillance

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2731344

US Government hacked for the fingerprints of the federal emploees

https://www.theguardian.com/technology/2015/sep/23/us-government-hack-stole-fingerprints

Regulator warns of 'Armageddon' cyber attack on banks

https://www.usatoday.com/story/money/business/2015/02/25/lawsky-goldman-sachs-banks/23995979/

Pentagon confirms that missile defenses are vulnerable to cyber attack

http://securityaffairs.co/wordpress/26446/cyber-warfare-2/pentagon-confirms-missile-defenses-vulnerable-cyber-attack.html

WORLD SUMMIT ON THE INFORMATION SOCIETY

WSIS FORUM | 12-16 JUNE 2017
Geneva | Switzerland

Information Society for SDGs

Thank You

www.wsis.org

www.wsis.org/sdg

www.wsis.org/forum

www.wsis.org/prizes

www.wsis.org/stocktaking

www.wsis.org/review

Join	Share	Win	Interact	Sponsor
CONSULTATIONS	BEST PRACTICES	WSIS PRIZE	MULTISTAKEHOLDER	FORUM

wsis-info@itu.int

#ICT4SDG