

Berkeley Innovation Forum, Fall Meeting, Oct. 30-31st, at the Haas School of Business at UC Berkeley

Notes were taken by Aileen Desoto, and edited by Henry Chesbrough

We had approximately 28 people in attendance.

We began the meeting at 8:15am by welcoming new members and new representatives of existing members to the Berkeley Innovation Forum. Henry reviewed the agenda for the day and also for the following morning.

Then we went into "speed dating": an hour spend in five minute increments, giving each participant a chance to meet briefly with a number of other BIF participants. Many cards were exchanged, some initial conversations were started, and the energy was very high.

After a break, we had our outside presenter, Michael Chui, from the San Francisco office of McKinsey and Company.

10/30/08 The Next Step in Open Innovation – Michael Chui, McKinsey

<note: all presentations are available from the BIF website, at <http://openinnovation.haas.berkeley.edu/nosearch/#Oct08Papers>

McKinsey Technology Initiative (MTI)

Look at long-term impact

Sponsored by McKinsey partners.

Distributed co-creation – the next step in Open Innovation

Examples – Loncin – a Vietnamese motorcycle company who gained significant market share against Honda by using a very open approach to working with suppliers, Goldcorp, nextnewnetworks, missha – started as woman's portal- collected data on what women want – then created company, naver

These are all examples of Collaborative networks of loosely coupled participants generating joint work products using highly decentralized and interactive environments

Why acceleration:

Demand (1B on-line, 3B mobile phones), technology, Supply

- Grove's Law – telecom – speed of networks of doubles every 100 years – but we're breaking Grove's Law

Digital universe is expanding rapidly – ¼ data – business

Web 2.0 technologies facilitate participation

- Google, Amazon, YouTube Social browsers/Social search, Social Networking, Tagging, Blogs

Participation is growing

- Wikipedia, Del.icio.us (aggregates tagging) – small number of people that tag the most – likely it's getting easier to do.

Increasing economies of scale are being discovered

Benefits

- Disruptively reshape industry structure – examples
 - Naver – search in South Korea. Leveraging Q&A from users, impacting Google/Yahoo. A little like tagging. Local - What's interesting in this area focus
- Create cost advantages
 - Loncin – drove down costs by more than 70%
 - Open Prosthetics – used web to co-design – get lower cost point
 - Lego Digital Designer leverages consumers to create, share and iterate on designs – Created lego design gallery
 - Netflix offers \$1 m to improve the prediction accuracy of its recommendation algorithm – increase by 10%
 - Seeing more contests – Xprize, Innocentive
- Better tailor offerings to customer needs
 - Threadless – designs for t-shirts
 - Missha - Co-creation can reduce uncertainty about customer demand
 - 80/20 publishing – JPG – consumers take pictures and edit
 - SugarCRM – open source CRM – customers (Channel) customize package for their needs
- Accelerate time-to-market
 - Wikipedia – 12 times the number of articles
 - Myelin Repair Foundation – license at least one drug within 5 years, 15 years shorter than an average medical research timeline -
- Improve quality

- Given enough eyeballs, all bugs are shallow – Eric Raymond
- More people involved, more errors found

Aspects of implementing co-creation

- Signal credibility to potential contributors
 - Reputation of individual orchestrators
 - Corporate brand strength important –
 - Second Life – Brand values, field of brand activity, amount of reward offered (contest, Starwood points), degree of interactivity with brand
 - Third-party funding
- Establish clear model of leadership – balance top-down and bottom-up control
 - Open election – community approved volunteers - Wikipedia
 - Representative election – elected governance boards – Open Solaris
 - Appointments - appointed - Myeline
 - Founder – self-declared leader – Linus Torvalds
- What didn't work – earlier Sun – JAVA, abandoned by leader
- Risks – Negative consumer participation – Impact – media coverage (Chevy ad – Iraqi Blood - \$3/gallon: Giggyup). Worked for Frito-Pepsi. Put top 10 posts up for vote, not everything open. Power of support forums
- Create the right incentives to participate
 - Sharing rewards – salary, weighted to contribution value or winner takes all , stock options, revenue sharing
 - Enhancing skills development – create opportunities for knowledge development and apprenticeship
 - Building reputation – track and rank participant's contribution...
- Find the population of participants
 - Impact of solver population at InnoCentive – population of experts from diverse fields yield the highest probability of success
 - Increasing expertise diversity in a population improves the likelihood a given problem will be solved

- Experiment and Scale – requires new mindsets – seeing lots of different ways – do lots of experiments but monitor them and scale up quickly
 - Directed innovation and investment – grassroots initiation and implementation
 - Assigning experts – selecting the right audience
 - Standardization
 - Assigned roles and tasks
 - Monetary incentives
 - Central monitoring

After Michael's presentation, we then went into our first corporation presentation. Ronald Wolf from Philips Research kicked this off.

