

voyager

a new adventure in learning

VTech's Voyager Adventure System was designed to immerse children in exciting adventures – any place, any time, and never the same adventure twice.

VTech developed the Voyager Adventure System knowing that children today need big, colorful interactive experiences that are both entertaining and developmental. While CD-ROMs offer this potential, they tie a child to the family's computer. Other LCD-based products, meanwhile, offer admirable content, but cannot deliver the large-scale, full-color experiences that children have come to expect.



The cornerstone of the Voyager concept was to provide computer control of a large amount of full-color graphics with the ability to respond to a child's input automatically. With this goal in mind, VTech's designers developed a fun, engaging format that allowed great flexibility in use – on a child's lap, a table, even standing up – but was still large enough to allow for a large, color screen.

Using a revolutionary combination of technologies, Voyager not only remembers children's names, but also each step of their journey. The children are in control – deciding where to go next – creating their own open-ended experiences that can change every time they play. Inspired by Voyager's capabilities, VTech's educators and game designers are developing a variety of expansion cartridges that take advantage of Voyager's unique story-telling capabilities and developmental potential.

Voyager puts children in complete control. They decide how much interaction they want: listen to a story, interact and direct it, or actively participate in challenging games and activities. In the *Snapshot Safari* Adventure Pack software, children enjoy a globally themed adventure where the *Adventure Kids* set out to explore Africa, Asia and Australia. Throughout the adventure, children learn interesting facts about animals and geography as they touch and play more than 30 activities and games that teach spelling, vocabulary, mathematics and logic.

No other company could have designed Voyager. VTech's engineers in Hong Kong tackled the daunting technical challenge of refining a new technology into a robust, manufacturable toy that would be able to meet both VTech's high durability and accuracy standards, and be available in the mass quantities necessary to meet an impressive demand for the product.

Voyager not only fascinates children, it engages retailers. The fact that it is a cartridge-based system gives the product a path toward a successful, long-term retail life. Indeed... the Voyager adventure has just begun.

brand building using new aesthetics



consumer perception surveys



product development meeting



initial product design

“Throughout our 25-year history, VTech Electronics has built tremendous brand equity by developing products that combine learning, fun and technology. Today, VTech is committed to maintaining its global leadership position by creating products that respond to market changes and are in tune with our customers’ lifestyles and needs. Going beyond traditional curriculum-based learning, we will include other developmental areas that are of interest to parents. The 2002/2003 product line is the first step in this new direction.”

Dennis W. PERRY
Chief Executive Officer, VTech Electronics Ltd

Market Overview

The electronic learning market is in some ways limited only by the imagination of the companies that serve it and in the past three years, new competition has significantly boosted growth particularly in the United States. In 2001, the total US market rose 8.5% to US\$1.9 billion, while our principal European market rose 3.1% to US\$1.6 billion. The widening use of personal computers may be partly responsible for this overall trend, since they stimulate a desire among children for electronic interactivity. The proliferation of other electronic devices, such as PDAs, increases the scope for ELPs that cater to young children and pre-teenagers.

The electronic learning markets in both the United States and Europe are expected to expand continuously at these levels over the next few years. In addition, there remains huge and largely untapped potential in regions such as Latin America and Asia.

Performance Review

Turnover declined by 33.5% to US\$193.7 million in the financial year 2002, and profits were also lower. The growth of competition in the United States in recent years has led to an erosion of VTech’s market share and declines in revenue. Even with this decline, however, VTech remains the global leader in electronic learning products, with a total market share of 47.

8%. Our goal this year was to revitalize the operation and to lay the foundation for a sustained rebound in revenues and profitability.

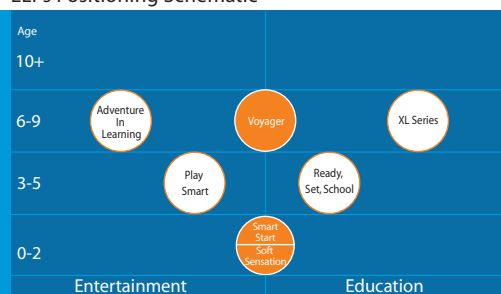
We achieved this by a return to the Group’s creative roots. VTech was a pioneer in the ELP market when it launched the first electronic learning aid, *Lesson One* in 1980. We then built a highly successful business centered on the concept of combining education and entertainment, targeting children between six and 11 years old.

Keen competition from PCs and slow response to market changes during the late 1990s undermined our competitiveness in this age group. VTech responded by expanding into the lower age group categories.

Extensive market research we commissioned from the Omnicom Group in 2001 nonetheless showed that consumers still held the VTech brand and its concept of “learning and fun” in high regard. Accordingly, we took a strategic decision to refocus on the higher-margin 6–11 year old category and completely redesign our product range to offer a comprehensive array across the entire spectrum from education to entertainment. To do so, we combined our excellent R&D with market research among consumers to develop a completely new range of products that were introduced this year.



