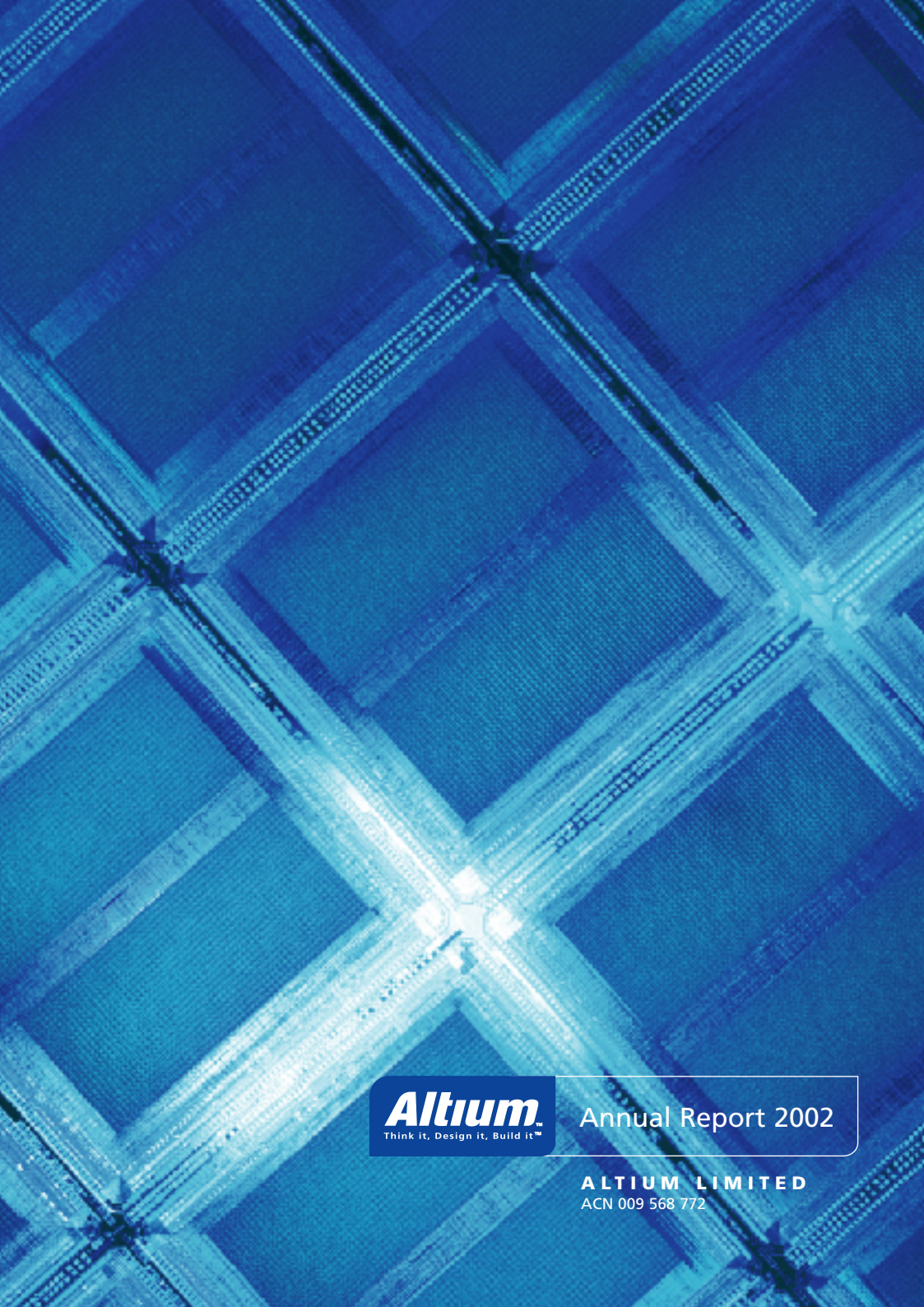


Altium™
Think it, Design it, Build it™

Annual Report 2002

ALTIUM LIMITED
ACN 009 568 772

Altium
Vision Statement

"Historically, the most advanced, state-of-the-art design tools have been prohibitively priced, with access being limited to engineers based within the few companies that could afford them. The Altium vision – unchanged since the company's inception – is to break down these barriers to innovation and technological advancement and provide every engineer and system designer with easy access to the best possible design tools. This is the driving force behind why our company was founded and is still the vision that guides our strategies today and into the future."

Nick Martin, Founder and Joint CEO,
Altium Limited.

Altium Milestones: 1985 – 2002

Technology

1985	Launch of Protel PCB
1991	Launch of Protel for Windows – the world's first Microsoft Windows-based PCB design system
1995	Launch of Advanced Schematic 3 with built in EDA/Client
1998	Launch of Protel 98 – the first product to include and integrate all five core board-design tools
1999	Launch of Protel 99 – on Design Explorer platform
2000	Launch of P-CAD product line Launch of CircuitMaker product line Launch of PeakFPGA product line – entry into FPGA Design & Synthesis market Launch of CAMtastic! product line
2001	Protel wins "Product of the Year 2000" as voted by Elektronik readers Release of first TASKING toolset – entry into Embedded Software Design market Altium announces Situs – the industry's first Topological Autorouter Establishment of R&D centre in the Netherlands
2002	Protel wins "Product of the Year 2001" as voted by Elektronik readers Release of Protel DXP – the first single application to address entire board-design process

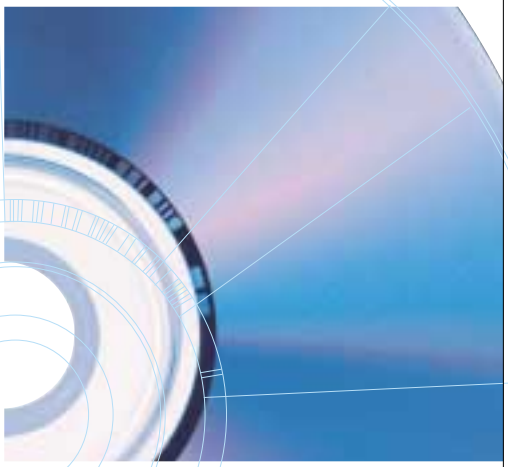
Acquisitions

1995	NeuroCad (autorouter technology) PLD technology from Logical Devices (CUPL)
1998	IDK (Swiss distributor) Techspert (Japanese distributor) Signal integrity technology from INCASES MicroCode Engineering (CircuitMaker product)
1999	Accolade Design Automation (Accolade product) VHDL simulation technology from Green Mountain
2000	ACCEL Technologies Inc (P-CAD product) Metamor Inc (FPGA RTL synthesis technology) Innovative CAD Software (CAMtastic! product) Technology including IP from Evatronics, Silicore, and CAST
2001	TASKING Group (TASKING products)
2002	EDA business of Hoschar AG (former German distributor)

Distribution Channels

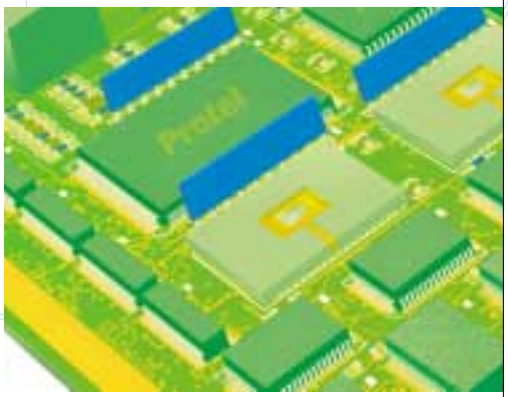
1986	Exports PCB Design tool to the US & Europe
1988	Opening of USA Sales & Support office
1995	Increased distribution network to sell to 28 countries worldwide
1998	Opening of Europe Sales & Support office in Switzerland Opening of Japan Sales & Support office
1999	Sold to 73 countries worldwide
2000	Opening of German Sales & Support office
2002	With sales offices and distribution network, now sells to 91 countries worldwide

Inside



10 Altium's Place in the EDA Industry

The Electronic Design Automation industry is maturing and has just undergone a period of heavy consolidation. This feature gives an insight into the changing industry landscape, and Altium's place within it – both now and into the future.



