Future of Trade Secret Systems: Addressing Innovation Gaps and Opportunities Derived from Emerging Technologies

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Technology Impact on Trade Secrets

- **Cambridge Dictionary**

Secret:

a piece of information that is only known by one person or a few people and should not be told to others

a fact about a subject that is not known

the particular knowledge and skills needed to do something very well

Trade Secret:

a piece of information that you are not willing to tell anyone

a piece of information about a product that is known only to the particular company that makes it

We need to assess the impact of emerging technologies on the possibility of keeping information / knowledge as a secret

and the care one will have to take to ensure that the desired information / knowledge remains a secret for the period for which one wishes to keep it as a secret.

Emerging Technologies

- Rapid move from non-digital to digital media for storage, communication, reproduction, preservation and utilisation of information / knowledge
- New Technologies with processes for Legitimate Reverse Engineering…unlocking the locked information / knowledge
- New emerging technologies for interfacing biosystems with devices for either enhancement of bio-abilities / correcting of defects in biosystems (what will be the limitations to the definition of being a “natural person”
- Development of non-intrusive techniques for mind reading and mind recording including dreams
- Development of mind to mind transmission of information / knowledge
- Training of brain for enhancement of skills / acquiring new skills
- Use of big data for diverse applications

Emerging Issues

- Revisit Contract Principles to the Protection of Intellectual Property, especially trade secrets related to

  ……Relationship between licenses (such as shrinkwrap license) prohibitions on reverse engineering, copyright and trade secrets

  ……Large scale induction in a workforce of “Autonomous Learning Systems”, working in parallel with humans, will require development of new “contractual paradigms” especially in “employee management” processes
- Establishing Existence (E); Ownership (O); Notice (N); Access (A) in Trade Secret Related matters especially to prove “misappropriation” is becoming increasingly difficult
- Identification, classification and protection as crucial steps are getting into a “cloudy space” and therefore valuation of trade secrets in the new technologies’ paradigm poses a challenge

The Way Ahead

- In the USA, The **Defend Trade Secrets Act of 2016** is only a start but needs to be developed further with a foresight of all that is to come in the near future in terms of technologies. **EU and Japan** have also taken a few steps ahead.
- “One size fits all” will not work meaningfully for Trade Secrets under the rapidly evolving technologies…..Therefore a uniform codification for trade secrets will pose unforeseen issues
- A recommendation is to create a “hybrid legal framework” drawing on the strengths of “codification” and coupling them with the flexibilities provided by “common law” considerations

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WIPO Symposium on Trade Secrets and Innovation
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by
Dr. Richard L. Thurston, Esq.

Introduction

- **Trade Secrets are at the core of innovation, but:**
  - Trade Secrets are at increasingly great risk from advancing technological developments in the Post Computer Age (PCA), such as borderless shared pools of information in the "Cloud".
  - Unmeasurable $$ amount of annual losses globally, but probably are in the range of tens if not hundreds of billions of US dollars per annum, not including unidentifiable values for:
    - ✓ **Loss of competitive advantage;**
    - ✓ **Loss of key core technologies;**
    - ✓ **Loss of company reputation;**
    - ✓ **Loss of business opportunities;**
    - ✓ **Loss of key customers** which would no longer trust your ability to protect their trade secrets;
    - ✓ **Loss of profitability, return on investment, loss of shareholder value, etc.; and**
    - ✓ **Loss of valuable/key personnel**
- Requires basic solution for developed and developing economies.

Challenges: Increasing Complexity

- Technological change will continue at an exponential pace. Recent growth of technology/IT:
  - Public access to court, PTO, other agency records over the internet – greater access to public records.
  - Digital technologies, high density storage media, and the cloud.
    - Beyond "digital" – new disruptive technologies such as augmented and VR-based, intelligent interfaces,
  - Mobile interconnectivity; contextual; IoT; social media explosion; bio-digital connections and trails.
  - Metadata.
  - Growing complexity and criticality of corporate and other cyber-security infrastructure.
  - Security automation, technology detection and recovery.
  - Is "AI" any longer relevant?
- Forensic science including "data intelligence" - based analytics.

