

Commons as Enabler of Commerce

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Commons, P2P, file-sharing are often viewed as disrupting markets.

- But commons is also an enabler of commercial markets.

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- P2P is part of a larger family of economically valuable activities which emerged from “grassroots.”

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Grassroots Examples

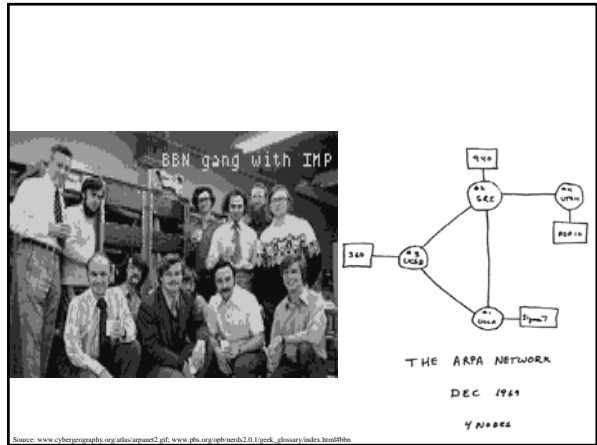
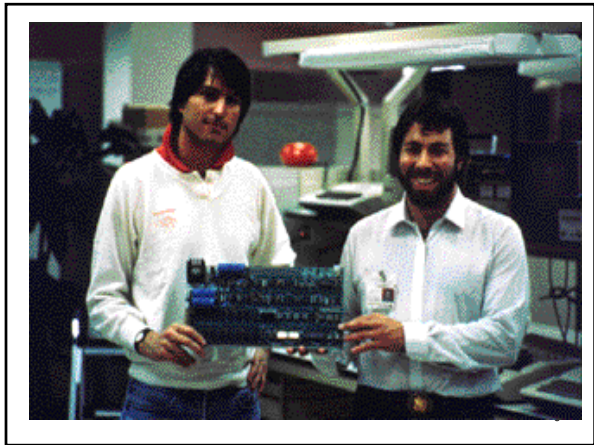
- 1910's: Radio amateurs
- 1970's: Citizens Band
- 1970's: Micro computer builders
- 1980's: Internet
- 1990's: Open Software movement
- 2000's: MP3 music file sharing
- 2000's: Wi-Fi

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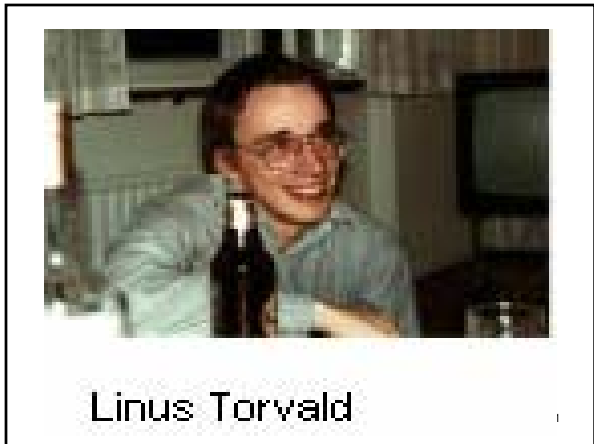




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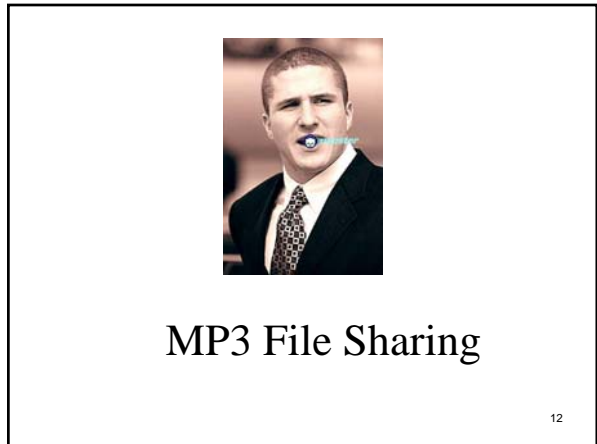


Source: www.cbrp.org/pubs/arpnet2.pdf, www.phd.org/ps/psb2.0.1/gsk_glossary/index.html#the



Linus Torvald

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MP3 File Sharing

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- These grassroots activities are often more efficiently provided by private firms.

