

Information Economy

37E00100

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Information Systems, Information and Service Management

Article of the day

Eisenmann, T., Parker, G. & Van Alstyne, M.W. (2006). "Strategies for Two-Sided Markets", Harvard Business Review, Oct 2006, pp. 92-101.

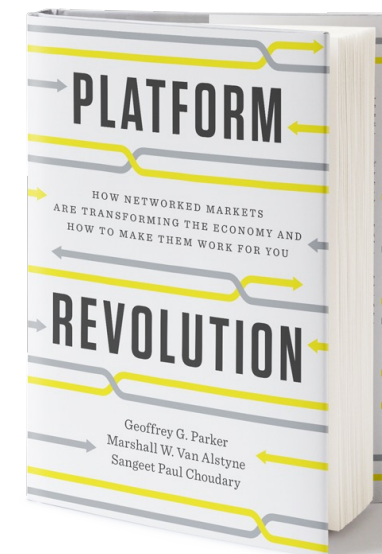
- Is the content still valid, up-to-date?
- New insights from the article?
- What not clear?
- What would you like to learn more about?

Topics

- Platform-Mediated Networks and Services:
- Overview, Definitions, and Core Concept

Based on material prepared by Professor **Thomas R. Eisenmann**, Harvard Business School; Professor **Marshall Van Alstyne**, Boston University and MIT Sloan School; and Associate Professor **Geoffrey Parker**, Tulane University

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Memo by Bill Gates to Microsoft's executive team

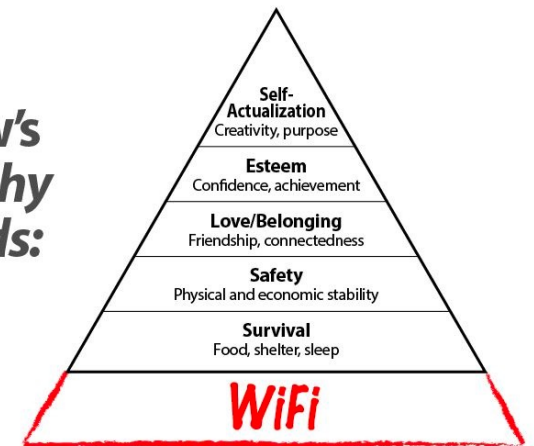
- On May 26, 1995, Bill Gates wrote a memorandum addressing the fundamental changes in the company's focus
 - <https://www.wired.com/2010/05/0526bill-gates-internet-memo/>

“Our vision for the last 20 years can be summarized in a succinct way. We saw that exponential improvements in computer capabilities would make great software quite valuable. Our response was to build an organization to deliver the best software products. In the next 20 years the improvement in computer power will be outpaced by the exponential improvements in communications networks. The combination of these elements will have a fundamental impact on work, learning and play.”

Brief history of (digital) platforms

- 1995:
 - Netscape IPO (web browser)
 - Rob Glaser launches RealNetworks
 - VocalTec introduces VoIP
 - First cable modems
 - Palm launches Pilot
- 1999:
 - IBM embraces Linux
 - XML is created, paving the way for “web services”
 - 802.11b (Wi-Fi) takes off
 - Napster launched