Challenges: Nature of Trade Secrets Creates Problems

- Identification – it is often difficult to define a trade secret clearly (e.g., a process may be a Trade Secret, but which dynamic, changing variables are critical to the product/results).

- Maintenance of Trade Secret records: Trade Secrets are "living," and will become organic/changing over time, making recordation challenging to meet evolving judicial/administrative evidentiary standards.

- Today, documenting and storing a Trade Secret is, generally, very time consuming and requires diligence to maintain (e.g., revision of a semiconductor process from version 1 to version 2 to version 3, etc.).

- Placing effective limits on Trade Secret dissemination are challenging (e.g., Engineer 1 moves to a competitor– even assuming no malicious transfer by Engineer 1, some Trade Secret leakage is likely).

- No adequate, uniform global standards for comprehensive Trade Secret protection.

Solutions to Advance Trade Secret Protection

- Reasonable efforts to protect Trade Secrets could include:
  - A digital and beyond digital designation of Trade Secrets.
  - "Marking" of Trade Secret documents *digitally (and beyond as noted earlier)* and using technology to become automatically equivalent to "Confidential". Only classification would become one solely of "access".
    - Limiting Trade Secrets, in fact, and technologically-speaking to "need to know" access though state of art cross-reference to future employee bio-reference electronic IDs. Could be established through bio-reference based augmented technologies.
  - A new corporate micro-system consisting of physical, IT, Cyber-based security in combination with new-age forensic/AI-based bio-techno sciences.
- Must be usable by both developed and developing economies.
- Trade secret management technologies need to be able to supplement internal monitor/audit and recovery controls.

ISSUES FOR TRADE SECRET ENFORCEMENT

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- Several failure points in litigation, including inability:
    a. To maintain secrecy.
    b. To identify properly the Trade Secret (today =improper cataloging or maintenance of a Trade Secret)
    c. To demonstrate Trade Secret ownership (unclear ownership or lack of proof of ownership proof)
- Cross-border issues include:
    a. Protection requires fast, timely, and often global injunctive relief to prevent Trade Secret dissemination/loss.
    b. Lack of internationally-recognized registration mechanism complicates efforts to prove ownership and existence of trade secret for injunction proceedings in multiple jurisdictions.
    c. No generally accepted global Trade Secret standards

TRADE SECRET REGISTRY SYSTEM is REQUIRED

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- Current systems have not been widely adopted.
  a. KIPO's system for Trade Secret Certification Service (https://www.tradesecret.or.kr/main.do)
     i. Regional bias assumed by foreign parties?
     ii. Lack of transnational recognition of registration?
  b. JPO's system (TBC – awaiting input from JP chapter)
- Protecting indigenous knowledge especially in developing nations:
  a. For example, traditional 'knowledge' for medicine/food products in their preparation, ingredients, proportions, etc.
  b. Patent protection may not be available, so Trade Secret protection may be the only available option.
- More recent 'traditional" systems requiring the owner/user to upload Trade Secrets pose growing, immediate security risk.

WHAT IS IKR?

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- Why IKR (International Knowledge Registry)?
  - IKR provides Proof of Existence (PoE) of an electronic document.
  - IKR is a neutral third party system;
    i. WIPO – UN's global forum for IP services and cooperation.
    ii. Skilled at processing and maintaining substantial numbers of international records for different IP matters (PCT for patents, Madrid for trademark, and Hague for design).
    iii. Sensitive to worldwide IP issues (e.g., policy discussions regarding traditional knowledge and their protection, treaty making, public access for sustainable development).
  - IIPCC – NGO, WIPO partner, non-partisan and not affiliated with any national government.

IKR IS NOW

- IKR is ready today.
  a. Already deployed for 3+ years within several companies, academic institutions, public/private institutes, and governmental entities.
  b. Internal development to scale for worldwide use at WIPO can be completed in 3-6 months at low cost.
- IKR can quickly become a global standard:
  a. No apparent IP infringement risk – in contrast to block chain.
  b. Adaptable with new evolving technologies.
  c. Deployment requires minimal technical infrastructure (excellent for developing economies) – unlike blockchain solutions, the IKR requires no significant computing or electrical power.
  d. Flexible deployment - may be run on phones, web broadcast, computers, servers, IoT, etc.
  e. May be used with traditional knowledge– e.g., recipes and formulas of traditional medicines.
  f. May be used on any electronic document, regardless of size or format and is, therefore, technology agnostic.