- Then why do these activities exist?

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A Basic Model of Model of Critical Mass

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Benefits

- Total benefits grow with the number of users—the network effect.
- Metcalfe's Law defines total benefits as $TB = b(n^2 - n)$.



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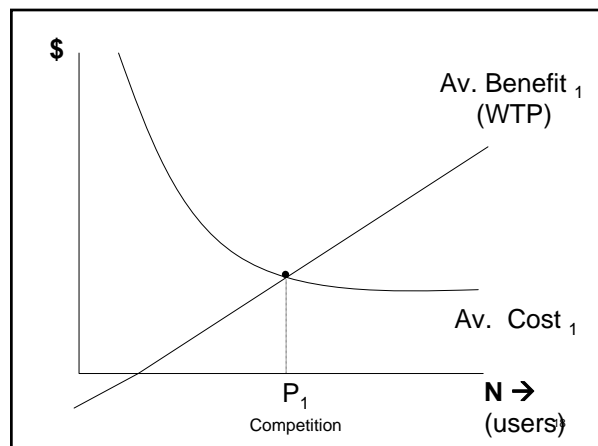
- Average benefits: $(b/n)(n^2 - n) = bn - b$
- Average benefits define maximum willingness to pay.

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Cost

- High fixed cost, low marginal cost
 - assume constant marginal cost
- $TC = F + nM$
- Average cost: $F/n + M$.

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- P_1 is the take-off point
- To the left of P_1 , the activity is not self-sustaining
- How does one get to the take-off point?

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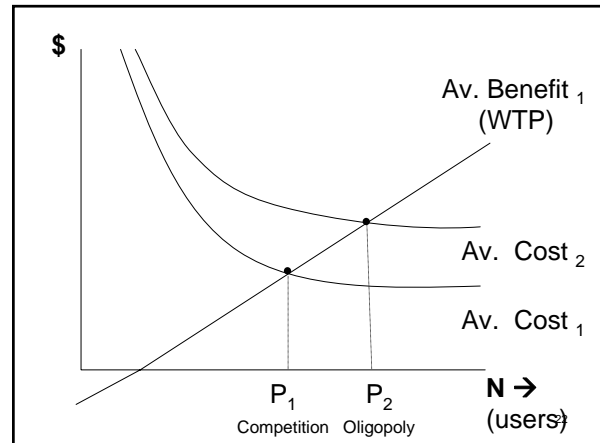
Options to Reach Critical Mass

- 1. Government subsidies
- 2. Regulation to force a price below cost to raise demand
- 3. A business firm underwrites the deficit
 - Unlikely where competitive entry likely

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- On the other hand, the take-off point for an oligopolistic industry will be P_2

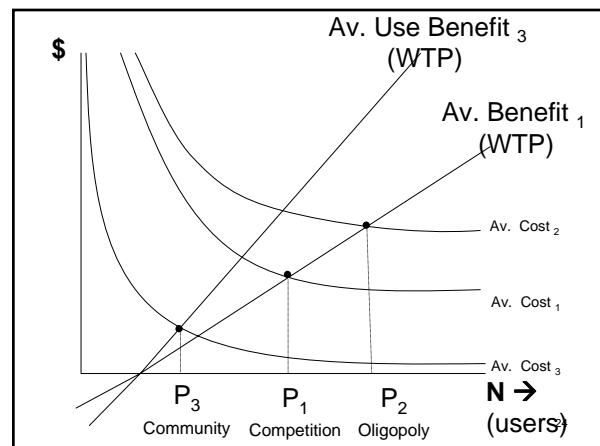
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4th Alternative to Reach Critical Mass: The Community Approach.

