

Games Infrastructure Firms Play

- **STAGE 1: DISTRIBUTION CAPACITY**
 - *WHERE* to place conduits, cables, or antennas
 - Industry-specific / geographically specific investment
 - Unaffected by bankruptcy (Hadley 1885)

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- **STAGE 2: TRAFFIC AND PRODUCT CAPACITY**
 - *WHICH* products (TV, telephone, content alliances)
 - *HOW MANY* routers, nodes, etc. to carry traffic



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- **STAGE 3: PRICE COMPETITION**
 - *HOW MUCH* to charge consumers for subscriptions



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Stage 3: Ruinous Competition?

- At stage 3, most costs are *SUNK*
- Why not just undercut competitors on price?

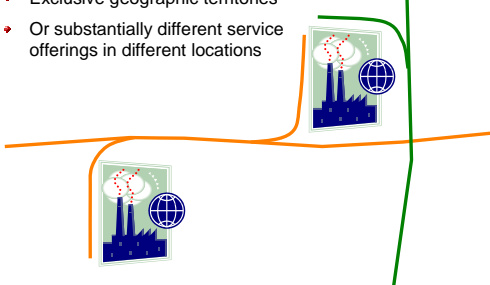
- Try to achieve price stability / avoid price wars

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Stage 1: Captive Customers

- Exclusive geographic territories
- Or substantially different service offerings in different locations



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Stage 2: Product Differentiation

- Extra services: telephone, TV, etc.
- Content alliances



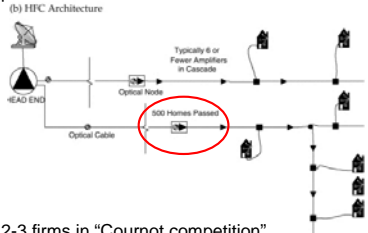
- Open access / network neutrality could be an obstacle

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Stage 2: Limit Capacity

- Network architecture is not just an engineering problem

(b) HFC Architecture



- 2-3 firms in "Cournot competition"
- Resale regulation could be a problem

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Avoiding Ruinous Competition

- Build networks in different locations
- Or build them differently in different locations
- Differentiate the product
 - Extra services
 - Exclusive content
- Limit capacity
 - Then undercutting on price is less tempting

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