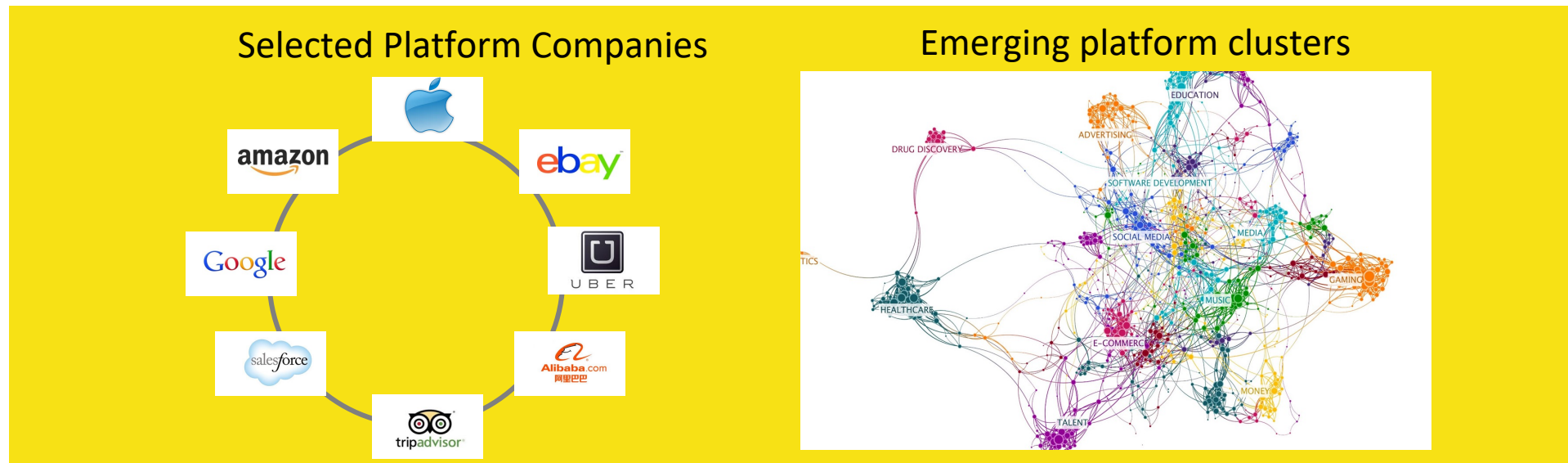
**Maslow's
Hierarchy
of Needs:**




Brief history... (cont.)

- 2004 on: Explosive Growth in...
 - Google's valuation
 - Skype
 - RSS, podcasting
 - Blogs
 - Open source software
 - Wikipedia
 - BitTorrent
 - ..
 - Social Media (MySpace, Facebook, LinkedIn, Twitter,...)
 - WikiLeaks
 - Smart phones
 - IoT
 - ...

Explosion of platform companies



The New Multinationals

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Source: CGE Platform Database
with Quid visualization, 2015

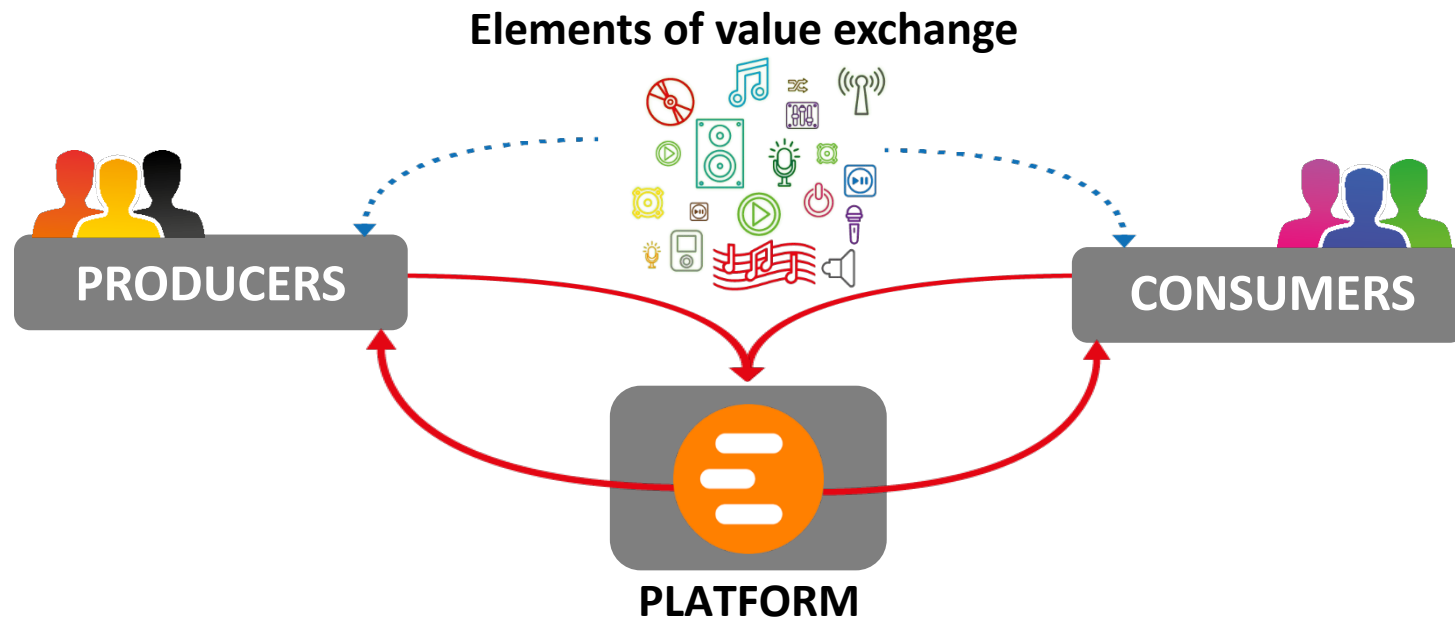
INDUSTRY	EXAMPLES
Agriculture	John Deere, Intuit Fasal
Communication and Networking	LinkedIn, Facebook, Twitter, Tinder, Instagram, Snapchat, WeChat
Consumer Goods	Nike, Philips, McCormick Foods FlavorPrint
Education	Udemy, Skillshare, Coursera, edX, Duolingo
Energy and Heavy Industry	Nest, Tesla PowerWall, General Electric, Enernoc
Finance	Bitcoin, Lending Club, Kickstarter
Healthcare	Cohealo, SimplyInsured, Kaiser Permanante
Gaming	Xbox, Nintendo, PlayStation
Labor and Professional Services	Upwork, Fiverr, 99designs, Sittercity, LegalZoom
Local Services	Yelp, Foursquare, Groupon, Angie's List
Logistics and Delivery	Munchery, Foodpanda, Haier Group
Media	Medium, Viki, YouTube, Wikipedia, Huffington Post, Kindle Publishing
Operating Systems	iOS, Android, MacOS, Microsoft Windows
Retail	Amazon, Alibaba, Walgreens, Burberry, Shopkick
Transportation	Uber, Waze, BlaBlaCar, GrabTaxi, OlaCabs
Travel	Airbnb, TripAdvisor