12 Focus: Protel DXP

Protel DXP is the most significant product update since we launched the first ever Windows-based design system in 1991. But what's so revolutionary about this new product? In this section we'll review what sets Protel DXP apart from other products on the market and look into the marketing and R&D efforts behind the launch.

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Section **01** Altium in 2002

Altium in 2002

Chairman's Review

On behalf of the board of directors of Altium Limited I would like to present the company's 2002 Annual Report. Although the effects of the past year's tough economic climate have been felt throughout our entire industry, I am pleased to be able to report that we have managed to maintain a profitable outcome combined with a strong cash flow position. While growth has slowed, we have taken inspiration from our prospects for future growth and established a stable foundation from which to push aggressively towards our long-term strategic objectives. I would like to take this opportunity to thank all Altium staff for maintaining a steadfast commitment to these objectives throughout the past year.

Altium enjoys a proven track record spanning 17 years of growth and profitability, and despite the uncertainty of recent times we have again been able to deliver a return to our shareholders. We have experienced slower growth than expected, and our recent expansion and acquisition program has increased our cost base, however in spite of these challenges we have realised a net profit after tax of $2.25m, which has allowed us to deliver a fully franked full-year dividend of 2c per share.

Since the company's IPO in 1999, Altium's strategic acquisitions plan has seen us add new core technologies as well as experienced staff, particularly in the area of research and development. While this has had a short-term impact on the company's financial performance, our dedication to defined long-term goals has seen us maintain our competitiveness. In light of the recent economic situation, we have set in place a range of initiatives focused on increasing our profitability both now and into the future.

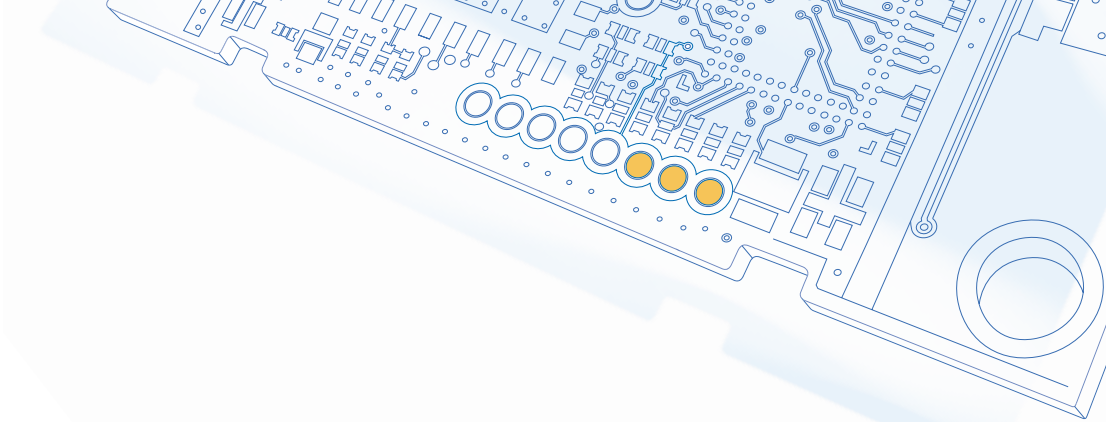
This past year has been an integration and consolidation phase for Altium. Because we are a global player, (with only 2% of our revenue derived from Australia) we have not been immune to the weakness affecting the global IT economy. However, we used this economically difficult time to focus on refining business operations, developing and implementing the strategies, technologies and infrastructure required to drive our business forward.

Our intensive R&D efforts have established a strong platform for the efficient development of current and future products and expanded our in-house technologies. We have progressed with the smooth integration and streamlining of all elements of our business, especially those that have flowed from recent acquisitions, and are set to grow our market share in Europe with the recent acquisition of Hoschar AG.

Additionally, and in parallel with our internal focus, we have maintained product momentum with the release of six new TASKING toolsets to the market, and of course, have finalised the development and release of Protel DXP and the re-engineered Design Explorer platform, which will deliver us a significant market advantage in coming years.

Our dedication to defined long-term goals has seen us maintain our competitiveness

The past year has provided an ideal opportunity to build solid product and business platforms that will see us further assert our position as a technology leader. As Chairman, I am proud to see the sound progress of our product development strategies, and I am confident that our efforts over the past 12 months have positioned us favourably to take full advantage of the opportunities we see before us. ■



A Message from our Joint CEOs

Bringing electronic design technology to all engineers

One of the great strengths of our company over the years has been its agility and its ability to integrate. We are not only referring here to integration at the business, technology and product level, but also the ability to react to changing market and industry conditions, and to integrate new ideas and methods into the way we do business. We have remained flexible because this is a key requisite for moving towards our ultimate goal – that of bringing the best electronic design tools within the reach of every engineer, designer and developer.

When we made the decision in the early nineties to move our products to the Windows platform, we were the first EDA company to do so. We did it not because our customers were asking for it or because there was a compelling technical reason, but because we saw that Windows would be the operating system that would be adopted by the majority of the computer market. At the time it was not viewed as a credible engineering design platform, but our belief was that the characteristics that made personal computing with Windows attractive in general – ease of use and low cost, standardised hardware – would also put PCs onto the desktops of every design engineer in the world. Targeting our products to this platform made computer-based design tools accessible to more engineers than ever before.

Unlike many of our competitors, we have never shied away from delivering new design technologies to our entire customer base. We have not restricted new technologies to the few customers who could afford to pay more. As we have developed or acquired new technologies, we have integrated these into our core products and provided them to our customers with no increase in the overall product cost. Rather than charge extra for additional capabilities, we have chosen the path of including all design capabilities as part of the standard product.

While on the surface it seems that we are giving precious technologies away, this strategy is key to the success of our company. By increasing the breadth of appeal of our tools we increase the potential market for our products. By increasing our market we have a broader base across which to amortise the cost of developing or acquiring technology. Our costs are spread across a wide user base. Because we operate a low-cost direct sales model, we can still maintain our profit from each sale without increasing our prices.

This is in contrast to the business model traditionally adopted by EDA companies, which focuses on a small number of key account customers that generate the majority of revenue for the company. Access to certain technologies must be carefully rationed in order to preserve their high value. Because this business model relies on large-scale corporate sales, it tends to require expensive pre-sales engineering support, making each sale relatively costly to close. In this model, selling to the mass market is less important – in fact it can sometimes be counter productive.

We are the only EDA company making technology affordable

The recent spate of consolidation within the EDA industry has generated a significant opportunity for Altium. We are the only company in the market offering affordable access to technology for the mass market of professional engineers. Our worldwide business model is built on a low-cost structure that supports the efficient servicing of a geographically dispersed target market. We believe that the recent changes in the EDA landscape combined with our product development strategies make Altium a compelling choice for an increasing number of engineers, designers and developers.

The continued development of our industry-leading product brands, exemplified by the recently-released Protel DXP, ensures that we have the required depth of technologies. The ongoing streamlining of our business operations and sales and support channels ensures that we have an efficient and cost-effective business model. These factors, driven by a force of dedicated, flexible and innovative staff and management, combine to give Altium the capabilities it needs to capitalise on the significant opportunities ahead. ■

Altium's Place in the EDA Industry

Altium develops and markets software for the development of both hardware and software for electronic devices – including software for PCB design, embedded software development, and FPGA design. Traditionally, the design of software and hardware have been regarded as separate design disciplines, however a number of issues are driving the convergence of these design methodologies. These include the changing industry landscape, the need to fit more and more circuitry onto smaller boards and the constant pressures on designers to decrease time-to-market.

Changing industry segmentation

Historically the EDA industry has been segmented by computer platform, with systems running either on specialised UNIX-based workstation networks, or on standard desktop PCs. For high-end design applications, the workstation was the preferred platform, delivering superior power and stability, but also requiring high levels of service and support. These products have always been characterised by high entry and maintenance costs.

The second option for designers was the "desktop EDA" market, which provided EDA tools that could be easily set up and run on a standard PC. These could be run individually or networked and were typically characterised by their low cost and comparative ease of use.

