AI/Data and "The" Internet

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CHALLENGES & OPPORTUNITIES OF THE INTERNET

1. Trust
2. De-Silo-ing against fragmentation, i.e., internets but the Internet
3. Edge-heavy (distributed and autonomous) computing
4. Native Digital, toward Internet of Functions (IoF) & Cyber-First
5. Global and/versus local ("national") policies
6. Internet-by-Design
   • Not only “technology”, but also “architecture ("gene")”
DE-SILO-ING
“De-Silo-ing”

Vertical Lock-on by silo (stove & pipe) → Horizontal Cooperation e.g., data-centric

Big hurdle for Big-Data with A.I.
• Risks of IoT (Internet of Things) systems;
  *IoT people loves “own private silo”*

1) Not “the I” (Internet), but “an i” (internet)
2) Poor security measures….. Needs Security-by-Design
3) Closed open source cloud forums Needs Interoperability
Data Sharing platform among all the industries for Society 5.0 - April 2018 -

1. Standardization is **not** purpose
2. Internetworking is the 1\textsuperscript{st} priority
3. We got protocol **translation** capability
4. We need **transparency** to connect
5. Agile development platform
6. Sharing experiences (Coopetition & cooperation)

なお、当該基盤の構築のプロセスにおいては、統一的な技術仕様の策定や実装を待つことなく、迅速に分野間のデータ連携が行われることを目指すべきであり、その実現に向けて、共通語彙、API、メタデータの仕様等を広く公開し、利用・導入される技術仕様の透明性を確保することで、相互接続性・連携稼働性を向上し、データ連携の促進を図る。すなわち、分野間の相互接続性の実現を優先し、分野毎のデータ連携基盤の構築にあたって培われた開発・実運用の経験を共有し、さらに当該システムにその知見を取り込みながら、継続的なPDCAサイクルによる段階的整備を迅速に実現させることが必要である。
DIGITAL-BY-DESIGN
-- “UNWIRE”-ING --

i. “Cyber First” from Digital Twin
ii. Internet of “Functions” (IoF), from IoT
What you must do is only attaching a module!! Your smart-phone becomes an intelligent smart key, with awesome "new" functions. Legacy functions were only 3, identify, open and close.
Important point; “digital” key can obtain infinite doodling capability for new value !!!
Physical key is an obstacle for digital innovation !!!

Key has 4,000 yeas history

Since key was “physical” object, we start to recognize a lot of inconvenience for sharing economy
Well,...... what we are realizing;

- Physical objects (e.g., key or money) are just of temporal appearance, as a physical instance, when we do realize Cyber-First.

1. Software module, with micro-service, has "mobility" with virtualization (= abstraction = digitization)

2. Some functions (= codes) are printed out to physical object, called as “thing”, from cyber space.

Then,

- Internet of Things (IoT)

- Internet of Functions (IoF)
THANKS
ありがとう