Whither Non-proximate communications

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Very Recent history 😊
About my research

+ **CS**
  + Trust (tomorrow)
  + Clouds and externalities
  + eg Privacy Trust Sarbanes-Oxley etc
  + Ontology for licensing software
  + Decentralized Approach to Resource Availability Prediction using Group Availability in a P2P Desktop Grid

+ **Law**
  + IP / Regulation of technologies
  + Deep Packet Inspection

+ **Biotech**
  + Spider mite
My team

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Trust

OSTM: Objective Service Trust Metrics
- Response Time
- Latency
- Execution Time
- Throughput
- Transaction Time
- Reliability
- Scalability
- Integrity
- Capacity
- Robustness
- Accuracy
- Accessability
- Availability
- Timeliness
- Domain/application specific OSTM
- Other OSTM

SSTM: Subjective Service Trust Metrics
- Security
- Execution Price
- Transaction ACID
- Regulatory
- Exception Handling
- Interopability
- Remedies
- Payment Satisfaction
- Delivery Satisfaction
- Usability
- Testability
- Stability
- Supported Standards
- Modifiability
- Privacy
- Domain/application specific SSTM
- Other SSTM

PTM: Service Provider Trust Metrics
- Security
- Remedies
- Privacy
- Other applicable STM
- Honest
- Ability
- Benevolence
- Credibility
- Other properties
- Brand name
- Web Site
- Physical Location
- Order Progress
- Contact Information
- Other clues
- Domain/application specific PTM
- Other PTM

STM: Service Trust Metrics

Provider’s Properties

Important clues
Privacy (and other externalities) for clouds

+ Image redacted
Autonomic licensing management
Provisioning System

- autonomic licensing
- policy based management
- DCM
- SLO→SLAs
- p2p cloud

SaaS [application, environment]
Cloud Computing [cluster]
Virtualization [machine, server]
Appliances [delivery]
Figure 4: Job Life Cycle
Rights Management Information, lifeform patents, FLOSS use etc etc

Figure 3: What kind of programs or applications are in use in your department?
etc

- All these areas come together as “technological advancement and policy”
Let's talk about communication

+ Today from a high-level of abstraction
In the next 40+ proximate minutes

- Non-proximate
  - Some history
  - Some technology
    - Infrastructure
    - Network
    - Servers/services
  - Devices
- Some issues
- Some crystal ball gazing
- Some questions and ideas
Hypothesis A

“Electric communication will never be a substitute for the face of someone who with their soul encourages another person to be brave and true.”

+ Attributed to Charles Dickens
Hypothesis B

“Connect as if you were face-to-face, even if your meeting members are spread across the globe. This simple to use technology will improve your meeting communication and help eliminate your travel budget and greenhouse gasses.”

“Meet together as if you were in the same room, and help save the planet - who wouldn't want to do that?”

Per AccuConference
+ Semaphores for landing planes
Early communication – slow

+ Information transfer
+ Smoke, fire, drums
+ 5\textsuperscript{th} century BC
  + “Mounted couriers could travel 1,677 miles (2,699 km) in 7 days...”
+ Earlier systems often required translation manually
+ Postal systems
+ realtime
  + Phone
  + Fax
  + DARPA → ‘web’
  + Cellphones
  + ‘smart’ handhelds
“Hubbard and Bell want to install one of their "telephone devices" in every city. The idea is idiotic on the face of it. Furthermore, why would any person want to use this ungainly and impractical device when he can send a messenger to the telegraph office and have a clear written message sent to any large city in the United States?”

Policy influence

1934 - Federal Communications Commission founded. Combined functions of RF spectrum allocation previously handled by the Federal Radio Commission and interstate regulation for common carriers. Introduced "value-of-service" pricing which required the subsidization of residential subscribers to speed the availability of nationwide telephone service.
Where used

- Edu
- Tert.to primary
- Open
- Self
- Social media
- Web 2
- Youtube....
- Bbery
- Meetings
- Workfkw.
- Mang
- Control
- From powerstations
- To satellites
As CS folk, and probably everyone else here...

- Words in paper titles:
  - Performance, time, efficient, probe, manage, improve, measuring, minimising, analysis, study,

- Our work is typically to achieve
  - System efficiencies
  - New/better/faster/cheaper/safer/cooler..
Social media example

What is the difference between Skype / Facebook / Twitter...?

http://communications.uwo.ca/web2-o/
Is computer mediated teaching effective?

Cheaper than F2F?

Can reach remote communities?

“The Faculty of Health Sciences provides its users with a state of the art Video Conferencing System which networks with Bell Canada's fiber optic ISDN lines. Currently there are six lines for high performance at 384 Kbps.”....
image redacted
Business

- Business today cannot be done without internet mediated exchanges
- Some businesses are those exchanges
- Have we lost the ‘handshake’ deal? (this relates to trust)
“UAE-based Thuraya Telecommunications said on February 25 that it had “conclusive evidence” that the Libyan government, one of its shareholders, was the source of what it called an “unlawful and intentional jamming” of its signals in Libya over the past week as violence continues to take hold in the country.” (three weeks ago)

Tomahawk missiles

Jamming devices
Is there a disconnect in our digital society

- Connection stress?
- Going black is a good idea?
- In the last five years how many of you have been without using telecommunication for five days?
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View some research at SSRN page: http://ssrn.com/author=10510