Opening up Corporate Innovation – Ronald Wolf Director Venturing, Philips Research

Philips needs innovation

Doing innovation in a different way.

Royal Philips Electronics – (Consumer Lifestyle, Lighting, Healthcare – hospital, imaging)

80k patents in IPR portfolio

20th century – light bulbs, x-ray tubes (medical systems), radio valve, oscilloscope, picture tube

Focused from 15 to 7 to 3 sectors from 1996 to 2000 to 2008

Philips needs growth to counter shrinking revenues – In the past when there wasn't growth, you need to re-organize and you end up losing new product possibilities since they are not in the black. Kills long-term growth. Philips has been facing this over the last 20 years.

Many ways to induce growth

Dual track innovation mechanism, adopted venturing as second development too.

Innovation, Emerging Markets, Market driven, Brand, Acquisitions

Growth culture

Strengthening the brand in new Market Sectors – Philips Healthcare – acquisitions

- Need organic growth to create new markets. Sustainable growth requires innovation

Corporates need to balance: more focus on adjacencies sourced from inside or outside – market innovation, break away innovation,

Road map innovation – many ideas, predevelopment, Development, Pilot trials, product release – moves into the Businesses

Venture innovation track - Ideation, pre-seed, alpha, beta, growth – held in Incubation can then move into the Businesses or spun-out [high-risk, low-cost] various Boundary Conditions

- Venture minimizes risks based on stepping stone market approach and stage gating
- Reduces financial risk by entering learning curve on initial focus on niche
- Normal venture failure rate 90%

Roadmap initiation and extension; 2 separate processes

- 1-3 yrs. New product development – focus on roadmap extension
- Other products – Roadmap initiation
 - Venturing process – new path, won't get there fast
 - Risk mitigation by stepping stone approach, 6-8 years. Buildup of marketing, sales channels + product development
 - Focus on adjacency and break away products

Start with high risk environment – invest some for a few products to test out, teach people to listen to the market. Make 1st product sell to 1st market, then look for next market

Venturing – need advice; don't know where you're going, try to find the kind of market that fits your position. Takes more time to get there.

Woodstove – 4 yrs ago, contains a lot of electronics, posers fan inside stove – optimal combustion – India market – needed to make modifications after going into the house to really understand customer needs

Ventures minimize risks based on stepping stone market approach

Stage gating based metrics (Bell-Mason) – common language – needed to educate everyone in the process.

Research project → Opportunity → Preseed → Seed → Alpha → Beta → Growth

Create, Assess, Sketch, Formulate, Specify, Build, Prepare, Launch – Capturing the value by scaling

Venturing Stage 1: develop PreSeed in Research – goes through Businesses vs. Incubation - 10%

4 Research Programs – various business development people scout in research to pick business opportunities.

Preseed – customer, market insights, financial forecasting, Legal evaluation, IP landscape, Business case pitch, PR

Research, Venture drive → Business rationale (\$50-100k at this point)

Lab Venture - Initial business plan

2-3 people in these businesses with some support from marketing, business development

Start LV, multiple Milestone reporting, transfer to one of the Incubators, licensing, business sectors, external. 17 Ventures started in 2007, 22 Ventures so far.

Venturing Stage 2: development from Seed in Incubators – still building statistics

PreSeed	Seed	alpha	beta	Growth
Research + Sectors = Externals	Incubator board	New Business Development Board	New Business Development Board	
	Defining detailed business plan Setting up business	First products/services through operational prototyping Refined product offering, full partner engagement Marketing strategy		Venture fully operational, gearing towards growth
		Incubator	Incubator	Untested in Philips

They hire outside people to help.

60 Ventures in the funnel – some spun out – Prime Technology Ventures – two have spun-out, 5 technology companies

- Home dialogue systems
- Handshake solutions
- Magnetic biosensors
- Content identification
- Polymer vision

- Liguavista
- Entertaible
- Silicon Hive
- AmBx
- WoWvs 3d solutions

Venturing timescale longer: keep it apart from business.

How to spin-in –

How to organize for Roadmap, adjacency and technology spin-in

Nano-particle sensing device – can measure nano particles in air – not beneficial for your lungs.