In the early days of desktop software, the performance gap between workstation and desktop software clearly segmented the market. However, as the power of the PC and the quality of the desktop software increased, the functionality gap decreased and the overlap between the segments grew. Currently, the performance gap is nearly non-existent and 90% of design is able to be done on the desktop. The exception to this is Integrated Circuit (IC) design (an area in which Altium does not and does not intend to compete). Because of the complexity of IC design and very high cost of chip prototyping, this type of design requires extensive engineering backup from tool vendors and is still primarily the domain of workstation-based software.

In recent years the EDA industry has experienced significant consolidation, with larger EDA software companies, including Altium, acquiring many smaller participants to augment their tool suites. As part of this consolidation, two of Altium's closest competitors in the desktop segment, Innoveda (with their PADS desktop product line) and Orcad, were acquired by Mentor Graphics and Cadence respectively. As a result, Altium is now the only company exclusively focused on providing professional tools directly to engineers, designers and developers at an affordable price.

While the workstation-focused companies have begun to build their acquired technologies into their workstation-based products, they now also offer "high-end" software products that run on desktop PCs as well as workstations, but which are still highly priced and bundled with customised service and support. Altium's products compete directly with these products in functionality and performance, so why the difference in price?

Instead of by computer platform, the EDA market is now segmented by the business models of the EDA vendors. Cadence and Mentor Graphics are focused on selling high-end tools to a market dominated by their key account customers, while Altium is aiming to sell mainstream tools to the mass market of electronics engineers. It is this difference that we believe gives Altium a competitive advantage.

The different business models

Although Cadence and Mentor Graphics have acquired "mainstream desktop" customers, they have stated that they consider the products that these customers originally bought to be "entry level". It appears that their motivation for servicing this market is to actively up-sell these customers to "higher-end" tools. It is for this reason that they must restrict their most powerful technologies to their high-end, high price design systems. This makes it difficult for these large developers of software for multiple platforms to adequately serve the mainstream mass-market of designers.

Altium does not need to protect a high-end market – we are focused exclusively on the mass market of electronics engineers. By introducing a range of new technologies to this mass market we will continue to give designers

Comparison of current EDA business models

Mainstream Tools

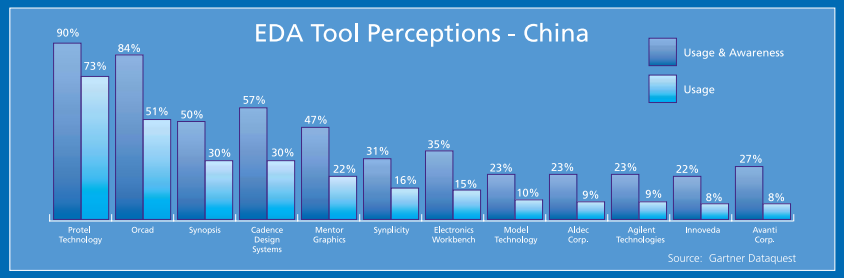
- Affordable
- Low cost infrastructure
- Don't need to limit access to technology
- Become productive quickly
- Looks after the vast majority of design engineers

High End Tools

- High cost of ownership
- Higher cost infrastructure
- Need to protect high end business & technology
- Longer lead time in achieving productivity
- Favours the small core of elite users

Significant opportunities for Altium in China

China's market for EDA software is expected to demonstrate the region's highest growth potential with a CAGR of 30% during the five-year period ending 2005 and will soon challenge other Asia-Pacific countries for the number one position in terms of EDA market size.[1] A recent independent industry survey on China's EDA industry released earlier this year revealed that Altium (formerly Protel) is the Chinese market leader in terms of EDA tool usage and brand awareness.[2] Altium's revenue from Chinese markets has grown more than 100% over the last two years and is now over AUD$2.8m.



[1] EE Times, March 13, 2002 [2] Source: "Design Trends and EDA Tools: China" (a joint study by Gartner Dataquest and EE Times Asia. Survey conducted in October 2001, sample size: 1,323 valid responses.)

access to new design functions, broadening the appeal of our design systems and in turn increasing our customer base.

Bringing technology to the masses

Altium's products are designed to be rich in features yet easy to use, and therefore only require a lean sales and support structure. Using this business model, Altium is well positioned to serve a large but widely geographically dispersed customer base and to amortise the cost of new technology over its large customer base, taking advantage of the economics of scale to generate increasing returns on its investment. This model equips us well to serve the needs of those mainstream designers who originally bought desktop design tools from Innoveda and Orcad, but have now become Mentor Graphics and Cadence customers by default. As these designers look for alternatives to their current situation, Altium will be a logical choice.

The future: emerging technologies

Although historically the Embedded Software Design (ESD) market has been seen as separate from the EDA market, this separation is artificial and the gulf between the markets is closing. A number of EDA players (including Altium) have recently acquired embedded software companies.

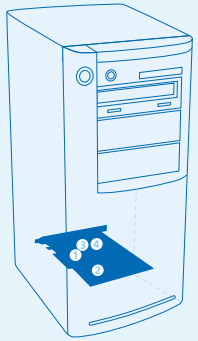
The convergence of hardware and software design remains a topical issue but is only just beginning to be seen in practice. Altium's acquisition of TASKING, a leading producer of embedded software development tools, will enable Altium to integrate areas of hardware and software design and bring a number of new technologies at an affordable price to the mass market of designers and developers.

Another factor driving change in the EDA industry now and into the future is the emergence and improving capabilities of FPGAs. Field-Programmable Gate Arrays (FPGAs) are a type of "blank" chip that can programmed by a designer after manufacture. They offer many of the benefits of custom-designed ICs without the high prototyping cost, and have the potential of providing a low-cost platform for the integration of complete electronic systems onto a single user-programmable chip.

Altium's business model is specifically designed to serve the mass market

Our tools already incorporate the facility to design the "virtual circuitry" to go inside FPGAs, and Altium is actively working on tools which will decrease the learning and cost barriers to entry and make designing for FPGAs accessible to the mainstream market of electronics designers. ■

Anatomy of an Electronic Device



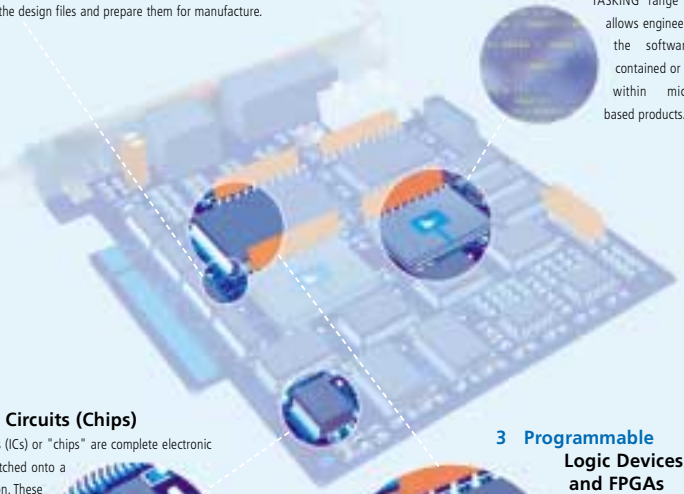
This example board is a typical PCB found inside a computer

1 Printed Circuit Boards (PCBs)

Electronic circuits are made up of a combination of electronic components such as ICs, capacitors and resistors connected together to perform a specific function. A Printed Circuit Board is a board used to mount the components and connect them together through tracks etched in the copper layers of the board. PCB design software, such as Altium's Protel and P-CAD products, allow engineers to use a computer to draw the layout of the components on a PCB and map out the complex set of copper connections between them. Technology such as Altium's CAMtastic! Computer Aided Manufacture (CAM) tool enables PCB designers to take the design files and prepare them for manufacture.

4 Embedded Software

Microprocessors are ICs that are specifically designed to process digital numbers. With the proliferation of digital electronics, microprocessors have become the cornerstone of circuit design. Microprocessors are found in a vast array of electronic devices from mobile phones and DVD players through to washing machines and cars. Microprocessors, however, need to be controlled by software in order to do anything useful. Altium's TASKING range of products allows engineers to develop the software that is contained or "embedded" within microprocessor-based products.