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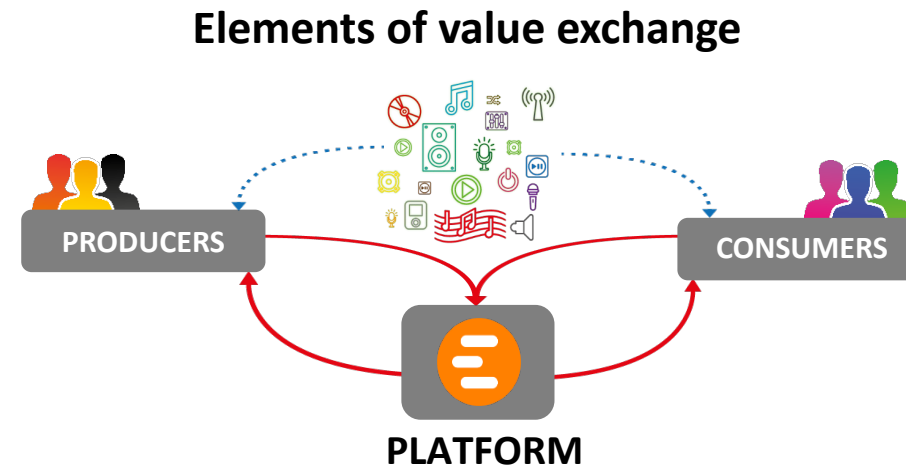
<https://d3.harvard.edu/product-platform-john-deere-revolutionizes-farming/>

Pipeline business vs. mult-sided platform business



A platform:

- Is a nexus of rules and architecture
- Is open, allowing regulated participation
- Actively promotes (positive) interactions among different partners in a multi-sided market
- Scales much faster than a pipeline business because it does not necessarily bear the costs of external production.

