

## ARM Holdings plc. MarketBuster

### Summary

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Most Americans use technology developed by ARM Holdings on a daily basis. It is present in their cars' anti-lock braking systems. It powers printers, scanners and copiers. You can find it in watches, handheld computers, Nintendo gaming systems, wireless devices, and mp3 players. Not to mention that ARM's technology is used by nearly every cell phone manufacturer. ARM Holdings develops and licenses microprocessors based on reduced instruction set computing (RISC), a chip architecture that allows several tasks to be processed at the same time. By licensing its intellectual property and working with a wide variety of customers, ARM has made its designs an industry standard that more and more companies are using each year.<sup>1</sup>

In 1985, the first commercial RISC processor was developed by the UK-based Acorn Computer Group. Acorn was founded by Hermann Hauser, a Cambridge University physicist in 1978. Acorn worked with Apple Computer on RISC technology and in 1990, the two companies spun off a company originally called Styletheme Ltd. Soon after the spin off, the company landed its first licensee, VLSI Technology (now a part of Philips Semiconductors), and changed its name to Advanced RISC Machines or ARM.

### The Story

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Robin Saxby became the president and CEO of ARM in 1991. When he took control of the company, it only had one licensee. The original business plan was for VLSI and one other chip company to manufacture the ARM processor for the Apple Newton. However, Saxby believed that this business plan was too limiting and would not allow the company to succeed. He thought it was necessary to license the ARM technology more widely.<sup>2</sup>

### MarketBusting Moves

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ARM created a new business strategy that helped it to widely license its technology by using the following MarketBusting Moves:

- #18: Improve your customers' personal productivity
- #20: Help improve you customers' quality

#### #18/#20: Improve your customers' personal productivity/Help improve your customers' quality

ARM began to pursue a new strategy that it termed "the partnership model". The strategy emerged partly from necessity. In the early 1990s, ARM had virtually nothing but a good technology. It realized that in order to make its technology the new global standard in chips, it would need to rely heavily on its partners.<sup>3</sup>

The traditional business model of chip companies was to outsource the actual manufacturing of the chip. ARM decided to concentrate on developing and licensing its intellectual property as its core competency, a business model now known as IP licensing. In order for this strategy to succeed, ARM needed to make use of the manufacturing, sales and distribution capabilities of its partners to quickly penetrate the market. However, ARM had only been licensed by companies working with Apple. Its first big client, Texas Instruments, licensed

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<sup>1</sup> 'ARM Holdings plc', 2005.

<sup>2</sup> Harbert, 1999, p. 55.

<sup>3</sup> Ibid.

its chip architecture in 1993. It was at this time that the industry began to realize the usefulness of the ARM chip. Manufacturers began to appreciate how to take advantage of the low-power attributes of the chip in portable consumer electronics and more companies began to use embedded intellectual property in developing systems on a chip.

ARM continued to work with more partners to build a broad infrastructure that supports the chip architecture. Its partners include companies like Microsoft, Philips Semiconductors, Wipro, Intel, IBM, PalmSource, Ericsson, Sony, and Yamaha. ARM has been able to partner with companies in diverse industries because it developed a technology generic enough to appeal to a broad number of market segments and applications, but is specific enough to offer a compelling reason for people to buy it instead of developing it themselves.<sup>4</sup> The infrastructure it created with its partners is now a significant barrier to entry for potential competitors because core customers can see few (if any) benefits in switching platforms. ARM not only provides intellectual property, but delivers all the support that its customers need to make use of the IP. The partners are more productive because they can focus on their core competencies and use ARM technology. In addition, they achieve a greater quality by using ARM's technology instead of attempting to develop their own competing chips.

## **Implementation**

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ARM's most direct competitor is MIPS Technologies. The main difference between the two companies is that MIPS focuses on the higher-end RISC processors for set-top boxes, printers and devices that need more computing power. ARM's processors are lower priced and dominate in the cost-driven cell phone business.<sup>5</sup> ARM continues to come out with more powerful 32-bit cores, but has so far neglected the 64-bit market in which MIPS operates. The 32-bit market is huge and ARM believes it is better to focus its efforts on this market rather than expanding into the 64-bit market.<sup>6</sup>

ARM stops short of making and selling chips. Venturing into these business areas would create a significant problem for ARM because it would then be competing with its customers. According to Saxby, "Strategically, we are getting closer to the Fortune 500 electronics companies now, but it's all part of the partnership model."<sup>7</sup> ARM must concentrate on both OEMs and its semiconductor partners without infringing on their territory to continue to thrive in the intellectual property business model.