Innovators first focus was on filtering market. Later market may be Philips product with huge market – healthcare – people with Asthma. Financial risk maybe relatively low.

Predicting the impossible – can't do it. But researchers from Research can comeback again and again if they really believe some thing is really great. Vetting process includes external VCs.

Discussion

Issues:

- Salad Mix Kit – How to Share Value, How to grow the pie big enough?
 - Internal products – company still wins in this model
 - SAP – received Developer points – placed on resume, second currency
 - Environment area – non-profits – more green, validate – 3rd party endorsement/certification, borrow from their reputation – non-monetary
 - IBM AlphaWorks – set orphans free in 1995 – developer outreach, finding alternatives
 - Stranded assets – Cisco – Variable interest entities – laws changed spin-in spin-out. HP George Dies said they couldn't get it to work
- IP management – field of use, chopping up IP [Philips split up display IP for the 4 companies – a lot of work], SPA has tons of ISVs not making any money from them, but they want access to sales channel
 - Is there Academic research – set it free if it comes back...

- Noise vs. Signal - Best Buy Casting really large nets — majority not good, huge burden to summarize and selection (Likes crowd sourcing but hates weeding)
 - IBM Innovation Jams – how did they distill it from 150k to 10 themes. A lot of filtering
 - IBM selling some of the tools for filtering
 - Use Crowd to do the tagging but IP issues
- Competitors can be part of community too
 - How to deal with that –
 - Alphaworks - when you go open in a big way, you own the space. Competitors worked with IBM
 - GE – Juliana Shei – worried about law suits – submitted docs dept. Wrote website (written in Japanese) to solicit ideas in Japan – goes to 15 teams, if no one says interest –rejects. Started in Sept.
 - Public/Private domain – more private area for more vetting
 - HP – 48 themes, receive 11 per theme, had 4 weeks to evaluate before winning, crowd sourcing. Just held workshop where the non-winners presented. They went just far enough – but competitors know a lot. Risk worth the disclosure
 - Innovation Research
 - Agilent – pre-competitive advanced research. Further away from product easier to share. Sometimes you want competitors in the boat with you.
 - Sharing ideas totally safe, should be encouraged for saving Telcom industry, it's all in the execution. Need to develop partnerships.
- Leadership – failure cases – lose the piece you want to keep
- Difficulty working together
 - Innocentive – IBMer not allowed to solve problems – Internal barriers to participate
 - NDA vs. FriendDA
 - Out-of-sight, out-of-mind – don't have people time to re-post
 - Blue sky mining – how do we work together if we don't know if we ought to be working together I'm on part a, he's on part b, she's on part c – etc.
- Microsoft Board Member – David Marquardt still on board since IPO. Direct pipe to the top of new opportunities

Wrap-up – NYU professor story – wanting to interact, girl went to back of tv – looking for the mouse

Our next corporate presentation came from Tom Hill, who until recently worked at Genentech and Roche, its parent company.

Tom Hill-Knowledge Management in Genentech

Roche –

worked at HP 10 years before switching to pharma 4 years ago

Questions for Discussion:

- What role does organization structure, leadership play?
- How can IT hinder or encourage solutions?
 - Older systems people – want control
 - Newer scientists – rogue databases, used to setting up their own shared
 - Need to figure out a way to support new
- How open innovation business models help?
- What factors need to change in the science innovation environment to foster more effective or faster innovation?
- What do we know about collaboration services, systems that can help us in solving this problem?
- How would parallel, iterative, collaborative value streams reduce the time to market launch?

New model working with FDA – only get license for those with the combined bio-marker, personalized healthcare, genomics. Many different think tank groups. Changes business model. He's working with personalized portfolio.

Needs to be a more agile organization. Requires more patient feedback.

Kaiser project Innovation Learning Network: <http://iln-public.pbwiki.com/> looking at total solutions with all different stakeholders. New business model.

J&J efficacy pricing model – if drug not 90% efficacious, you won't pay for it.

Non-profit – work with OneWorld Health –

IT focus on making the scientist happy, but the databases don't talk with each other.

Roche Molecular Diagnostics – Roche has seen the opportunity. Have liaisons across groups – starting – no supporting infrastructure

Companies need to be more open internally.

