

CONFIDENTIAL



 ***MicroTech, Inc.***

Chips & Components Division
Sam Gant, General Manager

Briefing for Sam Gant

Chips & Components Division, ■MicroTech, Inc.

You are Sam Gant, Manager of MicroTech's Chips & Components Division, which manufactures and sells chips and electronic components. It is the only MicroTech division chartered to sell chips externally. About 80% of its net sales are to outside customers (e.g. 20% to other MicroTech divisions). You are about to meet with a manager of the Household Appliances division to discuss transferring a memory chip technology that you wish to sell externally. The following analysis was prepared to brief you.

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 may help Household Appliances gain an advantage with a line of "smart" products. 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.

Initial Tension with Household Appliances

Household Appliances invested heavily to make the new technology a reality. At the reception following the public announcement of Shadow RAM, you congratulated Pat Coleman, manager of Household Appliances, and went on to say that Chips & Components was ready to exploit the product's commercial possibilities. Only your division can exploit the full opportunities arising from Shadow RAM.

However, the transfer will only take place if you reach a mutually acceptable agreement with Household Appliances. You don't want to involve top management since it might suggest that you were unwilling to cooperate. Coleman seemed a bit uneasy but agreed to meet and discuss the matter.

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 suspect that Coleman may be reluctant to transfer the technology to Chips & Components. First, they don't want you to sell chips to their rivals which would erode their advantage. Second, Household Appliances would have to give up the profit from selling Shadow RAM chips to Office Automation, which predicts a market share increase that it values at about \$40M if the technology is kept from their rivals.

The estimates included the net profit that you would earn from selling chips but you would have to subtract the transfer price you would pay Household Appliances to get them to agree ("T"). That is, T is whatever transfer price you and Coleman would agree to for transferring the technology.

To prepare for your meeting with Coleman, your financial analysts estimated the NPV to Chips & Components for producing and selling Shadow RAM (below). If the technology is not transferred, your division will get none of the profit and may trigger intervention by top managers. Chips & Components can produce Shadow RAM more efficiently and the numbers reflect stronger margins as well as the larger external market available to your division. The NPV to you depends on: A) the extent to which you don't sell to Household Appliances rivals, B) the extent to which you don't sell to Office Automation's rivals, and C) the transfer price. Of course, if you avoid direct rivals, you would sacrifice sales to these customers.

NPV (millions) to Chips & Components 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	0	0
0 years	100	55
1 year	90	50
2 years	60	45
3 years	40	40
4 years	20	35

Thus:

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

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)

