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Haas Inside Innovation 2007 Conference

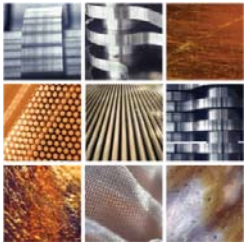
Capturing Value from Innovation

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November 17, 2007

*based on G. Pisano and D. Teece "How to Capture Value from Innovation: Shaping Intellectual Property and Industry Architecture", California Management Review, Fall 2007, Volume 50, No. 1



When do pioneers win and when do they lose?

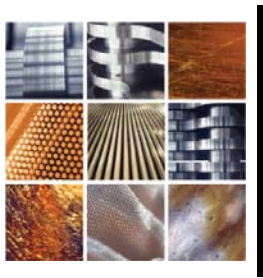
Key Factors:	Win	Lose
● Product Definition	P/P + features + form factor "on market"	Off market
● Timing		Too early, too late
● Complementary assets	Own and control any bottlenecks	Competitors/complementors and/or suppliers own or control bottleneck
● Intellectual Property/Appropriability	Strong*	Weak
● Industry Architecture	Shape it	Shaped by it

* see caveat later



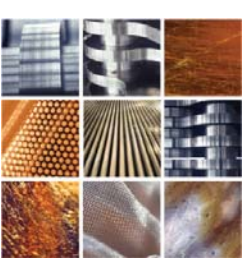
Pioneers often don't win

	Pioneer	Follower
Win	NutraSweet (Searle) Viagra (Pfizer)	iPod (Apple) Nabisco (Oreo cookie)
Lose	Newton (Apple) EMI (CAT Scanner)	Web Browser (Yahoo) Kodak (Instant photography)



Nature of Appropriability Regimes and Industry Architecture

- Industry Architecture defined as:
 - Closed (integrated)
 - Open (modular) [requires interface standards and protocols]
- Appropriability Regimes defined by:
 - Intellectual Property (Patents, Trade Secrets, Copyrights)
 - Innate Difficulty in Replicating the Technology



Reengineering Appropriability

1. Strengthening

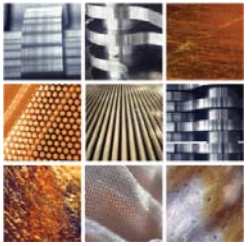
- Securing intellectual property rights
- Patent flooding - - - if possible, ring fence your invention

2. Weakening

- Property preempting investments:
 - (a) Publishing “prior art” to preempt patenting by others. E.g. Merck: made many expressed human gene sequences public.
 - (b) Open source software (making the source code publicly available e.g. Linux, Apache)

3. Managing Intellectual Property for Design Freedom

- Cross licensing (requires building a patent portfolio through invention and the acquisition of patents)



Reengineering Industry Architecture

- Investing in platform architectures e.g. WiMax (WiMax Forum).
- Technology Architecture and Business Model Decisions (closed v. open v. hybrids) e.g. Sony Batamax.
- Systems Integration
 - Vertical specialization (enabled by standards and modularization) requires systems integration. Those good at systems integration should be able to maintain control of the “architecture” e.g. Boeing.
- Locus of innovation with closed model is the system; with open model its at the component level.



Conclusions

- Managers must not be passive with respect to capturing value
 - Shape Appropriability, Industry Architecture, and standards; own or control cospecialized complementary assets
- Invention often required technological skills; but capturing value requires entrepreneurial, strategic, and implementation skills
- Marketplace winners are likely to not only have great products; they will also have strategic insights and the capability to *orchestrate*:
 - Complementary assets
 - Appropriability conditions
 - Industry architecture (standards, modularity, etc.)