After lunch, we started our third presentation, this one from SAP – and Barbara Holzapfel – VP of Portfolio Marketing at SAP

7 years – Co-Innovation at SAP – SAP Portfolio Marketing

Value Chains are Evolving into Business Networks

- Customer-centric, Connect and collaborate, relationship-driven, shared risk
- Different business models – different network types – collaborative network (oil exploration – sharing, connecting people), coordinated network (more transaction focus – scale – more automated routine processes).
- Drive revenue growth by collaborating with your business network – R&D, Sales
 - Open innovation through their business networks
 - Move from NIH, bundling of internal products & services, include partner products in solutions, co-creation with customers & partners
 - Example – Asian Paints- created network to train painters
- Gain cost savings by coordinating your business network for efficiency – Operations, Supply Chain
- Four Key Pillars of Innovation - Different portfolio approach – different openness, adjacency, control and orchestration
 - SAP Research – very technology driven. Work with specific universities on specific topics. These ideas get fed back to product
 - Corporate Incubation (like VC model – based on opportunity and adjacency – start-up model) – recent launch. Give internal entrepreneurs – mid-term breakthrough business opportunities. People get more concept-to-market ownership. Special fund. Criteria – opportunity size etc.
 - SAP Ventures (invests outside)
 - Customer Focused Ecosystem (innovate with partners and customers) – bring relevant innovations to customers at a faster speed
 - Trusted and Relevant partner solutions and services
 - Endorsed, certification process
 - Communities of Innovation
 - Questions typically answered within 20 min. Gain points on developer network

- Enterprise server community – what are the next set of services in the next product release
- Industry value networks – set-up in various industry (chemicals), bring knowledge leaders together to see what their needs are
- User network
- SAP EcoHub – marketplace for ecosystem solutions – open forum with partners to help accelerate discover, give insights into what's needed in the marketplace
- Enhancement Packages” Continuous innovation without disruption
 - Enhancement packages more modular – can pick and choose the innovation you want – quarterly basis.
- LOB Incubator for Imagineering – focus on usability & information access
 - Harmony project – has social networking site – exploring how it would fit with others
 - Imagineering Fellowship
 - Live Enterprise
 - SAP Widgets

Business Network Transformation, Simplify Innovation Consumptions, Customer focused ecosystem, Multiple modes of innovation needed.

Unexpected outcome

Positive - Uptake in Developers network – people really engaged

Negative – biggest challenge, sifting through it – build vs. buy

Incubator – motivations for funder – Executive board – should it stay self-funded, give people incentive to move forward. Driver – prior life VC, M&A background,

Our final firm presentation came from John Wolpert, formerly of IBM's Extreme Blue, Australia's Innovation Exchange, and now the founder of Team upstart.

Team upstart, LLC – John Wolpert

UpStart program in BestBuy - spends really small amounts of money (\$50k) and time (10 weeks)

Sustainable innovation programs are all about talent

How do we develop young entrepreneurial talent and how do we allow internal employees to interact when they don't know they can't

Small Business – upStart program video – not just ROPES course, building businesses

Participants live together - practice elevator pitches, people always there to bounce ideas, shepard helps for the week - Organizational Behaviors, creating Pro-formas

UpStart – 2 week decision cycle, we develop the talent first

Lessons from History – 12 years

- alphaWorks – border-crossing,
- Extreme Blue (most patented are in company – because of combining business & technology) – talent focus,
- IXC (Innovation Xchange Network) – Australian initiative - intentions matter,
- Y Combinator-entrepreneurship – micro-investing (\$20k, 10 weeks, 4 kids)

Makes Live-work environment – although it skews to younger single people

Future - Looking for site to create this opportunity in a joint environment (BestBuy, HP, Agilent, IBM, military, etc.). Recommends doing no more than 12 per year.

Randy BestBuy – develop talent & create business opportunities

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Henry got up to lead the next session on the agenda, What's New in Open Innovation? He argued that first the BIF needed to discuss the current economic climate, which was not favorable to innovation.

How to Make Open Innovation Recession-Resistant?

What Pressures Are You Facing?

Re-prioritized stage gates, new focus on bigger vs. smaller opportunities, Open Innovation easier because of smaller commitments, short-term – pay as you go, we can vary the amount of external investment to buffer internal opportunities (convert fixed to variable costs).

Randy, Dupont –recession 12-18 months, innovation is perceived as not essential, trying to change culture – see if R&D open to OI, looking at shorter programs, projects that will deliver cash in 2009, working with R&D programs where they are understaffed – OI might be the only way to deliver, How do we speed up

Bob, Dupont – cash is king, people in shutdown mode – 2-3 months, people will look to find better ways to do things, some projects moving along just more slowly. Over next 6 months – with new leadership Ellen Coleman – focus on partnerships/collaborations, very marketing oriented, external focus.

