Gentex: Firm

• Gentex started in Zeeland, Michigan as a maker of industrial fire alarm systems
• Entrepreneur Fred Bauer used as vehicle to enter car mirror business \[pun intended\]
• Why interesting?
  – The flip-switch “prismatic” rearview mirror is on every car on the road … if you can invent a better mirror
• And Donnelly (subsequently acquired by Magna), the #1 producer in North America, was just up the road, so Bauer knew of the potential market
Gentex: Products

• Auto-dimming mirrors
  – Glare from headlights of cars annoying
  – Flip-switch prismatic mirrors cheap, but awkward
  – Can automate?
    • Sensors for light levels
    • Motor to drive prismatic mirror
  – Maybe, but no market acceptance
Gentex: ECM

• A physical solution was awkward, so…
• How about a chemical one? …ca. 1988
  – Electrochromatic gel darkens with current
  – So sandwich gel between glass and the mirror
• Well received on GM luxury cars
  – Profitable for Gentex
  – Good uptake as a high-price option
    • but Gentex charged a moderate price
    • so very profitable for GM, too
Goal

• Continuing (profitable!) monopoly
  – secondary goal: growth
• How can Gentex achieve this?
  – Donnelly next door is a natural rival
  – News of Gentex’s success can’t be hidden, esp. in a small town!
Generic Issues

• Auto customers are also small in number
• Potentially a bilateral monopoly
  – a firm with market power selling to a firm with market power
• Specific assets are the norm
  – Pricing is inevitably contentious
    • Both are at risk of hardball tactics
• Greed encourages entry
  – Donnelly was (still is!) just up the road
Approaches

• Customers want multiple sourcing
  – Helped if there are contracting norms
  – Buttressed by a reputation for fair play
• Suppliers want multiple customers
  – Ditto
• Multimarket, multiperiod contract context
  – Makes hardball tactics less beneficial to both
  – But managing relationship still difficult
• Gentex of course wants to keep its monopoly…
Legal monopoly: patents

- a moving target, given rivals & new technologies
- constantly monitor competitors / tech literature
- Stream of subsidiary patents: as of 2007…
  - 278 US patents, 143 patents pending
  - 129 foreign patents, 310 patents pending
  - 16 trademarks, 20 additional pending + foreign
Costs: learning curve

• if can lower, then
  – barrier to entry in addition, gradually lowering prices
  – enlarges market
  – discourages entry
    • “Limit Pricing” model
Innovate in product

• Exterior mirror
  – 2- and 3-mirror sets
• Complicated glass
  – Thin glass
  – Spherical and (esp) aspherical glass
• Additional features
  – integral compass & thermometer, backup camera display
  – keyless entry systems (Homelink™), map lights
• product differentiation / price discrimination
  – both high-end and low-end packages with different price points
  – complicated product makes harder for potential rivals
Vertical structure
“Tier I” vs “Tier II”

- how to sell?
  - via other mirror companies!!

- lets focus on narrow R&D and production tasks
  - don’t need plastics, paint & finish tech
  - if make complete mirror, no company will buy 100% from one firms

- by giving a share of profits to mirror makers that buy your glass-plus-electronics
  - resistance to using your product is lowered
  - potential competitors help market your mirror!
Pricing (reiterated)

• **don’t be greedy!**
  – let other mirror makers make money
  – let auto companies make money
  – deters entry
  – enlarges market

• **make entry harder!**
  – add features, add product variety so that market for plain autodimming mirror is small
Using Uncle Sam

• Government
  – regulatory change to favor where strongest
    • aspheric (outside) mirror standards
    • can you get NHTSA to rule glare is a safety issue?
  • Backup safety standards
    – you can put a little TV inset in the mirror
    – car companies thus don’t have to design their instrument panel around a display
Sum

• Innovation as key to firm
• Entry from above
  – Luxury end of market, where price less central
  – Then push “learning curve” to take mass market
• Pricing, product definition: prevent entry
  – capacity also is a barrier: customers want large volumes, so rivals can’t start small
• After 25 years, still 80+% market share
  – Profitable
  – Still increasing market penetration and hence volume