2 Integrated Circuits (Chips)

Integrated Circuits (ICs) or "chips" are complete electronic circuits that are etched onto a small chip of silicon. These are the building blocks of most electronic circuits. The design process for creating new ICs from scratch or using partially fabricated templates (ASICs) is very expensive and requires a lot of software support. It is therefore only done by a few companies worldwide and for products that are manufactured in high volumes. Altium does not compete in the specialised and limited market for software design tools for ICs.

3 Programmable Logic Devices and FPGAs

ICs and ASICs can be likened to prerecorded CDs, where the information on the CD is fixed during manufacture. With recordable and rewritable CDs, on the other hand, it is the end user who determines what information the CD holds. Like recordable and rewritable CDs, special ICs called Programmable Logic Devices (PLDs) can be configured by design engineers to perform a desired function. FPGAs are a very versatile type of programmable device that can be used to integrate entire circuits onto a single chip. This area of electronics design has huge potential as FPGAs provide electronics designers with many of the benefits of custom-designed ICs without the extremely high development costs. Altium offers the Accolade range of software products to allow engineers to create the virtual circuitry that goes inside these devices, and is actively developing further products in this area.

Focus: Protel DXP

Altium has taken a fresh look at EDA tools with the recently released Protel DXP, the first single application to address the entire board design process, and our most significant product update since we released the first Windows-based design system in 1991. What sets Protel DXP apart from most other EDA systems is the fact that it is the first of a new generation of products to use our new proprietary Design Explorer (DXP) technology integration platform. This platform provides seamless integration between the different stages of the board design process, allowing design engineers unprecedented freedom to move through the board design process. So what prompted us to take this approach? Here's some background on the launch of Protel DXP…

The DXP difference

Electronics, and specifically printed circuit board design, is a multi-stage process. From the initial creation of a schematic diagram to the final preparation of the board for manufacture, these stages involve specific tasks, and as a result design software providers have traditionally been focused on creating individual tools to deal specifically with each of these tasks.

This "point tool" approach presents designers with a number of problems – design data must be transferred between different applications, the designer must learn to use different programs to do different design tasks, and the flow of the design work is dictated by the design tools rather than by efficiency. It is this situation that prompted the development of the DXP technology platform. Because it provides a common platform upon which design technologies can be integrated, DXP allows the seamless flow of information between all the stages of the design process.

In Protel DXP the result is a single application with the capabilities to address all the needs of the board design process. For designers this means less time spent dealing with data translation issues, fewer problems moving through the different design stages, and less time learning new tools.

The development process

Being the first product to feature the new DXP technology platform, the development and release of Protel DXP certainly was an atypical undertaking. Not only did we introduce new design capabilities and

The extensively redesigned Protel DXP user interface delivers superior functionality and a focus on consistency, ease of use and intuitive control. This superb design environment makes design more efficient, letting the designer choose the most appropriate design path and work the way they want to.

DXP allows the seamless flow of information between all stages of the design process

features to the product, but we needed to first re-engineer DXP to provide a suitable platform not only for Protel DXP, but for the entire range of DXP-based products that will follow.

Having listened to the opinions of designers we became aware of a need for greater flexibility in the design process. With this in mind we set about ensuring that Protel DXP would allow designers to arrange their workflows in the way that best suited them. We identified a number of areas in which this could be achieved and ultimately identified a number of areas of development for Protel DXP.

Firstly, by building the product on the DXP platform we allowed for the seamless transfer of design information. Secondly, we created a number of new design tools to increase the range of design options open to Protel users. Thirdly, we made a concerted effort to adjust and refine key tools from previous Protel products in line with user feedback.

Finally, all the new and refined features were coupled to an extensively redesigned user interface to make Protel DXP as easy to use, efficient and productive as possible.

Protel DXP allows designers to arrange their workflows in the way that best suits them

The launch

In addition to the intensive re-engineering of the product, the launch of Protel DXP also warranted the review of the product line's marketing on a fundamental level. Although it included all the features of the old Protel product (and more), Protel DXP also involves some fundamental changes to the design methodology, and as such presented a unique marketing opportunity.

The Protel DXP advertising campaign introduces a new brand image for Protel, designed to reflect the revolutionary nature of the new DXP platform while communicating Altium's focus on the engineer. The distinctive theme of design flexibility is carried through all the Protel DXP launch material, from print advertising to product packaging.

Altium's Situs Autorouter

Protel DXP debuts an industry-first technology

One of the key new technologies featured in Protel DXP is Situs™, Altium's next-generation Topological Autorouter™. The Situs autorouter breaks new ground in the PCB industry as the Topological Autorouting technology allows designers to move beyond the constraints of current shape-based technologies.

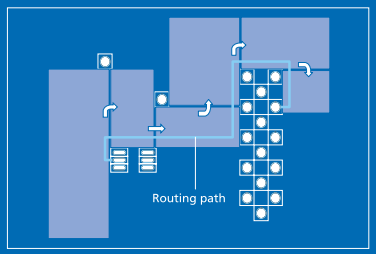
Autorouters are tools that automatically place tracks on a PCB to connect the various components of the board. The core technology behind Situs is a sophisticated autorouting algorithm acquired by Altium from NeuroCad in 1995. This technology has been incorporated into the autorouters supplied with Altium's previous design systems, but with the Situs development Altium has further developed the original technology to create a new approach to autorouting.

Traditional high-end routers are shape-based, meaning that they "view" the PCB in terms of rectangular blocks defined by the position and shape of each object on the PCB. With Situs, Altium's R&D team looked beyond this traditional approach to develop a new, topological autorouting stage. Situs maps the PCB using the spatial relationships between objects, removing the orthogonal geometry constraints of the traditional shape-based approach.

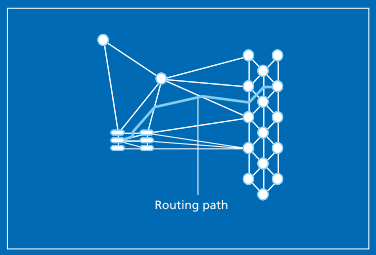
As a result, Situs is able to establish more intelligent and natural routing paths on a board, and has fewer limitations than traditional routers. Its flexibility allows it to easily cope with non-standard board and component configurations, and therefore offers more promise for current and especially future board and component packaging technologies.

Situs embodies the innovative development approach that will make the next generation of Altium products the leading choice for engineers.

Shape-based routing The current industry standard – shape-based routing – defines the space between obstacles on the board as a series of rectangles. Once the set of rectangles has been defined, a routing path is determined by following the edges of the rectangles.



Topological routing Topological mapping is not geometrically constrained; the potential path simply weaves its way between each pair of obstacles. Through sophisticated routing algorithms, Situs then converts the mapped path to a suitable routing path.



The launch of the product saw the introduction of a new look for Protel, designed to reflect the key characteristics of the product, and with a clear emphasis on clarity and ease of use. This new brand image was implemented across a complete range of media, from magazine and online advertisements to direct mail and the Protel website (www.protel.com). The response to the launch has been positive, with the product launch creating a strong initial impression and clearly imparting the message that the new technology introduced in Protel DXP gives designers the flexibility to "go their own way".

Altium's Tools at Work

Electronics can be found in consumer products ranging from children's toys to washing machines, as well as rapidly growing product areas such as mobile telecommunications and personal computing. Altium's tools are used by electronics engineers and designers to design the electronics circuitry that can be found inside these products, and are used across a wide range of industries including telecommunications, consumer electronics, automotive, defence and science. Customers include IBM, NASA, Motorola, Hewlett-Packard, Canon, Fujitsu, NEC, Sony, BMW, Alcatel, Daimler Benz, Philips, CSIRO, Nokia and Telstra.

TASKING XA tool used to upgrade Philips communication system Philips Business Communications (PBC), a business unit within Philips Consumer Electronics, provides business communications solutions to medium and large sized enterprises under its SOPHO brand name. The company's offerings are based around its series of ISPBX switches, wired and wireless peripherals, applications software and converged voice and data integration services. PBC used Altium's TASKING XA embedded software development toolset to program the 16-bit XA microcontroller when they decided to upgrade the Analog Line Card (ALC), which serves as the backbone of the switching system. The XA offered improvement in speed as well as in feature flexibility to the new ALC.

