

Microsoft Cloud Computing Research Centre

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Clouds of Things: Legal Considerations

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Clouds of Things - overview

- Why “Clouds of Things”?
- Concepts and taxonomy
- Security challenges
- Relationships and liabilities
- Personal data
- Governance



Clouds of Things: what are we talking about?

- Limitations notwithstanding, NIST's taxonomy for cloud has greatly facilitated analysis and discussion, especially across disciplines
- We don't have something simple like IaaS / PaaS / SaaS for IoT
- Would a taxonomy facilitate policy, commercial, and legal analysis?
- For example would it help if we could say:

"CloudData derived from ThingData" instead of "data in the cloud which are derived from operations using a cloud service to process data sensed by Things and then transferred to the cloud"



Clouds of Things: core elements

Thing

Thing
ThingData
ThingAction

Cloud

CloudData
Cloud Service
CloudSoftware



So, what is a 'Thing'?

- Any physical entity capable of connectivity, that has a direct interface to the physical world (i.e. a sensing and/or actuating capability)
- Things may be...
 - Attached
 - Embedded (including ingested / injected)
 - Composite
- Humans and animals are not Things
- Ability to communicate is essential

Security – policy and legal issues

- Complexity and systemic risks; whose responsibility?
- Obligation to implement security measures
- Liability / rights in relation to security breaches, including breach notification obligations
- Attacks on computer systems may be criminal
- Role of standards and mandatory certification

Relationships + Responsibilities

- Relevant parties, their roles, and the contract ecosystem
- Establishing contractual relationships using things
- Who owns what?
- Potential non-contractual sources of liability (including consumer protection, negligence, employment law)
- Cyber-risk and insurance



Personal Data in Clouds of Things

- What is regulated as personal data?
- Who is responsible?
- Which laws apply?
- What rights to individuals have?
- How do rules on data location and data transfer work – risk of Balkanisation of Clouds of Things?
- Will Clouds of Things be a catalyst for Privacy by Design and Privacy by Default?



Governance of Clouds of Things

- Who should do the regulating?
- Surveillance issues
- Identity and authentication
- Standards
- Demonstrating compliance with legal obligations
- Consumer protection
- Market and competition issues
- Use of radio spectrum



Issues on which we would welcome input

- Clouds of Things – incremental or step change?
- Can existing models for legal relationships and liabilities cope with the scale and complexity?
- If not, what might work better?
- Do we need a taxonomy and, if so, how much detail?
- What's missing from our legal considerations?