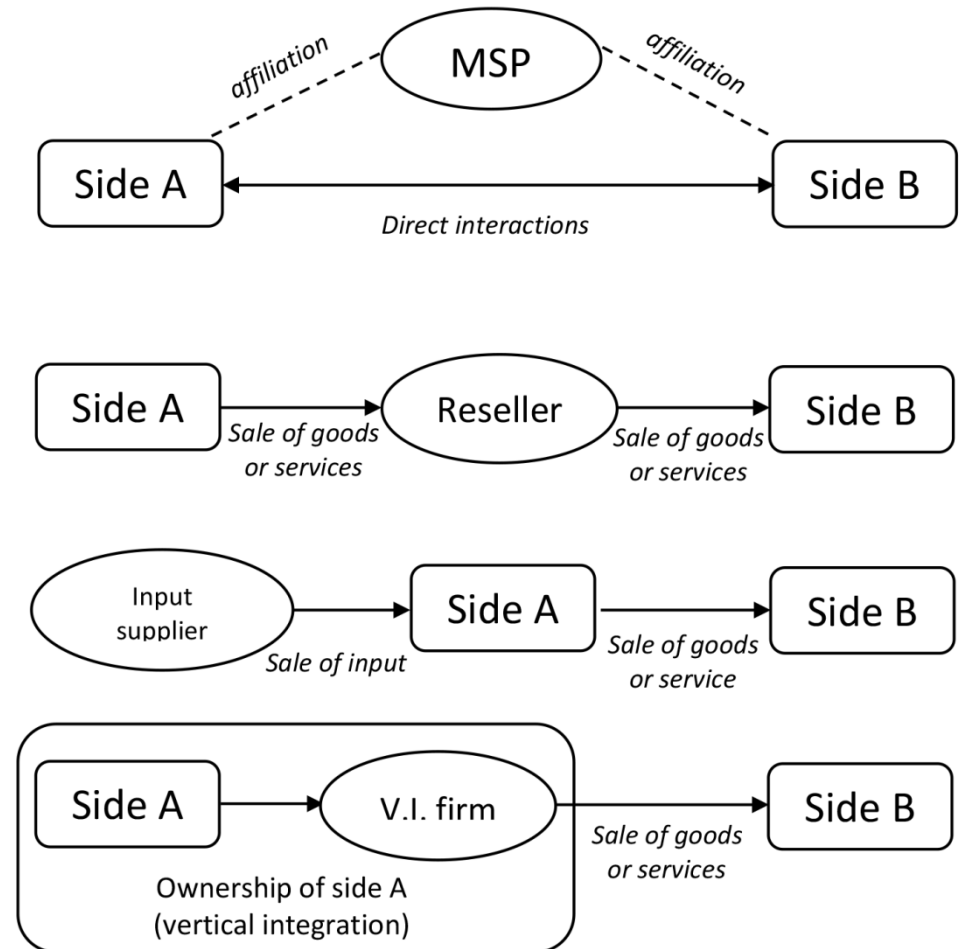


Source: Platform Revolution

One- and Two-Sided Networks

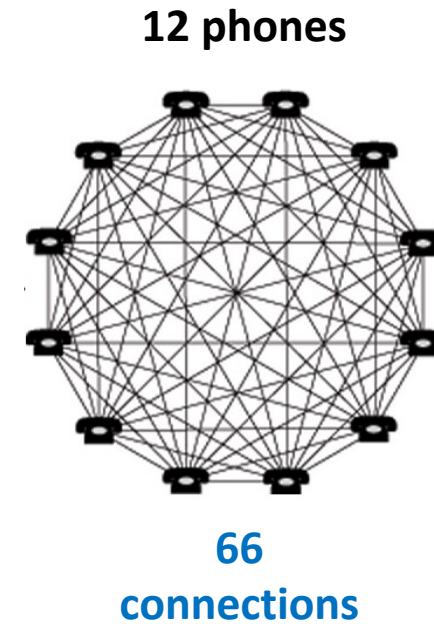
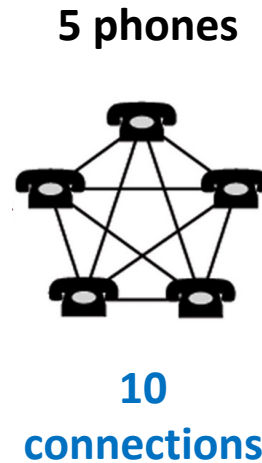
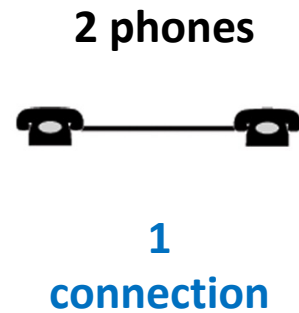
- “One-sided” networks: Transaction partners alternate roles, e.g., e-mailers send & receive, traders buy & sell
- “Two-sided” networks: Users are permanent members of one distinct group — a “side” — which transacts with a second group, e.g.,
 - Job seekers + recruiters
 - Card holders + merchants

What platform is not?