CONCLUSION

- Trade secrets are of growing importance as the world becomes more closely-connected digitally, and as data sets, algorithms, big data, analytics, AI, IOT, and other technologies evolve constantly.
- However, without a formal, worldwide standard, knowledge sharing encounters increasing friction and impediments.
- A robust technology-based system providing improved Trade Secret recognition and proof of existence will allow entities to collaborate and share Trade Secrets with greater confidence, thereby improving sustainable knowledge transfer for all.

THANK YOU

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WIPO Symposium on Trade Secrets and Innovation

Panel : The Future of Trade Secret Systems

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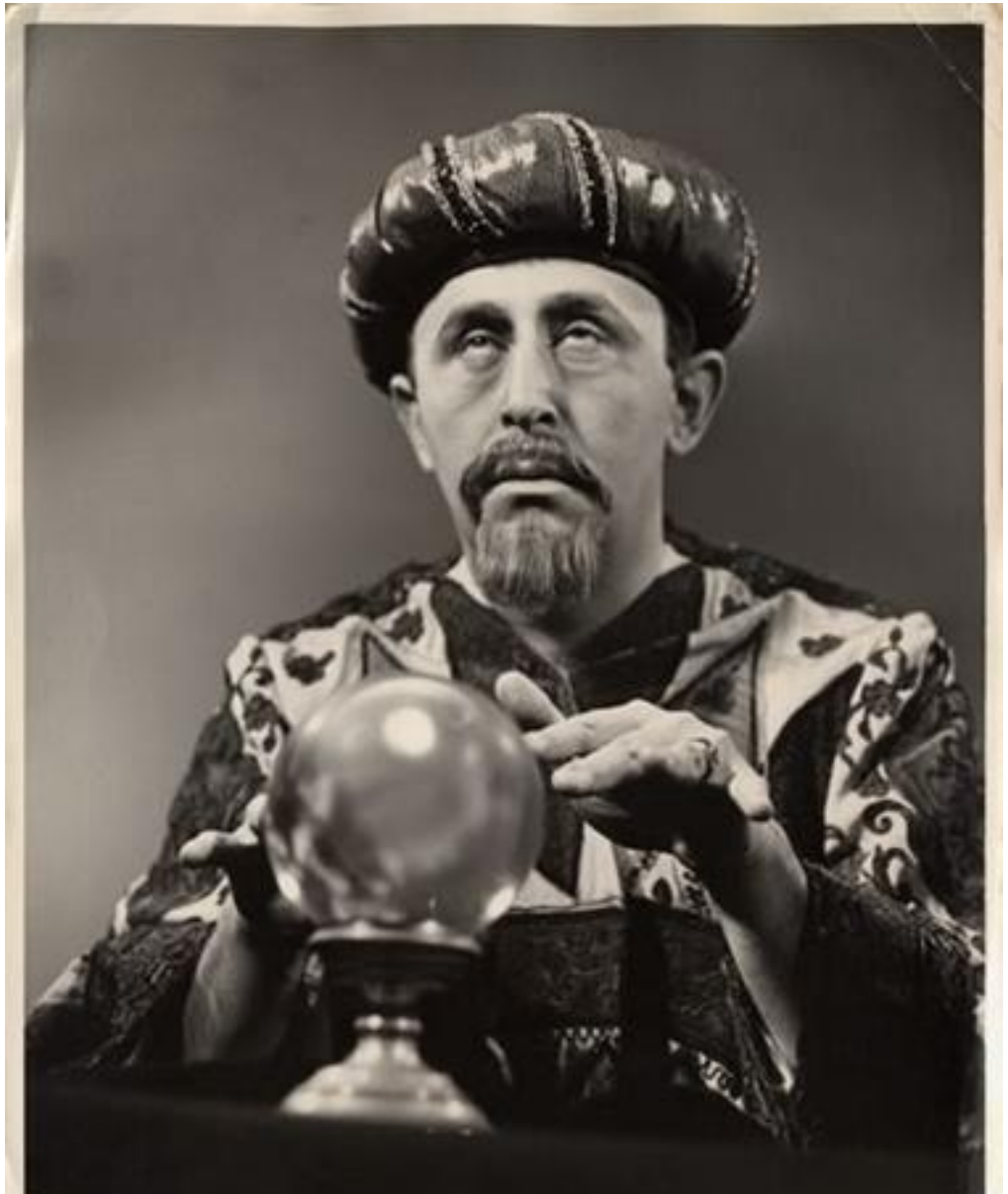
The Future of Trade Secret Systems ?