ELPs Positioning Schematic



retail presence with new packaging

At the education end of the spectrum, the *XL Series* caters to children aged 5–11 years old. It uses powerful handheld and notebook devices with a sleek design to teach children key skills needed at school, while at the same time offering music and animation creativity. The devices also allow them to play games, which can be played interactively with other users by using infrared technology. These devices can be connected to personal computers, making them a mobile extension of PCs.

At the entertainment end, the *Learning Adventures Series* disguises learning through non-keyboard based units that teach children aged three years old and up by using interactive characters in role-playing situations such as workshops. This series applies a unique recognition technology that customizes the learning experience through a series of questions and character reactions.

In the middle of the spectrum, the exceptionally well-received *Voyager Adventure Series* for children aged 4–7 years old marks VTech’s move back into a product that combines a housing with changeable content. The portable unit with its color touch screen lets children explore topics through a variety of adventures. As the adventures develop, the software responds and adapts to the user’s choices providing a personalized experience. Interchangeable software Adventure Packs, sold separately, allow children to use Voyager over and over without getting bored, as they face new challenges in each new adventure.

All of these were achieved in the highly contracted time frame of 12 months and while at the same time streamlining the operation. We made substantial savings in costs through the consolidation of our operations and the introduction of more efficient working practices. We also tightened control of inventory and receivables, improving our working capital position.

Outlook

Our goal now is to raise revenues and profits substantially for the 2003 financial year. The operation is very lean and efficient. The new product range has won an exceptional level of acceptance in Europe and North America as measured by both listings and shelf-space. The attractiveness of the products and the positive market research we were able to give to customers were important factors in this outcome.

As important was the retailers’ acknowledgement of VTech’s commitment to re-establishing our brand as the undisputed leader in the ELP market. The concrete expression of this commitment in the 2002 financial year was the new corporate identity launch. New packaging, promotions, advertising and public relations supported this initiative. In the financial year 2003, VTech has committed to increase the amount of money to be spent on marketing to the consumer. This will support a much more innovative, consistent and aggressive marketing campaign designed by the WPP Group.

This building of a new foundation for the business is the first step in a strategy that will greatly expand the scope of our products and move us back into a leadership position. Where traditionally VTech’s ELPs have focused on addressing overt learning through a keyboard type unit, we plan to develop products that go beyond the traditional curriculum to include other developmental areas that are of interest to parents. These products will be previewed later this year.

Geographically we are also examining ways to extend our market reach. Our marketing success in Europe will be the benchmark as we move forward in regions such as Asia and Latin America. These extensions will be enhanced by the development of additional initiatives in mainland China, our manufacturing base. A team headed by the Group Chairman is now exploring how best to extend our market reach.

contract manufacturing services

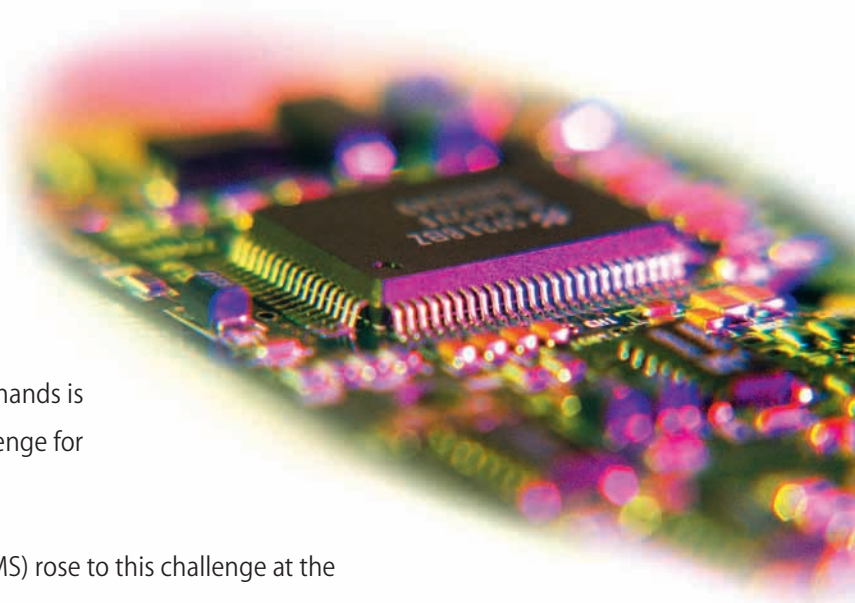
new approach

“The cost savings to customers who utilize the NPI program could be as high as 10% to 15%”

Andy LEUNG
Chief Executive Officer
VTech Communications Ltd

new product introduction team shortening the product development cycle

Consumers around the world increasingly demand tomorrow's technology. Further, their impatience with existing technologies has resulted in shorter life cycles for even the most innovative products. Staying on top of consumer demands is not only a challenge for designers – it's a major challenge for contract manufacturers.



VTech's contract manufacturing services business (CMS) rose to this challenge at the same time the Group mandated that all business units restructure their operations to become more customer-oriented. In 2001, we introduced the "New Product Introduction" (NPI) program to provide customers value-added services during the project transition phase – the phase between "design" and "manufacture".