## **Key Lessons**

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As the company looks towards the future, it will need to continue to stay responsive to its customers' needs and increase its technology's performance. Although ARM technology is dominant in many industries, it does not usually interact directly with software so it is easier for product manufacturers to switch to ARM alternatives than it would be for PC makers to move away from the predominant Wintel architecture. Since ARM technology is more easily replaced, it will not be able to secure Intel-type pricing, but by staying responsive to users and being mindful of potential competition, the company should be able to retain its lead in the industry.

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<sup>4</sup> Roberts, 2001, p. 68.

<sup>5</sup> Roberts, 2004, p. 70.

<sup>6</sup> Harbert, 1999, p. 56.

<sup>7</sup> Ibid.

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**DRAT Table, ARM Holdings plc****SOURCE**

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**External**

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Powerful Incumbents	Pioneer in the IP licensing industry; partners with large firms to avoid direct competition with them.
Opposition from advocacy groups	NA
Risk to key external stakeholders	NA
Inertia	Although it is a dominant technology and far ahead of its competition, it must prove that it can continue to innovate and add value to its offerings.
Disruption of customer's system or process	Created a way for its customers to prefer to license its technology rather than develop it themselves. ARM must continue to prove to its customers that there is added value in buying ARM technology.
Changes in standards or regulations required	NA

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**Internal**

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Internal political maneuvering	NA
Reluctance or resistance by those needed for active implementation	NA
Resource Constraints	ARM has experienced such tremendous growth that it has difficulties finding enough smart employees to keep up with its growth. IP licensing business model grew out of resource constraints that prevented ARM from producing/selling chips.

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**Platform changes required**

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Human resource and skills platforms	Must continue to attract highly talented individuals to fuel its fast growth
Logistics platforms	Maintain and coordinate direct and open communication with increasing number of employees and partners
Distributor platforms	NA
IT and database platforms	Must use IT systems to consolidate data from global locations
Technology platforms	Continue to invest in R&D to develop more powerful RISCs.
Assets, operations, and systems platforms	NA

## Marketbusting Kite

<b>Element</b>	<b>Needed to Support the Marketbusting System</b>
<b>Agenda</b> The key things that the critical people spend time on	<ol style="list-style-type: none"><li>1. Continual improvement of existing technology and continual development of new technology to better serve customer needs</li><li>2. Developing and maintaining partnerships</li><li>3. Recruiting new employee talent so the firm can continue to grow</li></ol>
<b>Norms</b> What principles and behaviors are valued?	<ol style="list-style-type: none"><li>1. Innovative ideas</li><li>2. Commitment to providing service to customers and meeting all their needs</li><li>3. Maintaining open communication with partners and employees</li></ol>
<b>News</b> What information and measures are paramount?	<ol style="list-style-type: none"><li>1. Financial stability</li><li>2. Revenue growth</li><li>3. Market share relative to competitors</li><li>4. Success/growth of its partners</li></ol>
<b>Allocations</b> What gets resourced and how are people rewarded?	Resources go to <ol style="list-style-type: none"><li>1. R&amp;D (28% of revenues)</li><li>2. Recruiting new talent</li></ol>
<b>Structure</b> Power, authority, responsibility structure	<ol style="list-style-type: none"><li>1. Company is organized around the markets it serves</li><li>2. Further divided by products</li></ol>
<b>History</b> Key routines that have developed and drive activities	<ol style="list-style-type: none"><li>1. Desire to mold the business according to customer needs since the success of the company depends on successful partnership relationships</li><li>2. Commitment to licensing business model to preserve partnerships</li><li>3. Focus on company culture and open communication</li></ol>

## **EXHIBIT 1: Companies that licensed ARM technology**

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1992: GEC Plessey, Sharp

1993: Texas Instruments, Cirrus Logic

1994: Samsung, AKM

1995: Digital Semiconductor, Atmel/ES2, NEC, Symbios Logic, LG Semicon

1996: OKI, Acatel, Yamaha, Atmel, Rohm

1997: Rockwell, Philips, Lucent, Hyundai, Sony

1998: Seiko, Epson, Matsushita, HP, IBM, Qualcomm

1999: Toshiba, Fijitsu, STMicroelectronics, 3Com

2000: Intersil Corp, Insilicon Corp, Sanyo, Ericsson, Taiwan Semiconductor Manufacturing Company, Altera, Infineon Tech., SSL Corp, Mitsubishi Electric Corp.

## **Sources**

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'ARM Holdings plc', 2005, Hoovers Online. Retrieved: April 25, 2005, from  
<[www.hoovers.com/subscribe/co/factsheet.xhtml?ID=56243](http://www.hoovers.com/subscribe/co/factsheet.xhtml?ID=56243)>.

Harbert, T 1999, 'ARMing the World', *Electronic Business*, vol. 25, issue 11, pp. 52-59.

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