Platforms leverage network effects

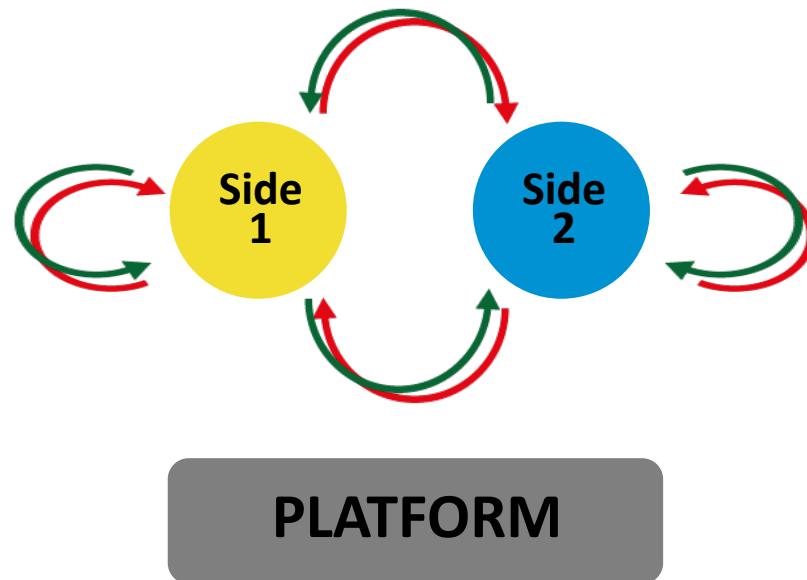
More users = more value = more users...



Network Effects

- Definition: Network's value to a user depends on the number of other network users
 - "Value" = willingness-to-pay for network participation = WTP for platform affiliation
- Properties
 - Can be negative, e.g., due to congestion
 - WTP tends to increase sharply as function of network growth

A two-sided network has four types of network effects that can be positive or negative



+ **same-side**: player-to-player contact in Xbox MMOG

+ **cross-side**: merchants & consumers for Visa

- **same-side**: competing dates on Match.com

- **cross-side**: advertising clutter to viewers

The platform shift

- Shift 1: From resource control to resource orchestration
- Shift 2. From internal optimization to external interaction
- Shift 3. From focus on customer value to focus on ecosystem value

(Ref: Van Alstyne, M.W., Parker, G.G. & Choudary, S.P., "Pipelines, Platforms, and the New Rules of Strategy", Harvard Business Review, April 2016)

Distinctive Challenges

- Platform-mediated networks are very complex, but oversimplification is common
 - Over- or underestimate strength of network effects
 - Price to network's sides as if they were separate markets
- Need to understand and distinguish between switching costs and multihoming costs
- Winner-Take-All Dynamics
- Business Model Design (next slide)

Business Model Design

- Designing Business Models is Difficult Due To:
 - “Two-sidedness” of most networks
 - Bifurcation of platform roles (next lecture)
 - Rapid growth, experimentation

“This is like the Cambrian explosion 550 million years ago, when multicelled life first appeared on the scene. It was the greatest speciation ever seen, but it was also — which people forget — the greatest rate of extinction ever seen. We’re going to see all kinds of ideas tried, and the majority of them are probably going to fail.” (Jeff Bezos, CEO Amazon.com, Business Week, 9/13/99)

