SI 680 - Contracting and Signaling, Winter 2008

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<http://hdl.handle.net/2027.42/64965>
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Playlist:

“Misinformed”, Soul Coughing

“Contract”, Lil Jon and the East Side Boyz

“Signal”, Laura Jansen

“Screen”, Brad
I can program a mainframe to do email and transaction processing.
24 x 7. No coffee breaks.
IT revolution!
Supercomputers on every desktop vastly increase human productivity.
Right?
“Connecting people, information, technology in more useful ways”
A 'contract' is a legally binding exchange of promises or agreement between parties that the law will enforce. Contract [[law]] is based on the [[Latin]] phrase ''[[pacta sunt servanda]]'' (pacts must be kept).<ref>Hans Welberg, ''Pacta Sunt Servanda,'' The American Journal of International Law, Vol. 53, No. 4 (Oct., 1959), p.775</ref> [[Breach of contract]] is recognised by the law and [[Judicial Remedies|remedies]] can be provided. Almost everyone makes contracts every day. Sometimes written contracts are required, such as when buying a house.<ref>e.g. In [[England]], s. 52, ''Law of Property Act 1900''</ref> However, most contracts can be and are made orally, like buying a law text book, or a coffee at a shop. Contract law can be classified, as is habitual in [[Civil law (legal system)|civil law]] systems, as part of a general [[law of obligations]] (along with [[tort]], [[unjust enrichment]] or [[restitution]]). An agreement involving jah is often termed a "jahagreement."
(example)
50% of US hard disk space is empty.
Much less than 50% contains unique data.
But...
Do you trust that machine with your backup will have it when you need it?
If this guy is your backup peer...
Will he read your private data?

BY: Vidiot (flickr)
http://creativecommons.org/licenses/by-nc-sa/2.0/deed.en
Free (and easy) riders?

BY: RaidersLight (flickr)
http://creativecommons.org/licenses/by-nc-sa/2.0/deed.en
Free (and easy) riders?
(Machines that send out more files than they take in)

BY: RaidersLight (flickr)
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Gnutella:
• 70% of users share no files.
• 1% share 40% of all files.

Spring 2006: Google + Sun ?
I Bought Votes on Digg

Annalee Newitz  03.01.07 | 2:00 AM

After roughly four and a half hours, my story on Digg had gotten only one digg -- from my pseudonym, PseudoPotato. View Slideshow

It was a great lesson in how powerful a tool Digg is for spreading information. Digg's primary function is to tell you what is "popular" in the world of current events. There's an undeniable influence of crowd-sourced "popularity," and the people behind Digg were clearly aware of this.

"How do we break up the monopoly of power over what is popular?" I wondered. The answer is to build monoplies of our own.

How do we keep pollution out?
“Connecting people, information, technology in more useful ways”

Source: School of Information, University of Michigan
Humans are smart nodes, but not programmable.
ICD includes autonomous, motivated agents in the scope of system design.
Draw on theories and empirical evidence of human decision making to understand likely behaviors in response to various system configurations.
INTRO TO Contracting, Signaling, Screening
(example)
(example)
Mail

Create your e-mail address

Country/Region: United States

E-mail address: @hotmail.com

Type the name that you want to appear before the @ symbol (for example, yourname).

Get help with this section

Create your password

Password:

The password must contain at least six characters and is case sensitive.

Password strength: Weak  Medium  Strong

Retype password:
Hotmail doesn’t want spammers getting free accounts
Enter the text as it is shown below:
(only needed if optional comments are entered)

This extra step helps prevent automated abuse of this feature. Please enter the characters exactly as you see them.

Send  Clear

Source: unknown
CAPTHCAs also impose costs on legitimate users.
Worth it? Is there a better design to discourage hijackers?
– How best to license your patent?
– Startup investors, principals, employees: Who gets what, when and how?
– Social networking: How do you motivate potential dating partners to reveal balanced and truthful information?
– Is there an email protocol that encourages spammers to stop without discouraging legitimate senders?
– How do you induce data producers to create archive-ready data sets?
– How do you induce buyers and sellers to be honest and perform well in semi-anonymous online transaction?
INTRO TO AGENCY
Why contract?
Examples?
AGENCY is universal
(example)
All information, all the time.
The information spotlight…

...causes bad guys to go elsewhere

... gives little guy bargaining power
But...
(example)
Bad guys can disguise info, change identity, disinform....
When and how to make information transparent?
E.g.: Monitoring helps when results are verifiable, not when they’re not!
Ex: More information reduces bad guy information rents but doesn’t create rent for others
learn?
...when people have different interests?
differences in knowledge:

a difference that makes a difference
incentives
info + incentives
Contracts
Contract: an agreement with three elements

Offer and acceptance
Consideration
Intention to be legally bound
What problem do contracts solve?
Principle has an objective

✓ profit max
✓ social justice
✓ universal information access
✓ whatever
“Getting to done” depends on actions taken and information provided by agents.
Agents may not share principle’s objective.
Create agreement specifying...

permissible actions

outcome as function of realized actions
E.g., committee decision process, auction, contract
Who knows what?
What are the motivations?
ICD:

Design mechanisms so agents want to provide information and effort that lead to high quality solution