Altium tools used in advanced nanospace mission The CanX Program is a bold new initiative run by the University of Toronto's Institute for Aerospace Studies. Over 18 months, graduate students at the University of Toronto will build new generations of picosatellites (satellites with mass less than one kilogram) and develop revolutionary space technologies for picosatellites, before testing and evaluating them in space. The first mission, CanX-1, will launch in early 2003. Students are using Altium's Protel board-level design software to design custom computer boards for the picosatellites. They are using Altium's TASKING DSP563xx embedded software development toolset to program the computer boards so that they can perform various tasks in space – such as helping to take pictures and controlling the orientation of the satellites.

TASKING C166 tool used in design of next-generation heart assist device Abiomed is a US company that develops technologies to assist or replace the human heart. The BVS® 5000 Bi-Ventricular Support system is a temporary cardiac assist device designed to address the large number of patients who currently die each year following heart surgery. The BVS® 5000 assists the patient's heart, allowing it to rest temporarily after surgery and increases their likelihood of recovery. Abiomed used Altium's TASKING C166 software development toolset to program the embedded software in the 16-bit C166 microcontroller to control the BVS® 5000.

Engineers in a broad range of industries use Altium's tools to design the electronics in a vast array of products.

Altium Professional Services

Working with our customers

As a company, one of our prime business strengths lies in bringing technologies to the mass market – that is, taking design technologies and methodologies that are seen as "expensive and high-end" and packaging them as affordable solutions for mainstream engineers and developers.

To support this effort, the Altium Professional Services (APS) group within Altium offers contract design and development services to companies seeking project-based assistance with electronic product development. This works in synergy with our design tools to help customers and potential customers migrate their existing work flows to use new technologies and/or design methods supported by Altium tools.

For example, APS can help a company move an existing embedded software application to run on a more powerful microprocessor. APS uses its extensive expertise in application porting to adapt the customer's existing code to suit the new architecture. The customer can then carry forward development of the application using Altium's latest generation TASKING embedded development toolset for the new target architecture.

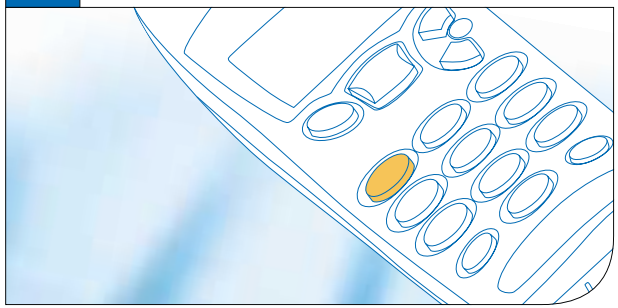
APS comprises a group of highly skilled and experienced engineers based at our R&D centre in Amersfoort in the Netherlands who utilise current communications technologies to work with customers all around the world. The group uses the full range of Altium design and development tools to provide its services, which means that as well as generating revenue, it also provides valuable feedback to our software R&D teams on the "real world" performance of our tools. This helps us provide better tools to our customers, and helps our customers understand and utilise the full potential of their Altium tools.

The APS group is another example of how Altium breaks down the barriers to innovation in electronic design. As Altium continues to bring new ways of doing electronic design to the mainstream and enables the broad spectrum of engineers and designers to participate in emerging design fields, Altium Professional Services will provide a key resource and play an important role in bringing these new technologies into everyday use.

Section **02** From the Board

From the Board

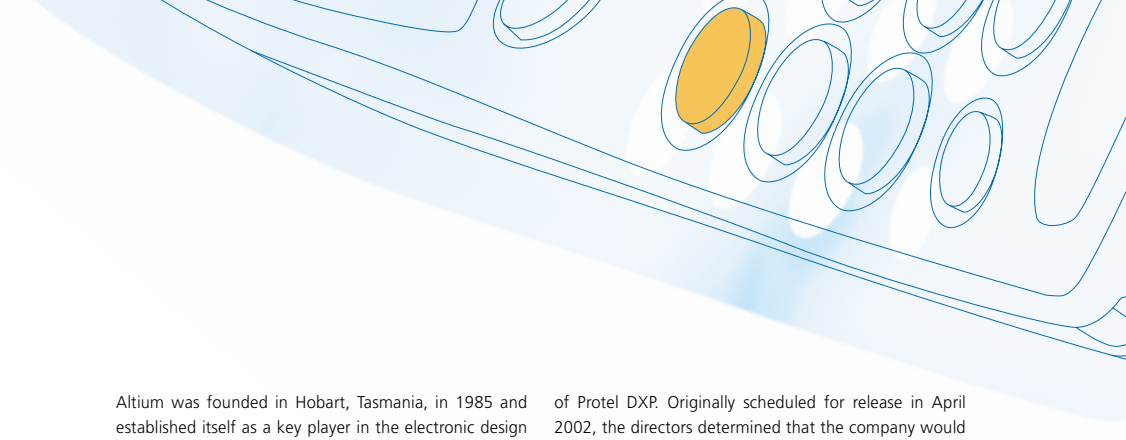
Review of Operations and Activities



Group overview

Business objectives

Altium Limited is a leading developer and supplier of desktop Electronic Design Automation (EDA) and embedded software design tools for the Microsoft Windows environment. Altium's software is used by engineers for the design of electronic devices found in many of today's newest electronic and consumer products across a broad range of industries including telecommunications, automotive, aerospace, defence, medicine, science, and consumer electronics.



Altium was founded in Hobart, Tasmania, in 1985 and established itself as a key player in the electronic design industry with achievements such as the release of the world's first Windows-based EDA tool, and the first fully-integrated desktop board-level design system.

Key to Altium's vision of providing all engineers with access to the complete electronic design system is its unique "Design Explorer" platform technology. The Design Explorer platform creates a single design environment that allows seamless integration of all aspects of electronic design. Every time a customer adds an Altium product to his or her toolset, the Design Explorer installation expands to include the new functionality and features of that product without requiring the customer to adopt a "new" system. Design Explorer provides Altium with a distinct competitive advantage and is one of the many reasons why Altium tools are world class.

Altium's products offer tailored solutions covering a range of electronic hardware and software design processes. Current products include Protel DXP, P-CAD 2001, various TASKING embedded software tools, and the CircuitMaker range of educational tools.

Review of operations

Altium's core business activity is the provision of shrink-wrapped software for the design of electronic products.

The 2001/2002 financial year provided many challenges and opportunities for the company. In recent years, Altium has experienced consistent strong growth in sales and profitability; however, in the 2002 financial year the company was unable to sustain this financial growth. With 98% of the company's revenues generated overseas, the company experienced difficult economic conditions in the wake of the US recession.

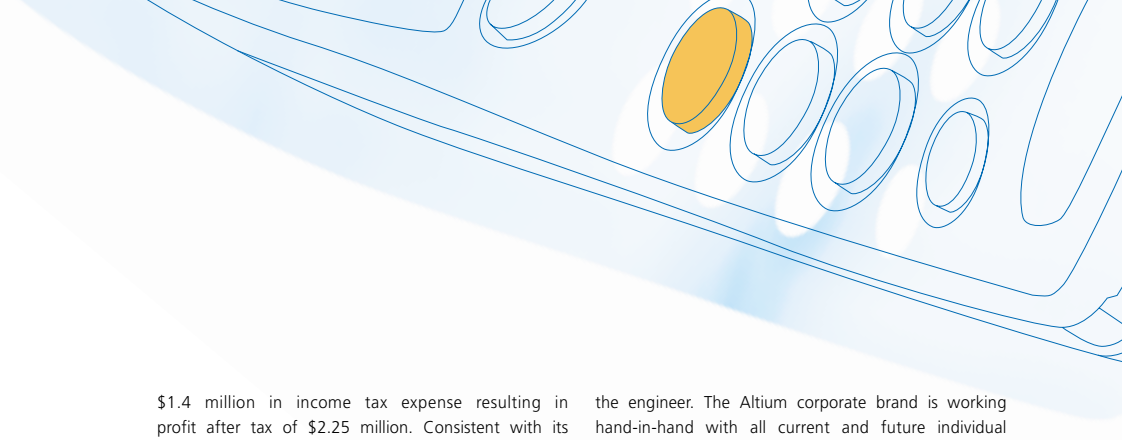
In addition to these external forces, the company's revenue was affected by the decision to defer the release of Protel DXP. Originally scheduled for release in April 2002, the directors determined that the company would be better served strategically by deferring the release until July.