- The benefit side is increased by an intense spirit of community.
 - Leading edge participation; vilification
- On the cost side, the community lowers costs by
 - Voluntarism
 - Piracy

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Community Activity

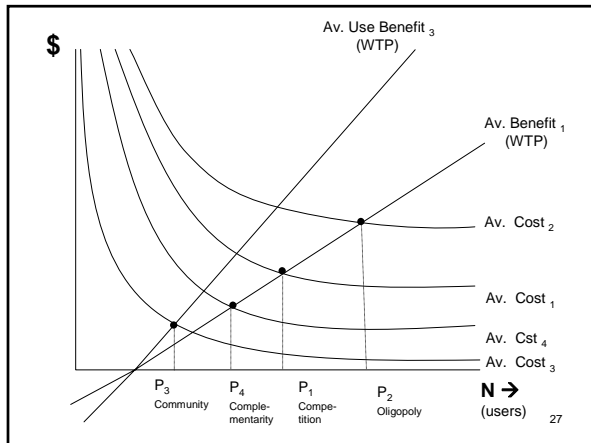
- Pushes the critical mass point to the left, P_3
 - an earlier take-off

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Subsequent Commercial Entry

- First, from firms with complementary interest
 - RCA with radios
 - Apple with MP3 devices
- P_4 is the “complementarity take-off point.”

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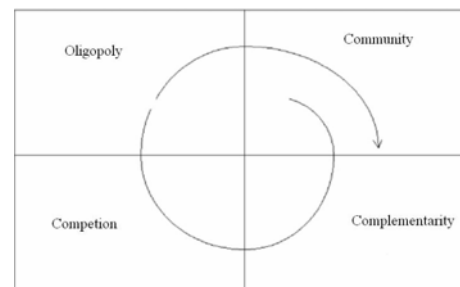
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- When the commercial entry takes place, it pushes aside the community that made it all possible.
- The community-based system is transitional, not permanent

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- Within the commercial alternatives, the center of gravity moves from
 - P_4 , (the take-off point of complementarity)
 - to P_1 (the take-off point of competition),
 - to P_2 , (the take-off point in an oligopoly).

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- Joseph Schumpeter's "creative destruction of capitalism" focused the undermining of oligopoly by competitive innovators, P_1 or maybe P_4 challenging P_2 .
- Not included was the challenge from community, P_3 .



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- We tend to lionize the business-based disrupters as creative entrepreneurs.
- But we ignore or vilify the community-based disrupters.
- There is a legitimate and useful role for community as an entrepreneurial element in the process of innovation

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Policy and Business Implications

- Suppressing sharing arrangements because they facilitate piracy is short-term thinking.
- Once the user base is large enough, it will provide the foundation for a market-based transaction mechanism.

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- If established media business firms take the long view, they would value the community efforts that create the user base for their own subsequent expansion.



Middelhoff (Bertelsmann CEO) & Sean Fanning of Napster 34

Example: Macro Impacts of Broadband

- Broadband is a historic transition
- US is not a leader
- Killer-app for broadband is entertainment.
- There are enormous secondary benefits to the economy and to innovation by broadband, just as the internet did a few years ago.

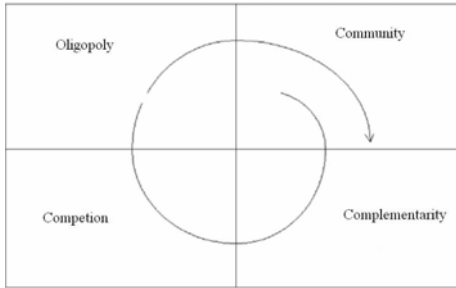
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The next frontier for the community?

- New interactive forms of communications
- Based on P2P's own core strengths
 - Community
 - Creativity
 - Energy
 - Interactivity
 - Peership.

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Another Cycle Begins From Commons to Commerce



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