Jennifer, Clorox – OI may help with a way to increase margin, help with cost savings. Trying to do OI in other areas – see it more broadly across the spectrum → Product – Product Supply – Retail

Alberto – Fiat crises – needed resources – had to look outside for money & people. Search for near term growth options outside.

Juliana, GE – developing diode technology – joint development anticipating a time to market reduction from 10 years to 3 years, cost being shared by another party, Konica, (reducing fix cost), but will share markets in enable this.

Do you abandon the long-term or can you move-up the long-term projects?

Jennifer, Clorox – unemployment increases during recession but maybe it'll be easier since there are more higher quality talent out there, we may see this talent forming small groups which may be less expensive with individuals and small groups. May be cheaper in a prize situation.

Michael – is the World on sale right now?

Rick, BB – M&As are the new R&D, bring them in when it makes sense. Financial crises might accelerate this?

Heading into hard times, targets haven't come down – just have to do more with less

Might be an opportunity for OI to take advantage – focus slightly changed.

Dupont – OI barrier, organization challenges, and strong leadership needed to encourage OI

George, HP – recent trend from large military government – seeing decline starting to chase overseas business, R&D trying to partner with HP since their people are all US – Sovereign Wealth Funds

Making assets work harder – rather than cutting R&D budget, try self-funding through out licensing, IP partitioning, spinning things out that might have real value

Bob, Dupont – widely adopted – share safe processes because when one company has a safety issue, impacts the whole industry. Ellen's work with universities identified total value of being safer including the value of reducing insurance rates

Jack, Agilent – hard time to innovate but the resources that work on innovation – might be an opportunity that OI saves work.

Wolpert – selling the orphans for generating cash and improving book value or if we have to lay people off – instead of just offering job training – create an explicit program to incent people to create a supporting new business.

Tom – take the ideas and assign them to the staff – seed investment, offer lower salary, here's an opportunity rather than layoff – opportunity to refresh innovation

Cisco – downturn – people on 30% salary with benefits – 6-12 months, the people could go work in non-profits, provided a long runway.

Darlene, Agilent – focus on the priorities that really matter, get through downturn so that you'll be more successful in the next upturn – keeping the upturn in mind.

Randy, BB - Opportunities to use OI tools internally

Ron, Philips – 7000 new campus with other companies created – brings in a lot of money so they can keep facilities up to a high standard. Cross fertilization occurs by default.

Geoffrey Moore – Dealing with Darwin – Deploy OI Resources Differently

- Core activities (that which differentiates you from your competitors) – non-Core activities.
- Mission Critical and Non-mission critical
- Core Mission Critical – some activities move to Mission Critical Non-core – OI should focus on this
- Role of OI Differs in different phases
 - Create new options
 - Drive differential – key collaborations
 - Create leverage
 - Create Exits
- OI Activities
 - Scouting Universities
 - New Brand/New Processes
 - Standards, Open Source, Collaborations
 - Spinoff functions where you become a customer instead of a captive internal user

How many using external sources/ innovation intermediaries – more or the same level

Juliana, GE – GE licensing is a profit center – IP looked at more closely – last 3 years

Ron – encouraging IP bounty hunters

Licensing hot technology – partitioning IP by geography, money put back into the project

Dupont, Bob – polyester licensing – helped to increase margins

What's New in Open Innovation at Berkeley?

- OI getting more global – 40% talks outside US
- OP message established but Open business model message not established
- Creating Open Innovation and Corporate Entrepreneurship
- Open Innovation Speaker Series

- Proposal for Open Innovation Lab to Kauffman foundation – more case studies for business model innovation
- Next book – Innovation in Services
- Cases Under Development
 - EBI, Nintendo, TSMC's Open Innovation Platform, Asian Paints – SAP
- What others have been doing?
 - OI consultancies, UTEK, Innovation Intermediaries, Collaboration, IP Management, Government Policy – white papers including OI
- IBM Patent on Making Money from patents – a system and methods for extracting value from a portfolio of assets, for example a patent portfolio
- Patent circuit court overturned Business method patents
- Academic interest – other talks/conferences, Special issues on OI and business models
- HP Prith Banerjee, former UI Dean of Engineering – heads re-launched HP Labs (received a lot of 3rd party funds).