Whilst overall revenues from sales of products and services declined by only 2%, the corresponding period included only one quarter of contribution from the TASKING tools. With the decision to defer the Protel DXP release, sales of Protel products fell by approximately 30%. Due to the general economic environment, sales of P-CAD and TASKING products fell by between 10% and 15%.

Over the later months of the financial year, the company experienced signs of gradual recovery in the US markets and also throughout Asia. With the release of Protel DXP and continued indication of recovery in global markets, the company has shown continued improvement through the first months of the new financial year up to the date of this report.

With a full year contribution of the TASKING group, operating expenses were up over the previous year. With over 120 engineers employed in research and development, the total R&D expense increased by 50% over the year. In addition to R&D, the expanded product range required additional sales and marketing costs, up 17%. In response to a contraction in business conditions, the company undertook business rationalisation and restructuring. Smaller sales offices in Italy, France, the Netherlands and on the East Coast of the USA were closed and these markets are now supported out of the company's main sales offices in San Diego, Stuttgart and Switzerland. All costs associated with the restructure and redundancies have been expensed in the period, totalling $1.6 million. General and administrative expenses were up by 43% with depreciation and amortisation up by 64%. The significant increase in amortisation was as a result of the full-year effect of the TASKING acquisition.

As a result of the fall in revenue and an increase in expenditure after the TASKING acquisition, profit before tax fell to $3.65 million. The company incurred



$1.4 million in income tax expense resulting in profit after tax of $2.25 million. Consistent with its policy to pay dividends to its shareholders, the company declared a dividend of 2cps on the 6th of September, 2002.

Investments for future performance

The company continued its development projects to further develop and integrate a number of acquired technologies in order to develop new product offerings for its customers. 2001/02 was a year of continued investment in this process which was illustrated by the release in July 2002 of the new Protel DXP product. Throughout 2002/03 the company will deliver many new products based on its Design Explorer (DXP) platform in the fields of printed circuit board design, embedded software development and new tools for the design of FPGAs.

In harmony with corporate strategy to streamline business systems and processes, this year saw investment in the development of AltiumOne, a platform for knowledge management for the group. Incorporating finance, HR, sales and customer support, project management and management reporting, AltiumOne represents the development of business systems facilitating timely and detailed data presentation and reporting across all facets of the company's operations. AltiumOne forms the platform upon which all business activity within Altium occurs.

On 6 August 2001 the company launched the new corporate brand "Altium". The launch as a distinct corporate brand represents the next stage in the realisation of the company's long-established vision to help engineers turn their ideas into products in the easiest and most productive way possible. This is being achieved by reframing and unifying the organisation's product development and sales and support processes across all product brands and by enhancing the company's focus on the most important element in the design process – the engineer. The Altium corporate brand is working hand-in-hand with all current and future individual product brands, and serves as a highly recognisable corporate platform adding value to the organisation's current and future products.

Review of financial position

Capital structure

During the year option holders have exercised 194,250 options raising $664,000. The total number of shares on issue as at 30 June 2002 was 87,631,224. For further details on contributed equity refer to note 19 to the financial statements.

Treasury policy

Consistent with the board policy with regards to hedging, the group has not used any hedging instruments to manage its foreign exchange exposure during the year.

Cash flows from operations

Cash generated from operating activities decreased by 51% from the same period last year, to $7 million as a result of decreased profitability. Further details on operating cash flows can be found in the Statements of Cash Flows in the financial statements.

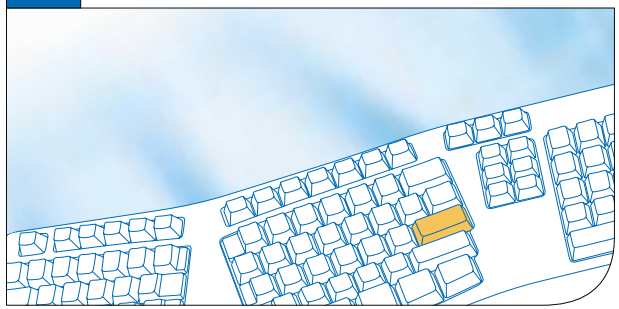
Corporate governance

Corporate governance information is included on page 10 of the annual report.

Statement of compliance

The above report is based on the guidelines in The Group of 100 incorporated publication: Guide to Review of Operations and Financial Condition.

Directors' Report



The directors of Altium Limited present their report on the consolidated entity consisting of Altium Limited and the entities it controlled at the end of, or during the year ended 30 June 2002.

Directors

The following persons were directors of Altium Limited during the whole of the financial year and up to the date of this report: Carl J Rooke, Kayvan Oboudiyat, Nicholas M Martin, David M Warren, William A Bartee. Darren Charles and Bruce W Edwards were appointed as directors on 9 July 2001 and continue in office at the date of this report.

Principal activities and review of operations

The consolidated entity's principal activities during the year continued to be that of the design, development and sale of computer software for the design of electronic products. Refer to the Review of Operations on page 20 for further commentary.

Results

	CONSOLIDATED	
	2002 $'000	2001 $'000
Operating profit before income tax	3,654	20,085
Income tax expense	(1,401)	(7,487)
Operating profit after income tax	2,253	12,598

Earnings Per Share

		2002	2001
Basic earnings per share	cents	2.6	16.4
Diluted earnings per share	cents	2.6	16.2

David Warren
Executive Director

Bruce Edwards
Executive Director

Dividends

Dividends paid or declared by the company since the end of the previous financial year were:

	2002	2001
A final ordinary dividend of 4.5 cents per share fully franked was declared by the directors on 7 September 2001 and paid on 19 October 2001 (in relation to the 2001 financial year).	-	$3,943,406
A final ordinary dividend of 2 cents per share fully franked was declared by the directors on 6 September 2002 (in relation to the 2002 financial year).	$1,752,624	-
Total dividends in respect of the year	$1,752,624	$3,943,406

Bill Bartee
Non-Executive Director

Darren Charles
Executive Director

Information on Directors

Director	Experience	Special Responsibilities	Directors' Interests in Altium Limited Ordinary Shares	Options
Mr. Carl J Rooke FCA FAICD	Non-Executive Director of 12 years. Chairman for 3 years.	Non-Executive Chairman. Chairman of Audit and Remuneration Committees.	224,400	160,000
Mr. Kayvan Oboudiyat B E (Hons) GDA	Joint CEO for 3 years Managing Director for 3 years prior. Senior Executive in the International Business Unit of Telstra.	Joint CEO. Member of Remuneration Committee.	1,187,500	1,200,000
Mr. Nicholas M Martin	Joint CEO & Founder. Executive Director for 15 years.	Joint CEO.	23,444,000	-
Mr. David M Warren B Sc (Hons)	Executive Director for 11 years.	-	4,303,000	-
Mr. William A Bartee BS MBA JD	Non-Executive Director for 3 years. Former Investment Director of Macquarie Technology Funds Pty Limited.	Member of Audit and Remuneration Committees.	-	80,000
Mr. Darren Charles B Com	Appointed Executive Director & Chief Financial Officer July 2001.	CFO. Member of Audit Committee.	106,890	170,250
Mr. Bruce W Edwards	Appointed Executive Director July 2001. President of Protel Technology, Inc prior.	-	-	-

Directors' meetings

The number of meetings of the company's board of directors held during the year ended 30 June 2002 and up to the date of this report and attended by each director were:

	Full meeting of directors	Meetings of committees Audit	Remuneration
Number of meetings held	8	4	1
Number of meetings attended by:			
C J Rooke	8	4	1
K Oboudiyat	8	*	1
N M Martin	8	1**	*
D M Warren	8	*	*
W A Bartee	7	4	1
D Charles (appointed 9 July 2001)	8	4**	*
B W Edwards (appointed 9 July 2001)	8	*	*

* Not a member of the relevant committee

** Nick Martin resigned from the Audit Committee during November 2001 and was replaced by Darren Charles.

Directors' and Senior Executives emoluments

The remuneration committee is responsible for advising the board on remuneration policies and packages for board members and senior executives. Members of the remuneration committee are C J Rooke, K Oboudiyat and W A Bartee.