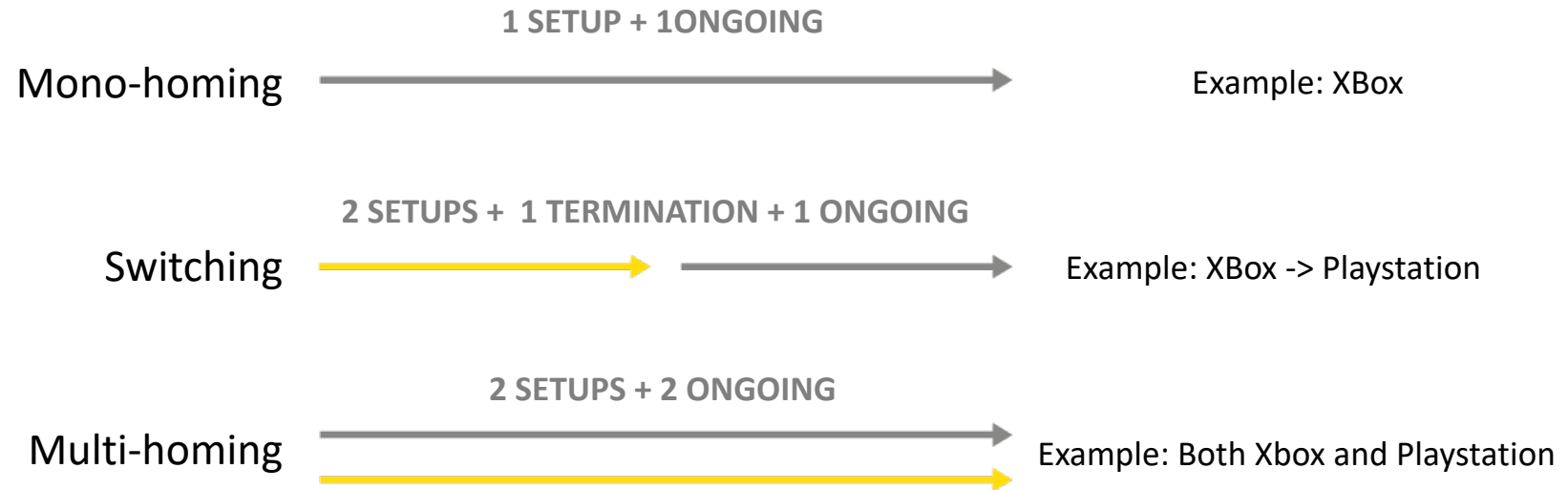
Switching Costs

- Out-of-pocket expenses and inconveniences incurred by network users (or by platform providers on their behalf) when users switch from one platform to another
- Network effects may deter or encourage switching, depending on the relative sizes of rival platforms.

Homing costs: costs/investments incurred by user due to platform affiliation

Upfront	<ul style="list-style-type: none">•Search and negotiation•Account setup, e.g., software configuration•Initial hardware & software investment; system integration•Training
Ongoing	<ul style="list-style-type: none">•Membership and transaction fees•Maintenance costs; customer service hassles•Tenure- or volume-based benefits
Exit	<ul style="list-style-type: none">•Account termination hassles and costs, e.g., changing email address, moving funds between brokerage accounts•Contract severance penalties•Salvage value of hardware, software

Homing and switching costs



Potential for winner take all (WTA)?

- Analyze:
 - Strength of network effects (high network effects point to WTA)
 - Multihoming costs for both sides (high multihoming costs point to WTA)
 - Users' preferences for differentiated platform functionality (low demand for differentiated functionality point to WTA)

WTA Potential?

	<i>DVD: WTA</i>	<i>Credit Cards: Multi- Homing</i>
Strength of Network Effect	<i>High</i> for most users on both sides, i.e., consumers and studios	<i>High</i> for most users on both sides, i.e., card holders and merchants
Multi-Homing Cost	<i>High</i> for both sides	<i>Low</i> for both sides
Demand for Special Features	<i>Low</i> due to technical standardization of TV	<i>Moderate:</i> “revolve” vs. charge (i.e., pay-in-full with no preset limit)

Summary: Core Concepts

- Platform mediated networks
- Network effects (or externalities)
- One- and Two-sided networks
- Switching and Homing costs
- WTA dynamics

QUESTIONS?

Slides and video recording on MyCourses

Eisenmann, T., Parker, G. & Van Alstyne, M.W.
(2006). "Strategies for Two-Sided Markets",
Harvard Business Review, Oct 2006, pp. 92-101.