After this session, the campus singing group DeCaDence came in and performed a few numbers. Then we got on the bus, and headed out for a dinner cruise on the SF Bay. You shoulda been there. It was a great event with surprisingly decent food!!

10/31/08

The next day, Henry began by asking for feedback on the previous day's activities.

feedback on Michael Chui's presentation– People wanted case studies to be deeper. Rear view teachings. Didn't feel there was much insight, strategy or foresight, especially for those living in Silicon Valley.

Henry then reviewed the results of the BIF University – Industry Experience Survey

Didn't get great survey return

Companies working with a wide list of universities

Discussed how some countries governments invest in centers of excellence – particularly in EU. US government does not operate in this manner. Spain funding from EU.

Geography question could have been re-worded to ask would "geography preclude you for working with a particular university".

Speed, Cost question was confusing - Ron

What type of Relationships are you working on? Question - Grants could have been added as a separate relationship. Gift vs. Grants discussion. University Administrative overhead (Stanford's is much higher than 55% - on average 62%). In Europe – most of the money flows from government. If it comes from industry – the money can be matched from government – very few gifts. Philips invests a lot in matching funds. In Spain, gift system is more open – work below the radar of IP control, the grant system can cause more IP issues. European – can't police IP well.

Kent from Agilent – University program – all universities have little or no overhead for gifts. In Asia – 10% overhead for grants.

Primary purpose of last 3 Technologies

- Alberto – some times companies approach universities for low-volume, time intensive work – (e.g. testing) – where the commercial value is not clear.
- Nitin – they do proof of concepts with university. (Nitin is from Wipro, which works closely with numerous Indian universities. They have a difficult model than most US universities, in working with industry).
- Kent – mix between projects meant to improve hardware/software and applications development – something they already sell but used in a different area (more the latter), important to work with university – if it works well in the new area, more likely to have results published.
- Ron – 600 masters students, 50-100 PhD students – 50% work in Philips, 50% in their lab – efficiency of program increases – everyone helped by this method. Many of the students get hired.

Benefits vs. Costs

- Most Benefits exceed Costs

Key benefits

- Ron – can provide stabilizing effect for your own research project which has external support
- GE – doesn't matter if external relationship – project will still get cancelled
- Kent – provides leverage – for a small investment, can attract related work that government funds

Have University technologies been taken to market

- Not a key part
- Juliana – difficult answering question. GE tends to invest in Enabling technology vs. products because of IP issues

How Successful - Successful

Biggest Benefits of University Technology

- Networking within research community – new currency

- Ability to try new ideas – Philips does this

Biggest problems

- Licensing big headache
- Professor left –
- University lacks enough industry knowledge
- University – doesn't operate on the same timeframe
 - Is this country dependent?
 - Nitin – India – they have employees working on their PhDs
 - Alberto – create safe harbor for research companies to work together, university facilitates this process
 - Juliana – Incura – industry talk through each other through IRI, creating standard templates
 - John – IBM funded students very early – relied on students talking with others UT – Austin, Israeli had high sense of urgency
 - Todd - Israeli agriculture high sense of urgency/responsiveness

Todd asked about Evaluation process

- Kraft process – review proposal – Scientific Review Board, allocate limited amount. Considering moving away from budget limitation. More than 100 proposals/yr received.
- SAP research – Peter – get a business unit head involved with it first - if no interest, doesn't happen (Paul's approach). Working a lot with China, Singapore, India.
- Don - They hand it off to the IP 1 over 4 years. Very distributed review process – researchers are looking to augment.
- John – less money faster for universities, being able to say less money quicker may fit better.
- Jennifer, Clorox – not sure, corporate technology platforms done more centrally
- George, HP – did web-based approach – forced order ranking, researchers had input in what got posted, fixed budgets for university funding, template really helped – could move quickly when there was additional money at the end of the quarter. HBS Case on HP-UC System. Moved to a more programmatic emphasis to create more critical mass to focus on the most critical problems.
- Nitin – center they are managing, numbers small, in largest city ???

- Kent – Centrally funded model and support divisional requests, aim to support all good proposals. Guidelines are established. Researchers bring proposals which are ranked and potentially funded. Some interaction between local and central in order to fund. Local involvement with the central review process.