Remuneration of directors and senior executives is determined so as to ensure that the package properly reflects the relevant person's duties and responsibilities and that the package is competitive to attract and retain services of high quality management. Remuneration packages include a base salary, superannuation, performance-related bonuses and other benefits. Executives are also eligible to participate in the company's option plans. Remuneration and other terms of employment for each board member are formalised in service agreements.

Remuneration of non-executive directors is determined by the board within the maximum amount approved by the shareholders from time to time.

Details of the nature and amount of each element of the emoluments of each director of Altium Limited, each of the 5 officers of the company and of the consolidated entity receiving the highest emoluments are set out in the following tables:

Non-Executive Directors of Altium Limited

Name	Directors' Base Fee $	Motor Vehicle $	Bonus $	Super $	Options $	Other Benefits $	Total $
Carl J Rooke	105,000	-	42,857	-	-	-	147,857
William A Bartee	57,385	-	19,841	6,178	-	-	83,404

Executive Directors of Altium Limited

Name	Directors' Base Fee $	Base Salary $	Motor Vehicle $	Bonus $	Super $	Options $	Other Benefits $	Total $
Kayvan Oboudiyat	40,000	277,384	5,947	136,905	37,284	-	-	497,520
David M Warren	40,000	126,667	-	71,428	24,762	-	-	262,857
Bruce W Edwards	71,022	162,419	-	-	2,868	-	15,419	251,728
Darren Charles	40,000	104,789	12,849	-	12,208	-	-	169,846
Nicholas M Martin	-	1	-	-	-	-	-	1

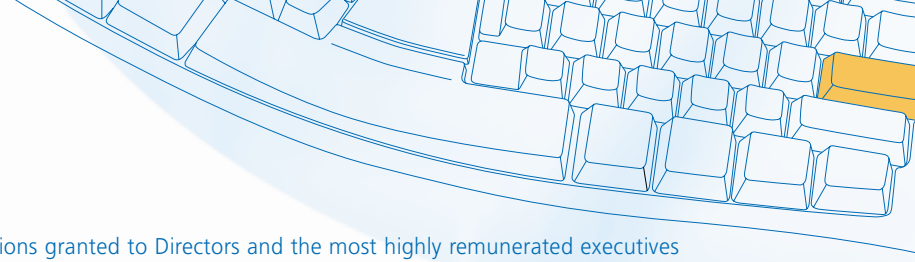
Other Executives of Altium Limited

Name	Base Salary $	Motor Vehicle $	Bonus $	Super $	Options $	Other Benefits $	Total $
Matthew Schwaiger Director of Product Management	129,238	-	-	9,462	-	-	138,700
Alan Perkins Director of Information Systems	112,329	-	-	8,385	8,304	-	129,018
Marc Depret Director, Platform Technologies	102,690	9,804	-	9,195	-	-	121,689
Jason Hingston Program Manager, Protel / Situs	110,092	-	-	8,807	-	-	118,899
Dejan Stankovic Program Manager, Design Explorer	109,914	-	-	8,793	-	-	118,707

Other Executives of the consolidated entity

Name	Base Salary $	Motor Vehicle $	Bonus $	Super $	Options $	Other Benefits $	Total $
Nicolas Boudot Regional Director, Europe	280,639	-	12,328	11,853	-	-	304,820
Peter Dratwa Manager, German Sales & Support Centre	208,664	-	29,091	6,780	-	20,885	265,420
Nancy Eastman Regional Director, USA	221,472	-	-	4,439	-	4,552	230,463
Brent Smith Manager San Diego Sales & Support Centre	196,837	-	-	4,202	-	8,246	209,285
Toshihiro Tada Regional Director, Japan	164,273	-	-	9,582	9,190	-	183,045

Other Executives are officers who are involved in, concerned in, or who take part in, the management of the affairs of Altium Limited and/or the consolidated entity. The amounts disclosed above for remuneration relating to options are the assessed fair values of options at the date they were granted to Executive Directors and other Executives during the year ended 30 June 2002. Fair values have been assessed using a Black-Scholes based option-pricing model. Factors taken into account by this option-pricing model include the exercise price, the term of the option and the market value of the share at the time the options were granted.



Share options granted to Directors and the most highly remunerated executives

Options over unissued ordinary shares of Altium Limited granted during, or since the end of the financial year, to any of the directors or the 5 most highly remunerated officers of the company and consolidated entity as part of their remuneration were as follows:

Other Executives of Altium Limited	Options Granted
Alan Perkins	120,000

Other Executives of the Consolidated Entity	Options Granted
Toshihiro Tada	100,000

The options granted to other executives of Altium Limited were granted under the Altium Option Plan on 7 November 2001. The options granted to other executives of the Consolidated Entity were granted under the Altium Option Plan on 4 December 2001.

Shares under option

Unissued ordinary shares of Altium Limited under option at the date of this report are as follows:

	Number	Issue Price Of Shares	Expiry Date
Protel International Employee Share Option Scheme	177,600	0.34	18 June 2004
Altium Option Plan	2,474,000	3.42	09 June 2005
Altium Option Plan	1,395,650	5.50	29 Sept 2005
Directors Plan	1,440,000	5.50	20 Nov 2005
Altium Option Plan	1,656,160	4.20	12 Oct 2006
Altium Option Plan	1,061,450	4.20	07 Nov 2006
Altium Option Plan	123,000	3.56	04 Dec 2006

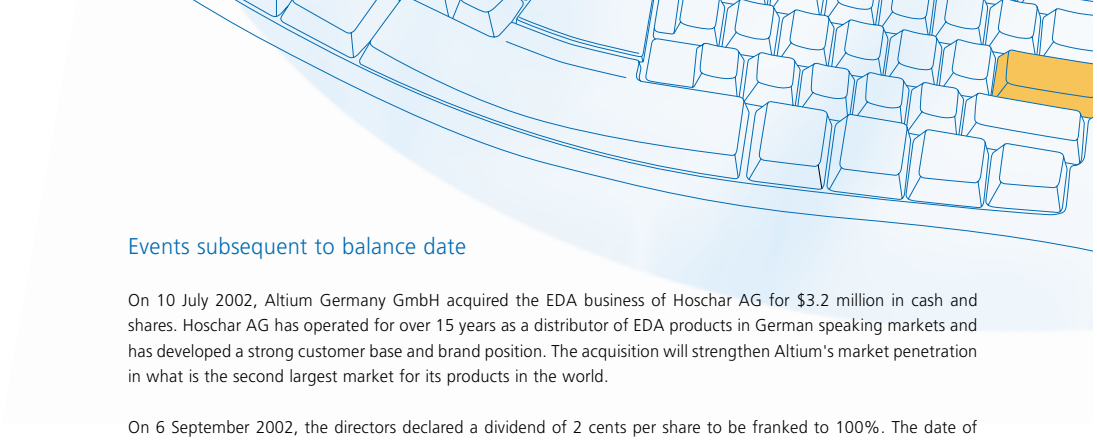
The options granted under the Protel International Employee Share Option Scheme can be exercised at anytime until their expiry on 18 June 2004. The options granted under the Altium Option Plan and the Directors Plan vest in equal amounts over a four-year period from the first anniversary date of issue. These options are exercisable at any time once vested through to expiry date. No option holder has any right under the options to participate in any other share issue of the company or of any other entity within the Group.

Significant changes in the state of affairs

There were no significant changes in the state of affairs during the period.

Environment regulation

The company has assessed whether there are any particular environmental regulations that apply to it and has determined that there are none of significance.



Events subsequent to balance date

On 10 July 2002, Altium Germany GmbH acquired the EDA business of Hoschar AG for $3.2 million in cash and shares. Hoschar AG has operated for over 15 years as a distributor of EDA products in German speaking markets and has developed a strong customer base and brand position. The acquisition will strengthen Altium's market penetration in what is the second largest market for its products in the world.