The NPI team is comprised of a group of well-rounded project engineers with experience in product design, component sourcing and manufacturing. The goal of the NPI team is very simple: to assist customers' engineers during the design stage to ensure their designs are created in a way that is conducive to effective manufacturing. This dynamic exchange of ideas during the development stage ultimately results in substantial savings in time and cost – savings that can be passed right on to the consumers at the retail level.

We estimate that customers enjoy a 10 to 15 percent cost savings when using the NPI program compared to projects launched with prototypes that do not take into account the manufacturing process. As a further benefit to customers, the NPI services are bundled with the standard manufacturing agreement with customers and provided at no additional cost.

VTech's New Product Introduction team, founded in mid-2001, has already helped dozens of customers achieve significant cost savings that ultimately ensure products launch on time and on budget.

exceeding customer expectations



understanding customers' needs

state-of-the-art manufacturing facilities

quality products

“Our ability to maintain profitability was a great achievement during the year when contract manufacturing suffered a downturn globally. This shows how competitive VTECH Communications is in our chosen market area. With the market recovering, we look forward to achieving higher growth next year.”

Andy LEUNG Hon Kwong

Chief Executive Officer, VTECH Communications Ltd

Market Overview

Contract manufacturing is an established trend. The rise of mainland China as an unrivalled manufacturing base, the ability to build extended supply chains and pressures on companies to reduce time to market, are changing the way companies operate. Increasingly, companies are outsourcing manufacturing, design and assembly to be able to concentrate on sales and marketing. This has resulted in growth of 20% or more in contract manufacturing during the past decade to create a US\$100 billion industry.

The year 2001 saw an abrupt halt to this upward momentum, with a decline in global turnover. The recession in the United States and the running down of inventories by firms worldwide led to significant drop of orders for contract manufacturers, especially those producing communications products, which account for about one third of the total demand.

Performance Review

Affected by the prevailing market conditions, turnover of contract manufacturing services fell by 27.0% to US\$92.8 million. VTECH's diversified customer base, however, combined with tight management, left profits stable.

During the financial year, we placed particular emphasis on

minimizing potential write-offs that would affect the bottom line. Inventory was kept at low levels, while despite the difficulties in the market, accounts receivable were maintained at normal ratios. This testifies to VTECH's close relationships with customers, which helped us to forecast demand and production schedules accurately.

These relationships were strengthened through the successful implementation of our New Product Introduction (NPI) program, which puts us at the leading edge of the contract manufacturing services business. The aim of NPI is to help the customers we work with shorten their product development cycles and reduce outturn costs.

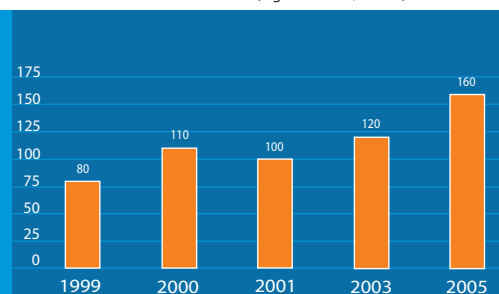
We are achieving this through dedicated NPI teams actively involved in the design process at an early stage. Through this engagement, our engineers can advise on the design from both production feasibility and component price perspectives, thus reducing the cost of the final product while at the same time enabling the final design to be put into immediate production.

Another initiative that has won praise from a number of customers was our decision to improve the operations from an environmental point of view. Through addressing areas



VTech's CMS manufacturing facilities in mainland China received ISO14001 certification

The Worldwide CM Market (Figures in US\$ billion)



Source:
Manufacturing Market
Insider – May 2002 issue

ranging from handling of disposable materials to controlling by-products, our CMS facilities in June 2001 received ISO14001 certification.

Outlook

With companies rebuilding inventory from early 2002 and overall economic growth looking more positive, the industry is forecasting a rise of 10% in contract manufacturing orders for the calendar year. Risk to this forecast is instability of the global economy, which may once again influence the demand for contract manufacturing services.

The recovery in orders in 2002 should be followed by a more robust performance thereafter, in line with historical norms, that would see the total contract manufacturing market expand by more than 50% of its present level, to US\$ 160 billion by 2005.

VTech intends at least to mirror this growth in turnover, while maintaining stable margins. Unlike many other top 50 companies in the industry, our strategy is to grow organically rather than by acquisition, in order to compete less on volume than through creating tailored solutions.

To this end, in November 2001, we had a major expansion of our facilities in Dongguan, increasing the factory capacity to

337,000 square feet. We also made use of the decline in demand for components in 2001 to negotiate improved terms with suppliers and deepen relationships with them. This should reduce the impact of an eventual rise in components prices as world demand picks up. These developments, together with a continued improvement to our internal supply chains and the NPI program, will help us to achieve our goal of steady top line and bottom line growth, through expanding and diversifying our customer base.