“Harmonizing Technology with Society”
From Real to Cyber World: A Law and Economics Analysis

September 30, 2009
Presented to ISSI
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Institute of Information Security

• Established 2004
• First and only Graduate School specializing in InfoSec.
• Both Academic and Practical
• Comprehensive Study of InfoSec.
• 80%+ Students from Business
• WWW: http://www.iisec.ac.jp
Personal Career

Business (33yrs.) + Researcher (12yrs.)

Non-Technical 17yrs. + Technical 9yrs.

Management 7yrs.

Domestic 27yrs. + Overseas 6yrs.

Nextel Communications 1yr

Economics 5yrs. + Law 7yrs.

Currently
Corporate Advisor 2 org.
Auditor 1
NPO Director 3

(NASDAQ:NXTL) (Now Sprint-Nextel)
Law in the Real World

- Tangible Goods: Excludable, Rivalry, Recoverable
- Alienable v. Inalienable
- Property, Contact and Liability Rules for Alienable Goods
- Freedom of Speech, Self-Decision and Privacy for Inalienable Objects
- Remedy and Sanction by Litigation, Injunction and Prosecution effective
- One Right for One Thing
Fluctuating Law in Cyberworld

- Intangible Goods: Non-excludable, Non-rivalry, Irreversible
- Only two types of Information protected: Secret Information (SI) and Intellectual Property (IP)
- SI Protection neither comprehensive nor well-balanced
- IP Protection (especially Copyright) challenged by Digital Technology
- Personal Data as the third type?
- Multiple Rights for One Object
- CODE is Law? (Lessig [1999])
# Real v. Cyber

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<thead>
<tr>
<th>Subject (Actor)</th>
<th>Real</th>
<th>Cyber</th>
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</thead>
<tbody>
<tr>
<td>Natural Person, Legal Person</td>
<td>+ Computer</td>
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<table>
<thead>
<tr>
<th>Object</th>
<th>Real</th>
<th>Cyber</th>
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<tbody>
<tr>
<td>Tangible Goods</td>
<td>+ Intangibles</td>
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<table>
<thead>
<tr>
<th>Action</th>
<th>Real</th>
<th>Cyber</th>
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<tbody>
<tr>
<td>Own, Exploit and Transfer</td>
<td>+ Attribute, Hold and License</td>
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<thead>
<tr>
<th>Enforcement</th>
<th>Real</th>
<th>Cyber</th>
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<tbody>
<tr>
<td>Damages, Prosecution etc.</td>
<td>+ Injunction or Recovering Tech?</td>
<td></td>
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<thead>
<tr>
<th>Alienability</th>
<th>Real</th>
<th>Cyber</th>
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<tr>
<td>One Right for One Thing</td>
<td>Multiple Rights for One Object</td>
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How to Generate a Balanced View

Original idea comes from Lessig [1999] & Tsujii [2003]
Questions

• **Question-1:**
  What do you think is the most important factor, if you are asked to develop or deploy a new information system for social innovation?
  - Legal System?
  - Management?
  - Moral?
  - Technology?
  - ...?

• **Question-2:**
  What kind of role do you expect on social scientist, when you do above?
Example: Data Protection Regulations in the World

http://www.privacyinternational.org
Social Innovation by cross-state Composition of Services

Composition of Services (e.g. Web 2.0)

Challenge: Application of different regulations