On 6 September 2002, the directors declared a dividend of 2 cents per share to be franked to 100%. The date of entitlements was set to 20 September 2002 and the payment date was set to 4 October 2002.

Except for the matters discussed above, no other matter or circumstance has arisen since 30 June 2002 that has significantly affected, or may significantly affect:

a) the consolidated entity's operations in future financial years, or
b) the results of those operations in future financial years, or
c) the consolidated entity's state of affairs in future financial years.

Likely developments and expected results of operations

The consolidated entity intends to expand its product offerings through the acquisition of additional technologies. Further information on likely developments and the expected results of operations of the consolidated entity has not been included in this report because the directors believe it would be likely to result in unreasonable prejudice to the consolidated entity.

Insurance of officers

During the year the company paid a premium of $54,063 to insure the directors and officers of Altium Limited and its subsidiaries. The liabilities insured are costs and expenses that may be incurred in defending any civil or criminal proceedings that may be brought against them in their capacity as directors or officers of the consolidated entity.

Rounding of amounts

The company is of a kind referred to in Class Order 98/0100, issued by the Australian Securities & Investments Commission, relating to "rounding off" of amounts in the directors' report. Amounts in the directors' report have been rounded off in accordance with that Class Order to the nearest thousand dollars, or in certain cases, to the nearest dollar.

Auditor

PricewaterhouseCoopers continues in office as auditor in accordance with section 327 of the Corporations Act (2001). This report is made in accordance with a resolution of the directors.

For and on behalf of the board

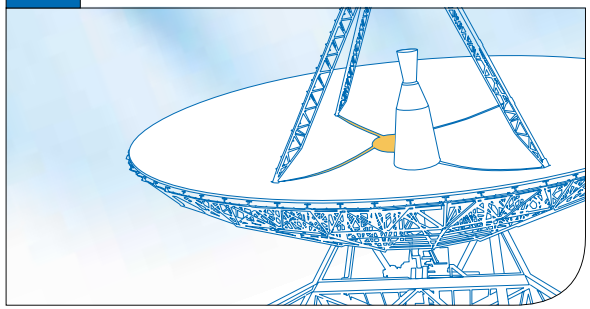
K. Oboudiyat

K Oboudiyat, Director

N M Martin, Director

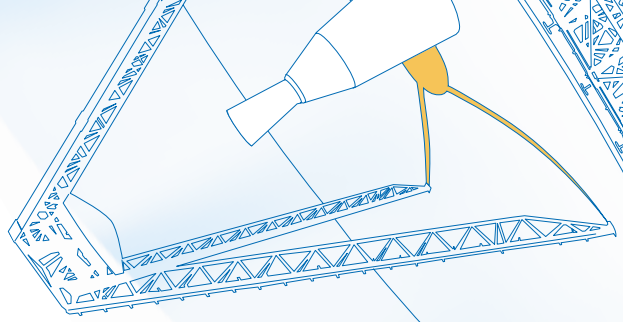
Sydney
11 September 2002

Corporate Governance Statement



The directors' are responsible to the shareholders for the performance of the company. Their focus is to enhance the interests of the shareholders, employees and customers and to ensure the company and its controlled entities are properly managed. The board draws on relevant corporate governance best practice principles to assist it to contribute to the performance of the company.

Day to day management of the company's operations and the implementation of corporate strategy is delegated by the board to the Joint CEO's and senior executives.



The functions of the board include:

- review and approval of strategy, budgets and financial plans
- monitoring organisational performance and achievement of the company's strategic goals and objectives
- monitoring financial performance including the approval of the annual and half-year financial reports and liaison with the company's auditors
- appointment and assessment of the performance of Joint CEOs and other members of the senior management team
- ensuring there are effective management processes in place and approving major initiatives
- enhancing and protecting the reputation of the company
- ensuring the risks facing the company and its controlled entities have been identified and that appropriate controls, monitoring and reporting mechanisms are in place, and
- reporting to shareholders.

A description of the company's main corporate governance practices is set out below. The practices have been in place throughout the entire year, unless otherwise stated.

Board of Directors

The Board is comprised of executive and non-executive directors, including a non-executive chairman. At the date of this report, the Board consisted of two non-Executive directors and five executive directors. Further details on directors are set out in the Directors' Report under the heading "Information on Directors".

The Board has established a number of committees to assist in the execution of its duties and to allow detailed consideration of complex issues. Current committees of the Board are the remuneration and audit committees. These committees consist of two independent directors and one executive director. The company's constitution specifies that one third of all directors and any director who has held office for three years or more, must retire at each annual general meeting (with the exception of the Chief Executive Officers). Where eligible, a director may stand for re-election subject to conditions laid out in the company's constitution.

Independent professional advice

Directors and Board committees have the right, in connection with their duties and responsibilities, to seek independent professional advice at the company's expense. Prior written approval of the Chairman is required, but this will not be unreasonably withheld. All directors will be made aware of the professional advice sought and attained.

Remuneration committee

The remuneration committee consists of the following directors: C J Rooke, W A Bartee and K Oboudiyat. The remuneration committee was established on 22 June 1999.

The remuneration committee was established to advise the board on remuneration policies and practices generally and will be responsible for making specific recommendations on remuneration packages and other terms of employment for executive directors, other senior executives and non-executive directors.

Executive remuneration and other terms of employment are to be reviewed by the committee having regard to performance, relative comparative information and independent expert advice. As well as a base salary, remuneration packages include superannuation, performance related bonuses and fringe benefits. All directors (excluding N M Martin) are also eligible to participate in the Director's Option Plan.

Remuneration packages are set at levels that are intended to attract and retain executives capable of managing the consolidated entity's global operations.

Remuneration and other terms of employment for the CEO and other executive directors are formalised in service agreements. Remuneration of non-executive directors is determined by the board and formalised in service agreements.

The remuneration committee's terms of reference will also include responsibility for reviewing any transaction between the consolidated entity and the directors, to ensure the structure and the terms of the transaction are in compliance with the Corporations Act (2001) and are appropriately disclosed.

Further information on directors' and executives' remuneration is set out in the Directors' Report and notes 24 and 25 to the financial statements.

The committee will also assume responsibility for management succession planning, including the implementation of appropriate executive development activities and ensuring adequate arrangements are in place, so that appropriate candidates are recruited for later promotion to senior positions.

Audit committee

The audit committee consists of the following directors: C J Rooke, W A Bartee and D Charles. The audit committee was established on 22 June 1999.

The main responsibilities of the audit committee are to:

- review and report to the Board on the annual report, the annual and half-year financial reports and all other financial information published by the company or released to the market.
- assist the Board in reviewing the effectiveness of the organisation's internal control environment covering:
  - effectiveness and efficiency of operations,
  - reliability of financial reporting, and
  - compliance with applicable laws and regulations.
- recommend to the Board the appointment, removal and remuneration of the external auditors, and review the terms of their engagement, and the scope and quality of the audit.
- review of insurance matters for the consolidated entity.

When appointing auditors or appointing accountants for non-audit services, the executive director and CFO, D Charles is not permitted to vote.

In fulfilling its responsibilities, the audit committee will receive reports from management and external auditors. It meets with external auditors up to four times a year and reviews any significant disagreements between the auditors and management, irrespective of whether they have been resolved. The external auditors have a clear line of direct communication at any time to all members of the audit committee and the Chairman of the Board and annually meet with the full Board. It is the policy of external auditors to provide an annual declaration of their independence to the audit committee. During the year, the company received such a declaration.

Audit of the company accounts is subject to a second partner review. The company's auditors Pricewaterhouse Coopers undertake a policy of engagement partner rotation every seven years. The audit committee will also adopt a policy of audit partner rotation on a seven year basis. The audit committee has authority, within the scope of its responsibilities, to seek any information it requires from any employee or external party.

Continuous disclosure

The company secretary has been nominated as the person responsible for communications with the Australian Stock Exchange (ASX). This role includes responsibility for ensuring compliance with continuous disclosure requirements in the ASX listing rules and overseeing and coordinating information disclosure to the ASX, shareholders, the public, the media, analysts and brokers. The company has policies and procedures on information disclosure that focus on continuous disclosure of any information concerning the company and its controlled entities that a reasonable person would expect to have a material effect on the price of the company's securities.