Satisfaction

- Will do it again, and more often than last year

Concerns

- Is universities mission to generating and disseminating knowledge vs. generating licensing
- Overheads at universities – high cost – no relation to the value-added
- Ron – in Europe – many contacts with universities – lobbying to affect the research agenda – more true when there's matching funds structure. Geographically confined.
- Kent – in Europe – people work with EU planning people, some R&D people that get involved in the forefront. Not much in the US. Opportunity is different – Centers of Excellence – get input from industry but at federal government level – slower process – They don't have patience.
- MIT model - University-Industry in US – no government involvement. Center informs and delivers innovation

The final session of the workshop turned to an indepth study of the BP-Berkeley Energy Biosciences Institute.

Paul Willems – BP Energy Biosciences Institute

Why 4 partners –

Rationale

- Biology will generate breakthrough technologies
- BP in the carbon energy business – there should be synergies,
- Energy bioscience – large open territory – biology ready for this, energy at the right point to do something significant

BP's challenge – how do we create a biology branch of the organization – wouldn't be expedient in-house, would be hard to attract top biology talent

Institute Vision

- Broad in scope – creating whole new value chain
- interdisciplinary – all major problems need to be addressed

- Mission-oriented – wanted to be outcome oriented
- Open work in Fundamental Energy Biosciences
- Co-locate some BP Researchers
- Long-term commitment (not a 1 year miracle) - \$500m / 10 years – estimate (could be more, but there's a floor)

Stanford – GCEP (GE, Exxon, Schlumberger, etc.) collaboration – more of a fund established at Stanford. Limited industry interaction.

Selection process – Procurement process – wrote RFP, sent out to certain institutions – 70 universities expressed interest, field visits, invited 5 consortia to make formal proposal, each 5 invited to London to make presentation, public announcement, formal announcement, began legal discussions

During London presentation Chancellor Birgeneau and Director Chu discussed their Bell Lab experience

Carol Mimura, Assistant Chancellor for IP and Industry Research Alliances (IPIRA) organizational restructuring

- Former Engineering Dean Newton – suggested maximizing impact vs. revenue model
- Long-term Relationships key

2006 Opportunity to Compete for Funding from BP “Help us to invent the future”

- IPIRA contract approach embraces Open Innovation principles

Low Energy government funding

[During Carter years – solar panels installed on White House, Regan removed them – not attractive]

Integrating Programs –

Relevant Facilities

- Melvin Calvin building currently houses EBI
- UIUC – Institute for Genomic Biology – fantastic partner – fields, experimental stations, relationships with John Deere, and other feedstock

Working Together – needed to create a single Master Agreement with a common IP framework and share revenues

Contract – 100 page contract (75 for DOE).

In Europe – is there resistance within the government?

Ron – more country-based initiation, in agricultural field – unknown big initiatives, for energy – many initiatives tested out in Spain

BP America – HQ in London, but ½ employees in US

Selection process – UK, German – difficult for European universities to work together across disciplines

Bahr-Doyle complexities, Federal funding requires substantial manufacturing within US – required waiver which took 4 months to negotiate.

Proposal based on pre-existing successful relationship – BP had licensed IP from this

EBI Goals

- \$500 million over 10 years
- Goals:
 - Totally system solutions to the production of biofuels that are cost effective and sustainable
 - Development of improved biotechnologies for energy applications
 - Education of scientists and engineers across the relevant disciplines
- Research is pursued in the different organization irregardless of department reputation

[LBNL Director Steve Chu – re-making LBNL to become Green Lab, LBNL the most academic of the labs]

John, Students working on research, not truly interesting to BP but could be interesting to VC?

Scientific Programs – Ligno-Cellulosic fuels most meet economic/environment/climate change tests,

- Feedstock development, Biomass depolymerization, Biofuels production, Environmental , social and economic issues (17 out of the first 49)

BP – doesn't have biofuels – don't need to whitewash anything. This is a good sustainable business. There are problems doing this – let's research the other issues.

Not interested in food conversion products.

[Why did BP pick these liberals – who had the best science, where's the best place to practice where you will be challenged – get asked the tough questions here. Before the agreement was signed, a lot of public reaction]

George, DOE has a lot of confidence in Berkeley

Francisco – how changeable is contract?

Paul - there are escape clauses for both party but more for reputation reasons than the science.

Kent – funding – Most industry contribution is small. Any need to put more mechanisms in place?

State of California did not incent other than contribute to new building.

UC can't create special deals – everything needs to exist under the UC System umbrella. Doesn't change UCB in the translational/commercial

The better the reputation/capability and quality, the less likely they can create special deals.

