

CONFIDENTIAL



 ***MicroTech, Inc.***

Household Appliances Division
Pat Coleman, General Manager

Briefing for Pat Coleman

Household Appliances Division, ■MicroTech, Inc.

You are Pat Coleman, Manager of MicroTech's Household Appliances Division, which makes and sells appliances (microwave ovens, dishwashers, etc.). Memory chips differentiate your products by making them "*smarter*." You purchase 80% of these chips from MicroTech's Chips & Components division and make the rest. Your division also sells specialized memory chips to other MicroTech divisions. You are about to meet with the manager of Chips & Components to discuss transferring a memory chip technology that your division developed. The following analysis was prepared to brief you for the meeting.

MicroTech Corporate Structure and the Role of the Divisions

MicroTech, Inc. is an international firm that designs, manufactures, sells and services a wide variety of consumer products. It is recognized as an industry leader with sales over \$8.2 billion and more than 276,000 employees. MicroTech is decentralized such that division managers oversee distinct profit centers and have autonomy over product development, discontinuation, production, pricing and selling.

The division charters were intended to prevent units from directly competing with each other for external customers. However, divisions have more latitude when selling to other MicroTech units where they are expected to make a "fair profit" comparable to outside vendors.

The CEO realized that this structure would result in some coordination problems. Unless division managers resolve most issues on their own, the small top management team would be overwhelmed. The CEO believed that the increased entrepreneurial spirit from this decentralized structure would outweigh any loss of coordination. Thus, division managers were expected to work out problems among themselves.

Why didn't Chips & Components Develop Shadow RAM in the First Place?

Five years ago, MicroTech's R&D Laboratory developed a theoretical concept that leveraged carbon nanotube technology to manufacture low energy memory high density chips that would retain large amounts of information even after the power was turned off. In essence, the charge would leave a "shadow" on the chip that could be read when power was restored and hence the term "shadow RAM."

The R&D Lab approached Chips & Components as the logical group to develop the concept (since they could sell electronic components externally). Chips & Components' engineers were dubious about the concept and decided to pass on it. The R&D Laboratory then offered the concept to Household Appliances, which invested five years and \$25 million to develop the new chip technology.

Competitive Advantage if Shadow RAM is Kept from Direct Rivals

The Shadow RAM technology that your division developed will help you gain an advantage with a line of "smart" appliances. In addition, the Office Automation division wants to offer an exclusive line of "smart" office equipment (copiers, printers, etc). The size of these advantages depends on the extent to which the Shadow RAM technology is not sold to direct rivals of the two divisions.

There is also an external market for the technology. Some of this includes direct rivals of Household Appliances and Office Automation but there are other potential customers as well. In order to take advantage of this external market, the technology must be transferred to Chips & Components. While the prospects for the technology are very good, it will be obsolete in four years.

Concerns about transferring the technology

You prepared for the public announcement of the Shadow RAM technology, with mixed feelings. You knew it had enormous possibilities. However, if the technology is transferred to Chips & Components, you will lose the revenue from internal sales and they may sell to your rivals – eroding your advantage. At the

reception after the announcement, Sam Gant, manager of Chips & Components congratulated you on your success and said that Chips & Components was ready to exploit the commercial possibilities of the technology. Though you don't want to transfer the technology, this is the only way to realize its full value for MicroTech. If you did not cooperate, top management might intervene and your interests may not be considered fully – a dilemma that Gant also faces.

Negotiation Issues

You will negotiate the terms for the transfer of Shadow RAM from Household Appliances to Chips & Components to take full advantage of the technology. The following three issues are up for negotiation:

- A. **Competitive protection for Household Appliances.** How long will Chips & Components keep the technology from (not sell to) Household Appliances' key rivals (ranges from 0 to 4 years)?
- B. **Competitive Protection for Office Automation.** How long will Chips & Components keep the technology from Office Automation's rivals (ranges from 0 to 4 years)?
- C. **Transfer price.** How much will Chips & Components pay to Household Appliances to compensate them for developing and transferring their technology?

NPV of Available Deal Options to Your Division

You have two main goals: 1) earn a reasonable profit for your division, and 2) keep the technology from rivals. The Office Automation division shares the last goal – predicting a significant increase in market share if they can have the technology four years before rivals.

