CFP Research Planning Meeting Summary
October 31, 2007
Cambridge, MA

Attendees

MIT
- Nadav Aharony, MIT
- Theta Aye, MIT
- Rob Beverly, MIT
- David Clark, MIT
- Charlie Fine, MIT
- David Gauthier, MIT
- Natalie Klym, MIT
- Kwan Lee, MIT
- Bill Lehr, MIT
- Fulu Li, MIT
- Andy Lippman, MIT
- Dawei Shen, MIT
- Karen Sollins, MIT
- Chintan Vaishnav, MIT
- Paul Ypodimatopoulos, MIT

Sponsors
- Bob Briscoe, BT
- Dirk Trossen, BT
- Kerry Lynn, Cisco
- Tony Tauber, Comcast
- Marie Jose Montpetit, Motorola
- Hannu Flinck, Nokia
- Bob Withrow, Nortel
- Roberto Minerva, Telecom Italia

CFP presentations

David Reed
- Facilities as albatross – we are moving away from facilities-based economy
- The Internet is now function liquid, architecture is neutral, identity is relative – you are the center of your network, you don't care about the operator
- Communication moving from post-office (point to point) model to spider web model. The spider web monitors our environment.

Dirk Trossen
- We need a framework that combines architecture, design and business models
    o Re architecture – where to place control points?
    o Re business models – how do you survive and flourish?

Karen Sollins
- Framework
    o Analysis toolkit
    o Architecture or design
    o Symbiotic design and combined analysis

Charlie Fine
- Non-technical, value chain view of P2P
- 3 classes of players

- o End users – concerned with utility
- o Aggregators/platforms – provide environments that support end users, usually using transport networks
- o Transport peers – concerned with monetizing pipes, ROI
- Who creates and captures value? – Aggregators gaining more control

Sponsor presentations

Roberto Minerva, Telecom Italia
- Infrastructure does matter. Can transport network offer services to the overlay?
- Diff between services to the overlay or the end users

Kerry Lynn, Cisco
- I imagine a future where everything is encrypted, no deep packet inspection, and applications are divided by bandwidth (latency) needs
- Suggestion: focus on <u>telepresence</u> – high bandwidth app

Bob Withrow, Nortel
- "Hyperconnectivity" -- understanding how and where to extract value in mesh networks
- We want holes not drills – Amazon sells holes on demand

Marie Jose Montpetit, Motorola
- We should be thinking about the edge
- Opportunity for P2P – TV example – peering groups all watch the same thing at the same time from one peer. People like community.

Bob Briscoe, British Telecom
- Resolve the lines – tussles – between value chain groups shown in Charlie's slides

Open discussion

- Andy Lippman: Wireless devices are becoming free and open, opportunistically choosing networks. This changes the model of control.
    - o End of cell phone carriers' control over the software
    - o Will change economics/profit model for carriers
    - o The customer relationship has switched from being with the carriers to the device manufacturer
    - o With enough open interfaces, it could become an open platform, a mass consumer device – a mobile PC

- David Reed: Alternate viewpoint – Verizon has emphasized the unity of their phones, consistent user interface.
  - What are the opps for mediating between capabilities and users?
  - there's an opportunity for carriers to be the trust point
  - value in the hardware vs value in the pipes

- David Clark: Focus on the issue of the social network as the potential next platform.
  - The next trend is context, where you are physically, your social network,
  - How to turn these into win/win depending on what kind of player you are.
  - The power of the platform is not to capture the market but to create an environment, e.g., web browser

- David Reed: There is a massive shift in understanding what a network is; from being a postman for messages to a mechanism for awareness and coordination
  - Major restructuring of the stack
  - Who pays for the pipes in this new world?
    - Auto industry analogy – offer a lifetime supply of fuel and maintenance as part of the purchase to the customer, who will no longer have operating expenses. Oil companies' customers would change from end users to the car companies.
    - Nokia should pay for the pipes and pass along cost through customers

January agenda

- Day 1
  - WG reporting (presentations like Oct 31)
  - Smaller topics, e.g., 700MHz auction
- Day 2
  - Identify three topics for 2-hour sessions, get outside speakers
  - Platform liquidity (speakers from PlanetLab, Amazon)
  - Social networking paradigm and next generation platforms

Issues
- Alignment between WGs
  - choose a topic and have all WGs deal with it, e.g., telepresence
  - We need more coordination to solve a concrete problem

- Audience
  - If we want senior people, we need flashy topic (e.g., iPhone discussion)
  - Is the goal of CFP to have senior people in the room?
  - Getting senior people in the room is valuable for partnering opportunities

- Output
  - We need a more bite-sized, easy to understand and easier to communicate framework
  - CFP white papers help validate sponsors' ideas when presenting them to their superiors
  - Output needs to be measurable – doesn't have to be a paper or slides

- o Some people come just for understanding, not concerned with outputs, but we need to allow for both
  - o Publish magazine articles in IEEE, Journal of Communications
  - o We are limited by our resources

- Operations
  - o Would like to know who's involved – researchers, sponsors, etc.

- Topics
  - o The Internet has become an anti-QoS machine
  - o Telepresence
  - o Emergency services
  - o Openness vs closedness
  - o Incorporation of context into communications
  - o 2006 = openness; 2007 = context awareness; 2008 = post-awareness – "livable networks"
  - o P2P is still considered an important topic to sponsors
    - ▪ Helping P2P grow up (get out of jail)
    - ▪ We're not talking about P2P so much as social networking [peer production?] If we call it social networking, it will get out of jail
    - ▪ We're talking about how to create a network out of people who want to communicate
  - o Social networking
    - ▪ Skeptical of the word "social" especially for hard core engineers