What do you expect to do to leverage additional funding – funding process – BP funds and receives IP writes, other participant would dilute BPs investment. Interested on Social-Economics space – adding hard facts, property evaluation to lobbying – EBI mission to collect this information – natural to collaborate with others to create other independent work. [e.g. John Deere would be a potential partner for a specific activity]

IPIRA – EBI impact – positive – JBEI was won.

Open vs. Proprietary

- BP benefits from Open side – opportunities to embed BP employees, looking at EBI to do academic work not commercialization – scale-up functions. These functions are taken into BP Proprietary side.

Energy Biosciences – new field, creating energy biologist, source of recruitment – there will be a flow of talent to BP, tech transfer through these people

Negotiating IP with University very challenging

- Licensing provisions – goal for BP and society to benefit from getting out, BP received BIP NERF.
- Negotiations had to make decisions on blue-sky licensing
- Had honest conversations as to why certain provisions were needed
- Fair-value negotiation easier because IPIRA wasn't focused on maximizing revenue, they are focused on maximizing social impact. Fair-value at UCB can include reputation gain, not just royalties

Intel research labelt – 7 years, no patents filed but some applications identified.

Joint agreement – if invention is co-invented, jointly owned, under US Patent law – both can do what they want – each party could license there own interest. BP will have NERF to UCB interest

Juliana – feels like paying twice for the same research. [Note: GEs been doing business like this for a long-time. Largest UC licensor]

Paul – During negotiation BP need to not lose track of who they were trying to compete against. UC not a competitor.

Deal of Distinction in 2007 winner

EBI funding K-12 educational program.

EBI – Experiment of a new model

EBI governance and oversight description

- Executive Committee & Governance Board
 - No cherry-picking of research proposals by Governance Board
 - Balanced Governance Board – approves budget, aggregate research agenda, strategic direction, Quorum of 5 but one person from BP and UC
 - Executive Committee – Grant making agency– responsible for majority of activities

Timeline: Feb 2007 BP selected, Nov 2007 signed agreement already in the proposal agenda

200 students involved – 300 full run-rate. BP propriety couldn't do it this fast and with the quality.

Paul's background – PhD ChemE –commercialization process development, manufacturing scale-up

Steve Long – plant scientist, Chris Somerville – bio-chemistry, enzymes

Regular lab meeting, conferences, amend funding based on progress

Many projects - 3 years fits naturally with most PhD cycles.

Are there provisions to renew after 10 years?

Constant dialog with faculty, intentionally funded competing projects – very early stage

Programs – important for contract duration – issue won't go away

Projects – finite timeline, finite deliverable

Will you stop second track? can't stop on a dime, but can exit out of the program/project once proper wind down. Post docs are easier, shorter timeframe

Juliana – are you creating this expertise internally? Paul is also recruiting for BP proprietary

Biggest hurdle in Execution

He wants this institute to be integrated with the corporation – not a token to the CEO

Personal involvement with BP

Kent - What resource do you need to set aside to get the kind of engagement you want?

There are BP personnel involved with trying to integrate component parts. They will need to add more expertise at a fundamental level – combination of learning and doing. 30% Open, 70% own lab.

What's range of BP investment in open projects? – some large, some small. Right now BP 10 people – future 50 people.

BP leases on-campus space.

Will this be Corporate charity?

Juliana – skeptical of this big experiment – takes more than 10 years to commercialize something really big, IP ownership – some really big stuff – risk that UC researchers could eventually

Peter – disagrees that it would take 10 years to commercialize.

At year 5 – they'll re-evaluate – will they still need EBI, they'll have the reputation to attract talent

George – so complex – you'll need to collaborate with other organizations.

Other institutions can be included but need to abide by the Master agreement rules.

John – impressed with tone of University Tech Transfer philosophy – Corporate Charity? – no – they'll get students with their know-how

Field of energy is too broad and important. BP can't lock it up.

Outreach component – seminars/workshops, working with Chabot – Climate Change exhibit, involved with various activities to communicate what BP's doing. Easy to communicate locally, but more challenging from a global perspective. Can try to do it in the science community – harder in public community.

Entrepreneurship – Bay area great place to create companies, Vinod Khosla involvement

Open to spinning-out technologies. Flexible framework.

Peak oil production?

- Plenty of oil in the world – problem above ground, not below ground – political problem
- They don't see this in the immediate
- Oil not going out of style any time soon

EBI focused on transportation fuels – 20%

Real impact in Climate change – not cars – electrical generation much bigger contributor.

Next Tentative Berkeley Innovation Forum meeting - April 9-10 at Agilent in Santa Clara