To prepare for your meeting with Gant, your analysts estimated the NPV to Household Appliances for a range of agreements you might reach (below). They also suggested that Chips & Components may pay you to transfer the technology ("T"). If the technology is not transferred, the NPV to Household Appliances is \$60M (including \$20M from internal sales and \$40M from the advantage of having the chips before rivals). Chips & Components can produce Shadow RAM more efficiently and the project is worth more to them both in terms stronger margins and the larger external market they would serve.

The NPV (to Household Appliances) depends on: A) the extent to which Chips & Components agrees not to sell to its rivals, B) some profit sharing gains if Office Automation is similarly protected, and C) the transfer price. Of course, Chips & Components may not want to sacrifice the sales to these customers.

NPV (millions) to Household Appliances for Competitive Protection Options

Years that Chips & Components agrees not to sell to:	A Household Appliance's Rivals	B Office Automation Rivals
No transfer/Impasse	60	0
0 years	5	0
1 year	25	1
2 years	35	2
3 years	45	3
4 years	60	4

Thus:

$$\begin{array}{|c|} \hline \textbf{Total NPV to Household Appliances} \\ \hline \end{array} = \begin{array}{|c|} \hline \textbf{A} \\ \hline \text{Value assuming protection to Household Appliances} \\ \hline \end{array} + \begin{array}{|c|} \hline \textbf{B} \\ \hline \text{Value assuming protection to Office Automation} \\ \hline \end{array} + \begin{array}{|c|} \hline \textbf{T} \\ \hline \text{Transfer price} \\ \hline \end{array}$$

MicroTech, Inc. Instructions and Contract

- A. Read your confidential materials. **DO NOT** discuss them with anyone. You will be paired with a classmate who has been assigned the opposing role. Then you may leave the room to discuss the technology transfer. Be sure to return by the specified time to note your results on the computer.
- B. You will be discussing three primary deal parameters:
1. **Transfer Price.** “T” is the *transfer price* – how much Household Appliances will get from Chips & Electronics (e.g., how much Chips & Electronics will pay) to transfer the technology.
 2. **Competitive Protection for Household Appliances.** You also discuss how much competitive protection Chips & Electronics will provide to Household Appliances. How long will they decline to sell to Household Appliances’ rivals?
 3. **Competitive Protection for Office Automation.** You also discuss how much protection Chips & Electronics agrees to provide for MicroTech’s Office Automation division. How long will they decline to sell to rivals of other divisions?
- C. **Impasse:** If there is no agreement in the time allotted, you have an impasse and the technology will not be transferred (e.g., Household Appliances produces Shadow RAM for use only within *MicroTech*).
- D. **Rules:**
- You **cannot** let the other party read your confidential role description. However, you may discuss anything (verbally) that you feel will lead to a better agreement for you.
 - You **cannot** change the company charter.

Contract for the Transfer of Shadow RAM Technology

Use the contract below to record the actual agreement you reach in the negotiation. It specifies the terms of the Shadow RAM technology transfer from Household Appliances to Chips & Components:

- A. **Team Number.** What was your team number (*for this exercise*)? _____
- B. **Agreement.** We agree to transfer the technology under the following terms (*don’t check any options if you didn’t agree to transfer the technology*):
- | | | | |
|-----------------------|----------------------------------|--------------------|----------------------------------|
| Protection for | 0 years <input type="checkbox"/> | Protection | 0 years <input type="checkbox"/> |
| Household | 1 year <input type="checkbox"/> | for Office | 1 year <input type="checkbox"/> |
| Appliances: | 2 years <input type="checkbox"/> | Automation: | 2 years <input type="checkbox"/> |
| | 3 years <input type="checkbox"/> | | 3 years <input type="checkbox"/> |
| | 4 years <input type="checkbox"/> | | 4 years <input type="checkbox"/> |
- C. **Transfer Price.** What value of “T” did you agree upon? _____

Please sign and print your real names below (if there was an impasse, no signatures are needed).

(aka Pat Coleman/Household Appliances)

(aka Sam Gant/Chips & Components)

(Print real name)

(Print real name)