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Challenges for the Future of Trade Secret Systems

- **(1) Data accessibility**

  => What is secret ?

- **(2) Data vulnerability**

  => What are reasonable steps ?

- **(3) Data mobility (data portability)**

  => Trade secrets *vs* data portability ?

- **(4) Data transparency**

  => Trade secrets *vs* transparency ?

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(1) Data accessibility

- Massive power to collect and aggregate data (big / smart data) => Challenge to establish that information is secret, i.e. not « generally known among or readily accessible […] » (art. 39 par. 2 (a) TRIPS)
- Risk of erosion of secrecy because digitally *accessible*

Example : trade secrets of executive search consulting firm (Sasqua Gr., Inc. v. Courtney and Artemis, No. CV-10–528, 2010 WL 3613855, E.D.N.Y. Aug. 2, 2010)

=> But power of technology to generate & combine data:

How artificial intelligence is changing drug discovery

Nic Fleming 30 MAY 2018 nature International journal of science

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(2) Data vulnerability

- What shall constitute « **reasonable steps** » in the vulnerable digital environment (with threats of cyberattacks / data breaches) ?
- What standards of cybersecurity ?

- Directive 2016/1148 on security of network and information systems (NIS Directive): art. 16

- General Data Protection Regulation 2016/679 (GDPR): art. 32

- Can technology help to identify and to protect trade secrets ? => Recording of trade secrets on a **blockchain** (timestamped / "hashed" (encrypted)) & use of **smart contracts** ("smart NDAs")

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(3) Data mobility / data portability

- **Right to data portability** from one data storage provider to another provider: art. 20 GDPR + art. 6 Regulation 2018/1807 of 14 November 2018 on a framework for the free flow of non-personal data in the European Union
- Complex balance of rights between trade secrets of the provider (data controller) and (personal & non-personal) data of the client
- Other challenges of data mobility (e.g. open innovation / employee mobility)

Who owns your Twitter followers, you or your employer?

By Anne Fisher December 13, 2012

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(4) Data transparency

- Pressure for data transparency => what balance between trade secrets and data transparency ?
- 2 examples:

(a) Ranking methods of online search engines:

EU Regulation 2019/1150 on promoting fairness and transparency for business users of online intermediation services (B2B) : algorithmic transparency

(b) Clinical study reports submitted for marketing authorisation application (MAA):

Opinion of the Advocate General Hogan, Case C-175/18 P PTC Therapeutics International Ltd v European Medicines Agency (September 11, 2019)

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Take aways for the Future of the Trade Secret Systems

- **(A) <u>Impact of digital technology</u>** on the application of the legal standards for trade secrets protection:

=> S*ecrecy* and access to & (AI-) generation of data

=> *Reasonable* steps of protection (cybersecurity)

- **(B) <u>Balance between competing interests/regulations</u>**:

=> Data mobility & portability (mixed datasets)

=> Data transparency

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- **(C) <u>Enforcement & dispute resolution</u>**

=> Key importance of trade secrets in the data economy

=> Complex legal framework applicable to data / data governance => <u>boom of transnational « data disputes »</u>

(« **Massive Online Micro-Justice** »)

=> **Need to develop innovative global dispute resolution mechanisms (ADR) for digital trade secrets & data disputes (e.g. data portability disputes)**